

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РОССИЙСКОЙ ФЕДЕРАЦИИ

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им. Ф.М. ДОСТОЕВСКОГО

В МИРЕ КОМПЬЮТЕРИЗАЦИИ

IN THE WORLD OF COMPUTING

*Учебное пособие по развитию навыков общей
и профессионально ориентированной англоязычной речи*

Составители С. Н. Голерова, С. Б. Невежина, С. Д. Оськина



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Рецензенты:

канд. филол. наук, доцент кафедры иностранных языков
ОмГУ им. Ф.М. Достоевского *Т.Н. Винокурова*;
канд. пед. наук, доцент кафедры педагогики ОмГПУ *Ю.Б. Дроботенко*

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Пособие состоит из практического курса по аудиторной и самостоятельной работе, аудио- и видеоматериалов на диске и комплекса приложений, включающего тексты для реферирования и просмотрового чтения, банк лексических единиц как для активного усвоения, так и для формирования навыков исследовательской деятельности, краткий грамматический справочник.

Предназначено для студентов, магистрантов и аспирантов факультета компьютерных наук, естественных и гуманитарных факультетов ОмГУ и других вузов. Пособие также рассчитано на широкую аудиторию специалистов в области компьютерной техники, изучающих английский язык.

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PREFACE

Учебное пособие «В мире компьютерной техники / In the World of Computing» по развитию навыков общей и профессионально ориентированной англоязычной речи предназначено для аудиторной и самостоятельной работы студентов, магистрантов и аспирантов всех специальностей и форм обучения факультета компьютерных наук и других естественных и гуманитарных факультетов и вузов, а также для студентов дополнительной квалификации «переводчик в сфере профессиональной коммуникации». Пособие подготовлено для организации аудиторной и внеаудиторной работы по дисциплине «Английский язык» с целью развития навыков говорения, аудирования, чтения и письма, а также формирования у студентов коммуникативной компетенции.

Пособие основывается на принципах интерактивного подхода к обучению иностранным языкам: используются различные учебные технологии (проблемное обучение, ролевые технологии, метод проектов, презентации и т. д.), направленные на развитие критического мышления студентов, навыков исследовательской работы, общекультурной и профессиональной компетенции, а также на повышение мотивации к изучению английского языка. При составлении заданий учитывался личностно-ориентированный подход к обучению иностранным языкам.

Учебное пособие содержит аутентичные материалы общего и профессионального характера. Разнообразные задания имеют дискуссионный и творческий характер, направлены на активное усвоение лексики, развитие речевых (устных и письменных) навыков и умений, навыков работы с видео- и аудиоматериалами, что способствует формированию коммуникативной компетенции в речевом повседневном и профессиональном общении.

Пособие состоит из 3 частей и комплекса приложений. Каждая часть включает темы, соответствующие содержанию про-

граммы курса «Английский язык». Комплекс приложений состоит из материалов для самостоятельной аудиторной и внеаудиторной работы; текстов для реферирования и просмотрового чтения; видео и аудио материалов и заданий к ним; банка лексических единиц, как для активного усвоения, так и для формирования исследовательской деятельности; краткого грамматического справочника. Все это направлено на формирование необходимых компетенций будущего специалиста.

Тексты и задания каждой части ориентированы на студентов разного уровня языковой подготовки. Учебный материал подобран таким образом, что преподаватель не ограничен жесткими рамками следования всем заданиям в строгом порядке, а, напротив, имеет возможность выбора заданий, исходя из языковых и личностных особенностей студентов каждой группы.

Данное пособие отличает контекстуальное рассмотрение грамматики и акцент на творческую самостоятельную работу студентов, особенно при выполнении заданий «Internet Research», «Project Activity», «Vocabulary Research». Использование открытых интернет-ресурсов должно стимулировать творческую активность как студентов, так и преподавателя. Ссылки на интернет ресурсы снабжены QR-кодами, что облегчит доступ к информации через мобильные устройства. Все ссылки на момент издания были рабочими.

STUDENT'S PERSONAL PROFILE



Entering a university is an exciting experience in every person's life. They say that university years are the best.

What are the reasons for this? Agree or disagree with the following reasons, giving your arguments. You can add your own reasons.

- being a university student is prestigious;
- it's a completely new life style with living in a dorm, meeting new people, learning new and useful skills, and partying from time to time;
- acquiring a certain specialty is necessary in the modern world;
- you are becoming a more responsible and self-dependent young adult, a more sensible person with the sober views on life.

INTRODUCING YOURSELF

Make a 2–3-minute speech about yourself. You may choose the topic(s) from the list below (A) or use the questions as a guide (B). Also there are some helpful words and phrases (C):

A:

- Meaning/ Origins of your name
- Favourites/ Likes and dislikes
- Friends and family/ Childhood
- Health and fitness /Sports
- Hobbies/ Interests
- Things you have written about / listen to/ have listened to /read/ have read/watch/ have watched
- Routines/ Habits
- Possessions /Buying habits/ Spending habits
- Communities or clubs you belong to
- Previous work/ Studies/ Volunteering

- Hometown/ Places you have lived
- Travelling
- People you have met
- Unusual experiences
- Influences on your life/ ideas
- Big changes in your life
- Personal achievements
- Ambitions/ Goals
- Near future

B:

1. What's your name?
2. How old are you?
3. When is your birthday?
4. Where are you from?
5. What do you do?
6. What are you doing here?
7. Do you like to study?
8. Do you like having a good time? How? Where?
9. What do you think of the university you have entered?
10. Did you choose the university yourself?
11. What are your likes (preferences) and dislikes?
12. What are your habits, hobbies?
13. What are your strong and weak points?
14. What's your family? How well do you get on with the family?
15. Where do you live? How far do you live from university?
16. How do you like relaxing?
17. What clothes do you prefer to wear?
18. What food do you prefer?
19. Do you have any nearest plans? What are they?

C:

Prefer, like, fancy, feel like, can't stand, really good (bad) at, belong to, interested in, don't mind.

Calm, imaginative, confident, kind (to), lazy, nervous, reliable, shy, thoughtful, (im) patient(with), friendly(with), sporty, creative, have a

good sense of humour, messy, a bit absent-minded, ambitious, stubborn, outgoing.

E.g.: I'm interested in sports. I'm into computers. I'm a movie fan. I'm not really good at cooking. I enjoy hanging out with my friends. I'm a bit stubborn. I would like to be more outgoing.

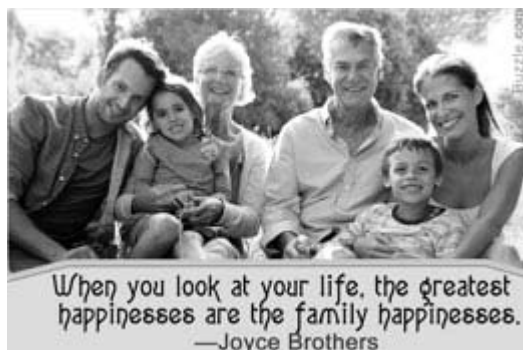
**Get to know your new group-mates
and feel free to ask questions to them!**

Break the ice (get comfortable with everyone)!

Part I

STUDENTS' LIFE: VALUES AND INTERESTS

Unit I. Family – relations, values, problems



“In time of test, family is best!”

Family gives a person a sense of support and security. Your family are the people with whom you can speak freely about your problems, share your joys and sorrows, they will never ignore you. We may say that, a family is an emotional centre of a person's life.

1. LEAD-IN

Read the following quotes, choose those you agree or disagree. Give some arguments. See Speaking Development, File № 1.

1. "Nothing in the world could make human life happier than to greatly increase the number of strong families." – David R. Mace
2. "The strength of a family, like the strength of an army, is in its loyalty to each other." – Mario Puzo (The Family)
3. "A family in harmony will prosper in everything." – Chinese proverb
4. "Family is the most important thing in the world." – Princess Diana
5. "All happy families resemble one another, each unhappy family is unhappy in its own way." – Leo Tolstoy

6. "The family is one of nature's masterpieces." – George Santayana
7. "We have to show leadership in protecting our environment so that we have a future for our children and grandchildren." – Arnold Schwarzenegger
8. "I don't care how poor a man is; if he has family, he's rich." – Dan Wilcox and Thad Mumford
9. "Like all the best families, we have our share of eccentricities, of impetuous and wayward youngsters and of family disagreements." – Elizabeth II
10. "What God is to the world, parents are to their children." – Philo
11. "Bear in mind that the wonderful things you learn in your schools are the work of many generations. All this is put in your hands as your inheritance in order that you may receive it, honor it, add to it, and one day faithfully hand it on to your children." – Albert Einstein
12. "A man can't make a place for himself in the sun if he keeps taking refuge under the family tree." – Helen Keller
13. "Call it a clan, call it a network, call it a tribe, call it a family: Whatever you call it, whoever you are, you need one." – Jane Howard
14. "In every conceivable manner, the family is link to our past, bridge to our future." – Alex Haley
15. "The family is the nucleus of civilization." – Ariel and Will Durant

2. READING

Work in pairs: 1. Read the text and headline the paragraphs.

For better understanding see Vocabulary Bank, File № 1.

2. Answer the questions to the text.

FAMILY RELATIONSHIPS

How could you describe the word "family"? First of all, "family" means a close unit of parents and their children living together. But we shouldn't forget that it is the most complex system of relationships. Family relationships are rarely as easy as we would like, and very often we have to work hard at keeping them peaceful.

When do people usually start a family? This question doesn't have a definite answer. In the 18th, 19th and at the beginning of the

20th century people used to get married at the age of 18 or even 16. If a girl about 23 or more wasn't married, she was said to be an old maid or a spinster. That might have turned out a real tragedy for her family which usually brought up more than three children, because in some cases a successful marriage was the only chance to provide a good life for the daughter and to help her family. Despite the fact that the girl was so young, she was already able to keep the house, take care of her husband and raise children. To feel the time, its culture and customs I advise you to read a wonderful novel or see a breathtaking film "Pride and Prejudice". Though the story takes place at the turn of the 19th century, it retains fascination for modern readers, revealing some problems which may be urgent in the 21st century.

But life's changing as well as people's style of life. Nowadays we have got much more freedom in questions concerning family. It is natural to get married at the age of 20 up to 30; however, some people prefer to make a career first and only after that start a family when they are already in their forties. Moreover, there are many cases when people prefer to live together without being married. There are some reasons for this phenomenon. Firstly, it is difficult to juggle a family life with studies at school or university. But without good education it is practically impossible to find a suitable well-paid steady job. It's a must to get a higher education, but by this moment you are already 22–24 years old. After that you seek for a well-paid job to live independently, which takes about 3–5 years. Now you see why people in the 21st century do not hurry to get married.

There is also another difference between old and modern families. Nowadays it is very unusual to find three generations living under one roof as they used to do in the past. Relatives, as a rule, live separately and don't often meet one another. This fact sharply hurts an older generation. Our parents and grandparents usually suffer from lack of attention and respect from their children and grandchildren, although they try not to show it. They really don't need much, just a telephone call or a visit once a week will make them happy.

There are two basic types of families. *A nuclear family* – a typical family consisting of parents and children. *An extended family* – a family consisting of the nuclear family, and their blood relatives. A single-parent family consists of one parent and children. Nowadays

there are very few people who have never divorced. Today the highest divorce rate in the world has the Maldives Republic. The United States of America take the third place. Russia is at the ninth place.

What are the reasons of great numbers of divorce? Let us name some of the most common and serious ones.

- ***Occurrence of adultery once or throughout the marriage.*** The unfaithful attitude towards a spouse destroys the relationship and leads to a final separation.

- ***Communication breakdown.*** After some time of living under one roof spouses find out that they are absolutely incompatible. Constant clashes, brawls and squabbles cause serious problems. The differences grow as a snowball and can't be already settled by kisses or hugs.

- ***Physical, psychological or emotional abuses.*** When a person taunts, humiliates, hits the children or his spouse, it can't but end with a divorce.

- ***Financial problems.*** It sounds lamentably, but sometimes love alone can't guarantee well-being, whereas money can solve many of your problems. So when a couple lacks it, their relations become more and more complicated, their priorities change and the relationships end.

- ***Boredom.*** A lot of couples get bored of each other after 7 or more years of marriage. Boredom may become the reason of constant quarrels and adultery which inevitably leads to a divorce.

However, it goes without saying, in most cases married couples succeed in solving all the problems and keep living in peace and happiness.

Follow good advice: Spend time with your parents and siblings as much as you can. They are often all you have when times get difficult in your life. Extended family including grandparents can be a big support as well.

(<http://www.buzzle.com/articles/creative-family-tree-ideas.html>)

Questions:

1. How many members are there in your family?
2. At what age did your parents get married?
3. Give your opinion of marriages of the previous centuries.
4. Do you think it is possible for a modern girl of eighteen to start a family?

5. People should not get married unless they are deeply in love, should they?
6. What can be done by both spouses to prevent a divorce?
7. What are the family roles distributed within a family? What is a "woman's place" and what is a "man's place" in the family?
8. Can the birth of children strengthen the family?
9. Do you agree with the statement that unhappy couples with children should stay together until the children are grown?

3. VOCABULARY

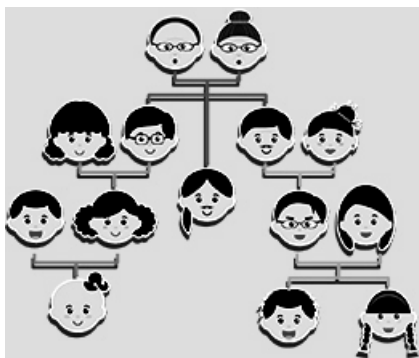
Study the idioms and make up your own sentences with them.

1. "get under someone's skin" = annoy or bother someone
My brother gets under my skin when he enters my room without knocking.
2. "stay-at-home mom" = a mother who doesn't have a job outside the home
My sister finds satisfaction in being a stay-at-home mom.
3. Black sheep of the family (the worst member of the family)
Mary is the black sheep of the family
4. Run in the family (to be a common feature in a particular family, a characteristic that appears in many (or all) members of a family)
My brothers and I have red hair. It runs in the family.
5. Blood is thicker than water (family relations are more important than all other relationships)
This housekeeper looked after him for many years, but he still left all his money to his only son. Blood is thicker than the water, you know.
6. A chip off the old block (someone who is similar in character to their mother or father)
She enjoys joking like her mother does-she's real chip off the old block!

4. READING AND SPEAKING

A Read the text and following some advice in the text draw your own family tree. See Vocabulary Bank, File № 2.

FAMILY TREE



Families have histories and legends, traditions and cultures that are specific to the bloodline. Most of these legends and traditions are manifestation of someone within the family. It is very interesting to know your family tree, the roots and the branches. Who knows, there could be pride facts that you may unravel!

If you decide to use a computer for making a family tree, you can be really innovative. You can provide links to descriptions of family members. You can display high-resolution pictures of the members as a part of the tree. Ready-made templates help you systematize your data onto the family tree. You can opt for various representations of the structure of your family. And you can actually publish the tree online for it to remain there as a reference for generations to come.

Genealogy is a fascinating study. It's kind of like a fairy tale, isn't it? You trace your family backwards and backwards. When one has so many names, you should decide on representing this huge family in a creative manner. Think about some creative family tree ideas, and use them for ideas for various projects yourself.

Creative Ideas for Family Tree

Representing a family can be challenging, especially if you don't have the complete data on your family history available with you. So, the first step to making a good family tree is to have the names of all the family members. If you're missing out on a few names, postpone the project for a while and do a thorough family search. But make sure to get ALL the names. It will serve two purposes. It will avoid blank spaces in the tree and also avoid any sort of conflict within the family. (How could you forget Uncle Trevor? or My God! You didn't put in cousin Frannie's name! You get the idea, I'm sure!) So, the first step is done. Now let's get to some designs.

Software to the Rescue

For those who are tech-savvy, there are various software programs that offer basic computer-generated family tree charts. To get results that are professional looking from the software, you can also opt for add-on programs. These kinds of programs work simultaneously with the new genealogy software, to give you a chart that is eye-catching and unique.

A lot of words that convey a lot of meaning are used when talking about relationships. Sometimes, we just fail to recognize the importance of a family. You could actually change all that with just a family tree.

(from: <http://www.buzzle.com/articles/creative-family-tree-ideas.html>)

B Study Vocabulary Bank, File № 3. Complete the exercises:

1. Organise these words into pairs of opposites and put them in the columns below.

mean clever nice lazy relaxed hard-working tense cheerful
generous unpleasant stupid miserable

Positive	Negative

2. What prefix forms the opposite of each of these words? (You need three different prefixes.)

kind flexible friendly honest reliable sensitive ambitious
pleasant

3. How would you describe the person in each of these descriptions?

1. He never bought me a drink all the time we were together.
2. I have to tell her what to do every minute of the working day. She wouldn't even open a window without someone's permission.
3. He often promises to do things but half the time he forgets.
4. She's always here on time.

5. I don't think he's done any work since he's been here.
6. She finds it difficult to meet people and talk to strangers.
7. He could work in any of the departments, and it doesn't matter to him if he's on his own or part of a team.
8. One of the great things about her is that she is so aware of what other people think or feel.
9. Bob, on the other hand, is the complete opposite. He is always making people angry or upset because he just doesn't consider their feelings.
10. The other thing about Bob is that he really wants to get the supervisor's job and then become boss for the whole department.

4. What nouns can be formed from these adjectives? Use a dictionary to help you.

Example: kind - kindness

punctual	optimistic	reliable	lazy
confident	generous	ambitious	stupid
sensitive	strong	flexible	shy

5. Choose three words which describe you. Is there one quality you do not have but would like to have? What, in your opinion, is the worst quality? If possible, compare your answers with a friend.

C In pairs, present your family trees to each other, describing members of your family (their age, occupation, appearance and features of character). See Vocabulary Bank, File № 3.

Here is a model text you can follow.

Janet, my elder sister, is 21. She does not *look like* me because she *has blue eyes* and fair hair, while my *eyes are brown* and I am *dark-haired*. She has a lovely *fresh complexion* and a beautiful mouth, with full lips, but she is *short-sighted*, so she wears contact lenses. She is *quite tall* and has a beautiful, *slim figure*. She is very *smart* and *looks really attractive* when she dresses up to go out with her boyfriend.

Janet *is studying* languages *at* the university and in summer she *works for* a travel agency. She can *speak French* and Spanish and

now she is learning modern Greek. She always *goes abroad for her holidays*. Janet loves being with a crowd of people and when she goes abroad she *talks to the local people* and *makes friends easily*. She loves *going to parties* and *eating out*. She *is good at games* but never *takes them seriously* so when we *play tennis* I always win because she doesn't care if she wins or loses.

Janet is very *witty* and *amusing* and she always *cheers me up* when I am depressed because she has a wonderful *sense of humour*. I think her only fault is that she is *restless* and *easily gets bored*. She is an *intelligent, hard-working person* but she doesn't get good marks at university because she doesn't study enough. I admire her because she is so bright and energetic but I think it is a good thing that her boyfriend is a *calm, tolerant* man and when she is *impatient* with him, he just laughs and then she laughs, too.

5. LISTENING AND SPEAKING

a) What's your position in a family? Are you the oldest child, the middle child, the youngest child or an only child?

b) Listen to a psychologist talking about influence your position in the family has on your personality. Complete the chart by writing four more adjectives of personality in each column.

Oldest children	Middle children	Youngest children	Only children
<i>Self-confident</i>	<i>Independent</i>	<i>Charming</i>	<i>Spoilt</i>

c) Look at the completed chart above. In pairs, say

- if you think it is true for you - if not, why not?
- if you think it is true for your brothers and sisters or your friends?

6. LANGUAGE DEVELOPMENT

For questions 1–15, read the text below and decide which answer A, B, C or D best fits each space. There is an example at the beginning (0).

Example:

0 A ever B once C only D never

FAMILY HISTORY¹

In an age when technology is developing faster than (0) A... before, many people are being (1) ... to the idea of looking back into the past. One way they can do this is by investigating their own family history. They can try to (2) ... out more about where their families came from and what they did. This is now a fast-growing hobby, especially in countries with a (3) ... short history, like Australia and the United States.

It is (4) ... thing to spend some time (5) ... through a book on family history and to take the (6) ... to investigate your own family's past. It is (7) ... another to carry out the research work successfully. It is easy to set about it in a disorganized way and (8) ... yourself many problems which could have been (9) ... with a little forward planning.

If your own family stories tell you that you are (10) ... with a famous character, whether hero or criminal, do not let this idea take over your research. Just (11) ... it as an interesting possibility. A simply system (12) ... collecting and storing your information will be adequate to start with; a more complex one may only get in your (13) The most important thing, though, is to (14) ... started. Who knows what you (15) ... find?

1	A pushed	B attracted	C fetched	D brought
2	A lay	B make	C put	D find
3	A fairly	B greatly	C mostly	D widely
4	A a	B one	C no	D some

¹ Cambridge Practice Tests for First Certificate 2 by Paul Carne, Louise Hashemi and Barbara Thomas. Cambridge University Press.

5	A seeing	B moving	C going	D living
6	A idea	B plan	C purpose	D decision
7	A quite	B just	C more	D even
8	A produce	B cause	C build	D create
9	A missed	B lost	C avoided	D escaped
10	A connected	B joined	C attached	D related
11	A treat	B control	C contact	D direct
12	A with	B by	C for	D through
13	A track	B path	C road	D way
14	A get	B appear	C be	D feel
15	A should	B might	C ought	D must

7. SPEAKING

A *Read the text below and think of how important family photographs for you.*

Share your ideas with your partner.

B *Bring your family photos to the class and in pairs describe them.*

FAMILY PHOTOGRAPHS

A family portrait is a valuable picture – it is fun to look at now, it's great for relatives far away, and it will bring back memories in the years to come. Families change quickly as children grow, so don't wait, whatever your position in the family – photograph your family group now, and plan to make this a regular event. Your family album isn't really complete without this record of all of you together.

Getting the whole of the family together isn't always easy, and so you will need to plan ahead to be sure everyone has time to pose. A relaxed, friendly feeling is what makes the picture, and you can't expect people to relax if they're in a hurry to do something else. Make your plans when you're all together and in a cheerful, friendly mood – says, during a meal and set a time convenient for everyone.

A family portrait takes some technical planning, too. Make up your mind in advance which room you want to use; choose your camera position and check the lighting. If you want to be in the picture, make sure you know exactly how the self-timer on your camera operates. With most cameras, you'll have from eight to twelve seconds to get into the picture after you press the shutter button.

8. READING AND SPEAKING

A Read the text and complete the tasks after the text.

FAMILY AND ITS PROBLEMS

There is no such thing as the perfect family. Every family is unique with its own combination of strengths and weaknesses. Sometimes families get overwhelmed by what seems like an endless list of challenges when it comes to juggling work, school and individual family members' needs. And sometimes families are blindsided by a huge upheaval such as a mental or physical illness, a job loss, or an addiction. Even "joyful" events such as a wedding, a job promotion, or a financial windfall can disrupt a family with unexpected consequences.

From the child's point of view the following problems can be serious: separation; divorce; an alcoholic or drug addicted parent; an abused parent; an abusive parent; parents who nag or criticize; parents who are overprotective; a parent's remarriage. Young people can also get really worried when they are getting bullied at school or their parents are always arguing and they don't have anyone to talk to.

Every family has problems once in a while. But sometimes family conflict becomes too much. Often, this is because of trouble understanding each other, changing expectations as you grow older or lack of trust among family members. It might also be because your parents see things differently from you since they are from a different generation, and may be also raised in a different country.

When conflicts happen you might find yourself changing your behaviour or reacting differently than usual. This is one way of showing your family that you dislike a situation. It may even make you feel like you have more control over the situation. But in the end,

your reactions might confuse your family and distract them from the real problems. Try having a straight-forward talk with your family about how you are feeling.

For example, if you rebel against your overprotective parents by staying out late on a Saturday night, they will get upset and ground you. Instead, if you talked to them about why you want to go out, where you are going, who you'll be with and how they can reach you, they may learn to trust you to stay out later.

Sometimes talking to your family is too difficult. Some family problems can sometimes put you in a very upsetting or even dangerous situation. Talk to an adult you trust like a teacher, mentor, friend's parent or school counselor about your family issues.

B Ask 6 questions to the text?

C Decide if these statements true or false according to the text, if false, correct them.

1) Pleasant events such as career or financial success cannot cause any serious family problems. 2) Parents' arguments do not usually make young family members worry. 3) Parents and children often view things differently but that doesn't cause a lot of problems. 4) A straight-forward talk with your family does not help solve any problems. 5) Teenagers should discuss their family problems only with their peers.

D Find words for the definitions. What word-combinations are used in the text?

1) The state of not having smth or not having enough of smth; 2) All the people who were born at about the same time; 3) A big change that causes a lot of confusion, worry and problems; 4) Easy to do or to understand, not complicated. 5) To keep asking people to do smth, to irritate continuously.

E Give English equivalents to the phrases: прямолинейный разговор; чрезмерно опекающие родители; взрослый; другое поколение; продвижение по службе; разрушить семью; печальная ситуация; недостаток доверия; быть предметом запугивания в школе; неожиданные последствия.

9. DISCUSSION

USEFUL TIPS

Here are some useful things you can do if you are having family/relationship problems:

Talk – communication is the key and often the first step to finding solutions. Be calm and honest about your concerns when discussing your problems with a loved one.

Accept your differences – it can help avoid unnecessary conflict if you can recognise that people have different ideas, opinions and beliefs and you may not always be in agreement.

Have fun together – even when things are tough, it's important to find the time to have fun with your loved ones.

Make a plan – it can help reduce stress and give common goals to work towards. For example if you are having financial problems it can help to create a budget.

Get help – you may not always be able to solve your problems yourself so you may need some external help.

Discuss in groups: 1. Do you think these tips can really help the family to solve their problems?

2. Think of the other ways of overcoming family difficulties?

3. Can you recall any real life examples when people managed to cope with their family problems?

See Speaking Development, File № 1.

10. RENDERING

Render the text in English and discuss the relations between the mother and the son.

1. What might have ruined the relations?

2. How much should parents love their children, where is the golden mean?

3. Who should be more forgiving, a parent or a child?

СЕРДЦЕ МАТЕРИ²

Я знала ее давно, когда ее сын был еще маленьким мальчиком. Все самое лучшее она отдавала ему, своему единственному сыну, в котором души не чаяла. Она работала в прачечной и мыла у кого-то полы, по тем временам получая хорошие деньги, которые с радостью тратила на любимого сына. Все самое лучшее, самое красивое, самое вкусненькое.

Она с гордостью вела его за руку, любясь им, ведь он был лучше всех детей на улице. Возвращаясь домой с прогулки, малыш нес воздушные шары, леденец на палочке и рассказывал, что он катался на каруселях, смотрел кино и ел много мороженого. Кто еще во дворе мог похвастаться этим? Любовь матери была настолько сильной, что она за этой любовью ничего не видела. Не видела и не хотела видеть, что он грубит старшим, не хотела верить, что он сломал лапу дворовой собаке, оправдывала его, когда жаловались соседские старушки и учителя. Ей всегда казалось, что за такую любовь, которую она ему дала, он не может быть плохим.

Шло время, годы неумолимо делали свое дело, и здоровье, которое было потрачено на воспитание сына, стало ухудшаться. Она никогда не болела, а точнее не позволяла себе болеть, но однажды нестерпимая боль пронзила грудь и резко отдалась под лопаткой. Она стояла, облокотившись на стол, не в состоянии дойти до дивана. Мысли лихорадочно носились в голове, и в первый раз она испугалась, испугалась не за себя, а за сына, как же он без нее? Кое-как добравшись до дивана, она устало опустилась на него и задумалась.

Она увидела отчетливо, как в кино: вот, она идет из роддома и несет маленькое существо, пахнущее молоком. Детский сад, школа, институт. Как быстро пролетело время...

Сын открыл дверь, и она по привычке собралась разогреть ему поесть, но какая-то сила как будто приковала ее к дивану и не давала встать.

² Мухортов Д.С. My Everyday English: учебное пособие по английскому языку повседневного общения. 2-е изд. М.: Книжный дом «ЛИБРОКОМ», 2013. С. 33.

– Ты чего лежишь? Не видишь, я пришел? Есть хочу!

– Я сейчас сынок, сейчас.

Она собрала все силы и встала...

Скорая помощь неслась по заснеженному городу, пугая своей сиреной прохожих. Он сидел напротив матери, и в первый раз за всю жизнь увидел ее так близко. Лицо было измощено морщинами, но все еще красивое, на нем был отпечаток усталости, руки натружены, с синими выступающими жилами. За долгие годы он никогда не думал о ней, и только сейчас, когда она лежала такая тихая и беспомощная, он осознал весь свой эгоизм по отношению к ней. Он никогда не видел, когда она ложилась и когда вставала. Он всегда ел горячее, когда бы ни пришел. Белые рубашки были накрахмалены и отутюжены.

Слезы текли по его щекам, и он в первый раз подумал о ней, о маме.

Вспомнил, что, даже поздравляя ее с Днем рождения, Новым годом, Днем 8 марта, покупал цветы подешевле, а подарок – лишь бы что-то подарить. Но бывало и так, что забывал о ее Дне рождения и вспоминал лишь тогда, когда подходил к квартире, от которой вкусно пахло пирогами. Если бы можно было что-то изменить...

...Машина остановилась у подъезда больницы. Вывезли каталку, мать переложили на нее и увезли. Ему не разрешили идти за ней, и он, как когда-то в детстве, растерялся и заплакал. Может он, наконец-то, пожалел мать и опять пожалел себя,

Врачи отказались делать операцию, было слишком поздно. Мать долго уговаривала врачей, чтобы пропустили сына, ведь ей так много надо ему сказать. Видя ее упорство, они согласились, да и оставалось то ей...

Седой профессор вышел из палаты и коротко бросил: «Три минуты, молодой человек». Сын робко переступил порог и увидел маму. На белой простыне она казалась совсем безжизненной. Страх сковал его тело, и он робко подошел к кровати. Он опустился на колени и взял ее руку, тихо произнес: «Мама, я пришел, прости меня». Он не мог больше произнести ни слова, слезы душили его, и он поцеловал руку матери.

Ресницы матери вздрогнули, и она с трудом открыла глаза. Перед ней на коленях стоял ее мальчик, любимый сын, которому

она посвятила всю свою жизнь. Сын смотрел на нее с такой любовью, как никогда, и она улыбнулась ему и прошептала: «Я рада, что ты все-таки умеешь любить», и с улыбкой, полной счастья, ушла...

Words and phrases from the story:

души не чаять – be dotty about sb/love sb. wholeheartedly/adore sb/worship sb.

любимый сын – beloved son

вести его за руку – lead him by the hand

возвращаться домой с прогулки – come back home from an outing

кататься на каруселях – ride on a merry-go-round/ carousel

грубить старшим – be rude to seniors/elders; insult (sb.)

воспитание сына – the son's upbringing?

роддом – maternity hospital

натруженные руки – work-weary hands

накрахмалить и отутюжить белье и рубашки – starch and iron linen and shirts

пожалеть мать – feel sorry for/ take pity on one's mother

11. LANGUAGE DEVELOPMENT

A Match the questions with the answers.

B Try to answer these questions in your own way.

1. What role does family play in each person's life?	A. If you want to have a happy family, try to be patient and understanding
2. Do you have your own family traditions?	B. Many marriages these days end in divorce. Besides, one parent may die. In both cases a child is brought up by one parent only. The state helps such families providing financial support.

<p>3. What will you ask your British friend about his/her family?</p>	<p>C. Do you get on well with your family members? Do you talk over your problems together? Is there sometimes misunderstanding between you and your parents? Do you share your domestic chores?</p>
<p>4. What can you advise people who want to have a close and happy family?</p>	<p>D. Every person needs a place where he can feel happy and quiet. One needs people with whom he could speak freely about his problems, share his joys and his sorrows. Such place and such people are his family. We may say that a family is an emotional centre of a person's life. Your family will never ignore you; you will always get support and understanding from your family, no matter whether you are good or bad. You can't live without your family's help and respect, but you should remember that your family members also need your attention and support.</p>
<p>5. Why are there many one-parent families? How does the state help such families?</p>	<p>E. Yes, we do. We have our own family traditions, but not many.</p>
<p>6. Are there any things that you do with your parents together?</p>	<p>F. If I were you, I would spend more time with my family, love, respect and obey my parents and grandparents.</p>

7. What can you advise people who want to have a good relationship with their parents and grandparents?	G. Is your family big or small? Have you got a sister or a brother? Do you get on well with your sister/brother?
8. Nowadays an average family has one child. From your point of view, how many children should there be in a family?	H. Yes, there are. We usually celebrate family holidays together and it's a tradition in our family to have dinner together and chat about the events of the day.
9. What will you ask your British friend about his/her family relationships?	I. I suppose, there should be two or three children in a family. You will never feel lonely having a sister or a brother.

12. PROJECT ACTIVITY

Choose a topic for your report and prepare a presentation. Present your report to the class. Follow the tips given in Speaking Development, File № 2.

- Generation gap
- Sibling Rivalry
- Difficulties the young family faces
- Family of the past and present

13. QUESTIONS ON THE TOPIC

1. What is the meaning of the word "family"? What does family mean to you? Is it a significant part of your life?
2. How large is your family? How would you describe your family members (What do they do? What are they like? What do they look like? What do they like to do?) At what age did your parents get

married (some facts from your family history)? What are the main family values for you? Do you have any family traditions?

3. Why has family life changed so much over the last forty years? What are the main problems that family faces today? Are there any ways to solve these problems?
4. Do you agree that spending time at home with your family is more important than high salary and a challenging job? What would you choose - high salary or more time with your family?
5. How much should parents love their children, where is the golden mean? Who should be more forgiving, a parent or a child?

Unit II. Friends. Interests. Hobbies

1. LEAD-IN

Comment on the following sayings about friends. See Speaking Development, File № 1.

1. "True happiness consists not in the multitude of friends, but in their worth and choice." (Samuel Johnston)
2. "A friend is one who knows us, but loves us anyway." (Jerome Cummings)
3. "A friend is a gift you give yourself." (Robert Louis Stevenson)
4. "Only your real friends tell you when your face is dirty." (Sicilian proverb)
5. "Your friend is the man who knows all about you, and still likes you." (Elbert Hubbard)
6. "My friends are my estate." (Emily Dickinson)

2. LANGUAGE DEVELOPMENT

A Look at the two groups of adjectives below. Those in group A are favourable, those in group B are unfavourable. Pair the adjectives in group A with their opposites in group B.

A	B
1 amusing	a stupid
2 calm	b disagreeable
3 cheerful	c boring

4 clever	d humourless
5 even-tempered	e hypocritical
6 generous	f lazy
7 good-looking	g mean
8 hard-working	h miserable
9 pleasant	i moody
10 polite	j narrow-minded
11 self-confident	k plain
12 sensitive	l quick-tempered
13 sincere	m rude
14 tolerant	n shy
15 witty	o unfeeling

B Which five adjectives in group A do you think are the most important in a friend? Which five adjectives in group B describe people you dislike most?

C Write an essay of 100–150 words describing your friend. For more words to be used, see Vocabulary Bank, File № 3.

D Complete the text with the phrases below.

FRIENDSHIP³

argue *close friend* colleague get on very well known
have a lot in common keep in touch lost touch met

I have a *close friend* called Irene. I've (1) _____ her for about 15 years now. We (2) _____ at work – she was a (3) _____ of mine at the company where I used to work, and we used to have our coffee breaks at the same time. We (4) _____ although we don't (5) _____ – we have quite different interests. We don't work together any more, and when I changed jobs we (6) _____ for a couple of years. But now we (7) _____ regularly. We phone each other once a week, and we see

³ New English File. Intermediate. By Clive Oxenden, Christina Latham-Koenig and Paul Seligson. Oxford University Press. 2005. P. 60.

each other about twice a month. We don't often (8) _____, only sometimes about films as we have completely different tastes!

E Think of a close friend of yours. In pairs, ask and answer the questions.

How long have you known him / her?

Where did you meet?

Why do you get on well?

What do you have in common?

Do you ever argue? What about?

How often do you see each other?

How do you keep in touch the rest of the time?

Have you ever lost touch? Why? When?

Do you think you'll stay friends?

3. REFRESH YOUR GRAMMAR

Revise 'usually' and 'used to' in English. See Grammar File № 6 (Present Simple, Past Simple).

4. READING

A Have you ever tried to get in touch with an old friend? Why? Did you succeed?

B Read about the Friends Reunited website and answer the questions.

1. What's it for?

2. How do you use it?

FRIENDS REUNITED?

Friends Reunited is a website which helps you to find old friends and lets you read what people you've lost touch with are doing now.

How does it work?

New visitors find their old schools or workplaces, which are usually listed on the web page, and then add their names to the list of

people already registered. They can also post photos and information about what they are doing now. When they want to contact another member, *Friends Reunited* forwards the message. Communication takes place without revealing personal email addresses or contact details until members decide they want to do so.

C Now read about two people who registered on the website. Who did they want to meet? Why?

D Complete the texts with the sentences below.

he used to go to	I used to know
I used to live	used to come
	we used to go out

Carol, 52, from Cornwall

When I was 15 I fell in love with a boy called Robert. I was at school, a girls' convent and he was in his first year at university. (1) _____ in secret because my parents didn't like him at all – Robert was a long-haired hippy who played the guitar. But after a year I broke up with him because my parents were making my life impossible. Robert was very angry, and we completely lost touch. But I always wondered what had happened to him, and when I heard about *Friends Reunited* I decided to try to get in touch again. I'm divorced now, and I thought 'you never know...'. I remembered the name of the school that (2) _____ and I went to their web page on *Friends Reunited* and there was his name! I sent him an email and two days later I got a reply...

Alex, 24, from Manchester

(3) _____ in Manchester but when I was eighteen my family moved south to London. Two years ago I had a really bad motorbike accident I was in a coma for two weeks and in hospital for six months. I completely lost my memory, not just of the crash itself but also of my past. While I was in hospital, my family (4) _____ every day and play me my favourite music and show me photos. Little by little I began to remember who I was and who my family were. But I still couldn't remember anything about the rest of my life. Then my sister had the idea of contacting *Friends Reunited*. Through them she contacted

people (5) _____ in Manchester when I was at school. She arranged a reunion in a pub near Piccadilly Station and I travelled to Manchester in search of my past.

E *Look at the two texts again. When do we use used to? How do you make negatives and questions? See Grammar File № 6.*

5. LISTENING

A *Track 2.1*

Read the text about Carol again. Now listen to her talking about what happened next. Was the meeting a success?

B *Listen again and answer questions 1-5.*

1. Why was Carol surprised at Robert's choice of job?
2. What happened when she got to the restaurant?
3. What do Carol and Robert look like now?
4. What did Carol realize as soon as she saw Robert?
5. How had Robert changed?

C *Track 2.2*

Read the text about Alex again. Now listen to him talking about what happened next. Was the meeting a success?

D *Listen again and answer questions 6-10.*

6. Did he recognize any of the people?
7. How did he feel?
8. What did they talk to him about?
9. What did he remember when he saw the photos?
10. Who is Anna? What does he think of her now?

6. SPEAKING

In pairs, tell each other about three of the following. Give as much information as you can.

- A friend you used to have but who you've lost touch with
- A teacher at school you used to hate

- A sport you used to play but don't any more
- A singer you used to listen to a lot and who you still like
- A device you used to use a lot but don't any more
- A piece of software you used to like

7. READING

A How often do you see your really good friends? Would you like to see them more often? Do you spend much time with people you don't really like?

B Now read the magazine article. What does 'edit your friends' mean?

DO YOU NEED TO 'EDIT YOUR FRIENDS'?

Is your mobile phone directory full of phone numbers of people you don't really want to talk to? Do you go out with people from work or university more often than with your real friends? Do you say yes to invitations because you think you should, not because you want to? If you answered yes to at least two of these questions, then perhaps it's time to 'edit your friends'?

Nowadays people tend to spend a lot of time socializing with colleagues at work or classmates at university. The result is that we don't have enough time to see our real, close friends. As our lives get busier it becomes more important to spend the little free time we have with people we really want to see, people we love and who really love us.

Who are the friends you need to edit? A few years ago I read a book about how to get rid of unnecessary possessions. It said you should ask yourself about each thing you have: Is it useful? Do I really like it? Do I feel better every time I look at it? If the answer is no to any one of those questions, you should throw it away. Maybe we should ask similar questions about our friends.

What kind of friends will you probably need to edit? Sometimes it's an old friend. Somebody who you used to have a lot in common with, but who, when you meet now, you have very little or nothing to

say to. Or it might be a new friend who you get on quite well with, but who is taking up too much of your time. Next time one of these people calls you and suggests a meeting, think, 'Do I really want to see this person?' and if the answer is no, say no, and make an excuse. That way you'll have more time to spend with your real friends.

C *Now read the article again. Choose the best summary of each paragraph: a, b, or c.*

1. People need to 'edit' their friends if ...
 - a they have moved to a different area.
 - b all their friends are people from work or school.
 - c they are spending a lot of time with people who are not real friends.
2. People today are often very busy, so...
 - a they should see their friends less.
 - b they should think carefully about how they spend their free time.
 - c they should try to make friends with people from work / school.
3. The writer says that ...
 - a we should ask ourselves who our real friends are.
 - b most of our friends are unnecessary.
 - c we shouldn't treat friends as possessions.
4. The kind of friends we probably need to 'edit' are...
 - a old friends who don't talk very much.
 - b new friends who talk too much.
 - c friends that you don't really want to see any more.

D *Read the article again. Underline five new words or phrases you want to learn.*

Do you agree with the article? Do you need to 'edit your friends'?

8. LANGUAGE DEVELOPMENT

A *Look at these expressions with get. Match them with their meanings A-G.*

1. a book about how to **get rid of** unnecessary objects □
2. ... a new friend who you **get on with** quite well □

3. ... I sort of relaxed and felt I was **getting to know** them again □
4. ... I **got to** the pub late □
5. ... I decided to try to **get in touch** □
6. ... and two days later I **got** a reply □
7. ... I **got** really excited □

- A make contact with somebody
- B be friendly with
- C become
- D know somebody (or something) little by little
- E receive
- F throw away
- G arrive at / in

B Complete the questions with get or an expression with get. Ask and answer the questions in pairs.

1. Who do you _____ best in your family?
2. Does it take you long to _____ new people?
3. Do you _____ more emails from friends than work-related ones?
4. How do you normally _____ with your friends (by text, phone, etc.)?
5. How often do you _____ things (e.g. clothes) that you don't use any more?

9. LISTENING AND SPEAKING

A Track 2.3

Read sentences A-F below. Now listen to three people talking.

Which sentences are they talking about? Write 1, 2, or 3 next to the sentence.

- A Men keep their friends longer than women.
- B It's more difficult to keep in touch with friends than it used to be.
- C It's impossible to stay 'good friends' with an ex-partner.
- D You should never criticize your friend's partner.
- E You should never lend money to a friend.
- F You can only have two or three close friends.

B *Listen again. Do they agree or disagree with the statements? What are their reasons? What examples do they give?*

C *Now look at the sentences and tick (✓) the ones you agree with and cross (X) the ones you don't agree with. Think about your reasons.*

D *In groups, compare opinions. Try to give real examples from your own experience or of people you know. Use the phrases below to help you.*

Useful language

Agreeing

I agree with that.

I think that's true.

Disagreeing

I don't agree with that (at all).

I don't think that's true.

Giving examples

For example, I have a friend who...

10. INTERNET RESEARCH

Go to <http://friendship.about.com/od/Keeping-Friendships-Strong/tp/Signs-Of-Healthy-Friendships.htm> and read the text WHAT IS A GOOD FRIEND: SIGNS OF STRONG FRIENDSHIPS by Cherie Burbach



Do you agree with the ideas provided?

Choose two or three ideas presented in the paper and develop them giving real examples from your own experience or of people you know.

11. GRAMMAR IN CONTEXT

A *Read the text paying attention to the modal verbs. Why are they used in the text? See Grammar File № 9 (Modal Verbs).*

IS IT NORMAL NOT TO HAVE A BEST FRIEND?

By Cherie Burbach, About.com Guide

Not everyone has a best friend in life, and that's perfectly okay. Some people have several close friends that give them love and support, but none of which they would consider a *best* friend. The key is not thinking in terms of "normal," because no two friendships are alike. Some people enjoy having different friends they can go out with or talk to, while others prefer to have one person they can continually count on to be with.

It's a matter of personal preference and even, perhaps, luck. After all, you might welcome a best friend into your life, but if you simply haven't found a person that would fit the bill you cannot force a friendship into the "best" status. You should never push or hurry a friendship, so if you haven't connected with someone on a best friend level, you need to wait to see if one of the relationships currently in your life has the potential to be a BFF. If there is one, then you need to nurture and develop the friendship to see if your good friend can turn into a best friend. If you don't have anyone that comes close to being a best friend, and it is something you desire, you need to meet more friends in general to see who you might connect with on that deeper level.

However, if you are happy to have close friends (with no one that would be considered your best friend), that's okay too. The key to knowing what is right is how you feel about it personally. If you feel lacking because you don't have a best friend, work on meeting more people and you'll increase your chances of finding someone. If you feel good about the friendships in your life (no matter the number), you don't need to worry about not having a best friend.

B *Find all -ing forms in the text, put them down, practice the expressions with them using your own examples. E.g.: having –*

enjoy having – I enjoy having different gadgets. See Grammar File № 12 (Gerund).

C *Answer the question put in the title. Do you agree with the author? In pairs, share your opinion with each other.*

12. READING AND SPEAKING

*Have you heard of Aristotle's division of friendship categories? Read the text **FRIENDSHIP IN THE MODERN WORLD**. See Additional Texts File № 1 and say what Aristotle's ideas you agree or disagree with.*

13. INTERNET RESEARCH

Search for the key words “social media” to have a general understanding of the concept.

14. READING AND SPEAKING

A *Read and translate the text. Answer the questions given after the text.*

SOCIAL NETWORKING: A MODERN PHENOMENON?

In recent years, the Internet has developed into a essential tool for almost everyone; there is a website or blog for nearly everything, and companies have realized how powerful an online presence can be for their products and services.

Aside from how the Web is revolutionizing the world of business, personal use of computers is also prominent. One aspect of the Internet that is enjoying immense popularity is the social network.

Social networking sites ensure that people are connected at all times. Social networks are changing the way people interact. Facebook is the most popular social network and people use it to find old friends, keep in touch with current ones, arrange parties and share news, articles and links. It is also used by musicians and comedians to connect with their fans, while organizations use it to spread their message and generate public support.

Twitter, further, has emerged from almost nowhere to become one of the most-used social networking sites in the world. Originally met with some disapproval by people who were unsure how to use it, it has become a favourite for celebrities who use it to keep in touch with fans.

Questions:

1. Why has the Internet become an essential tool for people?
2. What is social networking? How has it changed the process of interaction between people?
3. What popular social networks do you know? What can people do with a help of Facebook and Twitter?
4. Can social networking be considered as a modern hobby for many people? Do you use any social networking services? Which ones and what for? How much time do you usually spend for social networking?

B In pairs, share your experience of using social media:

What social media do you use?

How do you use social media?

What do you like/dislike about using them?

15. INTERNET RESEARCH

Go to <http://www.usatoday.com/story/tech/columnist/2016/02/04/facebook-anniversary-future-friendships/79765832/> and read the article WHY THERE'S NOTHING FAKE ABOUT FACEBOOK FRIENDSHIP by Alia E. Dastagir (USA TODAY February 7, 2016)



What are the main points provided? Do you agree with the author? Support your idea.

16. INTERNET RESEARCH

Search for the key words “toxic friendship” and make a list of toxic friendship signs and report back to the class.

Have you ever had toxic friends? Share your examples if you like.

17. LISTENING

Track 2.4

Listen to the song. Have you ever heard it? What is it about?

Follow the script in Studying File № 2 and give your Russian version of the lyrics.

18. SPEAKING

A *Do you agree that friends are those who have common interests and love spending time together? Why/Why not? To expand the topic, see Studying File № 1.*

B *Work in groups. Imagine that these are photos from your photo album. Choose one photo and present it to your friends.*



In your talk remember to speak about:

- where and when the photo was taken
- what/who is in the photo

- what is happening
- why you keep the photo in your album
- why you decided to show the picture to your friends

19. LISTENING

Track 2.5

You will hear five people being interviewed about how they spend their free time. For Speakers 1-5, choose from the list of activities A-F. Use the letters only once. There is one extra letter which you do not need to use⁴.

Speaker 1
Speaker 2
Speaker 3
Speaker 4
Speaker 5

A singing
B walking
C acting
D swimming
E drawing
F cooking

20. READING

Read the text and choose top 5 ways you would like to try during your vacation. Share your ideas.

We thought and thought to come up with unique ways to spend your vacation.

Take up a job. Many companies hire teenagers during the summer season. Most companies face a crunch with existing staff vacationing with their families. Hence, for those with career aspirations,

⁴ Cambridge Practice Tests for First Certificate 2. Student's book by Paul Carne, Louise Hashemi, Barbara Thomas . Cambridge University Press. Test 3. Part 3.

get a job. Who's hiring? Almost everyone. Right from software firms, advertising agencies, newspapers, corporates, hospitals, hotels... the list is endless.

Take up a hobby. Ya, right. So you've heard this before. But this time around, make it happen. First of all choose your hobby well. Let it be something you've been dying to do all your life. First of all, remember to list all the things you've wanted to do. Then identify the hobby that best fits your time, budget, and location.

Learn. Learn a new skill this vacation. Let it be a crash course on enhancing communication skills – gaining this has become very essential for everyone. It could be a short typing course to enhance your typing skills. Or it could be something more tangible like a short-term computer language. It could be a new language that you could learn. Something that will help you build your technical skills.

Learn a new game. It's never too late to learn a new game. If you are hooked on to Playstation, move on to something else – like the Age of Empires. Games are a huge industry and who knows, one of you might get into the industry because of your sheer passion for the game. And then, if you are the brick and mortar type, run to your local toy shop and buy something for yourself. I know a lot of young people out there who love to construct and deconstruct toys/games.

Go adventure-hunting. If you are the adventurous type, the world has suddenly opened up for you. Hunt for new places where you can vacation and conduct adventure sports. It could be a local dam that very few have heard of or it could be the mountain patch that becomes accessible during this season. Explore, talk, and reach out. Go bird-watching, join nature trails, or go back-packing. Remember to do all this based on expert guidance.

Nurture a pet. It could be something as no-high-maintenance like a cat. If you have the will and the time, you could get yourself a dog, a rabbit, a duck, birds. Talk to someone who knows about animals to make your choice.

Do some volunteering. For the socially conscious, may be volunteering with some local social agency might be a good idea. There are many voluntary groups that regularly require youngsters to contribute to their effort.

Create a study group. The best way to share knowledge is to create study groups. These are groups of like-minded people, who come together to share thoughts and ideas. Some of the greatest thoughts in history have come due to interactions within the young, like you. Decide on a place and a time. Choose a topic to discuss and run it to ground.

Learn a new tool. There are some who learn when they create. Learn a new tool... it could be working with a pickaxe or learning to use the scissors well. You could even learn tools like the tools from different ethnicities.

Connect with the spiritual you. This could be a good time to de-stress yourself, especially if the next year is going to be an academically challenging year. Learn some yoga, some meditation technique. Choose whatever you think suits your personality the best.

21. PROJECT ACTIVITY

Choose an unusual hobby for your report and prepare a presentation. Present your report to the class. Follow the tips given in Speaking Development, File № 2.

22. QUESTIONS ON THE TOPIC

1. What is a good friend? What should he/she do?
2. How important are friends to you? Do you prefer to have a big or a small group of friends?
3. Who is your best friend? (What does he/she look like? What is he/she like? What does he/she like? What is your friend's hobby? Have you got a lot in common?)
4. Is it normal not to have a best friend? Is it normal not to have friends?
5. What is social networking? Have social media changed friendship? In what way?
6. Do you think it is possible to make good friends using social media? Why/Why not?
7. How do you spend your free time? What is your hobby?

Unit III. Travelling across cultures



1. LEAD-IN

Comment on the following proverbs and sayings about travelling:

1. "The real voyage of discovery consists not in seeking new landscapes, but in having new eyes." (Marcel Proust)
2. "Travel brings power and love back into your life. (Rumi)
3. "All that is gold does not glitter, not all those who wander are lost." (J.R.R. Tolkien)
4. You get educated by traveling. (Solange Knowles)
5. Travel makes one modest, you see what a tiny place you occupy in the world. (Gustave Flaubert)
6. Travelling is almost like talking with men of other centuries (Rene Descartes)

2. SPEAKING

A Go to Studying File № 3 and practice the words and expressions. Tell about your last travel using the vocabulary.

B Pair work. Study Grammar File № 6 (Past Simple), write questions about a wonderful holiday and answer the questions.

C Ask your partner about his or her holiday and fill in the table.

Questions	You	Your partner
Where		
How to get		
Who with		
When		
Where (to stay)		
How long		
Activities		
Sightseeing		
Costs		

Example:

A: Where did you go?

B: I went to Hawaii.

A: Did you go there alone?

B: No, I went there with two friends.

D Now tell the class about your partner's holiday.

3. LANGUAGE DEVELOPMENT

A In groups, ask the following questions:

- What countries have you been to?
- Who lives there? What language is spoken there?

See Vocabulary Bank, File № 4.

B Using the vocabulary, answer these questions⁵:

1. Write down three countries where the first language is English.
2. What language is spoken in Brazil?
3. What are people from Holland called?
4. Write down three languages spoken in Switzerland.
5. What language is spoken in Saudi Arabia?
6. What nationality are people from Sweden?

⁵ Vocabulary in Use. Pre-Intermediate and Intermediate by Stuart Redman. Cambridge University Press. Unit 41.

7. What language is spoken in Mexico?
8. What are people from Egypt called?
9. What is the first language in Israel?
10. Where do people speak Mandarin?

C Complete these sentences with the name of the people from the country on the right.

Examples: I've worked a lot with Germans

I've spent a lot of time with the French

1. We do a lot of business with
2. are usually hard-working.
3. I have always foundvery friendly.
4. People often say that are reserved.
5. are very organised.
6. I met a lot of on my trip to Athens.

Germany
France
Japan
Israel
Brazil
Britain
Switzerland
Greece

MEANS OF TRANSPORT



4. VOCABULARY

A Look at the following and say which are used in the air, on land, and in/on water⁶.

Submarine, hang-glider, aeroplane, car, ship, helicopter, hot-air balloon, motorcycle, coach, raft, canoe, ferry, bicycle, lorry, hovercraft, train, bus, taxi

⁶ Enterprise 4. Intermediate. Coursebook by Virginia Evans, Jenny Dooley. Express Publishing. 1997. P. 147.

B Match the above nouns with the following verbs.

steer – drive – ride – fly – paddle

C Circle the odd word out.

A aeroplane: seatbelt, wing, deckchair, cockpit

B car: windscreen, boot, brake, anchor

C bicycle: pedal, saddle, exhaust pipe, chain

D train: buffet car, track, handlebars, luggage rack

E ship: deck, bonnet, bridge, cabin

D Decide which of the following words are connected with:

a) planes, b) ships, c) trains and d) buses. Some words can be used more than once.

locomotive, mast, runway, harbour, driver, flight attendant, carriage, life-jackets, dashboard, platform, co-pilot, engine room, radar, boarding pass, purser, number plate, wagon, horn, level crossing, compartment, rear view mirror

5. LISTENING

Track 3. 1

Read these announcements and guess the missing words from the lists above. Then, listen to the track and fill in the gaps.

Where would you hear each announcement? Finally, close your books and say as many words as you can remember related to each announcement.

A

“Good afternoon ladies and gentlemen. This is your purser speaking. On behalf of our 1) _____ and crew I would like to welcome you all 2) _____ the M.S. Jubilee. We wish you a pleasant and comfortable 3) _____. As passengers on the 4) _____ can see, we are now lifting the anchor and shall be leaving the 5) _____ immediately. Passengers are reminded, for security reasons, that at 17.30 we shall be holding a life saving drill. Your 6) _____ can be found in the bottom of your wardrobes. The number of your muster station is on the back of your 7) _____ door.”

B

“On behalf of the 1)_____welcome aboard TWA flight 801 from New York to Los Angeles. As we prepare for 2)_____we would like to remind you to place any hand luggage in the overhead 3)_____. Make sure your seat is in the upright position and please fasten your 4)_____. Before our departure members of the crew will demonstrate the aircraft’s safety 5)_____ and procedures. When our cruising altitude has been reached, the crew will serve refreshments and a light snack. We wish you a pleasant 6)_____.”

C

“1)_____three for all passengers travelling to Rugby, Stafford and Crewe. Those with 2)_____for Manchester and the North should change at Crewe 3)_____. First class compartments are situated in the first two 4)_____. A buffet car is available for those wishing to buy refreshments during the journey.”

6. SPEAKING

A *Look at the pictures showing different means of transport and read the list of adjectives below. Then make sentences comparing different means of transport. See Grammar File № 5 (Degrees of comparison).*



Use the following expressions:

more ... than, not as ... as, less ... than, as ... as, the most/least...

environmentally friendly, fast, comfortable, safe, economical, stressful, reliable, expensive, convenient, etc.

B What are main advantages and disadvantages of different forms of travelling?

Advantages:

- cheap, quick, convenient, etc.
- fresh sea air, beautiful scenery, more comfortable than cars and trains, etc.
- beautiful scenery, one of the safest ways to travel, easy to plan, possibility to travel overnight and long distances, etc.
- takes you door to door, easy with luggage, can travel wherever and whenever you want, etc.

Disadvantages:

- cramped, difficult to get to airports, expensive, etc.
- can feel seasick, slow, etc.
- noisy, frequent delays, poor catering, etc.
- traffic jams, tiring for drivers, slow for long distances, accidents, etc.

7. INTERNET RESEARCH



Choose any weird and extraordinary way of travelling we have/ will have in future and present your report to your fellow-students.

8. SPEAKING

Think about the whole experience of travelling and answer these questions. If possible, discuss your answers with someone else.

1. What is the most interesting part, and what is the most boring part about travelling?
2. Where do you often have delays, and why?
3. Is there any part that frightens or worries you?
4. What do you usually do during the journey?
5. Do you always eat the food they offer you?
6. Is there one thing which would improve travelling and make the experience more interesting?

9. REFRESH YOUR GRAMMAR

Revise Present Continuous for future. See Grammar File № 6 and do the task:

Pair work

A Choose a country you would like to visit on holiday. See Studying File № 4.

B Write questions about plans for holiday and answer your questions.

C Ask your partner about his or her plans for holiday and fill in the table.

Plans for holiday	You	Partner
Where to go		
How to get		
Who with		
When to go		
Where to stay		
How long		
What to do		
What to see		
How much to spend		

Example:

A: Where are you going to spend your holiday?

B: I'm going to Hawaii.

A: How are you going to get there?

B: I'm going there by plane.

D Now tell the class about your partner's plans for holiday.

10. READING AND SPEAKING

FASCINATING FESTIVALS

A Read the texts about three festivals. In pairs ask and answer about the festivals:

- Where is it?
- When is it?
- What do people do during the festivals?

1. THE TOMATINA FESTIVAL



Spain's La Tomatina is one of the hottest festivals the world has to offer. Not only does it feature ham and greased poles, it also finishes off with a city-wide tomato fight.

- La Tomatina is celebrated on the last Wednesday in August in the small town of Bunol in eastern Spain.

- La Tomatina participants are recommended to wear goggles to protect their eyes from the acid in the tomatoes.

- La Tomatina safety regulations require that tomatoes are squished before being thrown so they don't hurt when they impact.

- A cannon is fired to signal the beginning and end of the tomato-throwing.
- Firefighters use water cannons to wash down the streets after the festival.
- Men and women often separate into warring factions during the tomato throwing.

2. CARNEVALE D'IVREA



Every year in late February, residents of Ivrea take part in a carnival tradition which has been dubbed the “Battle of the Oranges” – and with good reason; for three consecutive days of the Carnevale d’Ivrea, they use oranges as weapons in a citrus-scented war in the city center.

The carnival is actually quite organized. The citizens of Ivrea divide into nine teams, and they attack each other. Some of them are mounted in high carriages towering over the crowd, meant to represent the duke's guards, and others toss oranges from street level. The teams in carriages all wear large helmets and other protective gear, and the citizens on the ground wear protective gear by no helmets. All participants in the battle are in costumes. The oranges are fresh, firm, and are hurled with speed and accuracy, and can hurt their intended targets. For visitors who just want to watch without getting pelted, wearing a red cap will let the fruit flingers know that you're just a spectator. However, anyone is welcome to join in the chaos by volunteering to join one of the teams.

If you're a brave soul who wants to experience one of the greatest, albeit messiest, vacations you've ever enjoyed, then you need to head to Ivrea in February for a memorable fruit-flinging festival!

3. SONGKRAN FESTIVAL



Songkran festival is a 3-day Holiday and is a Thai's way of celebrating New Year. The date is usually being celebrated on April 13 – April 15. Based on tradition, Songkran is about family and religious worship.

As part of the event, families conduct reunions, offer prayers and food to the monks, visit Buddhist monasteries and clean off just every junk in their houses believing that these would bring good luck for the remaining months of the year. Also, during the event, younger individuals pour water with exotic perfume in the palms of elders and Buddha images to ask for blessing.

Like other cultures, Thailand is also rich in so many beliefs and symbolisms. The water as part of the event symbolizes “cleansing” or “rejuvenating”. Of course, who would want to get wet in the middle of the streets for no good reason? The truth is that, natives throw water to others to wash all the misfortunes and struggles in the previous year as well as to refresh everything for the brand new year.

B Look through the texts again and express your opinion about them. Which festival would you like to go to?

11. REFRESH YOUR GRAMMAR

Read this extract from a hotel information brochure. Put the verbs in brackets into the simple present active or passive. The first one has been done for you.

See Grammar File № 7 (Passive).

The Hindu festival of Thaipusam is one of Malaysia's most famous and colourful festivals, and ceremonies 1 *are held* (hold) in temples all over the country in honour of the Hindu god Subramaniam.

The devotees* who 2 _____ (want) to take part in the festival 3 _____ (eat) special food for several weeks before Thaipusam so that their bodies will be prepared. When the day 4 _____ (arrive), they go into a temple, where special chants 5 _____ (sing) by a priest. The devotees go into a trance, and the priest 6 _____ (push) long metal rods through their cheeks, nose, or tongue.

Sometimes hooks 7 _____ (attach) to their backs, and they 8 _____ (pull) a kind of cart, which 9 _____ (call) a *kavadi*, along the street. At other temples, fire-walking ceremonies 10 _____ (organize), and the devotees 11 _____ (walk) several metres over red hot coal. Perhaps the most astonishing thing about these ceremonies is that the devotees 12 _____ (not/harm) in any way. There is no blood, and the cuts 13 _____ (heal) very quickly.

Thaipusam 14 _____ (take) place early in the year. One of the best places to see the ceremonies is at the Batu Caves, which 15 _____ (situated) only a few miles from Kuala Lumpur. Transport to the caves can 16 _____ (arrange) by the hotel.

**devotees – people who take part in the ceremony*

12. SPEAKING

Group work. Think of three famous festivals in your country and present the information about them to your foreign friends.

FOOD AND COOKING

13. READING AND SPEAKING

A *Study the information about food and cooking given in Studying File № 5 and write 100-150 words about your eating habits (what, where, how)*

B *What kind of food or dishes do you associate with these countries?*

The United States China France Italy Japan Mexico

C *Read the interviews with Alice and Jacqueline. Match the questions (1-6) with their answers (A-F)⁷.*

1. Is food a pleasure for you?
2. What do you normally eat in a typical day?
3. Do you ever cook?
4. Do you ever eat 'unhealthy' food? How do you feel about it?
5. Are you trying to cut down on anything at the moment?
6. Are people's diets in your country getting better or worse?

FOOD: FUEL OR PLEASURE?

THE UNITED STATES

Alice Freeman is a lawyer from San Francisco.

A ☐ I think people are trying to improve their diets, but they are doing it the wrong way by following diets like the Atkins diet. Personally, I don't think it's very healthy to cut out entire groups of foods like carbohydrates.

B ☐ Not very often. I don't have the time or talent to cook full meals. I usually heat up a frozen meal or order a takeaway.

C ☐ Sometimes I get fast food for lunch, I have to admit that I love French fries. I feel terrible about it afterwards, but I don't do it very often.

⁷ New English File. Intermediate. By Clive Oxenden, Christina Latham-Koenig and Paul Seligson. Oxford University Press. 2005. P.4

D □ I usually have a bowl of cereal or toast for breakfast. For lunch I eat at a restaurant near my office. I prefer Japanese or Indian food. I usually eat rice with fish and vegetables, soup or sushi. I don't eat meat, but I eat a lot of fish. In the evening, I just have something light at home.

E □ I am trying to cut down on the amount of fat I eat. I'm also trying to eat more wholemeal bread.

F □ Not really. I enjoy certain kinds of food, but most meals are just fuel to keep me going through the day.

FRANCE

Jacqueline Fabre is an IT consultant from Lyons.

A □ Yes, I cook every evening for my family. I often make soup or traditional French dishes like 'boeuf bourguignon', which is a kind of beef and red wine stew, and then we have cheese and salad. It may seem a lot but we don't eat big portions. What's important for me is quality, not quantity.

B □ Yes, I'm trying to eat less chocolate.

C □ I think people's diets are getting worse and worse. It's quite strange because we have a lot of information now about how bad fast food is for you. I'm afraid it's a problem in a lot of European countries.

D □ Not at home. I think most of the food I cook is healthy, but occasionally when I eat out I have something unhealthy, but it doesn't worry me.

E □ Yes, definitely. For me good meals with the family make me happy!

F □ I'm quite traditional and I have three main meals a day. For breakfast, I like hot chocolate, and bread and butter with honey or jam. For lunch, I often eat in a restaurant with my colleagues. I usually have vegetables and meat or fish but I love pasta and rice too. In the afternoon, I have fruit with biscuits or a piece of chocolate. In the evening, I have a proper meal with my family.

**D Read the interviews again and answer the questions below.
Write A (Alice), J (Jacqueline), or B (both of them).**

Who...?

1. often eats in restaurants
2. eats quite a lot of sweet things
3. eats ready-prepared food
4. cooks big meals at home
5. enjoys eating
6. feels bad when she eats unhealthily
7. is trying to eat less of something
8. prefers having good food to having a lot of food
9. is negative about eating habits in her country

E Match the underlined words or phrases from the text with the definitions.

1. to have a meal in a restaurant, not at home
2. a sweet food made by bees, which people often eat on bread
3. the quantity you eat of a kind of food during a meal
4. to make cold food hot
5. food you buy from a restaurant to eat at home
6. food from animals or plants used for cooking, e.g. oil, butter, etc.
7. food prepared in a particular way, e.g. sushi, lasagne, etc.
8. made from brown flour
9. a liquid food, often made of vegetables, e.g. tomatoes, onions
10. meat cooked for a long time in liquid, usually with vegetables

**F Which of the two women do you think has the healthier diet?
Why?**

**G Now interview each other with the questions from 1b. How
similar are your eating habits?**

E.g. Is food a pleasure for you? – Yes, definitely, I love eating.

14. LISTENING AND SPEAKING

Track 3.2

Rumiko Yasuda is a magazine editor from Tokyo, Japan.

A Listen to Rumiko answering questions 2-6 from the interviews. Do you think food for her is fuel or pleasure? Why?

B Listen again and answer the questions.

1. What does she usually have in the morning?
2. Where does she usually have lunch and dinner?
3. Why doesn't she often cook?
4. Does she eat or drink anything unhealthy?
5. Is she cutting down on anything at the moment? Why (not)?
6. What's happening to the Japanese diet at the moment?
7. Does she think this is a completely bad thing?

C Look at some of the things Rumiko said. Circle the correct form. Then compare with a partner and say why the other form is wrong. See Grammar File № 6 (Present Simple/Present Continuous).

1. *I don't usually have / I'm not having* breakfast at work.
2. I used to go to fast food restaurants, but now I *prefer / am preferring* eating something healthier.
3. *I am drinking / I drink* a lot of coffee every day.
4. I think Japanese people *get / are getting* fatter.
5. *I like / I'm liking* the fact that there are more different kinds of food and restaurants now.

D Make questions to ask your partner with the present simple or continuous. Ask for more information.

What / usually have for breakfast?

How many cups of coffee / drink a day?

Where / usually have lunch?

How often / eat out a week?

/ prefer eating at home or eating out?

/ need to buy any food today?

/ you hungry? / want something to eat?

/ take any vitamins or food supplements at the moment?

/ try to eat healthily at the moment?

MODERN MANNERS⁸

15. SPEAKING

A Mobile phone questionnaire:

1. What make is your mobile?
2. How long have you had your mobile?
3. Are you thinking of getting another one soon?
4. What ring tone do you have?
5. Do you ever use it 'hands free'?
6. What do you use it for (apart from talking)?
7. Where and when do you normally switch off your mobile?
8. How often do you text?
9. Do you use...?
 - a voice mail – speed dialing
10. Have you ever...?
 - ...lost your mobile
 - ...sent a text to the wrong person
 - ...forgotten to turn your phone off (with embarrassing consequences)



B In pairs, answer the questions.

1. Does it annoy you when people speak loudly on their mobiles?
2. Does this happen a lot in your country?
3. What other things do people do with mobiles that annoy you?

16. LISTENING

Track 3.3

A Listen to five people talking about things that annoy them about mobiles. Match the speakers with what they say.

Who...?

- A says talking on your mobile can be dangerous
B complains about people who are very impatient to use their mobiles

⁸ New English File. Intermediate. By Clive Oxenden, Christina Latham-Koenig and Paul Seligson. Oxford University Press. 2005. P. 36.

- C complains about people using mobiles on social occasions
- D hates having to listen to other people's conversations
- E complains about people who interrupt a conversation to answer the phone

B Match these sentences (1–5) from the dialogues with their meaning (a–e).

1. **You shouldn't** answer the phone if you're talking to a shop assistant.
 2. **You have to** switch off your mobile when you fly.
 3. **You mustn't** use your phone until you get off the plane.
 4. **You don't have to** shout – the other person can hear you.
 5. **You should** talk really quietly if you are in a public place.
- a You don't need to do this. It isn't necessary.
 - b Don't do this. It isn't allowed / permitted.
 - c Do this because it's a rule or the law.
 - d I think it's a bad thing to do this.
 - e I think it's a good thing to do this.

17. READING

A Read the definition of manners. Then look at phrases 1–8. Are these laws (or against the law) or just good / bad manners? Mark M (manners) or L (law).

manners [pl noun] a way of behaving that is considered to be polite in a society or culture

MANNERS OR THE LAW?

1. Play noisy games on a mobile phone in public
2. Send text messages when your car is stopped at traffic lights
3. Switch off your mobile phone on a plane
4. Switch off your mobile phone in class
5. Talk loudly on a mobile on public transport
6. Use a hand-held mobile while driving a car
7. Make very personal calls in public
8. Use your mobile at a petrol station

B Compare with a partner. Then make sentences with...

You should / shouldn't ... (for manners)

You have to / mustn't ... (for the law)

C Read Culture shock and tick (✓) the sentence which says what the article is about.

The English, have very good manners.

The English and Russian idea of good manners is different.

The English are polite but insincere.

The Russians are very rude and unfriendly.

CULTURE SHOCK

Good manners are always good manners. That's what Miranda Ingram, who is English, thought, until she married Alexander, who is Russian.

When I first met Alexander and he said to me, in Russian, '*Nalei mnye chai* – pour me some tea' I got angry and answered, 'Pour it yourself'. Translated into English, without a '*Could you...?*' and a '*please*', it sounded really rude to me. But in Russian it was fine – you don't have to add any polite words.

However, when I took Alexander home to meet my parents in the UK, I had to give him an intensive course in *pleases* and *thank yous* (which he thought were completely unnecessary), and to teach him to say *sorry* even if someone else stepped on his toe, and to smile, smile, smile.

Another thing that Alexander just couldn't understand was why people said things like, 'Would you mind passing me the salt, please?' He said, 'It's only the salt; for goodness sake! What do you say in English if you want a *real* favour?'

He also watched in amazement when, at a dinner party in England, we swallowed some really disgusting food and I said, 'Mmm . . . delicious'. In Russia, people are much more direct. The first time Alexander's mother came to our house for dinner in Moscow, she told me that my soup needed more flavouring. Afterwards when we argued about it my husband said, 'Do you prefer your dinner guests to lie?'

Alexander complained that in England he felt 'like the village idiot' because in Russia if you smile all the time people think that you are mad. In fact, this is exactly what my husband's friends thought of me the first time I went to Russia because I smiled at everyone, and translated every 'please' and 'thank you' from English into Russian!

At home we now have an agreement.

If we're speaking Russian, he can say 'Pour me some tea', and just make a noise like a grunt when I give it to him. But when we're speaking English, he has to add a 'please', a 'thank you', and a smile.

D Read the article again and mark the sentences T (true) or F (false). Correct the wrong sentences.

1. Miranda got angry because her husband asked her to make the tea.
2. Miranda had to teach him to say sorry when something wasn't his fault.
3. Her husband thinks English people are too polite.
4. Alexander wasn't surprised when people said they liked the food at the dinner party.
5. The food was delicious.
6. Miranda didn't mind when her mother-in-law criticized her cooking.
7. Alexander thought his mother was right.
8. In Russia it isn't normal to smile all the time when you speak to someone.
9. His Russian friends thought Miranda was very friendly because she smiled a lot.
10. Alexander never says thank you for his tea when he and Miranda are speaking in Russian.

E Now cover the text. Can you complete the phrases with the missing verbs?

1. _____ on someone's foot or toe (by accident)
2. _____ some wine into a glass or tea into a cup
3. _____ a noise, like a grunt
4. _____ food (so that it goes from your mouth to your stomach)
5. _____ a word from English into Russian

F Do you agree that people in your country behave like that? How do you behave?

18. SPEAKING

GOOD MANNERS? BAD MANNERS? DOES IT MATTER?

A Consider the following situations. In groups, discuss if people do these things in your country. Do you think it's good or bad manners to do these things, or doesn't it matter?

e.g. In my country, we don't kiss people when we meet them for the first time.

Greeting people

- kiss people on both cheeks when you meet them for the first time
- call older people by their first names
- use more formal language when speaking to an older person

In a restaurant

- let your children run around and be noisy
- be very affectionate to your partner
- talk on your mobile

Men and women – a man's role

- pay for a woman on the first date
- wait for a woman to go through the door first
- make sure a woman gets home safely at night

Driving

- always stop at a pedestrian crossing
- hoot at someone who's driving slowly
- drive with the window down and your music playing

Visiting people

- take a present if you're invited to dinner at someone's house
- arrive more than 10 minutes late for a lunch or dinner
- smoke in a house where the owners don't smoke

B *Read the text and say what manners of other nations you have learnt about. See Additional Texts, File № 2*

C *Split up into groups of three or four and describe our nation's manners to a person from a foreign country. What must he know if he wants to visit Russia?*

Revise Modal Verbs, Conditional I to make up correct sentences (Grammar Files № 9, 10).

19. PROJECT ACTIVITY

Choose a country for your report and prepare a presentation. Speak about peculiarities of the chosen culture. Present your report to the class. Follow the plan below and tips given in Speaking Development, File № 2.

1. Manners
2. Festivals and holidays
3. Sights and interesting places
4. Cuisine
5. Reasons for visiting

20. QUESTIONS ON THE TOPIC

1. Do you like travelling? How often do you travel?
2. Where have you been so far? What countries did you like most? Why?
3. Do you like to go sightseeing? What places have you seen?
4. Tell about your wonderful holiday.
5. What places would you like to visit?
6. What are the main advantages and disadvantages of different forms of travelling?
7. What festivals of our country would you offer a foreigner to participate in? Why?
8. Is food a pleasure for you? Do you ever cook? What are your eating habits?
9. What advice can you give to people if they want to visit a different country?

Part II

TRAINING PROFESSIONALS

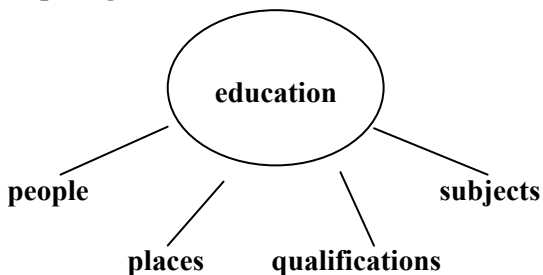
Unit IV. At University

Look at the pictures and tell what is presented.



1. LEAD-IN

Look at the spidergram and add three words to each category. Work in pairs.



2. SPEAKING

Comment on the following sayings about education. See Speaking Development, File № 1.

1. Whatever is good to know is difficult to learn. (Greek proverb)
2. Education is the key to unlock the golden door of freedom. (George Washington Carver)

3. Let us never be betrayed into saying we have finished our education; because that would mean we had stopped growing. (Julia H. Gulliver)
4. Intelligence plus character – that is the goal of true education. (Martin Luther King, Jr.)
5. Education, like the mass of our age's inventions, is after all, only a tool; everything depends upon the workman who uses it (The Simple Life)
6. Instruction ends in the school-room, but education ends only with life. (Frederick W. Robertson)
7. Education is the most powerful weapon which you can use to change the world. (Nelson Mandela)
8. Education is not the filling of a pail, but the lighting of a fire. (William Butler Yeats)

3. LISTENING AND READING

A Track 4.1

Read and listen to the text and answer the questions.

AT UNIVERSITY⁹

My name's Jason. I'm an **undergraduate** student at Newcastle University. I'm studying for a **degree** in Law. It's a three-year **course** and I'm in my second year at the moment. In my first year I had a room **on campus**, but I live **off campus** now. I share a house with five other students.

On most days I attend one or two **lectures**. I take notes, and then at the end of the lecture the **lecturer** usually gives us a reading list and an **assignment**. A week later we have a **seminar** in a small group. One of the students has to read his or her assignment and we talk about it.

At the end of our third year we'll take our **final examinations**, and if I pass them, I'll **graduate**. I'll get my degree certificate at a **graduation ceremony**.

⁹ English for Life. Intermediate. Student's Book by Tom Hutchinson. Oxford University Press.

1. Which university is Jason studying at?
2. What subject is he studying?
3. How many more years will he be at university?
4. Where does he live when he's at university?
5. How many lectures does he normally have?
6. What sort of student is Jason?
7. How long is his degree course?
8. When are seminars held?

B Find bold words and expressions in the text to match these definitions.

1. The lectures and seminars on a subject – *a course*
2. The place where the university buildings are –
3. The exams at the end of a degree course –
4. To finish a degree –
5. A student who is studying for a first degree –
6. A piece of work that students have to do –
7. Someone who teaches at a university –
8. The time when students get their certificates –

C Read the verb + noun collocations and make up your own sentences with them.

Study for a degree in ...

Do an assignment/a course

Attend a lecture/a seminar/a university

Take/sit/pass/fail an exam

Take/make notes

D Compare Jason's life as a student to the life of a student in your country. What differences are there?

4. LANGUAGE DEVELOPMENT

A Read the text and enumerate the differences

AMERICAN ENGLISH VS. BRITISH ENGLISH

There are a number of differences between American and British English. For example, in Britain the verb *graduate* means to finish

a university degree. However, in the US it can mean to finish a school, college, or university course. Similarly, written *assignments* are known as *papers* in the US. American undergraduate students are *college students*, even if they are studying at a university, while in Britain *colleges* are places which prepare students for university or which offer vocational training.

B Read the conversation. Complete the words from 3A.

Zack: Hi, Karim. How are you? Are you at university now?

Karim: Yes, I'm an 1). undergraduate student at Bristol.

Zack: Are you doing Law?

Karim: No, I'm studying for a 2). d _____ in history.

Zack: Is it a three-year 3). c _____?

Karim: That's right. I'm in my third year. I'm taking my 4). f _____
e _____ soon. Then if I pass, I'll 5). g _____!

Zack: So, are there are lots of students flats 6). o _____ c _____?

Karim: Yes, I used to live in one, but I wanted to get away from the university a bit, so I moved 7). o _____ c _____. Now I share a flat with some friends in the town centre.

Zack: Oh, right.

Karim: And what about you?

Zack: I'm still at school. But I'm thinking about 8). d _____ a course in Archaeology.

Karim: That sounds interesting.

Zack: Yeah, but I'm not sure. How much work do you have to do?

Karim: Well, I usually attend one or two 9). l _____ every day. Some of them are a bit boring, but most of them are OK. We have got some really entertaining 10). l _____ who know a lot of interesting things. It can sometimes be hard to take 11). n _____ while they're talking, but it's OK.

Zack: And then how often do you do an 12). a _____?

Karim: About once every two weeks. We do them and then we usually talk about them in a small group at a 13). s _____/

Zack: So will you have to go to a 14). g _____ c _____ after you've passed all your exams?

Karim: Of course! That's when I'll get my 15). d _____ c _____ and that's when I can celebrate!

B *Work with a partner. Describe and guess the words in the conversation:*

Example – A: It's a place where the university buildings are.

B: Campus.

C *Make up your own dialogue and act it out.*

5. READING AND SPEAKING

A *Before reading the text, discuss the questions:*

1. How do you understand a term “higher education”?
2. Why is it necessary for a person to be educated?

B *Read the text and think over the question raised in the title.*

IS HIGHER EDUCATION RIGHT FOR YOU?

Higher education could boost your career prospects and earning potential, while giving you the chance to immerse yourself in a subject that really interests you – and get involved in lots of other activities. Higher education is about taking your education to the next level: learning new things and getting to where you want to be. A higher education qualification could help you take charge of your future by developing skills and confidence and opening up new opportunities – whatever stage of life you're at. Even if no one else you know is thinking about going into higher education, it could still be the right choice for you. There are currently over two million higher education students in the UK. Higher education courses are offered at around 130 universities and higher education colleges, and many further education colleges. With more than 50,000 courses in a variety of academic and work-related subjects – including many that let you combine more than one subject – there's bound to be one that suits you.

<http://studopedia.org/3-33773.html>

C *Practice reading these words, mind the stress, translate them using a dictionary.*

Higher, education, career, boost, earn, potential, immerse, involve, qualification, charge, confidence, currently, bound, suit.

D Consult the English dictionary and explain the meaning of the underlined words.

E Read the text and be ready to retell it to your partner.

After four years of study a university graduate will get the Bachelor's Degree. He can continue his study for two years to take his Master's Degree. The other program provides for a diploma of the specialist after completing five years of study. In either program a student is trained in one specialization. In order to receive a university degree a student writes a graduate paper. The graduates can also continue their education and write dissertations for advanced degrees. After three years of post-graduate research work and the presentation of the dissertation it is possible to obtain the candidate degree. The next stage is the Doctor's Degree which requires much more research work and defending the Doctor's dissertation.

In Russia the process of the integration and reformation of higher education, based on principles of the Bologna Declaration, is under way. For the past several years Russian education has gained high dynamics of development in the course of global and European trends.

F Read the following text and fulfil the tasks on the vocabulary.

Higher education plays an important role in the development of any country. It provides the country with highly-qualified specialists. It trains people to become teachers, engineers, doctors and other professional workers. Today higher educational institutions of Russia include over 700 universities, academies, colleges and other educational institutions.

University gives training on a full-time and part-time basis. Tuition is free only for Russian citizens who successfully pass entrance examinations.

The academic year usually lasts 9 months and has 2 terms or semesters. Students take exams at the end of each semester. If the results of the examinations are good students get state grants. Twice a year students have vacations – two weeks (a fortnight) in winter and two months in summer.

The first- and second-year students get knowledge in fundamental sciences such as mathematics, physics, chemistry and humanities, for example, foreign languages, history, philosophy and others. At the third year students get more advanced knowledge and begin to concentrate on their special interests, that is, their major subjects.

After four years of study students get a Bachelor's degree. Then students can continue their studies and in a year or two of further study they get a Master's degree. After graduating from University they may go on with their study and research and get a higher degree.

Universities have their own students' hostels and some of them have large and excellent sport centres.

G Choose an English equivalent to each Russian word (the first is done for you):

1. более высокого уровня a) advanced b) excellent c) fundamental d) highly-qualified
2. включать a) to evolve b) to include c) to obtain d) to receive
3. обучение a) education b) training c) tuition d) studies
4. длиться a) to last b) to become c) to go d) to pass
5. успешный a) excellent b) highly-qualified c) good d) successful
6. предлагать a) to provide b) to offer c) to train d) to get

H Match the opposites:

- | | |
|------------------------|--------------------------------|
| 1. to enter University | a. to fail an exam |
| 2. part-time | b. special |
| 3. to receive | c. final exams |
| 4. to pass an exam | d. to graduate from University |
| 5. general | e. to give |
| 6. entrance exams | f. full-time |

I Tell about the studying at your university, taking Text F as a model.

J Go to Studying File № 6, complete the tasks and answer the questions given, enlarging your speech on the topic. Vocabulary Bank, File № 5 may be helpful for you.

1. Do you need to pass examinations before you can go to university?

2. Do some students get a grant to study at university?
3. Is the tuition free if you go to university?
4. What courses can students take at universities in your country?
5. How long do they last?
6. What degrees can students get?

6. LANGUAGE DEVELOPMENT

EDUCATION IN DIFFERENT COUNTRIES

A *Look at the pictures and try to guess what countries (Canada, Germany, France, Britain) these universities belong to.*



B *What do you know about higher education in different countries? In groups, share your awareness of the topic. To be sure you are right, go to Additional Texts, File № 3.*

C *Would you like to get education in one of these countries?*

7. DISCUSSION

There are different modes of studying nowadays. The Internet can give you an opportunity to take an on-line course. Discuss in groups the following questions:

1. Would you like to study on-line and get an on-line degree?
2. What is necessary for studying on-line?
3. What are advantages and disadvantages of on-line education?

8. READING

A In pairs, discuss the following:

1. When did you finish school?
2. When did you enter the university? What exams did you pass to enter the university?
3. What do you know about the university you study at? Did anyone advise you to choose this university?

B Read the text and translate it. You may use Vocabulary Bank, File № 6.

OMSK STATE UNIVERSITY

Omsk F. M. Dostoevsky State University usually referred to as Omsk State University (OmSU) was founded in 1974 in the city of Omsk, Russia. The two original departments Humanities and Science and 40 professors have grown to 13 departments and a 900 member faculty. The university has graduated more than 10,000 students and maintains ties with universities in the UK, Germany and the USA.

The university has 13 Faculties: Economics, Law, Philology and Media Communication, History, Mathematics, Computer Sciences, Physics, Chemistry, International Business, Foreign Languages, Culture and Art, Psychology, Social and Humanitarian Science.

The university has ten main buildings. Among these are two nine-story dormitory towers, mostly with two or three students sharing a room. These dormitories possess laundry facilities, pay phones, TV lounges and game rooms. Self-catering rooms provide facilities for communal cooking and dining.

The campus includes photocopy offices, a book store, libraries, learning rooms, computer laboratories, a health center, a playground, two gyms, cafeterias and canteens, a large conference hall.

The library maintains subscriptions to many subject-specific periodicals as well as to daily and weekly newspapers both from Russia and from abroad. Study rooms are included on the library's premises and computer labs in areas designated by each department are widely used by both students and faculty to read for classes and exams, to write articles, essays and coursework, and to rehearse presentations. Networked computers provide free Internet and e-mail access.

The university publishes several newspapers, giving insight into campus life and keeps students informed about social and sports events. Both students and faculty contribute to the papers.

The Publishing Department and the Scientific-Educational Fund (NOF) both publish research and literature. NOF is in charge of organizing preparatory courses and administering tests for high school students and applicants. In addition to full-time students, the university operates continuing education programs in several departments.

C Answer the questions:

1. When was your university founded?
2. What faculties does your university have?
3. What facilities does your university provide students with?

9. INTERNET RESEARCH

Search for the information about universities of other countries (the USA, Britain, Germany) you would like to enter. Present the information to the group using the following plan:

- requirements for enrollment
- degrees you can get
- courses you can take
- cost of studying (courses, grants, scholarship, accommodation, etc)
- facilities the university provides students with

10. LANGUAGE DEVELOPMENT

EFFECTIVE LEARNING: **TIME MANAGEMENT FOR STUDENTS**

Comment on the following sayings about time:

1. You may delay, but time will not. (Benjamin Franklin)
2. It's not enough to be busy, so are the ants. The question is, what are we busy about? (Henry David Thoreau)
3. You're writing the story of your life one moment at a time. (Doc Childre and Howard Martin)

11. WATCHING AND SPEAKING

<http://www.youtube.com/watch?v=VUk6LXRZMMk>



Before Watching

***A How often do you find yourself behind your work at university?
How often do you feel you accomplished nothing of what you
planned?***

While watching

B Watch the video and answer the questions:

Who is the video aimed at?

What stands for RAC?

What is the first step to successful time management?

How many biggest time wasters should you pick up?

How is your work connected to your home life?

What are the ways to change your time wasting habits?

What are the benefits of decluttering?

What is the final tip of the video?

After watching

C Discuss your time spending habits:

Do you know how you spend your time?

Would you follow the tips given in the video? Why?

12. READING AND SPEAKING

A Read the text for the main idea.

TIME MANAGEMENT HORSE RACE

by Dr. Donald E. Wetmore

Every horse race has a first place winner and a runner-up, second place contender. It is not uncommon for the first place horse to earn twice the prize as the second place finisher. Curiously, the number one horse did not have to run twice as fast or go twice as far as the competition to get twice the money. It only had to be a nose ahead of the competition to reap twice the rewards.

Time management, personal productivity, and success in life are a lot like the horse race metaphor. To get twice as much in life, in any of our 7 Vital Areas of Life, health, family, financial, intellectual, professional, social, and spiritual, we do not have to double our effort and input. We only need to get a nose ahead of where we are now to realize significant increases in our results.

Five suggestions, when applied, can help us to get a "nose ahead."

First, plan your day, every day, preferably, the night before. Then, when arriving at work, there is a plan of action to direct us forward. Without a plan, temptations may draw us into unproductive avenues where we may serve the loudest voice that demands our time rather than dealing with the most productive opportunity.

A simple plan consists of a list of all the items we ideally might want to accomplish during the next day. Prioritize those items in order of their importance. (#1 for most important, #2 for next most important, etc.) Begin the most important item first, then go to the next most important item, etc. Typically, it is unlikely that all items on the list will be completed, but that is fine. Success has little to do with how much was left undone at the end of the day but, rather, what was

actually accomplished. We will always leave undone more than we do get done simply because we all have more to do than time permits which says a lot of good things about how good we really are, to have so much entrusted to us by so many!

Second, overplan your day to take advantage of "Parkinson's Law" which teaches that, "a project tends to expand with the time allocated for it." If you give yourself one thing to do during the day, it will likely take all day to complete it. If you give yourself two things to do during the day, you will likely accomplish both. If you give yourself twelve things to do during the day, you may not get all twelve done, but you may complete seven or eight items. Having a lot to do creates a healthy sense of pressure on us to naturally become better time managers. With a lot on our plate, we tend to be more focused, we tend to suffer interruptions less, and we delegate better.

Third, work with a clean desk and work environment. There is truth in the saying, "Out of sight; out of mind." Equally true is the reverse, "In sight; in mind." When items are in our field of vision, we cannot help but be distracted and pulled in the wrong direction where we may "major in the minors", busy all day long, but accomplishing little of significance.

Fourth, restrict meetings. During any typical business day, there are reportedly 17 million meetings being conducted in the United States. A meeting is two or more people getting together to exchange common information. Simple enough, but it is probably one of the top institutional time wasters. Always ask, "Is this meeting necessary?" "Do I contribute anything to this meeting?" "Do I get anything of value from this meeting?" If the answer to these questions is "no," try to find a way out of attending the meeting.

Finally, handle paper just once. Get out of the "shuffling blues" when paper is looked at and relooked at again and again while deadlines slip through the cracks as we get buried under a blizzard of paperwork. As you encounter each new piece of paper, physical paper or emails, if it can be responded to quickly, in a minute or less, respond then and there. If it will require a longer amount of time, schedule it for the time when you will get to it and then put it away.

Common sense ideas. That's what horse sense is, yes? Enjoy the race.

B *Translate the underlined sentences paying attention to the structures given and the adequacy of the variants you provide.*

C *Render the text. Follow the algorithm given in Speaking Development, File № 3.*

D *Discuss the following with your partner (in small groups):*

1. Do you plan your day? Why? Do you list all the items you want to accomplish? How many items does your usual list include?
2. Do you agree with “Parkinson’s Law”? Do you overplan?
3. How could you describe your work environment? Is it productive?
4. How often do you skip meetings if they are useless? What does your decision usually depend on?
5. How do you handle papers?
6. Did you like the article? Did you find the tips worthy? Are you going to follow any of them? Which ones?

13. INTERNET RESEARCH

A *Search for keywords “time management for students”, compile tips for effective learning and present top 5 to the class.*

B *Explore the Internet and provide some information about Brian Tracy*

14. WATCHING

<https://www.youtube.com/watch?v=6jGu9b9ELk0>



*Watch the video **IMPORTANT HABITS OF SUCCESSFUL PEOPLE** by Brian Tracy and answer the questions:*

1. What does your ability to develop good work habits for what you do determine? (Why is it important?)

2. How does Brian describe poor workers? What is the problem with them?
3. What are the foundations of good work habits?
4. What do they require?
5. What is the worst waste of time?
6. What do people experience working on unimportant tasks?
7. What are the benefits from learning how to concentrate?
8. Do you agree with Brian Tracy? Are you going to follow his advice?

15. SPEAKING

Make a brief report on the time management technique you personally use or would like to try.

16. OPTIONAL TASK

INSIDE THE MIND OF A MASTER PROCRASTINATOR /TED Talks

Tim Urban talks about procrastination:

https://www.ted.com/talks/tim_urban_inside_the_mind_of_a_master_procrastinator?language=ru



Watch the video for the whole concept and share your opinion in writing (200–250 words).

17. READING AND SPEAKING

What faculty do you study in? Did anybody advise you to choose this faculty?

What do you know about the faculty you study in?

A Read the text and answer the questions below.

COMPUTER SCIENCES FACULTY

The Faculty of Computer Sciences was established at Omsk State University in 2003 on the basis of Computer Sciences Department which was opened in Physics Faculty in 2001. One of the main tasks of the Computer Sciences Faculty is preparing highly qualified specialists in the area of programming and information technologies.

The faculty prepares specialists in the following directions and specialties: Computer Security, Information Security, Informatics and Computing Systems, Applied Informatics, Mathematics and Computer Sciences, Computing Networks, Sociology. Sociology Department joined our faculty in 2015 and since then sociologists being able to use modern computing methods of sociological research have been trained at the Faculty of Computer Sciences. The faculty contains such special Chairs as the Chair of Cybernetics, The Chair of Computing Systems, the Chair of Computer Technologies and Networks. We study both general-educational and special subjects such as History, Logics, English, Physical Education, Programming languages, Algebra, Discrete Mathematics, Theory of Graphs, Engineering Graphics, Physics, Mathematical Analysis, Computing.

The Faculty offers its students both undergraduate and postgraduate courses. Students of our Faculty can get such undergraduate degrees as a Bachelor's or a specialist's degree. Undergraduate courses last four years or five years and a half. Those who desire to develop and to enhance their CV can choose to take a postgraduate course and get Master's and PhD degrees. Postgraduate courses usually last two or three years.

Highly qualified teachers having candidates' and doctors' degrees work at the faculty. The main directions of scientific research correspond with the type of specialists the faculty trains.

Students of our faculty successfully take prizes in student Olympiads and international competitions. We take an active part in all sport and cultural events of the university and the faculty. Our faculty has a Museum of Computing Hardware that has a large collection of calcu-

lating tools, electrically-driven calculating machines, computers and so on. We have also a tradition to celebrate the Week of Computer Sciences Faculty.

Graduates of our Faculty are demanded as specialists who can work in all areas connected with Information Security in Computing Systems, Information Technologies, Information Collection and Processing. After graduation from the university, students can choose to become different specialists, such as software engineers, computer security specialists, blog administrators, help desk technicians, DTP operators, hardware engineers, network administrators, webmasters and many others. They can easily find employment in government authorities, Department of Internal Affairs, Federal Security Service, banks, different software security companies, large enterprises, and small and medium-sized businesses.

1. When was the faculty of Computer Sciences founded?
2. Who is the Dean of your faculty?
3. What special Chairs does your faculty have?
4. What subjects do you study? What is the easiest (the most difficult) subject for you?
5. What courses and degrees are offered to students of your faculty?
6. What facilities does your faculty offer to students?
7. Is students life active and various? What events can students take part in?
8. What specialists are trained in your faculty?
9. Where can graduates work after graduating in Computer Sciences?
10. What are you going to be after graduating from the university?
Where would you like to work?

B Fill in the table about your faculty and then tell about it to your group-mate.

<i>Date of foundation</i>	
<i>Number of students</i>	
<i>Number of teachers</i>	
<i>Chairs</i>	
<i>Subjects</i>	

<i>Facilities</i>	
<i>Students' life</i>	
<i>Employment opportunities</i>	

C In groups, discuss the following:

1. Do you like your faculty? Do you know any famous people who graduated from the faculty?
2. What do you like best about your faculty?
3. What part of student life in your faculty would you be critical of?
4. If you were a Dean of your faculty (a President of the University), what would you change?

D Read the dialogue. Put down phrases from the dialogue, which can be helpful while speaking about your studying

AN AMERICAN SENIOR HIGH SCHOOL

Quincy Senior High School, Quincy, Illinois

Quincy, Illinois, is a typical midwestern town of about 50,000 inhabitants. It is situated 120 miles north of St. Louis, the nearest big city. Quincy Senior High with a student population of 1,900 is the only public senior high school in the town and it also draws students from the surrounding region.

Q: Alan, which high school do you attend?

A: I attend Quincy Senior High School in Quincy, Illinois. I've been there for four years, and I'm in the twelfth grade.

Q: What are the subjects required in your four years of high school?

A: Well, in my four years of high school I have to complete twenty credits, one in math, three in history, three in English, three and a half in P.E., a half in health and one year of science. And that adds up to twelve credits. The other eight were optional and I could take more of any one subject such as math, history or I could take other subjects such as psychology or computers, or so on.

Q: And what are your subjects now?

A: My present subjects now are math, English, German, computers, business law and one study hour which normally would be P.E. But I run track after school and so therefore I take a study hall instead of P.E. Besides sports there are also several other activities after school such as and band, drama club, theater, chess club, many other clubs such as German club and Spanish club, so forth.

Q: What does your schedule look like?

A: Well, I attend school between 8.00 and 2.20 every day and in that time period I have" six hour-classes and a thirty-minute break for lunch. And between each class I've five-minute breaks.

Q: Can you tell me anything about the tests and examinations at your school?

A: Well, we have many different kinds of tests. Usually we have essay tests, multiple choice tests. Then there are other tests such as quizzes and oral examinations such as book reports and speeches and such.

Q: What about homework?

A: It's different with every teacher. Some teachers like to give lots of homework and others don't give that much. It just depends upon their teaching style.

Q: How do teachers evaluate the performance of students?

A: Well, usually a teacher evaluates the performance by written tests equaling fifty per cent of the grade, oral tests and quizzes as forty per cent and homework as ten per cent. And then usually we write a large paper twice a year called the term paper and that also adds into the grade.

Q: What part of the school life at Quincy would you be critical of?

A: Well, as a whole I like Quincy High a lot and if I could change one thing, it would probably be the breaks between class. I think they are too short. Five minutes isn't enough time to get from one class to the other.

Q: What do you like best about your school?

A: Well, I like Quincy High a lot. I like the teachers the best. They're good teachers and they're easy to get along with. I also like the fact that Quincy is a bigger school because that gives me more opportunities in sports and in the variety of classes that I can take.

E In pairs, make up a dialogue about your studying in the Computer Sciences Faculty. Use the given dialogue as a model.

18. QUESTIONS ON THE TOPIC

1. Why is higher education important for you?
2. Why did you prefer the University of your City?
3. What degrees can you get at university?
4. Is there any difference between studying in Russia and that of other countries? What is it?
5. What does online education mean? Would you like to take an on-line course?
6. What is time management?
7. What tips for effective learning do you know?
8. What facilities are provided at Omsk State University (in the Computer Science Faculty)?
9. What subjects do the students of your faculty study?
10. What degrees can students of your faculty get? What degree are you going to get?
11. What do you like best about your faculty (your university)? What would you be critical of?
12. What specialists can students of your faculty become? What is your future profession?
13. What are you going to do after graduating from the university? Would you like to take a postgraduate course?
14. Where would you like to work? What would you like to do?

Unit V. Employment and Career Opportunities in IT



WHY PEOPLE WORK – JOB MARKET – IDEAL JOB – CAREER OPPORTUNITIES IN IT – HOW TO GET A JOB – FORMAL LETTERS – FIRST INTERVIEW

1. LEAD-IN

A Think of the following:

1. Why do people work? Put down as many reasons for working as you can.
2. Would you work if you had a lot of money?

B In pairs, compare your ideas about the reasons for working.

C Study the construction below and ask questions using the grammar pattern See Grammar File № 10 (Conditional II)

E.g.: ***Would you still work if you won a lot of money?***
Would you keep on working if you didn't need to?
What would you do if you were financially independent?

D Read the text and enumerate the reasons for working the author provides. Are they similar to those you put down?

WHAT ARE YOU WORKING FOR?¹⁰

Have you ever asked yourself what you are working for? If you have ever had time to (1) this taboo question, or put it to others in moments of weakness or confidentiality, you (2) well have heard some or all of the (3) It's the money of course, some say with a smile, as if explaining something to a small child. Or it's the satisfaction of (4) well done, the sense of achievement behind the clinching of an important (5)

I worked as a bus conductor once, and I can't say I (6) the same as I staggered along the swaying gangway trying to (7) out tickets without falling over into someone's lap. It's the company of other people perhaps, but if that is the (8), what about farmers? Is it the conversation in the farmyard that keeps them captivated by the job? Work is power and a sense of status say those (9) have either attained these elusive goals, or feel aggrieved that nobody has yet recognized their leadership (10)

Or we can blame it all on someone else, the family or the taxman. I suspect, and I say this under my (11), that most of us work rather as Mr Micawber lived, hoping for something to (12) up. We'll win the pools, and tell the boss what we really think. We'll scrape together the (13) and open that little shop we always dreamed of, or go (14) the world, or spend more time in the garden. One day we'll get that (15) we deserve, but until then at least we have something to do. And we are so busy doing it that we won't have time to wonder why.

- | | | | |
|---------------|-------------|--------------|---------------|
| 1) A) propose | B) meditate | C) consider | D) launch |
| 2) A) might | B) can | C) will | D) should |
| 3) A) below | B) rest | C) following | D) latter |
| 4) A) a work | B) a job | C) a task | D) an effort |
| 5) A) deal | B) position | C) job | D) engagement |
| 6) A) enjoyed | B) wished | C) hoped | D) felt |
| 7) A) make | B) turn | C) issue | D) give |
| 8) A) one | B) case | C) question | D) former |

¹⁰ Advanced Language Practice by Michael Vince Mac Millan, 1994. p. 192–193.

- | | | | |
|------------------|------------------|-------------|-----------------|
| 9) A) people | B) must | C) who | D) to |
| 10) A) qualities | B) status | C) property | D) requirements |
| 11) A) oath | B) suspicion | C) breath | D) pressure |
| 12) A) move | B) turn | C) ease | D) end |
| 13) A) resources | B) opportunities | C) rest | D) money |
| 14) A) round | B) over | C) into | D) to |
| 15) A) ambition | B) station | C) vocation | D) promotion |

JOB MARKET

2. READING AND SPEAKING

A Think about these questions (The Key Words may help you)¹¹:

1. What job areas have become more important in the last twenty years?
2. What jobs have become less important?
3. What skills and qualities are useful to get a good job nowadays?

Key Words:

Job areas: agriculture, coal mining, information technology, the media, professional services, shipbuilding, steel.

Skills: communication skills, computer skills, driving, language skills, organisational ability, typing.

Qualities: co-operation, creativity, cultural awareness, flexibility, initiative, motivation.

B Study the reading strategies and complete the reading task in C.

Reading Strategies:

- First, read the text to get the general idea. Read each paragraph with a sentence gap again and identify the topic of the paragraph, e.g. gap 1 = dealing with change.
- Read the sentences before and after the gaps. Look for clues about the missing sentences and underline the linking words, e.g. first of all.
- For each gap, find a sentence that matches the topic of the paragraph and links with the sentences before and after it, e.g. gap 1 – d.

¹¹ Learn English with Longman and MN / Moscow News. № 28, July 11–17, 2001. P. 10.

C Follow the stages in the Strategies above to find the correct sentences (a–f) for each gap (1–6) in the text below.

- a) On the other hand, business and professional services, the media, information technology, and the biosciences are doing really well.
- b) Because of this, computer programmers and systems analysts will be in much greater demand.
- c) However, understanding other people, their minds, culture and history will be vital.
- d) First of all, don't panic.
- e) They will also need people who can work co-operatively and get on well in a team.
- f) Because of this, workers will have to be more flexible.

SURVIVAL OF THE FITTEST

‘Between now and the 21st century citizens of the world’s richest and most technologically advanced nations will find it increasingly difficult to keep up with the demand for change. For them, the future will arrive too soon.’ So begins Alvin Toffler’s book *Future Shock*, written back in 1970.

Now people are beginning to pay attention to Toffler’s prediction, because the speed of change is accelerating rapidly. It is sometimes difficult to work out the patterns of change. What should you do? (1) _____. Take a deep breath and try to get a sense of the good things the future has to offer.

You don’t need to be a genius to predict the job areas which will be most affected by technological change. Agriculture, textiles, coal mining and heavy industry are all doing badly. (2) _____.

Without doubt, the number of jobs in information technology will rise dramatically. There are currently over 100 million computers in the world and by 2020 the number will be around one billion. (3) _____.

There are also many other important changes taking place in the workplace. First, the job market is getting more and more competitive and the idea of a job for life’ has already become old-fashioned. (4) _____. According to Mark Hastings of the Institute of Man-

agement, in the future people will organize their working life around a variety of contracts, instead of working just for one company.

Many more people will work for small, dynamic companies which can react quickly to changes in the market. Other people will give up working for a boss and become self-employed. All this means that companies will require people who are flexible and responsible. (5) _____.

Good communication skills will be essential. According to Dr. Laurence Lyons of the Future Work Forum, women will initially have an advantage in this area. James Traeger, of the training agency Menswork, explains that many men will have to be retrained. 'It's not about making men more like women, but helping men to communicate as well.'

We are undoubtedly moving towards a global economy. English will probably remain the international business language, so learning Russian and Chinese is not a priority. (6) _____. Above all, a manager will need to feel comfortable working with people from other cultures and coping with cultural differences.

New technology is the driving force behind the rapidly changing workplace, so don't get left behind. You don't need to become a computer expert, but you must consider improving your computer skills. Work with more than one program in case you have to use them at work, and try to read about all the latest technology.

Undoubtedly, all this new technology is changing the way we work and offering many alternative ways of working. Rather than go into an office, a lot of people are connected to the Internet and now work from home. Working like this may give you the flexibility you want – to live where you want, to continue your studies and to have a lot more free time. That must be good news.

*(From: Opportunities Intermediate. By Michael Harris,
David Mower and Anna Sikorzynska)*

D Read the text again and answer these questions.

- 1) What is 'future shock' and how does it affect people?
- 2) What are the job areas of the future?
- 3) How will careers change?

- 4) How will companies change?
- 5) What skills and personal qualities will people need?
- 6) What personal benefits will the new situation bring?

3. WRITING

Write down some of the predictions made by the journalist. Use your own words where possible.

E.g.: The journalist said that, in the future, sectors like farming, mining and heavy industry would probably lose jobs. She...

To complete the task correctly see Grammar File № 8 (Reported Speech).

4. VOCABULARY

A Make sure you know all the expressions given:

Accelerate rapidly, become old-fashioned, become self-employed, do badly, feel comfortable, find (something) difficult, have an advantage, have free time, pay attention, react quickly, rise dramatically, take a deep breath.

B Complete the sentences below with the correct form of expressions from Exercise A.

- 1) I never really _____ speaking in a foreign language.
- 2) If you look at the unemployment figures, they _____ in the 1980s.
- 3) We get so much homework that I don't _____ to relax.
- 4) I'd like to _____ one day and now work for a boss.
- 5) Rally drives have to _____ to avoid accidents.
- 6) I _____ maths _____. I always _____ in maths exams.

C Match the words from this list:

bored, my own business, an accident, a career, an exam, an excuse, somebody a favour, a good time, home, your homework, married, a mistake, money, promotion, a suggestion, your best

- do** – 1 an exam; 2 _____; 3 _____; 4 _____
make – 5 _____; 6 _____; 7 _____; 8 _____
have – 9 _____; 10 _____; 11 _____; 12 _____
get – 13 _____; 14 _____; 15 _____; 16 _____

EXPAND THE TOPIC

5. READING AND SPEAKING

A *Read the information and write short answers to the questions that follow. Then discuss your ideas with a partner.*

TEMPORARY WORK

Because of global competition, advances in technology, and corporate cost-cutting, the fear of losing a job has become a fact of life for many employees, both blue-collar workers and professionals. Many employees who are laid off from full-time jobs can find only temporary jobs or part-time jobs as a replacement. For example, in the United States in the 1990s, more than two-thirds of new jobs were temporary positions and these temporary workers made up more than 25 percent of the work force. "Tems" generally receive no health insurance, no retirement pensions, no benefits at all aside from an hourly wage. Many economic specialists fear that temporary jobs widen the gap between "haves" and "have-nots" in society.

1. Does temping serve a useful purpose for society? Or, is temping just a way to take advantage of employees?
2. In addition to workers who have lost their full-time jobs, who might find temping helpful?

B *For further details explore and answer the questions:*

https://en.wikipedia.org/wiki/Temporary_work

1. What does "temporary employment" refer to?
2. What other names are there for temporary employees?
3. What are the opposites for full-time workers temporary work white-collar workers
4. What are pros and cons of temporary work?
(See Speaking Development, File № 1)



C *Erin Hatton, an assistant professor of sociology at the State University of New York, Buffalo, analyzes the phenomenon of*

temporary economy in the USA. If you are interested, see Additional Texts File № 4.

6. INTERNET RESEARCH

Search for the key words “jobs of the future” and make a list of 7 top careers for the future: what jobs will be in demand in future. Report back to the class. Revise Grammar File № 13 (Future prediction / is likely to).

IDEAL JOB

7. SPEAKING

A *Choose what you consider the three most important aspects of a good job in the list. Compare your answers in a small group and record how many times each answer was chosen. Present your findings to the class. You may use the expressions below:*

All of us...

Most of us...

One/third of us...

None of us...

DOES A GOOD JOB MEAN TO YOU?

- 1 a high salary
- 2 opportunities for advancement
- 3 good benefits (health, insurance, retirement pension)
- 4 job security
- 5 independence
- 6 travel
- 7 interesting co-workers
- 8 good location

B *Rank these benefits from the most to the least desirable, in your opinion.*

free medical insurance company car luncheon vouchers profit-sharing stock options sport and social facilities pension plan free accommodation Christmas bonus

8. LISTENING

A *A recent survey by Chiumento, a British human resources consultancy, established the ten factors that make people happy at work. With a partner, try to agree which are the two most important and the two least important factors.*¹²

What makes people happy at work?

- Being part of a successful team.
- Doing something rewarding.
- Doing varied work.
- Earning a competitive salary.
- Doing enjoyable work.
- Feeling that you are making a difference.
- Having a good boss or manager.
- Having a good work-life balance.
- Having friendly, supportive colleagues.
- Having your achievements recognized.

Source: *Chiumento's Happiness at Work Index*

B *The survey also established some other factors related to being happy at work. With your partner, discuss whether you think the following were probably true or false according to the research, and say why.*

1. Statistically there are more happy people at work than unhappy people.
2. Employees of bigger companies or organizations are happier than those who work for smaller companies.
3. Men are generally happier than women in their work.
4. Full-time workers are happier than part-time workers.
5. People with higher positions in a company are happier than the people below them.
6. The longer you stay in one job, the happier you become.
7. Workers over 55 are the happiest.

¹² New English File Advanced by Clive Oxenden & Christina Latham-Koenig. Oxford: University Press, 2010. P. 7.

C Track 5.1

Now listen to a radio programme about the survey and check your answers to B. Were you right?

9. INTERNET RESEARCH & SPEAKING

Perk – something extra that an employee receives in addition to regular pay for doing a job.

Corporate culture / company culture / organizational culture – a blend of the values, beliefs, taboos, symbols, rituals and myths all companies develop over time. It's shown in the ways the organization conducts its business, treats its employees, customers, and the wider community, how committed employees are towards collective objectives.

A Explore the Internet and make a list of ten ways of motivating employees at Google. Discuss in small groups.

B What other companies with strong company culture do you know? Which of them would you like to work for?



CAREER OPPORTUNITIES IN IT

10. READING

***Do you want to find out whether Computer Science is for you?
Read the text and answer the questions below.***

COMPUTER SCIENCE

Many people incorrectly believe that a computer science career is all about programming. While it is true that most entry-level jobs after a Bachelor's degree involve programming, most practitioners eventually graduate to other responsibilities such as design, coordination, testing, planning and management. Thus, you typically start with a software engineering job after a Bachelor's and move on (after about 5 years of experience) into higher-level positions. With advanced coursework and a Master's degree, you can work in an area of specialization that uses your advanced coursework. For example, working for an animation outfit such as Disney will require at least 2 to 3 courses in computer graphics. Finally, a PhD degree usually finds its recipient in a research environment such as a research lab, research wing of a large corporation or a university.

The core areas of computer science, including *software engineering, graphics, networks, databases, multimedia* and *artificial intelligence* remain strong today. At the same time, some of the most exciting new work in computer science is occurring at the intersection between computer science and other fields. For example, computer science is changing the way biological research is conducted in fundamental ways, leading to a new field called bioinformatics at the intersection of biology and computer science. Similarly, computer simulations are making it possible to study problems in physics, chemistry, economics and geology that were difficult without computers.

Computer science is unlike many other disciplines in that there is a large intersection with other fields. This makes it possible to "dual-major" in computer science and another field in a meaningful way. For example:

- A dual-major with biology can lead to a career in bioinformatics.

- A dual-major with economics will help solve problems in economics via computer simulation.

- A dual-major with political science or criminal justice can lead to a career in security and information policy.

- A dual-major with fine arts has obvious implications for a career in animation.

- A dual-major with business can lead to some types of IT (Information Technology) careers.

- Computer science is about a unique kind of problem-solving: creatively solving problems using computation. If you are creative, if you like puzzles, if you like problem-solving in other domains (engineering, mathematics, sciences), if you are comfortable with abstract thinking, if you like working at the intersection of multiple disciplines – if any of these apply to you, then Computer Science is for you.

In high-school, consider taking a few computer science courses. One advantage of taking the AP exams is that many schools will transfer these if you have a sufficiently high score. It's important to note this fact: you do NOT have to have any computer science in high-school to take it up in college. Universities not only offer courses for the completely uninitiated but also find that those with high-school computer science do not necessarily fare better. Suggested next steps:

- Enquire about schools with computer science programs and ask questions. Do the programs offer strong programs in computer science? Can you combine computer science with other fields of study?

- It often is best to look at webpages of computer science departments. Explore course offerings and research interests of faculty.

- Keep things in perspective. Do not necessarily let the broad aspects of an education outweigh what a computer science department offers. Depending on your interests and style, you may have much to gain from a small computer science program in a liberal arts college as from an in-depth computer science curriculum from an engineering school.

1. What kinds of careers are open to you with a degree in Computer Science?

2. What are hot topics in Computer Science today?
3. What does it take to be successful in Computer Science?
4. Can Computer Science be combined with other fields of study?
5. What do I do next if I want a career in Computer Science?

11. LANGUAGE DEVELOPMENT

A Complete these definitions with jobs from the box.

*software engineer computer security specialist blog administrator
help desk technician DTP operator hardware engineer network
administrator webmaster*

1. A designs and develops IT devices.
2. A writes computer programs.
3. A edits and deletes posts made by contributors to a blog.
4. A uses page layout software to prepare electronic files for publication.
5. A manages the hardware and software that comprise a network.
6. A works with companies to build secure computer systems.
7. A helps end-users with their computer problems in person, by email or over the phone.

B What qualities and skills are important for you to be successful in your future career? To add more to the list below, see Vocabulary Bank, File № 7.

Logical reasoning, patience and tenacity, being good with figures, imagination, self-discipline, accuracy, leadership skills, efficiency, creativity, drawing skills.

12. LISTENING AND SPEAKING

Track 5.2

Listen to the speaker talking about IT career path (<https://www.english4it.com/>) and answer the questions.

1. What should you keep in mind when determining what field of IT to go into?
2. What do you need to be successful in getting a good job?
3. Do you agree that “everyone who works hard deserves a raise every year”? Why/why not?
4. What should you do to show your IT manager that you are a good performer?
5. Do you agree that “appearance and attitude are very important”? Why/why not?
6. Working with others, “think globally, act locally” – what does it mean?
7. What is passive-aggressive behaviour?

13. INTERNET RESEARCH

Go to http://computingcareers.acm.org/?page_id=8



A Read the information about computing degrees and career paths that Association for Computing Machinery offers and find out:

- categories the work of computer scientists falls into
- what each career path involves

B Decide what career path(s) you are interested in. Give reasons. Share in groups.

HOW TO GET A JOB

14. SPEAKING

In your experience, how do people usually get a job? Number the ways listed below from 1 to 7, with 1 being what you consider to be

the most frequent way to get a job and 7 being the least frequent way. Do this individually. Then discuss the reasons for your answers in a small group.

Family members and friends

Personal contacts

Advertisements in the newspaper

Temporary work in the office or company

Volunteer (unpaid) work in the office or company

Employment agencies

Internet

15. READING

Read the text “WHY YOU NO LONGER FIND GOOD JOBS ON NEWSPAPER ADS” by Timothy Ho. Go to Additional Texts, File 5 and answer the questions:

- Why shouldn’t you search for a good job in newspapers?
- Can you enumerate the means mentioned the employers use for hiring?
- Headhunters: what do they do?
- What are classified ads used for nowadays?
- Do you think if the hiring practice described is similar to the Russian one?

16. INTERNET RESEARCH AND SPEAKING

A Explore the Internet and find top three resources for each category (e.g.: <http://www.indeed.com/q-temporary-jobs.html>

- temporary jobs
- jobs for IT specialists in Russia
- jobs for IT specialists worldwide
- jobs for graduates and students



B Study the job ads: what sort of information do they contain? What are the most appealing ads for you? Which jobs would you apply for? Why? Discuss in small groups.

17. LANGUAGE DEVELOPMENT

A Put the events in Josef Gutkind's career in chronological order¹³.

1	Before graduating, Josef applied for jobs in twenty companies.
	Josef was offered a position as a management trainee.
	He attended a second interview conducted by a panel of managers.
	He found a new job , but was dismissed after arguing with his boss.
	Two years later he was appointed Logistics Manager.
	He was short-listed for a second interview at Wilson Brothers.
	While he was unemployed Josef studied for a master's degree.
	When Wilson's got into difficulties, Josef was made redundant .
	In his early fifties he took a sabbatical to write a book.
	He retired from business and now lives in the south of France.
	Thanks to his enhanced CV, Josef was hired by a firm of consultants.
	The book was a best-seller, and Josef resigned from the firm.

B Use the expressions in bold from the first five sentences above to complete these questions from a job-interview. Change the verb if necessary.

1. Could you tell me exactly why you ... from OQP?
2. Was that before after you ... Quality Manager?
3. After the factory closed, was it difficult to ...?
4. Have you ... jobs in other companies in the area?
5. Would you be available to ... next week?
6. How would you feel if we ... as a product manager?

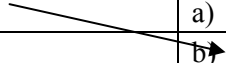
C Now correct these sentences from a biography. The words in bold have been mixes up.

1. Aisha's resume was impressive; she was **dismissed** without even attending a first interview.

¹³ The Business. Intermediate. Student's Book by John Allison with Paul Emmer-son. MacMillan, 2007.

2. At the second interview. Aisha did so well that she was **made redundant** on the spot.
3. A few years later she wrote her first novel while she was **unemployed**; it sold only 400 copies.
4. Aisha was an unconventional journalist who preferred to work at night; after four hours late for a meeting she was **hired**.
5. When the editor in her next job refused to publish a controversial article she had written, Aisha immediately offered **to retire** but the editor refused to let her.
6. However, when the newspaper was taken over by a larger competitor, Aisha was **short-listed**.
7. After difficult times while she was **on sabbatical**, she was family able to live in comfort when her sixth novel became a best-seller.
8. She was 74 when she family decided to **resign** from writing novels.

D *In each set of five below, match a verb on the left with a noun on the right to make collocations for describing skills and qualities.*

1 take	a) a commitment to
2 make	b)  initiative
3 be	c) good working relationships
4 work	d) a good listener
5 build	e) to strict deadlines
6 work	f) a busy workload
7 make	g) ownership
8 manage	h) closely with
9 possess	i) a valuable contribution to
10 take	j) strong negotiating skills

E *Use eight of the collocations in D to complete the sentences below. Change the verb form if necessary.*

1. I enjoy taking initiative, and I keep my promises; when I ... to a project, I always deliver.
2. I have a lot of experience in ... both project development and system analysts teams, and can adapt to their different working styles.

3. I have excellent organizational skills, and I hate being late – so I have no problem with
4. I liaise with government officials: fortunately, I
5. I'm used to ...; I'm good at multitasking, and coping with pressure is no problem.
6. I often ... of projects with multi-million dollar budgets.
7. I believe I can ... any work group.
8. I ..., so I build good working relationship with colleagues.

F Which two answers in E could you give to each of these questions?

1. Are you able to take responsibility?
2. Are you a good communicator?
3. Are you a good time manager?
4. Are you a good team worker?

WRITING FORMAL LETTERS (CV & COVER LETTER)

18. LEAD-IN

A Read the information and translate it into Russian:

People who are interested in a certain job (position) can apply for it by sending in a **letter of application** or **covering letter** (US **cover letter**) and a **curriculum vitae** or **CV** (US **resume**) containing details of their education and experience. A company may also ask an applicant to complete a **standard application form**. The company's Human Resources department will then select the most suitable applications and prepare a **shortlist** of candidates or applicants, who are invited to **attend an interview**.

B Study the CV carefully and decide where each of the following headings should be placed

PERSONAL INFORMATION	HOBBIES AND INTERESTS
REFERENCES	SKILLS
ADDITIONAL SKILLS	PROFESSIONAL EXPERIENCE
EDUCATION	

CURRICULUM VITAE

1 _____

Name: Alice Scott
Address: 52 Hanover Street
Edinburgh EH2 6LM
Scotland
Telephone: 00 34 91 5435201
Email: ally782@scotland.com
Date of birth: 28/07/82

2 _____

2006 Online diploma in web-based technology for business, www.elearnbusiness.com
2005 Course in web design at the Cybernetics College, London: HTML, Java and Macromedia Dreamweaver
2004 Course in computer hardware and networking at the Cybernetics College, London
1999–2004 Degree in Computer Science and Engineering, University of London

3 _____

January 2006 – present Part-time Webmaster at www.keo.es; responsible for updating the site and using Adobe Flash to create animations

May 2005 – December 2006 IT consultant at Media Market, specializing in e-commerce and IT strategies

4 _____

Knowledge of multiple computer platforms (Windows, Mac and Linux); strong database skills (including the popular open source MySQL database); complete understanding of graphics formats and Cascading Style Sheets

5 _____

Social and organizational skills
Good communication skills
English; Arabic (fluent)

- 6 _____ Web surfing, listening to music and travelling
- 7 _____ Bill Denholm, Manager, keo.es
Sam Jakes, Lecturer, Cybernetics College

19. INTERNET RESEARCH

- A** *Search for the keywords “what not to put on your resume”. Compile a class list of the top ten errors.*
- B** *Explore job search engines, find the job you would like to apply for and write a CV. Vocabulary Bank, File № 7 may be helpful for you.*
- C** *Search for the keywords “action verbs for CVs”. Update your CV using dynamic action verbs and phrases.*

COVER LETTER

20. LISTENING AND READING

Track 5.3

- A** *You are going to listen to a short extract from a radio programme called Job Hunt. As you listen answer the questions¹⁴:*
1. Who is the programme aimed at?
 2. Who is the guest speaker? What does she do?
 3. Which of the following topics do they speak about?
 - Writing CVs.
 - Writing cover letters.
 - Attending a job interview.
 - Applying for jobs by e-mail.
 - Filling in application forms.
 4. Where can listeners find out more about the topic?
 5. What signs of upcoming changes did you notice?

¹⁴ Inside Out. Advanced. by Ceri Jones with Russell Stannard. Workbook. Macmillan Heinemann. 2001. Un.12.

B Read the following statements and decide if they are true (T) or false (F).

1. A cover letter can replace a CV.
2. A cover letter is important as it can help you create a good first impression.
3. You should repeat the main points from your CV in the letter.
4. It should be impersonal and factual.
5. E-mail and Internet have made recruitment more efficient.
6. E-mail cover letters are shorter and less formal than traditional cover letters. |

C Listen again to check your answers.

21. VOCABULARY

A Complete the expressions below with the verbs from the box.

add give take do (2) make (x3)

1. _____ a personal touch
2. _____ (someone) a favour
3. _____ your best
4. _____ (someone) a chance
5. _____ a difference
6. _____ an effort
7. _____ a good impression
8. _____ your time

B Complete the following extracts from the radio programme with the expressions in A. Make any changes that are necessary.

1. A cover letter is a short letter of introduction written to accompany your CV. It's often the first contact you have with a potential employer and it's your first chance to _____.
2. ... it can often _____ between getting an interview or having your CV ignored.
3. It _____ to demonstrate your written communication skills.
4. Just as you would _____ to look smart and professional for a job interview,...

5. ... so you should _____ to make as good a first visual impression as possible with your cover letter.
6. It really is important to _____ over it, don't rush it, and make sure to double check it for spelling mistakes ...
7. ... always ask someone to _____ and read through it for you before you send it off. It's always easier for an objective eye to spot mistakes or discrepancies.
8. It is there to interpret the factual information included in your CV and to _____ .

C Follow the script in Studying File № 7 and check your answers.

22. READING

A Read this article about common errors made when writing cover letters.

TOP FIVE COVER LETTER BLUNDERS

There are certain errors that promise to diminish your hard work of writing a cover letter. From typographical mishaps to erroneous employer information, all mistakes have a negative impact on the application process. Serious errors will land your application in the wastebasket. Be forewarned: carefully read your cover letter at least twice. The following list outlines some of the most common cover letter mistakes and, more importantly, suggests ways to correct them.

A _____

Tailor your cover letter to the specific position applied for. Your letter should convey a genuine interest in the position and a long-term pledge to fulfilling its duties. For example, I am very interested in this proof reading position, and I am confident in my ability to make a long term contribution to your company.

B _____

Since cover letters are generally short, every word of every sentence should be directly related to your purpose for writing. Any other information weakens your application. For example, mentioning that

you are a certified gymnastic instructor while applying for the post of civil engineer.

C _____

Do not include your age, weight, height, marital status, race, religion, or any other personal information unless you feel that it directly pertains to the position that you're seeking. For instance, height and weight may be important if you are applying to an athletic team. Similarly, you should list your personal interests and hobbies only if they are directly relevant to the type of job you are seeking. If you are applying to a company that greatly values teamwork, for instance, citing that you organised a community fund-raiser or played on a basketball team will probably be advantageous. When in doubt, however, leave it out.

D _____

Although some applicants might choose the third person ('he' or 'she') as a creative approach to presenting their qualifications, potential employers sometimes find this voice disconcerting. In general, using the first person voice is preferable.

E _____

It is very easy to make mistakes in your letters, particularly when you are writing many in succession. But it is also very easy for a recruitment manager to reject out of hand any cover letter that contains errors, even those that seem minor at first glance. Here are a few common technical mistakes to watch out for when proof reading your letter:

- Misspelling the recruitment manager's name or title in the address, in the greeting, or on the envelope.
- Forgetting to change the name of the organization you're applying to each time it appears in your application, especially in the body of the letter.
- Indicating application for one position and mentioning a different position in the body of the letter.

B Now put the paragraph titles in the correct place in the text.

1. Choice of Pronouns
2. Unrelated Career Goals
3. Typographic Errors

4. Unnecessary Career Information
5. Irrelevant Personal Information

23. WRITING

A Read the letter of application and answer these questions¹⁵.

1. Which job is Sarah Brown applying for?
2. Where did she see the advertisement?
3. How long has she been working as a software engineer?
4. What type of programs has she written?
5. When did she spend three months in Spain?

Dear Mr Scott,

I am writing to apply for the position of Senior Programmer, which was advertised on 28th March in The Times.

I graduated in May 2008 and did a work placement with British Gas as part of my degree. Before taking my present job I worked for a year with NCR. I stayed in this job (1) ... March 2010.

(2) ... the last three years I have been working as a software engineer for Intelligent Software. I have designed four programs in C for commercial use, and (3) ... January I have been writing programs in C++ for use in large retail chains. These have been very successful and we have won several new contracts in the UK and Europe on the strength of my team's success.

Two years (4) ... I spent three months in Spain testing our programs and also made several visits to Italy, so I have a basic knowledge of Spanish and Italian. I now feel ready for more responsibility and more challenging work, and would welcome the opportunity to learn about a new industry.

I enclose my curriculum vitae. I will be available for an interview at any time.

I look forward to hearing from you.

Yours sincerely, Sarah Brown

B Read the letter again and complete it with for, since, ago or until.

¹⁵ Infotech. English for Computer Users. Fourth Edition. Student's Book by Santiago Remacha Esteras. P.133.

C Look for verb forms in the text, meaning the following

- what Sahra has done
- what she has been doing
- what she did

See Grammar File № 6

D Look at the job advertisement for a webmaster at eJupiter Alice Scott is interested in applying. Use her curriculum vitae (5 pages above) to write a letter of application. Follow these steps:

Paragraph one: reason for writing
I am writing to apply for the position of...

Paragraph two: education and training
I graduated in (date)...
I completed a course in...

Paragraph three: work experience
For the past X years I have been...
Since X I have been...

Paragraph four: personal skills
I spent X months in (country)..., so I have knowledge of (foreign languages). I can...

Paragraph five: reasons why you are applying for this job
I now feel ready to ... and would welcome the opportunity to

Paragraph six: closing / availability for interview
I enclose ... I look forward to ... I will be available for an interview...

Vacancies at eJupiter.co.uk

Webmaster

We are seeking a Webmaster for elupiter.co.uk, a company dedicated to e-commerce.

The successful candidate will manage our website.

You will be responsible for making sure the web server runs properly, monitoring the traffic through the site, and designing and updating our web pages.

Experience of using HTML and Java is essential.

Experience of Adobe PDF and Photoshop is an advantage.

The successful candidate will also have knowledge of web editors - MS FrontPage or equivalent.

Send your CV and a covering letter to James Taylor, eJupiter Computers, 37 Oak Street, London SW10 6XY

If you need extra information on writing cover letters see Studying File № 8 or explore the Internet.

FIRST INTERVIEW

24. READING

If the resume and cover letter have impressed the employer he/she will call the applicant in for an interview.

A Look through the text for the main idea. What is the purpose of the article?

A _____

The first interview is usually no longer than 1 hour and can often be much shorter depending on the number of candidates they are meeting and time available. It is usually conducted by one individual, who is not the final decision maker about applicants. The first interview is a way to screen (eliminate) applicants and to come up with a short list of candidates for an opening. At this stage the employer wants to see how the candidate acts in person and interacts with others.

B _____

The first part of the interview is the introductions. After the handshake, there are several minutes of "small talk" (questions like "How's the weather today?", "Did you have any problems finding the office?" etc. are aimed to demonstrate both the ability to interact and the confidence and comfort level of the applicant).

In the second part the interviewer asks different questions relating to the job to decide if the candidate is suitable for the position.

In the third part of the interview the interviewer usually asks if the candidate has any questions for him/her.

Then goes parting when the applicant again expresses his/her interest in the position and thanks the interviewer for his/her time spent.

C _____

A candidate should be dressed in a professional manner, clean and tidy. If you are applying for a job in an international company you must take into account cultural differences. If you have doubts about an article of clothing go for the more conservative choice. Remember, first impressions count! Your greeting handshake should be strong

enough and friendly. Keep eye contact. If you are offered a cup of tea do what feels comfortable. If the employer is drinking coffee or the coffee is already in the room then go ahead. If you're sitting in a chair without a table nearby and are worried about spilling the coffee then decline the offer. If the employer is not drinking or the coffee is not in the room, then decline so as not to put anyone out.

D _____

The questions asked by the interviewer may cover different topics, but the essence of your answers should always be the same – why you are good for the job. Also, your answers should always be more than "yes" or "no." You should always provide a relevant reason for your "yes" or "no" answer. Never be critical/negative of others, previous employers or past work experiences. If you are asked to point out a personal weakness, take the opportunity to tell the interviewer further positive things about you (for example, "Sometimes I become too involved in my work. I have the habit of devoting myself 100% to a project which I am involved.")

E _____

You **SHOULD HAVE QUESTIONS**. Having no questions will be interpreted by the interviewer as a lack of interest or excitement in the job and the company. Your questions may be like "How many employees does the company have?", "What are the future plans/directions of the company?", "What is a typical work day like at the office?" The final question you ask should be what is the company's timeline for filling the position. Then again express your interest in the position and thank the interviewer for his/her time.

F _____

As soon as you return home from the interview, you should write the thank you letter, addressed to the individual with whom you met. If there were two or three interviewers, send a thank you letter to each of them.

G _____

Practice and be prepared. You should never go into an interview "cold". Make a list of anticipated questions and answers. Also you may ask your friends to help you do a practice interview before a big job opportunity.

(taken from Life in Democracy)

B Read the text carefully and ask questions to the paragraphs (A–G) so that each paragraph could be the answer.

25. INTERNET RESEARCH

Remember, after the first interview there may be a series of other interviews of different formats until the final decision is made.

A Search for the keywords “types of interviews”. Compile a class list of the top ten types of job interviews.

B In groups, choose 3 or 5 of them and present to the class.

C Conduct a survey: “3 types of job interviews I would like to try / to avoid”. Report the results. (If comfortable, you may vary the task and discuss the interview types with your partner).

26. LISTENING AND SPEAKING

A Track 5.4¹⁶

Melissa Morrow is telling a friend about her job interview. Listen to the dialogue. What type of interview did she attend? Listen again and make up the direct questions that Melissa was asked about:

- 1) her experience
- 2) current job
- 3) her greatest success
- 4) money
- 5) her car
- 6) her employer
- 7) working for the company

To complete the task revise Grammar File № 8 (Reported Speech). You may follow the script in Studying File № 9 and check your answers.

¹⁶ Focus on Grammar. High Intermediate Coursebook. By Marjorie Fuchs and Margaret Bonner. Pearson, Longman. Third edition. Unit 28.

B Track 5.5

Listen and answer the questions below. Follow the script if necessary (Studying File № 10):

- 1) A few weeks ago, Melissa Morrow had an unusual job interview. What kind of questions was she asked at the beginning?
 - a) _____
 - b) _____
 - c) _____
- 2) What was her reaction?
- 3) What does a stress interview feature? When is this type of the job interview appropriate?
- 4) Does all tough questioning is legitimate? What questions are illegal?
- 5) What is the situation with illegal questions in Russia: what questions are supposed to be illegal? What kind of questions may NOT an interviewer ask in Russia?

C Track 5.6

You are going to hear a job interview that takes place in Canada. First read the checklist. Then listen to the interview and check the topics the interviewer asks about.

Possible Job Interview Topics

Ok To Ask

Name
Address
Work experience
Reason for leaving job
Reason for seeking position
that is open
Salary
Education
Professional organizations
Convictions for crimes
Skills
Job performance
Permission to work in Canada

Not OK to Ask (illegal to ask if not related to the job)

Age
Race
Sex
Religion
National origin
Height or weight
Marital status
Information about spouse
Arrest record
Physical disabilities
Children
Citizenship
English language skill
Financial situation

D Listen again and note the illegal questions the interviewer asks.

1. *How old are you?* _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

E Report the illegal questions to your classmates. Revise Grammar File № 8 (Reported Speech) if necessary.

E.g.: He asked her how old she was.

27. SPEAKING

A Read these questions, which were asked during Claire's interview. Claire asked some of the questions, and the manager, Mr. Stollins, asked others. Decide who asked each question. Then rewrite each question as Indirect Speech.

1. "What type of training is available for the job?"
E.g.: Claire asked what type of training was available for the job.
2. "What kind of experience do you have?"
3. "Is there opportunity for promotion?"
4. "Are you interviewing with other companies?"
5. "What will my responsibilities be?"
6. "How is job performance rewarded?"
7. "What was your starting salary at your last job?"
8. "Did you get along well with your last employer?"
9. "Do you hire many women?"
10. "Why did you apply for this position?"
11. "Have you had any major layoffs in the past few years?"

B Role Play. Job interview.

Here are some options to complete the task:

- you may try a certain type of an interview (invent all the job details you need);

- you may try a job interview with Alice Scott whose CV and cover letter were worked through in FORMAL LETTERS section above
- or you may try something else.



In any case follow the steps:

- decide on the type of the interview
- decide on the job to apply for
- decide on the candidate (prepare CV)
- make a list of questions to ask (for an interviewer) or may be asked (for an interviewee). Try it out!

28. VOCABULARY

Study Vocabulary Bank, File № 8 and make sure you know the words on Career and Employment.

29. QUESTIONS ON THE TOPIC

1. Why do people work? What is a good job for you?
2. What characterizes job market today?
3. What kind of person must you be to be successful in your future career?
4. What kinds of careers are open to you with a degree in Computer Science?
5. What career path are you interested in?
6. What papers must an applicant send to a company? What are their purpose and format?
7. What are the stages of an interview?
8. Have you ever applied for a job? Have you ever been interviewed?
9. What types of interview do you know? Which would you like to attend?

Part III

MAJORING IN COMPUTING

Unit VI. Computers



1. LEAD-IN

Comment on the following sayings about computers. See Speaking Development, File № 1.

1. Man is still the most extraordinary computer of all (John F. Kennedy)
2. Computers have lots of memory but no imagination.
3. Computers don't kill books; people do. (Douglas Rushkoff)
4. Man is a slow, sloppy, and brilliant thinker; computers are fast, accurate, and stupid. (John Pfeiffer)
5. Computers are magnificent tools for the realization of our dreams, but no machine can replace the human spark of spirit, compassion, love, and understanding. (Louis V. Gerstner, Jr.)
6. The question of whether a computer can think is no more interesting than the question of whether a submarine can swim. (Edsger Dijkstra)
7. I think it's fair to say that personal computers have become the most empowering tool we've ever created. They're tools of communication, they're tools of creativity, and they can be shaped by their user. (Bill Gates)

2. READING

A In pairs, discuss these questions:

1. What computer do you use at home, university or work?
2. How often do you use it? What do you use it for?

B Read the text and say if you do all these things with the help of a computer. Make a list of phrases.

THE DIGITAL AGE¹⁷

We are now living in what some people call the digital age, meaning that computers have become an essential part of our lives. Young people who have grown up with PCs and mobile phones are often called the digital generation. Computers help students to perform mathematical operations and improve their maths skills. They are used to access the Internet, to do basic research and to communicate with other students around the world. Teachers use projectors and interactive whiteboards to give presentations and teach sciences, history or language courses. PCs are also used for administrative purposes – schools use word processors to write letters, and databases to keep records of students and teachers. A school website allows teachers to publish exercises for students to complete online. Students can also enroll for courses via the website and parents can download official reports.

Mobiles let you make voice calls, send texts, email people and download logos, ringtones or games. With a built-in camera you can send pictures and make video calls in *face-to-face* mode. New smartphones combine a telephone with web access, video, a games console, an MP3 player, a personal digital assistant (PDA) and a GPS navigation system, all in one.

In banks, computers store information about the money held by each customer and enable staff to access large databases and to carry out financial transactions at high speed. They also control the cash-points, or ATMs (automatic teller machines), which dispense money

¹⁷ Infotech. English for Computer Users. Fourth Edition. Student's Book by Santiago Remacha Esteras. P. 2.

to customers by the use of a PIN-protected card. People use a Chip and PIN card to pay for goods and services. Instead of using a signature to verify payments, customers are asked to enter a four-digit personal identification number (PIN), the same number used at cash-points; this system makes transactions more secure. With online banking, clients can easily pay bills and transfer money from the comfort of their homes.

Airline pilots use computers to help them control the plane. For example, monitors display data about fuel consumption and weather conditions. In airport control towers, computers are used to manage radar systems and regulate air traffic. On the ground, airlines are connected to travel agencies by computer. Travel agents use computers to find out about the availability of flights, prices, times, stopovers and many other details.

3. LANGUAGE DEVELOPMENT

A *Find the words (1–10) in the text above. Can you guess the meaning from context? Are they nouns, verbs, adjectives or adverbs? Write n, v, adj or adv next to each word.*

1. perform _____
2. word processor _____
3. online _____
4. download _____
5. built-in _____
6. digital _____
7. store _____
8. financial _____
9. monitor _____
10. data _____

B *Match the words (1–10) with the correct meanings (a–j).*

- a. keep, save _____
- b. execute, do _____
- c. monetary _____
- d. screen _____

- e. integrated_____
- f. connected to the internet_____
- g. collections of facts or figures_____
- h. describes information that is recorded or broadcast using computers_____
- i. program used for text manipulation_____
- j. copy files from a server to your PC or mobile_____

4. REFRESH YOUR MEMORY

Study the construction below and answer the questions given, using the grammar pattern. See Grammar File № 7 (Passive).

*E.g.: At school computers **were used to** search for information/At university computers **are used to** do on-line courses.
I think in the future, computers **will be used to** do all work.
Even homework **will be done** on the internet and **emailed to** the teacher. Children **will be taught** about computers at a younger and younger age. The younger generation will be more and more skilled in electronics and understanding how they work.*

Questions:

1. How are/were computers used at your university/ school?
2. How do you think computers will be used in the future?

5. SPEAKING

In groups, choose one of the areas (entertainment, schools/universities, Formula 1 cars, factories, industrial processes) and discuss what you can do with computers in this area.

Key Words

Formular 1 cars: design and build the car, test virtual models, control electronic components, monitor engine speed, store (valid) information, display data, analyse and communicate data

Entertainment: download music, burn CDs, play games, take photos, edit photos, make video clips, watch movies, watch TV on the computer, listen to the radio via the net

Factories and industrial processes: design products, do calculations, control industrial robots, control assembly lines, keep record of stocks (materials and equipment)

School/University: access the Internet, enroll online, search the Web, prepare exams, write documents, complete exercises online, do research, prepare presentations

*E.g. Computers are used to...
A PC can also be used for.....
People use computers to...*

6. RESEARCH THE INTERNET

Explore how computers are used in other areas of life and report back to the group:

- sports
- medicine
- crime investigation
- banking
- advertising and business
- government
- Military, Navy, and the Air Force
- etc.

7. READING

A Can you explain what a computer is? Do you agree with the explanation given?

A computer is an electronic device that manipulates information, or data. It has the ability to store, retrieve, and process data.

B Look through the text and name the main parts of a computer.

C Using the information from the text enlarge the explanation given.

WHAT IS A COMPUTER?¹⁸

A computer is an electronic machine which can accept data in a certain form, process the data, and give the results of the processing in a specified format as information. First, data is fed into the computer's memory. Then, when the program is run, the computer performs a set of instructions and processes the data. Finally, we can see the results (the output) on the screen or in printed form.

A computer system consists of two parts: hardware and software. Hardware is any electronic or mechanical part you can see or touch. Software is a set of instructions, called a program, which tells the computer what to do. There are three basic hardware sections: the central processing unit (CPU), main memory and peripherals. Perhaps the most influential component is the central processing unit. Its function is to execute program instructions and coordinate the activities of all the other units. In a way, it is the 'brain' of the computer. The main memory (a collection of RAM chips) holds the instructions and data which are being processed by the CPU. Peripherals are the physical units attached to the computer. They include storage devices and input/output devices.

Storage devices (hard drives, DVD drives or flash drives) provide a permanent storage of both data and programs. Disk drives are used to read and write data on disks. Input devices enable data to go into the computer's memory. The most common input devices are the mouse and the keyboard. Output devices enable us to extract the finished product from the system. For example, the computer shows the output on the monitor or prints the results onto paper by means of a printer.

On the rear panel of the computer there are several ports into which we can plug a wide range of peripherals – modem, a digital camera, a scanner, etc. They allow communication between the computer and the devices. Modern desktop PCs have USB ports and memory card readers on the front panel.

¹⁸ Infotech. English for Computer Users. Fourth Edition. Student's Book by Santiago Remacha Esteras.

8. VOCABULARY

A *Match these words from the text (1–9) with the correct meanings (a–i).*

- | | |
|---|--|
| 1. software | a. the brain of the computer |
| 2. peripherals | b. physical parts that make up a computer system |
| 3. main memory | c. programs which can be used on a particular computer system |
| 4. hard drive (also known as hard disk) | d. the information which is presented to the computer |
| 5. hardware | e. results produced by a computer |
| 6. input | f. input devices attached to the CPU |
| 7. ports | g. section that holds programs and data while they are executed or processed |
| 8. output | h. magnetic device used to store information |
| 9. central processing unit (CPU) | i. sockets into which an external device may be connected |

B *In pairs, explain the meaning of these words and expressions. If necessary consult the English dictionary for the definitions.*

Input devices:

keyboards, numeric keypads, pointing devices (including mouse, touch pad and tracker ball), remote controls, joysticks, touch screens, graphics tablet, magnetic stripe readers, chip readers, PIN pads, digital cameras, video cameras, web cams, scanners, microphones, sensors, MICR, OMR, OCR, barcode readers, light pens;

Output devices:

monitors (CRT, TFT), printers (laser, ink jet and dot matrix), plotters, speakers, control devices (motors, buzzers, lights, heaters);

C Find the odd word out

1 *vocals, mouse, keyboard, disk drive*

2 *network, system, disk, circuit*

3 *internet, modem, radio, telephone*

4 *software, disk, video, programme*

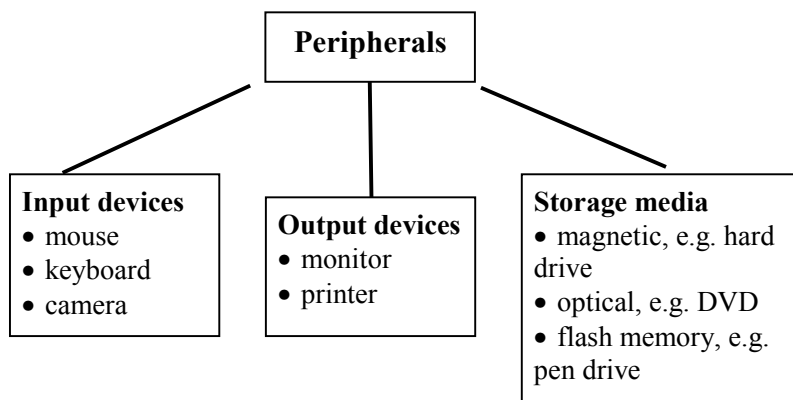
5 *overload, jam, clog, destroy*

9. LANGUAGE DEVELOPMENT

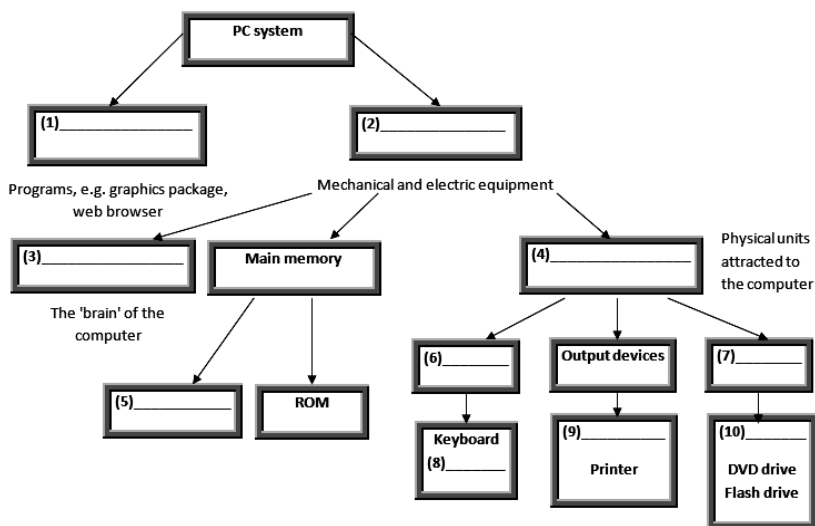
A Look at the HELP BOX in Studying File № 11 and then use suitable classifying expressions to complete these sentences:

1. A computer _____ hardware and software.
2. Peripherals _____ three types: input, output and storage devices.
3. A word processing program _____ software which lets the user create and edit text.
4. _____ of network architecture: peer-to-peer, where all computers have the same capabilities, and client-server (e.g. the Internet), where servers store and distribute data, and clients access this data.

B Describe this diagram, using classifying expressions.



C *In groups, describe this diagram, using classifying expressions. Make reference to your own devices.*



10. READING AND SPEAKING

A *Can you enumerate functions of all parts of a computer? Read the text and put down the functions mentioned.*

WHAT ARE THE MAIN PARTS OF A COMPUTER?

A computer is a complex machine that is capable of performing huge computations at an extraordinary speed. Its processing power is often compared to that of a human brain. Although human intellect is the undoubted winner in this competition, the capabilities of a computer cannot be underestimated. This complex machine, influenced from the design of a human brain, mainly consists of a processing unit, an arithmetic/logic unit, computer storage, and input and output devices along with its peripherals. It is these 'parts' that make the 'whole' system. So, let's take a look at the major parts of a computer.

Central Processing Unit (CPU): Also known as the computer processor, the CPU is an electronic circuit that executes computer

programs. The primary responsibility of a computer processor is to execute a sequential set of instructions that constitute a program. CPU operation can be divided into four basic steps, namely, fetch, decode, execute, and writeback. During the 'fetch' step, the processor retrieves program instructions from memory. In the decode step, the instruction is broken down into parts. The instruction set architecture of the CPU defines the way in which an instruction is decoded. In the 'execute' step, CPU performs the operation implied by the program instruction. During the 'writeback' step, the CPU writes back the results of execution, to the computer's memory.

Motherboard: A computer motherboard consists of sockets in which microprocessors are installed, memory slots, a chipset that acts as an interface between the CPU bus and the peripheral buses (a bus connects all the internal parts of a computer), non-volatile memory chips housing the system's firmware and a clock generator, which helps in the synchronization of various system components. Some motherboards also include logic and connectors to support input devices like PS/2 connectors for a mouse and keyboard.

Hard Disc: A hard disc is described as a part of the computer disc drive, which stores data and provides computer users with quick access to large amounts of data. A hard disc is an electromagnetically charged surface or set of discs that record data in concentric circles known as tracks. It is a non-volatile storage device that stores digitally encoded data. A head, resembling a phonograph arm, is used to read and write data onto a hard disk. The hard discs of desktops are generally capable of storing 120 GB to 2 TB of data. Laptop hard disc drives are smaller and have lower data storage capacities.

Computer Memory: It refers to those components of a computer, which retain digital data. It forms the core of a computer and makes up the basic computer model in collaboration with the CPU. Magnetic drums and delay lines used as primary storage by computers of the early days, have metamorphosed into a miniature silicon chip, which can achieve efficient storage of large volumes of data. Random Access Memory, popularly known as RAM, is a small-sized light and volatile form of computer memory. It is capable of temporary storage of data. Registers located in a computer processor are the fastest forms of computer storage. The most frequently used informa-

tion is duplicated in the processor cache of a computer, thereby improving its performance. Computers require a non-volatile primary storage to read large programs. This non-volatile memory is known as ROM or Read-only memory. It also contains the startup programs used for bootstrapping a computer. Secondary storage media such as flash memory, magnetic tape, punch cards, and zip drives and tertiary storage media like tape libraries are also a part of computer memory.

Monitor: A visual display unit, as it is called, is an electrical equipment that displays images generated by the video output of a computer. Monitors of the early years used CRT technology for imaging, while modern computer monitors use LCD or even plasma screens. The display provides computer users with an instant feedback in the form of text and graphic images. Monitors are the most-used output devices of a computer.

Keyboard: A keyboard is regarded as an input device for a computer. With respect to the arrangement of keys, a computer keyboard is similar to a typewriter. The keys or buttons act as electronic switches or mechanical levers with characters printed on them, with each keypress corresponding to a written symbol. A keyboard has its own processor and circuitry, which consists of a key matrix, which helps bring about the keyboard operation.

Mouse: A computer mouse is a pointing device that detects two-dimensional motion. Apple's Macintosh was the first successful mouse-driven computer. A mouse translates the motion of your hand into signals that a computer can recognize and respond to. There are three basic types of mice, namely, mechanical, opto-mechanical, and optical. Mechanical mice have a rubber or metal ball that can roll in all directions. Mechanical sensors in the mouse detect the direction of motion of the ball. Opto-mechanical mice differ from mechanical mice, in that they use optical sensors to detect motion. Optical mice, popularly used today, have a laser to detect movement of the mouse. They do not have mechanical moving parts and possess higher performance speeds.

(<http://www.buzzle.com/articles/what-are-the-main-parts-of-the-computer.html>)

B Read the text again and answer the questions:

1. What are basic steps of CPU operation?
2. What does a computer motherboard consist of?
3. What part of a computer records and stores data?
4. How much data are hard discs of desktops capable of storing?
5. What part of a computer retains digital data?
6. What is a volatile form of computer memory?
7. What is a non-volatile form of computer memory?
8. What other parts of computer memory are there?
9. Does a keyboard have its own processor?
10. What are three basic types of mice?

C Answer the following questions. To use speaking strategies, go to Speaking Development File № 1.

Do you agree that perhaps the most important part of a computer is the 'intelligence' embedded in it?

Can its computing capabilities beat human intellect? Will computers be able to replace human beings?

D What types of computers do you know?

Read the text and say if all the types are mentioned? Which types do you use? Why?

TYPES OF COMPUTERS

1. The personal computer (PC) defines a computer designed for general use by a single person. While a Mac is a PC, most people relate the term with systems that run the Windows operating system. PCs were first known as micro-computers because they were a complete computer but built on a smaller scale than the huge systems in use by most businesses.





2. A PC that is not designed for portability is a desktop computer. The expectation with desktop systems are that you will set the computer up in a permanent location. Most desktops offer more power, storage and versatility for less cost than their portable brethren.

3. Also called notebooks, laptops are portable computers that integrate the display, keyboard, a pointing device or trackball, processor, memory and hard drive all in a battery-operated package slightly larger than an average hardcover book.



4. Netbooks are ultra-portable computers that are even smaller than traditional laptops. The extreme cost-effectiveness of netbooks (roughly \$300 to \$500) means they're cheaper than almost any brand-new laptop you'll find at retail outlets. However, netbooks' internal components are less powerful than those in regular laptops.

5. A palmtop computer is similar to a laptop computer, but smaller. It's small enough to fit in the palm of your hand (hence the name!) Palmtops are usually not very powerful since fast CPUs require a large battery and get hot – both problems in a small device. A typical palmtop have a very small keyboard – too small to type on normally. Instead the user



types using both thumbs. Also there is no room for a trackpad, so a touchscreen or tiny joystick is used instead. Palmtops are extremely portable, but the small keyboard and screen make the devices tiring to use for long periods.



6. Personal Digital Assistants (PDAs) are tightly integrated computers that often use flash memory instead of a hard drive for storage. These computers usually do not have keyboards but rely on touch screen technology for user input. PDAs are typically smaller than a paperback novel, very lightweight with a reasonable battery life.

A slightly larger and heavier version of the PDA is the handheld computer.

7. Another type of computer is a workstation. A workstation is simply a desktop computer that has a more powerful processor, additional memory and enhanced capabilities for performing a special group of task, such as 3D Graphics or game development.



8. A computer that has been optimized to provide services to other computers over a network. Servers usually have powerful processors, lots of memory and large hard drives. The next type of computer can fill an entire room.

9. In the early days of computing, mainframes were huge computers that could fill an entire room or even a whole floor! As the size of computers has diminished while the power has increased, the term mainframe has fallen out of use in favor of enterprise server. You'll still hear the term used, particularly in large companies to describe the huge machines processing millions of transactions every day.



10. This type of computer usually costs hundreds of thousands or even millions of dollars. Although some supercomputers are single computer systems, most are composed of multiple high performance computers working in parallel as a single system. The best

known super computers are built by Cray Supercomputers.

11. The latest trend in computing is wearable computers. Essentially, common computer applications (e-mail, database, multimedia, calendar/scheduler) are integrated into watches, cell phones, visors and even clothing. For more information see these articles on computer clothing, smart watches and fabric PCs.



<http://computer.howstuffworks.com/10-types-of-computers10.htm>

E Read the text below about functions of different types of computers and complete the table. What other types of computers do you know? Use your knowledge or search the Internet if necessary.

Device	Peculiarities and Functions

FUNCTIONS OF DIFFERENT TYPES OF COMPUTERS

Personal Computer or PC – A PC is a computer that is used by someone for his personal use. It is a complete system in itself and its convenient size, price and simple functions make it easy for the end-user to work on it without any intervention from computer operators.

Desktop – Any PC that is designed to be placed on a desk and not for portability is called a desktop. Such computers are kept in a somewhat permanent location and can be a little bulky. They usually have more power and storage compared to their movable counterparts.

Laptop or Notebook – A PC that can be moved around is called a laptop. It gets its name from the fact that you can keep it on your lap and use it. It is also called a notebook because you can carry the battery-operated device to classes or meetings conveniently and store any notes or information in it. It integrates the monitor, keyboard, pointing device, CPU, memory and hard drive in one system.

Netbook – This is similar to a laptop, the only difference being that it is smaller in size, which makes it even more portable. It is also less expensive and performs the basic functions, but its internal parts are not as powerful as a desktop or laptop.

Workstation – This computer is a desktop which is larger, consists of a more powerful processor, greater memory space and extra ability to do specific kind of work. Such a computer is used by programmers, game developers, video or sound editors and graphic designers.

PDA – A Personal Digital Assistant is a small, highly integrated computer usually using flash memory for storage instead of a hard drive. It uses touchscreen technology and doesn't have a keyboard. Those which use a digital pen for input are called handheld computers. It is light, portable, has good battery life and fits within your palm, because of which it is also called a palmtop.

Server – The server's main purpose is to provide certain services to other computers or a whole network of computers. It is much larger than any average computer and generally a whole room is necessary to fit the whole server. It has powerful processors, additional amount of memory and bigger hard drives.

Mainframe – Mainframe computers are used by large companies and organisations to perform critical tasks that involve bulk data

processing like transaction processing, census information, statistical data and so on. They consist of extensive input and output facilities, are very stable and dependable and handle millions of transactions every day.

Supercomputer – This type of computer processes data much faster than a regular system. It is the leader in processing capacity and costs millions of dollars. A supercomputer is used for sensitive and calculation-intensive work such as scientific research, physical simulation, climate studies, oil and natural gas exploration, weather forecasting, quantum physics, to name a few.

Wearable Computer – This device is worn on the body like a watch or visor and is often used by military professionals or doctors to track human actions if their hands are engaged in other activities. Smart watches and fabric PCs are examples of wearable computers.

All these types of computers serve a different purpose but there are a few things common in all of them, that is, they help us save time and aid in achieving accuracy in our work. From occupying a whole room to fitting in our pocket, the computer has indeed come a long way. And the best part is that in spite of so many developments and differences in features, it's journey has just begun, as the possibilities of what they can do are limitless.

<http://typeslist.com/different-types-of-computers>

11. WATCHING

<https://www.youtube.com/watch?v=PF7EpEnglgk>



A Watch the video "KIDS REACT TO OLD COMPUTERS" and say which facts from the history of computers are mentioned?

B Watch the video again and answer the questions given:

1. How do kids describe late 1970s computers?
2. What puzzled them?

12. RESEARCH THE INTERNET

Choose any device from the table from E above (10. READING AND SPEAKING) and explore the following:

- history of developing the device
- features and functions
- interesting facts

13. LANGUAGE DEVELOPMENT

A Read the short extract about usage of computers and fill in the appropriate word(s) from the list below:

operate, software, install, transmit, comprehensive packages, users, screen, Internet

Learning to 1) a computer is not as difficult as many people think. Computers can be expensive to buy, but you can often get 2) containing all the equipment you need at a discount from big companies. Some companies will even 3) the system for you. Your system will also include various kinds of 4) such as word-processing and game programmes, all stored on disks. When you put the disk into the computer, the programme or information can be displayed on the 5) Many computer 6) go on the 7) This is a system that links computers, making it possible to 8) information from one system to another in a different place via the telephone.

B Fill in the correct word(s) from the list below. Use the word(s) only once.

advantage, access, regulated, to lack, to charge, circuits, scale, to create, looming, communications, to cause, to express

1. telephone
2. to have to smth
3. by laws
4. a fee
5. on an international

6. system
7. inconvenience
8. offence
9. the funds
10. A battle is on the horizon
11. concern
12. to be to smb's

C *Make up your own sentences using these word combinations.*

14. SPEAKING

A *Look at the notes and the useful expressions below, then talk about the advantages and disadvantages of having a computer. You can use your own ideas as well.*

Advantages

- Make life easier
- Learn a lot
- Gain work skills
- Fast, accurate work
- Helps keep accounts
- Access to a lot of information

Disadvantages

- Bad for your eyes
- Make you unsociable
- Access to offensive information
- Expensive to buy/maintain
- Invasion of privacy
- Games keep you from schoolwork

Useful expressions:

- *Although, despite, not only ... but also, in addition, on the other hand, however, also, both, etc.*
- *I think, I believe, I disagree, However, I have to admit ..., On the other hand, One advantage is..., Another advantage is ..., Moreover, Furthermore, etc.*

E.g. 1) *Computers make your life easier. **However**, they can make you unsociable.*

2) *A: I believe that computers are very useful in schools.*

B: On the other hand, students can have access to harmful information

15. WRITING

Write a 200–250-word essay on the statement below. You are given 40 minutes to complete the task.

We are becoming increasingly dependent on computers. They are used in businesses, hospitals, crime detection and even to fly planes. What things will they be used for in the future? Is this dependence on computers a good thing or should we be more suspicious of their benefits?

16. REFRESH YOUR GRAMMAR

Read the information below. Revise Conditionals II and III in Grammar File № 10. Make up at least 7 sentences using the grammar patterns.

E.g.: 1. *Over 110 million users are registered on MySpace.*

*If MySpace **was** a country, it **would be** tenth largest in the world, while Facebook **would be** third largest with over a billion users.*

2. *Bill Gates, the founder of Microsoft was a college drop out.*

*If Bill Gates **hadn't been** a college drop out, he **wouldn't have founded** Microsoft.*

INTERESTING COMPUTER FACTS

1. On one of the world's most popular shopping websites, eBay, there are transactions of approx. \$680 per second.

2. There are approx. 6,000 new computer viruses released every month.

3. Doug Engelbart, invented the first computer mouse in the year 1964, which was made of wood!

4. One of the world's leading computer and computer peripheral manufacturer, Hewlett Packard, was first started in a garage at Palo Alto, in the year 1939.

5. If you open up the case of the original Macintosh, you will find 47 signatures, which is of each member of Apple's Macintosh division of 1982.

6. The first Apple computer which was built by Steve Jobs and Steve Wozniak, was made by using parts they got for free from their employers. They were made to scrounge spare parts from work.

7. About 70 % virus writers are actually employed by an organization under a contract.

8. The Apollo 11 Lunar Lander which was used to travel to the moon, has less processing power than the processor of a cell phone.

9. Out of the 1.8 billion Internet users, only 450 million can speak English.

10. The first 1GB hard disk, announced in 1980, weighed about 550 pounds, and was priced at \$40,000.

11. A normal human being blinks 20 times a minute, whereas, a computer user blinks only 7 times a minute!

12. Sweden is a country with the highest percentage of Internet users (75 %).

13. Mosaic' was the first popular web browser, released in the year 1993.

14. Most of us must have played the game Tetris. Since the time it was created in the early eighties, it has sold more than 40 million copies worldwide, which made its creator richer by \$8m.

15. Almost all computer users must know how destructive a virus can be. But then, it would be interesting to know that a virus cannot corrupt your PC on its own. It corrupts your system only when you activate it, by either downloading infected files from the Internet, or by sharing these infected files.

16. Computer circuitry can be destroyed by static electricity. It is so mild for humans that we don't even feel it.

17. Today, we find hard drives up to 10TB, but did you know, the first hard drive was created in 1979, and could hold just 5MB of data.

<http://www.buzzle.com/articles/interesting-computer-facts.html>

17. RESEARCH THE INTERNET

Explore who contributed into the development of IT and Computer Science. Make up your own sentences using the pattern below.

*E.g. If it **hadn't been** for Bill Gates, we **wouldn't have learnt** about Microsoft.*

18. READING AND SPEAKING

A Read the text and enumerate the operating systems that are mentioned.

What other OS can you name?

GUI OPERATING SYSTEMS¹⁹

The term user interface refers to the standard procedures that the user follows in order to interact with a computer. In the late 1970s and early 60s, the way users accessed computer systems was very very complex. They had to memorize and type a lot of commands just to see the contents of a disk, to copy files or to respond to a single prompt. In fact, it was only experts who used computers, so there was no need for a user-friendly interface.

In 1984, Apple produced the Macintosh, the first computer with a mouse and a **graphical user interface (GUI)** Macs were designed with one clear aim: to facilitate interaction with the computer. A few years later, Microsoft launched Windows, another IS operating system based on graphics and intuitive tools. Nowadays, computers are used by all kinds of people, and as a result there is a growing emphasis on accessibility and user-friendly systems.

A **GUI** makes use of a **WIMP** environment: windows, icons, menus and pointer. The background of the screen is called the **desktop**, which contains labelled pictures called **icons**. These icons represent **files** or **folders**. Double-clicking a folder opens a window which contains **programs**, **documents**, or more nested folders. When you are in a folder, you can launch a program or document by double-clicking

¹⁹ Infotech. English for Computer Users. Fourth Edition. Student's Book by Santiago Remacha Esteras. P. 63.

the icon, or you can drag it to another location. When you run a program, your PC opens a window that lets you work with different tools. All the programs have a high level of consistency, with similar tool-bars, menu bars, buttons and dialog boxes. A modern OS also provides access to networks and allows multitasking, which means you can run several programs – and do various tasks – at the same time.

The most popular operating systems are:

- The **Windows** family designed by Microsoft
- **Mac OS** – created by Apple and used on Macintosh computers.
- **Unix** – a multi-user system, found on mainframes and workstations in corporate installations.
- **Linux** – open-source software developed under the GNU General Public License. This means anybody can copy its source code, change it and distribute. It is used in computers, appliances and small devices.
- **Windows Mobile** – used on most PDAs and smartphones (PDAs incorporating mobile SO phones).
- **Palm OS** – used on Palm handheld devices,
- **RIM** – used on Blackberry communication devices. Developed by Research In Motion.
- The Symbian **OS** – used by some phone makers, including Nokia and Siemens.

These computer platforms differ in areas such as device installation, network connectivity or compatibility with application software.

B Summarize the text in 90-100 words. Follow these steps:

1. Underline the necessary information in each paragraph.
2. Make notes about the main points. Leave out details such as examples.
3. Make sentences from the notes and link the sentences with connectors (*and, but because, therefore, etc*)
4. Write your first draft.
5. Improve your first draft by reducing sentences. For example:
 - Cut out unnecessary phrases

Macs were designed ~~with one clear aim~~ to facilitate interaction with the computer.

– Omit qualifying words (adjectives or modifying adverbs)

~~very~~ complex

– Transform relative clauses into -ing participle clauses – **See Grammar File № 11 (Participles)**

Double-clicking a folder opens a window which contains programs, documents or....

Double-clicking a folder opens a window containing programs, documents or....

C *Work in pairs, A and B. Each of you has information about some operating systems. Find out the answers to these questions from the information you have:*

- 1) Which operating system is used on Apple Macintosh microcomputers?
- 2) What is Penpoint designed for?
- 3) Name one system used on IBM mainframes.
- 4) Which operating system is Linux related to?
- 5) Name an IBM operating system similar to MS-DOS.
- 6) Which operating system replaced MS-DOS?
- 7) Which systems are in fact graphically orientated shells for MS-DOS?
- 8) How many versions of Windows 9X were developed?
- 9) Which operating systems are designed for networks?
- 10) Which operating system is used by DEC VAX minicomputers?

Student A Your information is the following:

Mac OS The graphically-oriented operating system used on Apple Macintosh microcomputers.

MS-DOS The most widely used operating system ever on PC-compatible microcomputers; MS-DOS has been technologically surpassed in recent years and is no longer being revised.

MVS, VM, OS/390 Operating systems used on IBM mainframes.

NetWare A widely used operating system on local area networks (LANs).

OS/2 The operating system designed for high-end PC-compatible microcomputers; was available in both desktop version and a version for network administration.

Penpoint An operating system designed for pen-based computers.

Windows NT Microsoft Windows operating system built from ideas developed in VMS and used for servers and workstations. More secure and stable than Windows 9X systems.

Student B Your information is the following:

PC-DOS An operating system similar to MS-DOS that has been widely used on IBM microcomputers.

Unix An operating system used on all sizes of computers, but mostly large ones; available in many versions, such as Linux, HP-UX, Xenix, Venix, Ultrix, A/UX, AIX, Solaris, and PowerOpen.

VAX/VMS An operating system used by DEC VAX minicomputers.

Windows 3.x* Refers to the Windows 3.0 and Windows 3.1 operating environments, and to variants such as Windows for Workgroups 3.11; each of these is a graphically-oriented shell program for Microsoft's MS-DOS operating system.

Windows 9X The operating system that replaced MS-DOS and Windows 3.1, combining the functionality of both programs and much more into a single package; two versions were produced, Windows 95 and Windows 98, although various editions were made available.

Windows 2000 An operating system targeted primarily to corporate client-server applications; available in both a desktop version and a version for network administration.

*Not a full operating system

19. READING

A Find the answers to these questions in the following text.

- 1) What did Linus Torvalds use to write the Linux kernel?
- 2) How was the Linux kernel first made available to the general public?
- 3) What is a programmer likely to do with source code?
- 4) Why will most software companies not sell you their source code?
- 5) What type of utilities and applications are provided in a Linux distribution?
- 6) What is X?
- 7) What graphical user interfaces are mentioned in the text?

LINUX

Linux has its roots in a student project. In 1992, an undergraduate called Linus Torvalds was studying computer science in Helsinki, Finland. Like most computer science courses, a big component of it was taught on (and about) Unix. Unix was the wonder operating system of the 1970s and 1980s: both a textbook example of the principles of operating system design, and sufficiently robust to be the standard OS in engineering and scientific computing. But Unix was a commercial product (licensed by AT&T to a number of resellers), and cost more than a student could pay.

Annoyed by the shortcomings of Minix (a compact Unix clone written as a teaching aid by Professor Andy Tannenbaum) Linus set out to write his own 'kernel' – the core of an operating system that handles

memory allocation, talks to hardware devices, and makes sure everything keeps running. He used the GNU programming tools developed by Richard Stallman's Free Software Foundation, an organisation of volunteers dedicated to fulfilling Stallman's ideal of making good software that anyone could use without paying. When he'd written a basic kernel, he released the source code to the Linux kernel on the Internet.

Source code is important. It's the original from which compiled programs are generated. If you don't have the source code to a program, you can't modify it to fix bugs or add new features. Most software companies won't sell you their source code, or will only do so for an eye-watering price, because they believe that if they make it available it will destroy their revenue stream.

What happened next was astounding, from the conventional, commercial software industry point of view – and utterly predictable to anyone who knew about the Free Software Foundation. Programmers (mostly academics and students) began using Linux. They found that it didn't do things they wanted it to do – so they fixed it. And where they improved it, they sent the improvements to Linus, who rolled them into the kernel. And Linux began to grow.

There's a term for this model of software development; it's called Open Source (see www.opensource.org/ for more information). Anyone can have the source code – it's free (in the sense of free speech, not free beer). Anyone can contribute to it. If you use it heavily you may want to extend or develop or fix bugs in it – and it is so easy to give your fixes back to the community that most people do so.

An operating system kernel on its own isn't a lot of use; but Linux was purposefully designed as a near-clone of Unix, and there is a lot of software out there that is free and was designed to compile on Linux. By about 1992, the first 'distributions' appeared.

A distribution is the Linux-user term for a complete operating system kit, complete with the utilities and applications you need to make it do useful things – command interpreters, programming tools, text editors, typesetting tools, and graphical user interfaces based on the X windowing system. X is a standard in academic and scientific computing, but not hitherto common on PCs; it's a complex distributed windowing system on which people implement graphical interfaces like KDE and Gnome.

As more and more people got to know about Linux, some of them began to port the Linux kernel to run on non-standard computers. Because it's free, Linux is now the most widely-ported operating system there is.

Re-read the text and match the terms in A with the definitions in B.

A

a	kernel
b	free software foundation
c	source code
d	open source
e	a distribution
f	X

B

1. A type of software development where any programmer can develop or fix bugs in the software
2. The original systems program from which compiled programs are generated
3. A complete operating system kit with the utilities and applications you need to make it do useful things
4. A standard distributed windowing system on which people implement graphical interfaces
5. An organization of volunteers dedicated to making good software that anyone could use without paying
6. The core of an operating system that handles memory allocation, talks to hardware devices, and makes sure everything keeps running.

B Mark the following statements as True or False:

- a)Linux was created in the 1980s.
- b)Minix was created by a university student.
- c)Linux is based on Unix.
- d)Minix is based on Unix.
- e)Linux runs on more types of computer than any other operating system.

20. WATCHING

<https://www.youtube.com/watch?v=o8NPllzkFhE>



Watch the interview of Linus Torvalds, the founder of Linux, and answer the following questions:

1. What kind of office does he have? What is the main thing about the computer he wants to have at work?
2. How does he understand what open source is? How did he get the idea of open source? What does he like about open source?
3. How long has he been programming?
4. What did he like as a child? What kind of person is he?
5. How does he relate to Edison and Tesla?
6. Is the open source idea fully realized?

21. LISTENING AND READING

A Look through the words in Vocabulary Bank , File № 9 and make sure you understand them.

B Track 6.1

Listen to the speaker and answer the questions below. You may follow the script in Studying File № 12, if necessary:

1. What is software?
2. What are the verbs used to start a software program?
3. What can happen when software has a bug?
4. What are you forced to do when software stops responding?
5. Why does programming seem mysterious to most people?
6. Is it useful to learn programming? Why?
7. What do you need to run a program on the kind of computer for which it wasn't intended?
8. How many basic kinds of software are there?

9. What is the real difference between open source and closed source software? Give an example.
10. What do good programmers like?
11. Have you ever written a software program yourself? If yes, what kind of program was it? What language did you use? How long did it take you?
12. Have you ever had a bug in the program run? Did you try to debug it yourself or did you ask for help? How long did it take you to fix the problem?

C What platforms do you know? Read the text and see if you were right.

OPERATING SYSTEM **(SOURCE OPEN AND CLOSE SOURCE)**

Operating System is a software that manages all the resources in the computer. These resources can be either hardware and the application program.

There are two kinds of operating systems:

OPEN SOURCE

Open source is software where the source code is open and is provided by the developer in general in order to be studied, modified or further developed and disseminated. If there is a maker of software that does not allow the code to be changed or modified, it is not referred to as open source even though the code of the software programs available.

Open source (open source code) was popularized in 1998. The history of open source software is born from hacker culture grown in computer laboratories in American universities like Stanford, Berkeley, Carnegie Mellon, and MIT in the 1960s and 1970s. The system is deemed to be an open source operating profitable, especially by users of open source.

Advantages of Open Source

1. Many power (HR) whose role is working on the project
2. Error (bugs, errors) more quickly found and fixed

3. The quality of the results is guaranteed for evaluating community
4. Safer
5. Cost-effective
6. Do not repeat the development

Disadvantages of Open Source

1. Lack of human resources that can take advantage of open source
2. The lack of protection of intellectual property rights

Examples of operating systems including Open Source are Linux, Ubuntu, Red Hat, Mandriva, CentOS, Fedora, Clear OS; Open BSD and Free BSD; Open Solaris and Solaris; Android

CLOSE SOURCE

Close Source operating system code is not open to the public, the owner of the closed-source code can divide the source code through a license with free or pay. Although free, limited license to make an operating system is not completely open source. For example, if the license is no prohibition to modify the code, then the operating system is not open source.

Advantages of Closed Source

1. Support directly from the owner of the application / program.
2. Easy to get certified.
3. It is easier to use / learn / understand because the majority of users use it (in certain areas).

Disadvantages of Close Source

1. There is no special support / direct from the manufacturer (developer).
2. Cracks open, can be used for information retrieval.
3. Socialization use, somewhat difficult, as most users use closed source (Windows), only in certain areas.
4. It is difficult to obtain certification.
5. The existence of a license that requires the user to provide funds / financial.
6. Development limited.
7. Required antivirus.

8. Applications are generally available paid.
 9. Detection weakness wait for feedback from the user application.
- Examples of operating systems including Close Source is Microsoft Windows; Anti-virus McAfee; Corel Draw

D Read the text again and discuss the following in pairs.

1. What platforms have you tried? Which one do you prefer? Why?
2. Think about advantages and disadvantages of open source / closed source. Enumerate them.
3. What would happen if all the software were open source (closed source)?

22. WATCHING

Watch the video and summarize the issues raised by Richard Stallman at TEDxGeneva 2014. Be ready to discuss them in groups.

<http://www.tedxgeneva.net/talks/richard-stallman-free-software-free-society/>



23. VOCABULARY RESEARCH

Study Vocabulary Bank, File 10 and make a glossary. Follow the instructions in Studying File № 13.

24. QUESTIONS ON THE TOPIC

1. How are computers used in different areas of life (entertainment, education, sports, industry, medicine, crime investigation, banking, advertising and business, government, Military, Navy, and the Air Force, etc.)
2. What is a computer? What can you say about parts of a computer?

- ## Unit VII. Programming Languages



Comment on the following sayings about programming languages.

- 147

5. "C++ is a horrible language. Even if the choice of C were to do *nothing* but keep the C++ programmers out, that in itself would be a huge reason to use C." (Linus Torvalds)
6. "There are two ways of constructing a software design. One way is to make it so simple that there are obviously no deficiencies. And the other way is to make it so complicated that there are no obvious deficiencies." (Tony Hoare. Computing professor, implemented Algol 60, searcher at Microsoft Research)

2. READING AND LANGUAGE DEVELOPMENT

A Read the text. How many high-level computer languages are mentioned?

COMPUTER LANGUAGES²⁰

Unfortunately, for us, computers can't understand spoken English or any other natural language. The only language they can understand directly is **machine code**, which consists of 1s and 0s (binary code).

Machine code is too difficult to write. For this reason, we use symbolic languages to communicate instructions to the computer. For example, **assembly languages** use abbreviations such as ADD, SUB, MPY to represent instructions. The program is then translated into machine code by a piece of software called an **assembler**. Machine code and assembly languages are called **low-level languages** because they are closer to the hardware. They are quite complex and restricted to particular machines. To make the programs easier to write, and to overcome the problem of intercommunication between different types of computer, software developers designed **high-level languages**, which are closer to the English language. Here are some examples:

- **FORTRAN** was developed by IBM in 1954 and is still used for scientific and engineering applications.

- **COBOL (Common Business Oriented Language)** was developed in 1959 and is mainly used for business applications.

²⁰ Infotech. English for Computer Users. Fourth Edition. Student's Book by Santiago Remacha Esteras. P. 120.

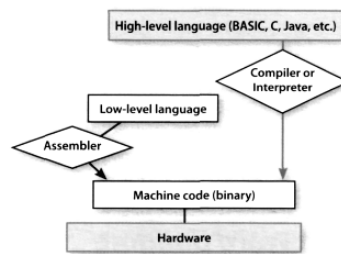
- **BASIC** was developed in the 1960s and was widely used in microcomputer programming because it was easy to learn. **Visual BASIC** is a modern version of the old BASIC language, used to build graphical elements such as buttons and windows in Windows programs.

- **PASCAL** was created in 1971. It is used in universities to teach the fundamentals of programming.

- **C** was developed in the 1980s at AT&T. It is used to write system software, graphics and commercial applications. **C++** is a version of C which incorporates object-oriented programming: the programmer concentrates on particular things (a piece of text, a graphic or a table, etc.) and gives each object functions which can be altered without changing the entire program. For example, to add a new graphics object. This makes programs easier to modify.

- **Java** was designed by Sun in 1995 to run on the Web. Java applets provide animation and interactive features on web pages. (See Unit 25).

Programs written in high-level languages must be translated into machine code by a **compiler** or an **interpreter**. A compiler translates the source code into **object code**—that is, it converts the entire program into machine code in one go. On the other hand, an interpreter translates the source code line by line as the program is running.



It is important not to confuse **programming languages** with **markup languages**, used to create web documents. Markup languages use instructions, known as **markup tags**, to format and link text files. Some examples include:

- **HTML**, which allows us to describe how information will be displayed on web pages.

- **XML**, which stands for **Ex-tensible Markup Language**. While

```
<xml>
< name> Andrea Finch </name>
< homework> Write a paragraph describing
the C language </homework>
</xml>
```

In this XML example we have created two new tags: <name> and <homework>

HTML uses pre-defined tags, XML enables us to define our own tags; it is not limited by a fixed set of tags.

– **VoiceXML**, Which makes Web content accessible via voice and phone. VoiceXML is used to create voice application that run on the phone, whereas HTML is used to create visual applications (for examples, web pages).

B Look through the text and find the information to fill in the table:

Language	Developed	Function	Characteristic

C Read the text again and answer these questions:

1. Do computers understand human languages? Why?/Why not?
2. What is the function of an assembler?
3. Why did software developers design high-level languages?
4. Which language is used to teach programming techniques?
5. What is the difference between a compiler and an interpreter?
6. Why are HTML and VoiceXML called markup languages?

D Complete these sentences with a computer language from the text.

1. _____ allows us to create our own tags to describe our data better. We aren't constrained by a pre-defined set of tags the way we are with HTML.
2. IBM developed _____ in the 1950s. It was the high-level language in data processing.
3. _____ applets are small programs that run automatically on web pages and let you watch animated characters, play games, etc.
4. _____ is the HTML of the voice web. Instead of using a web browser and a keyboard, you interact with a voice browser by listening to pre-recorded audio output and sending audio input through a telephone.
5. This language is widely used in the business community. For example, the statement ADD VAT to NET-PRICE could be used in a _____ program.

E Look at the words in the boxes. Are they nouns, verbs or adjectives? Write n, v or adj next to each word. There may be more than one possible answer. Complete the sentences with words from the boxes.

Program_____	Programmers_____	Programming _____	Programmable_____
--------------	------------------	-------------------	-------------------

- _____ is the process of writing a program using a computer language.
- A computer _____ is a set of instructions that tells the computer how to do a specific task.
- Most computer _____ make a plan of the program before they write it.
- A _____ keyboard allows the user to configure the layout and meaning of the keys.

Compile_____	Compiler_____	Compilation_____
--------------	---------------	------------------

- Programs written in a high-level language require _____ - that is, translation into machine code, the language understood by the processor.
- A source program is converted into machine code by software called a _____.
- Programmers usually _____ their programs to generate an object program and diagnose possible errors.

Bug_____	Debug_____	Debugger_____	Debugging_____
----------	------------	---------------	----------------

- Any error or malfunction of a computer program is known as a _____.
- A _____ is a program used to test and _____ other programs.
- The process of going through the code to identify the cause of errors and fixing them is called _____.

3. READING

Read the text about different categories of programming languages. Go to Additional Texts, File № 6.

4. WATCHING

<https://www.youtube.com/embed/PkoY1zRgQik?rel=0&autoplay=1>



Before watching

What programming languages are hardest to learn, in your opinion? Why?

While watching

Watch the video about ten top hardest programming languages and name them. Answer the following questions:

1. What language borrows features from C and shell scripting?
2. What language combines the object-oriented features of Java and functional style programming?
3. What language is used in AI?
4. What are three top hardest languages described?

After watching

Work in pairs and speak about the hardest languages for you to learn?

5. READING

Read the text and say what author's tips are helpful for you

ADVANCED PROGRAMMING LANGUAGES

Students often ask for a recommendation on what language they should learn next. If you're looking for a job in industry, my re-

ply is to learn whatever is hot right now: C++, Java and C#--and probably Python, Ruby, PHP and Perl too.

If, on the other hand, you're interested in enlightenment, academic research or a start-up, the criterion by which you should choose your next language is not employability, but expressiveness. In academic research and in entrepreneurship, you need to multiply your effectiveness as a programmer, and since you (probably) won't be working with an entrenched code base, you are free to use whatever language best suits the task at hand.

Here you'll find descriptions of four good languages to learn--Haskell, Scala, ML and Scheme – with a list of my favorite features for each, and pointers on where to learn more.

Of course, this short list is by no means exhaustive. There are many uncommon languages that excel at niches. To name just a few more, there's also D for systems programming; Erlang or Clojure for concurrency; and Datalog for constraint programming. Then there are languages like Smalltalk--alternate yet fully capable universes that branched off from mainstream computing long ago.

I encourage my students to never stop learning niche languages. They expand your modes of thinking, the kinds of problems you solve quickly and your appreciation for the meaning of computation.

6. INTERNET RESEARCH

A Explore features of the following advanced languages. Make a list of them and present to the class.

<http://matt.might.net/articles/best-programming-languages/>

- Haskell.
- Scala.
- Standard ML and OCaml.
- Scheme.

B Explore the Internet to find out what programming languages have appeared this year. Report back to the class.

7. WATCHING

<https://www.youtube.com/embed/LR8fQiskYII?rel=0&autoplay=1>



Before watching

In pairs, share your experience of the first programming language you learnt.

While watching

A Watch the video extract presenting an opinion of Larry Wall, founder of Perl, of five programming languages everyone should know about. Enumerate the programming languages he mentions about.

B Watch the video again and answer the questions:

1. What programming languages should everyone have known several decades ago?
2. What is lightweight object-oriented language these days?
3. What heavier weight object-oriented language does Larry Wall speak about?
4. What language is for mathematician type-minded people, genius people?
5. What fundamental language has influenced almost every language that has followed it? What language is everyone trying to reinvent but not succeeding in doing so?
6. What programming language is Larry Wall prejudiced for and why?

After watching

Discuss in pairs:

What programming languages you think everyone should know about. Why?

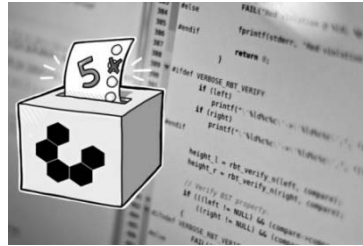
8. READING AND SPEAKING

- A** *In groups, discuss different languages which you think are necessary for you to know. Is it possible to know all programming languages?*
- B** *What programming languages can you advise to learn for first-time learners? Read the text below and characterize each of the mentioned languages briefly.*

FIVE BEST PROGRAMMING LANGUAGES FOR FIRST-TIME LEARNERS

Alan Henry

Let's be clear – we're not trying to absolutely settle the question of which language you should learn first if you're trying to code. Everyone has different opinions and depending on your specific reasons for learning, perhaps none of these would be appropriate. We could possibly highlight here, with much more description and rationale for each. Here are the five most popular of your nominees, in no particular order.



Java

Oracle's Java is one of the web's longest standing, persistent, and influential programming languages. You'll find Java at the core of applications on and off the web, on all platforms, operating systems, and devices. It's a deeply featured class-based, object-oriented programming language that's designed to be portable and workable on as many platforms as possible. For that reason, it's also one of the world's most popular programming languages, which makes it incredibly valuable to learn if you're interested in learning to program. The flip-side to Java is that for all of its portability and applicability, it can be quite difficult to grasp, and quite difficult to program effectively and efficiently.

Java isn't a perfect programming language though – many schools and classes start with C or C++ because Java gets a lot of its syntax from

those earlier languages. It's a fundamental set of core concepts that will help you as you move to other languages and technologies. For more reasons why it's a good choice, take a look back at its nomination thread.

Ruby

Ruby is a dynamic, open-source, object-oriented programming language developed by computer scientist Yukihiro Matsumoto back in the 90s, which makes it one of the youngest languages in broad use, much less in this roundup. It was designed to have syntax that was easy to read and to write by mere humans, without necessarily needing to learn a massive base of commands and specialized "vocabulary" in order to get started. While the language itself is object-oriented, it also supports procedural, functional, and imperative programming, one of the factors that makes it remarkably flexible.

Ruby has a reputation for being relatively easy to understand and easy to learn, easy to read when you have to, and for having a large, active, passionate developer community that's committed to the success of the language.

Python

Python was developed in the 80s by Guido van Rossum, who then handed the language over to the non-profit Python Software Foundation, which serves as the language's administrator, and the language is open source and free to use, even for commercial applications. Python is usually used and referred to as a scripting language, allowing programmers to churn out large quantities of easily readable and functional code in short periods of time, but it's also dynamic, and supports object-oriented, procedural, and functional programming styles, among others. Thanks to its flexibility, Python is one of the most widely used high-level programming languages today.

Python doesn't exactly start you at the basics, but it does teach some useful things like indentation, modularity, and the importance of naming conventions that will help you as you learn and work with other languages.

C/C++

C++ is the natural step up from C. Without getting too much into the rich and detailed history of C, and then of C++ (which started

off as a set of improvements and updates to bring C into modern applications), let's just say that both languages have been around since the 1970s and early 80s, respectively. C, for its part, is an extremely widely-used, general purpose, imperative programming language that's heavily influenced almost every language that's followed it. C++ on the other hand took things a step further, added object-oriented features like classes to the language, along with virtual functions and templates. C++ is another of the world's most popular programming languages, and is still in wide use today in everything from video games to productivity software. C++ is a bit more difficult to pick up than C, although many people would argue that there's no reason to start with C anymore at all. That's a debate we're not about to settle.

One thing that's important about C and C++: They're both some of the most foundational languages in computer science and programming. If you learn them, they'll benefit you, you'll have a richer understanding of programming if you start with them. Even if you're not aiming to code professionally, it may not be an issue to you, but it may still be worth considering.

JavaScript

JavaScript, not to be confused with Java, is a scripting language that was developed in the 90s by Brendan Eich, formerly of Netscape Communications and now of the Mozilla Foundation. JavaScript is one of the fundamental technologies on which the web as we know it is based. Don't be fooled though – JavaScript exists outside of the browser as well, but largely in the context of connected applications and services. The language itself is dynamic, and gives programmers the flexibility to use object-oriented programming styles (as the language itself is mostly object oriented) as well as functional and imperative ones. It derives much of its syntax from C, and if you plan to do any development for the web in any fashion, learning JavaScript should be on your list.

Fortunately, JavaScript is relatively easy to learn, is already right there in your browser for you to play with, and even though it's been around for a while, it's rapidly gaining popularity. Many of you who nominated it noted that your bang for the buck when learning JavaScript is huge, because you can start using it right away to build

things for the web – which may very well be what many people are learning to code for.

Here are the results of the opinion poll conducted:

What's The Best Programming Language for First-Time Learners?
(Poll Closed)

Java 17.63 % (3,291 votes)

Ruby 8.39 % (1,566 votes)

Python 34.16 % (6,376 votes)

C/C++ 23.29 % (4,347 votes)

JavaScript 16.53 % (3,085 votes)

Total Votes: 18,665

<http://lifehacker.com/five-best-programming-languages-for-first-time-learners-1494256243>

C Comment on the results of the opinion poll presented above.

D Conduct your own opinion poll about usage of programming languages by your fellow-students, friends and colleagues. Present the results of the poll.

9. READING

Read the jokes and translate them.

1. – Why do java programmers have to wear glasses?
– Because they don't see sharp. :)
2. I'd like to make the world a better place, but they won't give me the source code. :)
3. During a recent password audit, it was found that a blonde was using the following password:
MickeyMinniePlutoHueyLouieDeweyDonaldGoofy
When asked why such a big password, she said that it had to be at least 8 characters long. :)
4. An optimist person will say that the glass is half-full.
A pessimist person will say that the glass is half-empty.
A programmer will say that the glass is twice as large as necessary.

If a programmer was designing a glass, when it reached half full, the glass would be replaced by a new glass, twice as large, and all the liquid poured into the new one, so as to achieve amortized constant time glass filling. :)

For more jokes go to

<http://stackoverflow.com/questions/234075/what-is-your-best-programmer-joke>

10. DISCUSSION

Read the following statements. Which do you agree with? Why? To use Speaking strategies, go to Speaking Development, File № 1.

1. Learning a programming language is like learning any natural language. The only difference is that you are communicating with a machine instead of another person."
2. I get annoyed when I hear people comparing programming languages with natural languages. They have almost nothing in common.

11. PROJECT ACTIVITY

Choose a programming language you are interested in/good at/would like to master. Present your report to the class. Follow the tips given in Speaking Development, File № 2.

- history of this language development
- features
- reasons for using/learning it



12. VOCABULARY RESEARCH

Study Vocabulary Bank, File 11 and make a glossary. Follow the instructions in Studying File № 13.

13. QUESTIONS ON THE TOPIC

1. What is a programming language?
2. Do computers understand human language? Why? /Why not? What is the difference between a compiler and an interpreter?

3. Why are HTML and VoiceXML called markup languages? What is machine code?
4. What is assembly language? When did it appear? Why is assembly language difficult to use?
5. What are low-level programming languages? Give examples and describe them briefly.
6. What are high-level programming languages? Give examples and describe them briefly.
7. What languages did you try to program? Have you ever written a software program yourself? If yes, what kind of program was it? What language did you use? How long did it take you?
8. What programming language do you prefer to work with and why?
9. What new programming languages do you know? Provide some facts from their history?
10. What is the best programming language to learn first? Why? What is the hardest programming to learn, in your opinion? Why?

Unit VIII. Internet Security



1. LEAD-IN

Comment on the following sayings about Internet. See Speaking Development, File № 1.

1. "Google can bring you back 100,000 answers. A librarian can bring you back the right one." (Neil Gaiman)
2. "The Internet is the first thing that humanity has built that humanity doesn't understand, the largest experiment in anarchy that we have ever had." (Eric Schmidt)

3. "You are what you share." (Charles Leadbeater, *We Think: The Power Of Mass Creativity*)
4. "It is the greatest truth of our age: Information is not knowledge." (Caleb Carr)
5. "The internet was supposed to liberate knowledge, but in fact it buried it, first under a vast sewer of ignorance, laziness, bigotry, superstition and filth and then beneath the cloak of political surveillance. Now...cyberspace exists exclusively to promote commerce, gossip and pornography." (Ben Elton)
6. The true computer hackers follow a certain set of ethics that forbids them to profit or cause harm from their activities. (Kevin Mitnick)
7. "Companies spend millions of dollars on firewalls, encryption and secure access devices, and it's money wasted, because none of these measures address the weakest link in the security chain." (Kevin Mitnick)
8. "The only truly secure system is one that is powered off, cast in a block of concrete and sealed in a lead-lined room with armed guards." (Gene Spafford)
9. "If you spend more on coffee than on IT security, you will be hacked. What's more, you deserve to be hacked. (Richard Clarke)

2. LISTENING AND READING

A Track 8.1²¹

Before listening discuss with you partner the following:

1. What do you use the Internet for?
2. What are the most popular Internet services?
3. Do you know when and where did the Internet appear?

B Go to Vocabulary Bank, File 12 and make sure you are familiar with the words given in the list.

C Listen to the speaker talking about history of the Internet. While listening put down the names of those who contributed into the development of the Internet.

²¹ English 4IT: <https://www.english4it.com/unit/6/reading>

D Follow the script in Studying File № 14 and find out what changes were made.

E What details grabbed your attention? Why? Share with the class.

3. SPEAKING AND INTERNET RESEARCH

A In pairs, answer the questions below. You may go to Additional Texts, File № 7 or explore the Internet.

1. What networks evolved, merged, or dissolved, to form the global Internet?
2. What is the Internet?
3. When was the first email system developed? By whom?
4. Who created Ethernet?
5. What is TCP/IP?
6. Is it correct to use the terms Internet and Web interchangeably? Why/Why not?
7. What are the ways of connecting to the Web?
8. What are the types of Internet connection?
9. What is a Web browser? What browsers do you prefer? Why?
10. What is a search engine?

B Go to <http://webtrends.about.com/od/Websites/tp/A-List-of-Search-Engines-to-Use-Instead-of-Google.htm>, read the text “LIST OF SEARCH ENGINES TO USE INSTEAD OF GOOGLE” by Elise Moreau and make a list of engines mentioned.

What other engines do you know?

What search engines do you personally use? Why?

4. LANGUAGE DEVELOPMENT

EMAILING

A Are you an email addict? Complete this quiz and find out:

1	Do you know all your friends' email addresses, even if you can't remember their phone numbers?	Yes <input type="radio"/> No <input type="radio"/>
---	--	---

2	Do you stay online even when you are not using your computer because you don't want to miss incoming messages?	Yes No	<input type="radio"/> <input type="radio"/>
3	Do you have email relationships with people you've never met in person?	Yes No	<input type="radio"/> <input type="radio"/>
4	Do you have to check your inbox between Friday night and Monday morning?	Yes No	<input type="radio"/> <input type="radio"/>
5	Do you prefer to 'CC' your emails to other people, just in case?	Yes No	<input type="radio"/> <input type="radio"/>
6	When you send an email with a question, do you sit in front of your computer waiting for the reply?	Yes No	<input type="radio"/> <input type="radio"/>
7	Is the number of emails you save and file higher than the number you delete?	Yes No	<input type="radio"/> <input type="radio"/>

B *Read the article below and write in the correct letter (A–F) for the missing sentences.*

- A This is where we first find out about decisions that have been made, deals struck and the direction being taken.
- B In the past few months, 290 employees at a government department have been sacked via their office intranet, while a car equipment firm laid off the workforce by email.
- C Then suddenly you send an email to the wrong person.
- D They are typical of the average employee who sends 34 emails a day.
- E Sending mail CC has only made it worse.
- F Two letters were attached, one saying her contract had been cancelled, the other that she should return any work items.

CLICKING THE HABIT²²

Email makes many things so much easier-including making someone redundant. **(1)** _____ In the case of Helen Saxon-Jones,

²² Total Business 2, Student's Book by John Hughes. Oxford University Press. 2009.

she was checking inbox from home one day when she read the subject line: "This email is only to be opened during office hours". But she clicked on it anyway. (2) _____. Unable to believe it, the 29-year-old, who had been working as a project development officer with a charity, took the case to a tribunal. She finally received £12,000 in compensation from her former employer.

But these bosses who dismiss workers by email aren't necessarily evil, cowardly people – they're mostly people just like you and me who have developed the habit of using email too much.

(3) _____ They meet people and exchange email addresses rather than phone numbers. They email CVs to prospective employers. In a survey of workers last week, almost half admitted they email the person sitting next to them to avoid making verbal contact, and one in five of us uses email just to gossip about work colleagues.

Regardless of the field in which you work, it is a safe bet to guess that your first course of action on any given workday is to log on to your PC and begin checking your inbox. (4) _____ We send a question and become offended if the recipient does not respond within hours. We have become slaves to the inbox, dependent on a constant flow of typed communication.

So type-type-type, even when it is unnecessary. Workers type up their every thought and send off emails with tremendous inaccuracy or complete pointlessness. (5) _____ We are copies in on emails that do not directly affect us in the vague interests of keeping everyone "in the loop".

Email allows us to continue to work at home. Constant access leads to a compulsion to keep the communication going. You're at home, and there's nothing good on TV, so you decide to have a glass of wine and do a little work. As you review your inbox, you start firing off responses. (6) _____ You don't want them to read it and the next thing you know you're sending even more emails to try and undo the damage. Another round of emails has begun!

C Underline one incorrect word in each group.

E.g.: check you: button, inbox, email – проверить

1 click on: a link, a computer, an icon

2 delete, save, click: an email

- 3 send, copy, shut down: an email to (someone)
- 4 log on to a: mouse, computer, website
- 5 restart, delete, register: the computer
- 6 back up, save, break: a document
- 7 fire off, send, dismiss: a reply
- 8 attach a: sender, file, document
- 9 type in your: username, icon, address

D Now look at the words you underlined. Can you use them in another phrase?

E.g.: Click on this button to restart.

5. READING

A Read the text, put down the words in bold type from the text and translate them.

SECURITY ON THE WEB

There are many benefits from an open system like the Internet, but one of the risks is that we are often exposed to **hackers**, who break into computer systems just for fun, to steal information, or to spread viruses (see note below). So how do we go about making our online transactions secure?

Security is crucial when you send confidential information online. Consider, for example, the process of buying a book on the Web. You have to type your credit card number into an order form which passes from computer to computer on its way to the online bookstore. If one of the intermediary computers is infiltrated by hackers, your data can be copied.

To avoid risks, you should set all security alerts to high on your web browser. Mozilla Firefox displays a lock when the website is secure and allows you to disable or delete **cookies** – small files placed on your hard drive by web servers so that they can recognize your PC when you return to their site.

If you use online banking services, make sure they use **digital certificates** – files that are like digital identification cards and that identify users and web servers. Also be sure to use a browser that is

compliant with **SSL** (Secure Sockets Layer), a protocol which provides secure transactions.

Email privacy

Similarly, as your email travels across the Net, it is copied temporarily onto many computers in between. This means that it can be read by people who illegally enter computer systems.

The only way to protect a message is to put it in a sort of virtual envelope – that is, to encode it with some form of **encryption**. A system designed to send email privately is Pretty Good Privacy a **freeware** program written by Phil Zimmerman.

Network security

Private networks can be attacked by intruders who attempt to obtain information such as Social Security numbers, bank accounts or research and business reports. The most common methods of protection are **passwords** for access control, **firewalls**, and **encryption** and **decryption** systems. Encryption changes data into a secret code so that only someone with a key can read it. Decryption converts encrypted data back into its original form.

Malware protection

Malware (malicious software) are programs designed to infiltrate or damage your computer, for example **viruses**, **worms**, **Trojans** and **spyware**. A virus can enter a PC via a disc drive – if you insert an infected disc – or via the Internet. A worm is a self-copying program that spreads through email attachments; it replicates itself and sends a copy to everyone in an address book. A Trojan horse is disguised as a useful program; it may affect data security. Spyware collects information from your PC without your consent. Most spyware and adware (software that allows pop-ups – that is, advertisements that suddenly appear on your screen) is included with ‘free’ downloads.

If you want to protect your PC, don’t open email attachments from strangers and take care when downloading files from the Web. Remember to update your **anti-virus software** as often as possible, since new viruses are being created all the time.

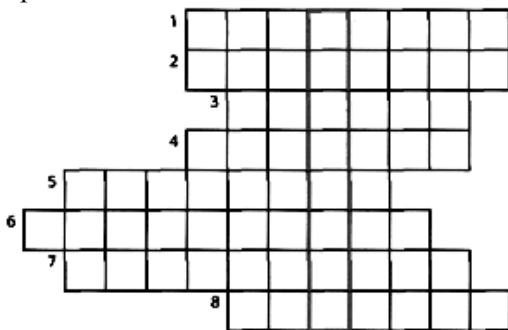
Note: Originally, all computer enthusiasts and skilled programmers were known as **hackers**, but during the 1990s, the term hacker became synonymous with **cracker** – a person who uses technology

for criminal aims. Nowadays, people often use the word hacker to mean both things. In the computer industry, hackers are known as white hats and crackers are called black hats or darkside hackers.

<http://lingualeo.com/ru/jungle/security-and-privacy-on-the-internet-85530#/page/1>

B Solve the clues and complete the puzzle.

1. Users have to enter a _____ to gain access to a network.
2. A _____ protects a company intranet from outside attacks.
3. A _____ is a person who uses their computer skills to enter computers and networks illegally.
4. _____ can infect your files and corrupt your hard drive.
5. You can download _____ from the net; this type of software is available free of charge but protected by copyright.
6. Encoding data so that unauthorized users can't read it is known as _____.
7. This company uses _____ techniques to decode (or decipher) secret data.
8. Most _____ is designed to obtain personal information without the user's permissions.



C Go to Additional Texts, File № 8 and read the text “MALWARE” and answer the questions put in the text.

D Explore the Internet and complete the table:

Type of virus	Effects produced

6. READING AND SPEAKING

A *Go to Additional Texts, File № 9 and read the text “5 SIGNS YOUR WEB APPLICATION HAS BEEN HACKED”. Summarize the information.*

B *Go to Additional Texts, File № 10 and read the text “WHY IS SECURING THE INTERNET OF THINGS SO DIFFICULT?”. Follow the Algorithm in Speaking Development File № 3 and Render the article.*

7. LISTENING

A *Track 8.2.*

Listen to an interview with Diana Wilson, a member of the Internet Safety Foundation. Which answers (a or b) best describe what she says?

SAFETY ONLINE FOR CHILDREN²³

1. Parents should make children aware of
 - a. The benefits and risks of the internet.
 - b. The risks of the Internet.
2. A web filter program can be used to
 - a. Prevent access to sites with inappropriate content.
 - b. Rate web content with labels (similar to the way movies are rated).
3. If kids spend too much time online or suffer from internet addiction, parents should
 - a. Stop them using the Internet.
 - b. Look for help from specialists.

²³ Infotech. English for Computer Users. Fourth Edition. Student's Book by Santiago Remacha Esteras.

B Listen again and complete the interviewer's notes.

Risks	Solutions
Manipulation of children	There are websites (4)_____ at children.
Invasions of (1)_____	Internet (5)_____ programs
Distribution of indecent or	let parents block objectionable
(2)_____ material	websites.
Violence and racist (3)_____	Websites should (6)_____
	their content with a label, from
	child-friendly to over 18 only.

8. READING AND SPEAKING

A Read the text about cyber bullying and think of the examples from life experience.

CYBER BULLIES

Just as a child may encounter bullying or aggressive behavior from other students in school, they may be subject to bullying online. So-called “cyber bullies” may send harmful and cruel words or images through the Internet or an electronic device such as a cell phone, in order to harass, embarrass, humiliate, and threaten their target. Other forms of bullying include password hacking, identity theft and blackmail. Many kids may be equally likely to become bullies or victims. While some are anonymous, cyber bullies are often kids who are known by a child from their school, camp, community group, or neighborhood.

It is important to talk openly with children about how to handle cyber bullying issues. If your child encounters a form of cyber bullying, remember that bullies thrive on the reactions of their targets. Children should avoid escalating the situation by refraining from responding to the bully. Parents should contact your local authorities if the problem persists. Be sure to save all messages, including dates and time.

B Look at the following tips on online safety and discuss with your fellow student if they are really useful.

SAFETY RULES

While the Internet offers amazing opportunities for entertainment, education, connectivity, and more, anyone who goes online should understand basic Online Safety. Teaching these basics to your children is essential.

1. When asked by friends or strangers, online or offline, never share Account IDs and Passwords.
2. Don't reveal any personal identity information in your Screen Names, such as your birthday, hobbies, hometown or school.
3. In any information exchange, like e-mail or chat, never give any personal information about yourself or someone else.
4. Don't share photos of yourself, your family, or your home with people you meet online.
5. Never open e-mails that come from unknown sources DELETE them.
6. If you receive mean or threatening comments online, don't respond. Log off and report the activity to your parents.
7. Nothing you write on the Web is completely private. Be careful what you write and to whom.
8. Never make plans to meet an online "friend" in person.
9. WHEN IN DOUBT: Always ask your parents for help. If you're not sure, log off.

C Give 7 tips on online safety using Modal Verbs. You can add some more tips. If necessary, revise Grammar File №9:

*E.g.: You **shouldn't** share Account IDs and Passwords when asked by friends or strangers, online or offline.*

9. LANGUAGE DEVELOPMENT

THE HISTORY OF HACKING²⁴

A Read Part 1 of the text and answer these questions.

1. Which hacking case inspired the film *War Games*?

²⁴ Infotech. English for Computer Users. Fourth Edition. Student's Book by Santiago Remacha Esteras.

2. When did *Captain Zap* hack into Pentagon?
3. Why was *Nicholas Whitely* arrested in 1988?
4. How old was the hacker that broke into the US defense computer in 1989?

The history of hacking – Part 1

1971 – John Draper discovered that a whistle offered in boxes of Cap'n Crunch breakfast cereal perfectly generated the 2,600Hz signal used by the AT&T phone company. He started to make free calls. He was arrested in 1972 but wasn't sent to prison.

1974 – Kevin Mitnick, a legend among hackers, began hacking into banking networks and altering the credit reports of his enemies. He didn't expect that his most famous exploit – hacking into the North American Defense Command in Colorado springs – would inspire the film *War Games* in 1983.

1981 – Ian Murphy, a 23-year-old known as Captain Zap on the networks, hacked into the white house and the Pentagon.

1987 – The IBM international network was paralysed by a hacker's Christmas message.

1988 – The Union Bank of Switzerland almost lost \$32 million to hackers. Nicholas Whitely was arrested in connection with virus spreading.

1989 – A fifteen-year-old hacker cracked the US defense computer.

1991 – Kevin Poulsen, known as Dark Dante on the networks, was accused of stealing military files.

B *In pairs, discuss which of the cases in Part 1 you have heard of. Which do you think is the most important?*

C *Complete Part 2 of the text with the Past Simple form of the verbs in the box. To revise Past Simple, go to Grammar File № 6*

<i>show</i>	<i>spread</i>	<i>steal</i>	<i>launch</i>	<i>attempt</i>	<i>overwrite</i>	<i>be</i>	<i>infect</i>	<i>affect</i>
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The history of hacking –Part 2

1992 – David L Smith (1) _____ prosecuted for writing the Melissa virus, which was passed in word files sent via email.

1997 – The German Chaos Computer Club (2) _____ on TV how to obtain money from bank accounts.
2000 – A Russians hacker (3) _____ to extort \$100,000 from online music retailer CD Universe. A Canadian hacker (4) _____ a massive denial of service attack against websites like Yahoo! And Amazon. The I LoveYou virus, cleverly disguised as a love letter, (5) _____ so quickly that email had to be shut down in many companies. The worm (6) _____ image and sound files with a copy of itself.
2001 – The Code Red worm (7) _____ tens of thousands of machines.
2006 – Hackers (8) _____ the credit card details of almost 20,000 AT&T online customers. However, subscribers to its service (9) (not) _____.

D Read these landmarks in the history of Hacking and prepare at least five questions in the past simple. In pairs ask and answer your questions.

Example: What happened in 1969? What did Ray Tomlinson do in 1971?

1969 – The US Defense Department establishes Arpanet, a network connecting research centres.
1971 – Ray Tomlinson of BBN invents an email program to send messages across a network. The @ sign is chosen for its at meaning.
1981 – IBM sells the first IBM PC. BITNET provides email and file transfers to universities.
1982 – TCP/IP is adopted as the standard language of the Internet.
1988 – Jarkko Oikarinen develops the system known as Internet Relay Chat (IRC).
1991 – CERN (Conseil Européen pour la recherche Nucleaire) creates the WORLD WIDE WEB.
1998 – The Internet 2 network is born. It can handle data and video at high speed but is not a public network.
1999 – Online banking, e-commerce and MP3 music become popular.

2001 – Napster, whose software allows users to share downloaded music, maintains that it does not perpetrate or encourage music piracy. However, a judge rules that Napster's technology is an infringement of music copyright.

2004 – Network Solutions begins offering 100-year domain registration.

2006 – Americans spend over \$100 billion shopping online.

10. WATCHING

A

<https://www.youtube.com/watch?v=7UaPL5PGywo>



Watch the video 5 MOST DANGEROUS HACKERS OF ALL TIME and provide facts from their biographies.

B

CYBERSECURITY 101: BLACK HAT VS WHITE HAT HACKERS with Don Maclean, DLT's Chief Cybersecurity Technologist, who explains the difference between White Hat Hackers and Black Hat Hackers and reasons how the cyber industry can attract more talent.

<https://www.youtube.com/watch?v=LiCI9XOi72Q>



Before watching

I Make sure you know the following words and expressions:

Reward, target, incentive, incentivize, jail, get jailed, to be brought to justice, legitimate, impending danger, the 9/11 attacks, sense of gratification, to stay abreast, at breakneck pace, magic bullet, fascinating, to handle, mundane, tedious, to be assessed properly, to be in compliance with, engaging, to have a high-profile at the board level in a corporation, spate, silver lining, prominence, stature, officials, CEOs, cyber security breaches, sway, consequences.

While watching

II Watch the video and answer the questions:

1. What statement did Don Maclean start with?
2. Why has a lot of cybersecurity talent gone over to the dark side?
3. What can incentivize the good actors to stay on the right side of the law and ethics? (3 incentives presented)

After watching

III Look at the following words and expressions. Provide the context they were used in:

Target, be caught, to stay abreast, at breakneck pace, mundane, engaging, back room, cyber security breaches.

IV Make up your own sentences with them.

V Discuss with your partner:

- The speaker talked about the situation in the USA. Are the principles he talked about universal? Do they work in Russia?
- The speaker placed the incentives in a certain order. Why? Does the order count? Try to place them other ways and think of consequences.

C

WHITE HAT HACKERS: Computer security researchers compete to find the most vulnerabilities in today's popular laptops and mobile phones.

<https://www.youtube.com/watch?v=7M2yyGyg01c>



Before watching

I Have you ever heard about the Pwn2Own hacking contest? Explore the Internet to find out details.

<https://en.wikipedia.org/wiki/Pwn2Own>



II Make sure you know the following words and expressions:

Evil, key stroke, countless hours, elite, to conquer, to attempt, vendor, to patch up.

While watching

II Watch the video and answer the questions:

1. What does it mean to be a White Hat Hacker?
2. How many participants are there at the conference in Vancouver?
3. What does the contest attempt?
4. Who is the real winner? Why?

After watching

III Watch again and fill in the blanks:

1. White Hat Hackers would be considered the _____ who work on the _____ side or who responsibly _____ vulnerabilities.
2. “Pwn” is a video gaming term meaning _____.
3. Its aim to see who can find the most _____ in today’s popular systems and mobile phones.

4. The winner gets ____ they also get the ____ and the ____ .
5. ... before hackers who have gone to the dark ____ and want to collect your private information or ____ you with the virus can ____ .

IV Discuss with your partner:

What other hacking contests do you know?

... have you participated?

... would you like to try? Why?

D Go to Studying File № 15 to watch the video about Ethical Hacker.

11. READING AND SPEAKING

Go to Additional Texts, File № 11 and read the text “A HACKER EXPLAINS WHY US NUKES CONTROLLED BY ANCIENT COMPUTERS IS ACTUALLY A GOOD THING”. Follow the Algorithm in Speaking Development File № 3 and Render the article.

12. SPEAKING

CYBER CRIMES

In small groups, look at the list of cybercrimes below and discuss these questions.

1. Which crimes are the most dangerous?
2. Is it fair or unfair to pay for the songs, videos, books or articles that you download? Should copyright infringement be allowed online?
3. What measures can be taken by governments to stop cybercrime?
4. Do you think governments have the right to censor material on the Internet?
5. Personal Information such as our address, salary, and civil and criminal records is held in databases by marketing companies. Is privacy in danger?

Cybercrimes:

- ***Piracy*** – The illegal copy and distribution of copyrighted software, games or music files

- **Plagiarism and theft of intellectual property** – pretending that someone else's work is your own
- **Spreading of malicious software**
- **Phishing**(Password harvesting fishing) – getting passwords for on-line bank accounts or credit card numbers by using emails that look like they are from real organizations, but are in fact fake; people believe the message is from their bank and send their security details.
- **IP spoofing** – making one computer look like another in order to gain unauthorized access
- **Cyberstalking** – online harassment or abuse, mainly in chat rooms or newsgroups
- **Distribution of indecent or offensive material**

13. PROJECT ACTIVITY

Choose any crime from the list above and explore the Internet for more details. Make a short report and present it to the class.

14. READING

- A** *Work in pairs. Read the text and outline the most vulnerable personal information you share about yourselves on social networks.*
- B** *Study the words in italics and decide of what part of speech and verb form they are.*
- C** *Translate sentences with “ing” words into Russian in written form.*

10 THINGS YOU SHOULD NEVER POST ON SOCIAL NETWORKS

We share so many details of our daily lives online, but where should we draw the line on what we share about ourselves, our family, and our friends? There are some tidbits of personal information that it is best to never share online, here are ten of them:

1. Your Full Birthdate

While you may love *getting* loads of birthday wishes posted by your friends on your Facebook Timeline, *having* your birthdate

posted on your profile may provide scammers and identity thieves with one of the key pieces of information needed to steal your identity and open up accounts in your name.

2. Your Current Location

Many people don't realize that when they post a status update or a tweet, they may also be *revealing* their current location. *Giving out* your location information can be dangerous because it tells potential thieves that you might not be at home. *Depending on* your privacy *settings*, that innocent tweet from your vacation spot might give the bad guys the green light they were *waiting* for to rob your house.

3. Pictures of Your Children or Your Friends' Children Tagged With Their Names

Ok, this is a sensitive topic. We all want to protect our kids, we would lay down in front of a truck to protect them, but many of us post hundreds of name tagged pictures of our children online for the world to see. The problem is that you can never be sure that only your friends are *seeing* these pictures. What if your friend has their phone stolen or logs into Facebook from the library and forgets to log out? You can't rely on the "Friends only" *setting* because you really never know. Assume that everything is public and don't post *anything* that you wouldn't want the world *having* access to.

If you must post pictures of your children, remove any geotag information, and avoid *using* their real names in the picture tag or description.

Your true friends know their names, no need to label them. Same goes for *tagging* pictures of your friends' kids. If in doubt leave the tag out.

I would be a hypocrite if I said I had removed all tags of my kids from Facebook. It's a long process to go back through years worth of photos, but I work on it a little bit at a time, eventually I'll have them all removed.

4. Your Home Address

Again, you never know who might be *looking* at your profile. Don't post where you live as you are *making* things easy for the bad guys. What can criminals do with your address?

5. Your Real Phone Number

While you may want your friends to be able to contact you, what if your real phone number falls into the wrong hands. It's possible that

your location could be narrowed down by someone using a reverse phone number lookup tool which are freely available on the Internet.

An easy way to allow people to contact you by phone without *giving* them your real phone number is by using a Google Voice phone number as a go-between.

6. Your Relationship Status

Want to give your stalker the green light they've been *waiting* for while simultaneously *letting* them know that you're more likely to be home alone? *Posting* your relationship status is the surest way to accomplish this. If you want to be mysterious, just say "It's Complicated".

7. Pictures With Geotags

There's no better road map to your current location than a geo-tagged picture. Your phone might be *recording* the location of all pictures you take without you even *knowing* it.

8. Vacation Plans

"Hey, I'm *going* to be on vacation on the 25th of August, please come rob me", that's basically what you're *saying* to social network *trolling* criminals when you post your vacation plans, vacation photos, and when you location tag yourself while you're still on vacation. Wait until you are safely home before *uploading* your vacation pics or *talking* about your vacation online. Is "*checking in*" at that fancy restaurant really worth *giving up* your location information to potential criminals?

9. Embarrassing Things you Wouldn't Want Shared With Your Employer or Family

Before you post *anything* online, think to yourself, would I want my boss or family to see this? If not, don't post it. Even if you post *something* and delete it, doesn't mean that someone didn't take a screenshot of it before you had the chance to remove it.

<http://netsecurity.about.com>, by Andy O'Donnell

15. ROLE-PLAY

A *In pairs, make up dialogues on the situation: two friends are talking about internet security. Find out if your friend follows the tips below. Act the dialogues out.*

B *You may extend the topic using the information from the text above.*

TIPS FOR ONLINE SAFETY



Tip—Keep your password secret, even from friends.



Tip—Make sure the url begins with https (the s stands for secure) before buying anything online; otherwise, hackers can steal your credit card details.



Tip—Carefully select the pictures you share. A simple photo can ruin your reputation.



Tip—If something makes you uncomfortable, even if you met in real life, cut off contact.

16. VOCABULARY RESEARCH

Study Vocabulary Bank, File № 13 and make a glossary. Follow the instructions in Studying File № 13.

17. QUESTIONS ON THE TOPIC

The Internet

1. What is the Internet?
2. When and where did the Internet appear?
3. Who contributed into its development?
4. What are the most popular Internet services and search engines?
5. What do you use the Internet for?

Viruses

1. What is a virus? What types of viruses do you know?
2. What ways can viruses enter our computer system?
3. How can we protect a computer system from viruses? Is it possible?

Computer crimes

1. Why is computer security so important for us?
2. What cyber crimes can you enumerate? Give their brief description.
3. What are the reasons for computer crimes?
4. Is it fair or unfair to pay for the songs, videos, books or articles that you download? Should copyright infringement be allowed online?
5. Hackers: what are they?
6. What is the difference between Black Hat Hackers and White Hat Hackers?
7. What does it take to be a hacker? Have you ever hacked?
8. What measures can be taken by governments to stop cybercrime?

Unit IX. Information Technologies

1. LEAD-IN

Comment on the following sayings about new technologies:

1. "Technology gives us power, but it does not and cannot tell us how to use that power. Thanks to technology, we can instantly communicate across the world, but it still doesn't help us know what to say." (Jonathan Sacks)
2. "Our technological powers increase, but the side effects and potential hazards also escalate." (Alvin Toffler)
3. "Technology offers us a unique opportunity, though rarely welcome, to practice patience." (Allan Lokos, *Patience: The Art of Peaceful Living*)
4. "The number one benefit of information technology is that it empowers people to do what they want to do. It lets people be creative. It lets people be productive. It lets people learn things they didn't think they could learn before, and so in a sense it is all about potential." (Steve Ballmer)
5. "Technology is supposed to make our lives easier, allowing us to do things more quickly and efficiently. But too often it seems to make things harder, leaving us with fifty-button remote controls, digital cameras with hundreds of mysterious features and book-length manuals, and cars with dashboard systems worthy of the space shuttle." (James Surowiecki)
6. "Artificial intelligence is no match for natural stupidity." (Albert Einstein)

2. REFRESH YOUR GRAMMAR

Underline Complex Object structures in the given quotes (see Grammar File № 13) and practice them in your own sentences relating to technologies.

3. INTERNET RESEARCH

Search the Internet for more quotes, choose 3 you like most and discuss them in small groups.

4. READING AND SPEAKING

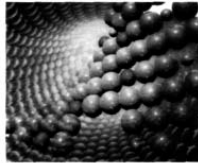
FUTURE TRENDS²⁵

A *In pairs, discuss these questions.*

1. What do you think a trend is?
2. What trends in ICT do you think will affect our lives in the future?
Make a list.



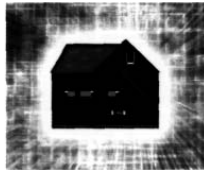
a _____



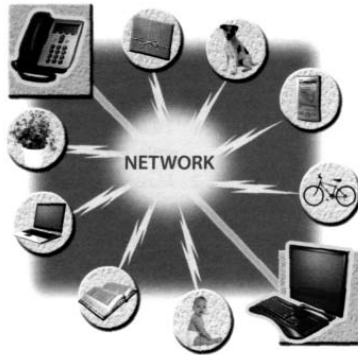
b _____



c _____



d _____



e _____

B *Match the texts (1–5) with the picture (a–e). Which trends from your list A are mentioned?*

1. By all accounts, **nanotechnology**- the science of making devices from single atoms and molecules – is going to have a huge impact on both business and our daily lives. Nano devices are measured in **nanometers** (one billionth of a metre) and are expected to be used in the following areas.

- **Nanomedicine:** By 2020, scientists believe that nano-size robots, or **nanobots**, will be injected into the body's bloodstream to treat diseases at the cellular level
- **Nanomaterials:** New materials will be made from carbon atoms in the form of **nanotubes**, which are more flexible, resistant and durable than steel or aluminium. They will

²⁵ Infotech. English for Computer Users. Fourth Edition. Student's Book by Santiago Remacha Esteras.

- **Nanocomputers:** Chip makers will make tiny microprocessors with **nanotransistors**, ranging from 60 to 5 nanometres in size.

2. Artificial Intelligence (AI) is the science of making intelligence machines and programs. The term originated in the 1940s, when Alan Turing said: 'A machine has artificial intelligence when there is no discernible difference between the conversation generated by the machine and that of an intelligent person.' A typical AI application is **robotics**. One example is ASIMO, Honda's intelligent humanoid robot. Soon, engineers will have built different types of **android**, with the form and capabilities of humans. Another AI application is **expert systems**- programs containing everything that an 'experts' knows about a subject. In a few years, doctors will be using expert system to diagnose illnesses.

3. Imagine you are about to take a holiday in Europe. You walk out to the garage and talk to your car. Recognizing your voice, the car's doors unlock. On the way to the airport, you stop at an ATM. A camera mounted on the bank machine looks you in the eye, recognizes the pattern of your iris and allows you to withdraw cash from your account. When you enter the airport, a hidden camera compares the digitized image of your face to that of suspected criminals. At the immigration checkpoint, you swipe a card and place your hand on a small metal surface. The geometry of your hand matches the code on the card, and the gate opens. You're on your way. Does it sound futuristic? Well, the future is here. **Biometrics** uses computer technology to identify people based on physical characteristics such as fingerprints, facial features, voice, iris and retina patterns.

Adapted from the Richmond Times-Dispatch

<p>4. Ubiquitous computing, also known as pervasive computing, is a new approach in which computer functions are integrated into everyday life, often in an invisible way. Ubiquitous devices can be anything from smartphones to tiny sensors in homes, offices and cars, connected to networks, which allow information to be accessed anytime and anywhere</p>	<p>– in other words, ubiquitously. In the future people will interact naturally with hundreds of these smart devices (objects containing a microchips and memory) every day each invisibly embedded in our environment and communicating with each other without cables.</p>
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<p>5. In the ideal smart home, appliances and electronic devices work in sync to keep the house secure. For example, when a regular alarm system senses that someone is breaking into the house, it usually alerts the alarm company and then the police. A smart home system would go further, turning on the lights in the home and then sending a text message to the owner's phone. Motorola Homesight even sends images captured by wireless cameras to phones and PCs. Smart homes can remember your living</p>	<p>patterns, so if you like to listen to some classical music when you come home from work, your house can do that for you automatically. They will also know when the house is empty and make sure all appliances are turned off. All home devices will be interconnected over a home area network where phones, cable services, home cinemas, touch screens, smart mirrors and even the refrigerator will cooperate to make our lives more comfortable.</p> <p style="text-align: right;"><i>Adapted from www.businessweek.com</i></p>
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C Read the texts again and answer these questions.

1. Which unit of measurement is used in nanotechnology?
2. What are the advantages of nanotubes over regular materials?

3. What will doctors use expert systems for?
4. What features are analysed by biometrics?
5. Which trend refers to computers embedded in everyday devices, communicating with each other over wireless networks?
6. What will the alarm system do if someone breaks into a smart home?
7. How will devices be interconnected inside the smart home?

D Find words in the texts with the following meanings.

1. A microscopic robot, built with nanotechnology (text 1) _____
2. A robot that resembles a human (text 2) _____
3. Biological identification of a person (text 3) _____
4. Integrated; inserted into (text 4) _____
5. Electrical devices, or machines, used in the home (text 5) _____

E Go to Additional Texts, File № 12. Read the text “SAMSUNG LAUNCHES \$200 GALAXY TAB IRIS, AN EYE-SCANNING TABLET FOR AUTHENTICATING INDIA’S CITIZENS”. Follow the algorithm provided in Speaking Development, File № 3 and render the text.

F If you are interested in Biometrics development you may also have a look at:

BRAINPRINTS HIT 100 % ACCURACY AT IDENTITY VERIFICATION

<https://nakedsecurity.sophos.com/2016/02/05/brainprints-hit-100-accuracy-at-identity-verification/>

HOW YOUR NEXT PASSWORD COULD BE YOUR BRAIN

<https://nakedsecurity.sophos.com/2015/05/21/how-your-next-password-could-be-your-brain/>

SKULL ECHOES CAN BE A PASSWORD TO PROTECT FACEHUGGER COMPUTERS

<https://nakedsecurity.sophos.com/2016/04/25/skull-echoes-can-be-a-password-to-protect-facehugger-computers/>

G What other interesting advances in Biometrics do you know? Share in the class.

5. LANGUAGE DEVELOPMENT

ROBOTS, ANDROIDS, AI²⁶

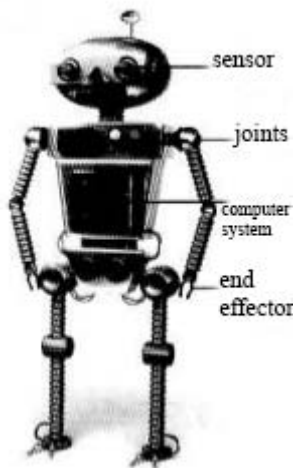
A *Read Part I and say what parts robots have.*

Part I. Robots and automata

A robot is computer-programmed machine that performs actions, manipulates objects, *etc.* in a precise and, in many cases, repetitive way.

Robots may be **automata**, or man-like machines, whose basic components are similar to a human body.

- They have mechanical links, **joints**, which connect their movable parts.
- Their heart and muscles are the electric or pneumatic motors or systems, the **actuators**, which create the movement.
- Robots also have hands, usually tools or grippers, called **end effectors**.
- They may be equipped with cameras or infrared controls, **sensors**, which transmit information to the central system in order to locate objects or adjust movements.
- Finally, robots depend on a **computer system**, the brain that directs the actions.



B *Complete the article with words from Part I*

ACTION ROBOT TO COPY HUMAN BRAIN

Scientists at Aberystwyth University are working on a machine which they hope will recognize objects with cameras that will work as (1)_____, and retrieve objects with an arm that will be its (2)_____. Although the arm will have (3)_____ that will link its muscles and

²⁶ Professional English in Use. ICT. Intermediate to Advanced. By Santiago Remacha Esteras, Elena Marco Fabre. Cambridge University Press. P. 70.

an electric motor that will be the (4)_____, this new (5)_____ won't move like a human, i.e. it won't be like the (6)_____ of science-fiction films: forger Star Wars' C3PO. It will be desk based: no walking, or climbing stairs. The team hopes to discover how the brain performs 'multi-tasking' and to use that information to develop the (7)_____ to create a robot that can think for itself.

C Read Part II and say where robots can be used (search the Internet to extend your answer).

Part II. Uses for robots

The word *robot* comes from *robota*, meaning compulsory labour; similarly, robots are helpful in activities which are too dangerous, too boring or too precise for human beings.

Robots in industry

Robotic arms, telescopic or bending arms, are widely used in the automobile industry to paint, weld and assemble car parts. Robots are also used in electronic assembly of microchips where precision of movements is essential.

Robots and space

Planetary rovers, remotely-operated vehicles, and **space probes**, un-piloted spaceships, are used to explore space.

Robots and health

Surgical robots, which help human surgeons, are programmed to assist in very delicate microsurgery operations or mimic the surgeons movements in telesurgery operations.

Robots and safety

Mobile robots, vehicles controlled by human operators, are used for defusing bombs and handling hazardous materials.

D Read Part III and do the task below.

Part III. Artificial Intelligence

Artificial Intelligence (AI) is the science that tries to recreate the human thought process and build machines that perform tasks that normally require human intelligence. It has several applications.

Androids are anthropomorphic robots designed to look and behave like a human being. Most androids can walk, talk and understand human speech. Some react to gestures and voice inflection. Some 'learn' from the environment: they store information and adapt their behavior according to a previous experience.

Expert systems is the term given to computer software that mimics human reasoning, by using a set of rules to analyze data and reach conclusions. Some expert systems help doctors diagnose illnesses based on symptoms.

Neural networks are a new concept in computer programming, designed to replicate the human ability to handle ambiguity by learning from trial and error. They use silicon neurons to imitate the functions of brain cells and usually involve a great number of processors working at the same time.

E Complete the extracts with words from Part III.

The term (1)_____ is defined as automation of intelligent behaviour, but can (2) _____ really be intelligent? (3)_____ are mod of units that resemble neurons. They are often used to simulate brain activity and are effective at predicting events (4)_____, also known as knowledge based systems, mirror the structure of an experts thought.

6. READING AND SPEAKING

A Go to Additional Texts, File № 13. Read the text “FULL METAL SCRUBS: IT SECURITY FOR SURGICAL ROBOTS COULD SAVE YOUR LIFE”. Follow the algorithm provided in Speaking Development, File № 3 and render the text.

B Go to Additional Texts, File № 14. Read the text “SCUBO IS AN OMNIDIRECTIONAL ROBOT FOR UNDERWATER EXPLORATION”. Follow the algorithm provided in Speaking Development, File № 3 and render the text.

7. INTERNET RESEARCH

Search for the keywords “trends in robotics”. Make a short report to the class on the current trends in this field.

8. READING AND SPEAKING

A *What is Nanotechnology? What does it refer to?*

B *Read the text about nanotechnology and answer the questions:*

What parts can it be divided into?

What are the main points each paragraph provides?

What is your personal attitude towards nanotechnology?

NANOTECHNOLOGY

Nanotechnology is a part of science and technology about the control of matter on the atomic and molecular scale – this means things that are about 100 nanometres or smaller. Nanotechnology includes making products that use parts this small, such as electronic devices, catalysts, and sensors etc. Nanotechnology is defined as the study of structures between 1 nanometre and 100 nanometres in size. To give you an idea of how small that is, there are more nanometres in an inch than there are inches in 400 miles. To give an international idea of how small that is, there are as many nanometers in a centimetre, as there are centimetres in 100 kilometres.

Nanotechnology brings together scientists and engineers from many different subjects, such as applied physics, materials science, interface and colloid science, device physics, chemistry, supramolecular chemistry (which refers to the area of chemistry that focuses on the noncovalent bonding interactions of molecules), self-replicating machines and robotics, chemical engineering, mechanical engineering, biology, biological engineering, and electrical engineering.

Generally, when people talk about nanotechnology, they mean structures of the size 100 nanometers or smaller. There are one million nanometers in a millimeter. Nanotechnology tries to make materials or machines of that size.

People are doing many different types of work in the field of nanotechnology. Most current work looks at making nanoparticles (particles with nanometer size) that have special properties, such as the way they scatter light, absorb X-rays, transport electrical currents or heat, etc. New materials are possible with nano size structures. It is even possible to work with single atoms.

There has been a lot of discussion about the future of nanotechnology and its dangers. Nanotechnology may be able to invent new materials and instruments which would be very useful, such as in medicine, computers, and making clean electricity. On the other hand, nanotechnology is new and there could be unknown problems. For example if the materials are bad for people's health or for nature, they may have a bad effect on the economy or even big natural systems like the Earth itself. Some groups argue that there should be rules about the use of nanotechnology.

9. INTERNET RESEARCH

Explore the Internet and present a brief report on Applications of Nanotechnology.

10. READING AND SPEAKING

A For questions 1–15, read the text below and decide which answer A, B, C or D best fits each space. There is an example at the beginning (0).

0 A announced B declared C informed D claimed

THE INTERNET HOUSE²⁷

A leading British building and design company has just **(0)** ...**A.** their plans for the home of the future. The new design, **(1)** as the 'Internet House', has five bedrooms, plenty of bathrooms and a double garage. But these are not the main selling **(2)**, for it is the €25,000 **(3)** of automation that makes this house really different.

It will be **(4)** for people who have plenty of money, but not a great **(5)** of time; young professionals in other words. They are likely to be **(6)** to the idea of a microwave that provides easy-to-cook **(7)** via the Internet and a cooker that switches itself on or off at a command received via e-mail.

All the electrical appliances in the house, **(8)** the heating and lighting controls, are linked together by **(9)** of a gadget called

²⁷ Fast Track to FCE. Course Book by Alan Stanton, Mary Stephens. Longman.

a 'router'. Using what's called a 'Webpad', a kind of portable lap-top computer, the owners of the house tap in commands from (10) they may be. The Webpad (11) A signal to the router, which (12) The message and then activates the necessary controls. On the way home at night, for example, the owners can switch on the lights or (13) the central heating working, and so (14) sure that they have a nice warm welcome when they (15) into their home.

- | | | | | |
|----|--------------|--------------|-----------------|---------------|
| 1 | A entitled | B known | C referred | D named |
| 2 | A points | B plots | C plans | D paths |
| 3 | A value | B price | C cost | D worth |
| 4 | A accurate | B model | C precise | D ideal |
| 5 | A length | B lot | C deal | D extent |
| 6 | A excited | B attracted | C appealed | D interested |
| 7 | A recipes | B receipts | C prescriptions | D instructors |
| 8 | A as long as | B as well as | C as soon as | D as far as |
| 9 | A account | B regards | C order | D means |
| 10 | A whatever | B however | C wherever | D whichever |
| 11 | A draws | B speaks | C sends | D hears |
| 12 | A decodes | B discounts | C decides | D dissolves |
| 13 | A lead | B get | C have | D put |
| 14 | A come | B make | C keep | D hold |
| 15 | A step | B stay | C stand | D start |

B Read the text and choose the most suitable variant.

SMART STUFF

INCREASINGLY over the last few years, we have become familiar with the range of small electronic gadgets that come under the heading 'smart' accessories. Joggers, for example, run with heart-rate monitors, and shop assistants carry pocket-sized computers. But these are just the first examples of a whole range of new products that promises to change our lives in all sorts of surprising ways.

As a scientist at Massachusetts Institute of Technology's Media Lab, Rosalind Picard tries out all kinds of smart accessories before they go on the market. One of these was the so-called «frown head-band». It came as a shock to Rosalind to realize just how often she

frowned. Stuck in a traffic jam recently, waiting for the cars to move forward, Rosalind kept hearing the sounds of the tiny sensor inside the band worn around her forehead – each time she frowned in frustration, the sensor gave out a signal. Headbands that check facial expressions are just one of the things she and her colleagues have designed. Their aim is to make ready-to-wear items that both look good and give the wearer useful feedback. Body sensors, like those in Rosalind's headband, can detect physical changes that the wearer might not otherwise be aware of. Hidden inside watches, rings or shoes, these sensors can check for signs of stress, give information and offer advice.

Another computer scientist, Steven Feiner, is working on a pair of glasses that will do more than help you to see. Imagine you want to try a restaurant in a foreign city but you're not familiar with the dishes on the menu. If you are wearing a pair of Steven's glasses, all you have to do is glance above the restaurant's doorway and your glasses will immediately become windows to the Internet, offering you full details of the meals served inside. Are you one of those people who lack confidence when giving a talk to an audience? Look to the right and the glasses will flash your notes in front of your eyes. They could also prove useful for cooks who want to check a recipe without leaving sticky fingermarks all over their cookery books.

At the moment, Steven's invention looks more like a pair of ski goggles than a pair of glasses. It's a headset connected to a hand-held computer and a Global Positioning System (GPS) receiver, which tracks the wearer's position. Students who don't mind being stared at have tried out the Star Trek-like device on campus. But Steven says that these head-worn displays will eventually get smaller, lighter and smarter as technology improves. As they will be relatively cheap, he foresees them replacing the notebooks and manuals that workers have to carry. He predicts that they will be useful to surgeons, giving them instant access to a patient's medical notes while carrying out operations.

And, of course, this new technology has a fashionable as well as a useful application. A chemical engineer named Robert Langer has invented a new microchip that, if put inside a ring, can give off different scents according to a person's mood. That, of course, may or may not appeal to you. And, in the end, it is shoppers, not scientists, who will determine which of these smart accessories will succeed as

fashionable items and which are destined to join history's long list of crazy inventions. Steven Feiner, concerned that vanity may prevent some people from wearing his glasses, is already working on the idea of contact lenses with the same features.

It is clear, however, that as small computer displays get brighter and cheaper, they will pop up in all sorts of easily-wearable accessories, even in the buttons on your coat. What's more, this is something that's going to happen a lot sooner than we all expect.

1. *When Rosalind wore the headband, she was surprised at*

- A. how well the sensor worked.
- B. how affected she was by the traffic.
- C. how strong the signal was.
- D. how comfortable it was to wear.

2. *What does «Their» in the text refer to?*

- A. facial expressions
- B. headbands
- C. colleagues
- D. ready-to-wear items

3. *'glance' in the text describes a way of*

- A. wearing something
- B. looking at something
- C. pointing to something
- D. finding something

4. *Steven's glasses will help people who are giving a talk by*

- A. telling them if they forget to say things.
- B. checking how nervous they're feeling.
- C. signaling if they make a mistake.
- D. helping them to remember things.

5. *What is the current problem with Steven's glasses?*

- A. where they are worn
- B. how much they cost
- C. what they look like
- D. the way they've been tested

6. What is the writer's view of Robert Langer's invention?

- A. It is unlikely to work successfully.
- B. It is a bad use of new technology.
- C. He is sure people will laugh at it.
- D. He is uncertain whether people will buy it.

7. In general, what does the writer think about 'smart' accessories?

- A. They will soon be widely available.
- B. Much more research is needed into them.
- C. Only a few of them will prove to be useful.
- D. They will only affect the lives of certain people.

C In pairs, discuss with the partner whether you would like to live in Smart Home. What 'smart' accessories do you have/would you like to have?

D Go to Additional Texts, File № 15. Read the text “WITH \$3.2 MILLION, NOTION BRINGS THE INTERNET OF THINGS TO HOME MONITORING”. Follow the algorithm provided in Speaking Development, File № 3 and render the text.

11. INTERNET RESEARCH

Explore the Internet and present a brief report on Smart stuff novelties.

WEARABLE TECHNOLOGIES

12. READING AND SPEAKING

Go to Additional Texts, File № 16. Read the text “THE NEXT OPPORTUNITY FOR WEARABLE TECHNOLOGIES: AESTHETICS”. Follow the algorithm provided in Speaking Development, File № 3 and render the text.

13. INTERNET RESEARCH

Explore the Internet and present a brief report on Wearables.

14. WATCHING

https://www.ted.com/talks/tan_le_a_headset_that_reads_your_brainwaves



A HEADSET THAT READS YOUR BRAINWAVES

Tan Le's astonishing new computer interface reads its user's brainwaves, making it possible to control virtual objects, and even physical electronics, with mere thoughts (and a little concentration). She demos the headset, and talks about its far-reaching applications.

Before watching

A *Make sure you know the following words and expressions:*

conscious, facial, take into account, explicitly, decision-making process, realm of human interaction, emotional experiences, emit, outer surface layer, cortex, cortical folds, consistency, array, abrasion, high fidelity EEG acquisition system, cognitive suite, maintain...for the entire duration, disappear, fade out, even though, instance, familiar (with), distinct thoughts, to heighten, curtains, to blink, we are ... only scratching the surface..., involvement.

While watching

B *Watch the video and answer the questions:*

1. What distinguishes communication between people? Why is it complex?
2. What do the researchers want? What is their vision?
3. Why is it difficult to implement the idea?
4. What was the researchers' breakthrough?
5. What features the device presented?
6. How does the presented cognitive suite work?
7. What are the applications mentioned?

After watching

C Put the verbs in Passive forms:

1. We take into account so much more than what explicitly ... (express)
2. Our brain ... (make up) of billions of active neurons...
3. When these neurons interact the chemical reaction emits an electrical impulse which can ... (measure).
4. The majority of our functional brain ... (distribute) over the outer surface layer of the brain.
5. Each individual's cortex ... (fold) differently, very much like a fingerprint.
6. Facial expressions... In emotional expresses actually ... (design) to work out of the box with some sensitivity adjustments available for personalization.
7. And once you trained up the detections these thoughts can (assign) or (map) to any computing platform application or device.
8. Your facial expressions can naturally and intuitively ... (use) to control an avatar or virtual character.
9. The technology can also ... (apply) to real world applications.
10. ... facial expressions ... (map) to the movement command.

D Fill in the gaps with Perfect verbs (active or passive):

1. Our communication with machines always _____ (limit) to conscious and direct forms.
2. We always _____ (have) to give a command to a machine in order for it to do something for us.
3. So eventhough a signal may come from the same functional part of the brain by the time the structure _____ (fold), its physical location is very different between individuals....
4. ... who kindly _____ (agree) to help me to demonstrate what we _____ (be) able to develop.
5. And the great thing about it is that we only _____ (give) the software one instance of how he thinks about "disappear".

E Watch the video and check up your answers.

F Discuss with your partner:

1. What impressed you most?

2. The presentation was held in 2010. Do you know if something has changed since then?
3. Would you like to have an application like the one presented?
4. What other technological advances do you know?

15. PROJECT ACTIVITY

TRENDS IN NEW TECHNOLOGIES **AND THEIR EFFECT ON PEOPLE'S LIVES**

Choose any new technology and make a presentation.

You should cover following:

- brief description
- application
- advantages/disadvantages
- perspectives

To present your report, use the tips given in Speaking Development, File № 2.

16. VOCABULARY RESEARCH

Study Vocabulary Bank, File № 14 and make a glossary. Follow the instructions in Studying File № 13.

17. QUESTIONS ON THE TOPIC

1. What are the trends in new information technologies? Enumerate them and give their brief description.
2. Robotics: what jobs are meant for robots? Where can robots be used? Can robots replace humans?
3. What technological advances do you know? How do they effect on people's lives?
4. Which technology development would you like to be involved in?

SUPPLEMENTARY

1. SPEAKING DEVELOPMENT

FILE № 1 DISCUSSION

If you are having a debate, use different speaking strategies to sound more convincing. While debating you are supposed to listen to the speakers carefully. Using different speaking strategies you should agree or disagree with the opinions and develop the ideas expressing your point of view.

SPEAKING STRATEGIES:

Giving a presentation

First and foremost...

First of all...

I'd like to begin by... Secondly,/Then,... Finally...

Before we go any further, let's look at...

Last but not least...

Compared to...

Emphasizing

In contrast...

Most importantly, we must...

Let me point out that...

Don't forget that...

Giving opinions

In my opinion...

In my view...

To my mind...

Some might think that...but I disagree. ...

Some... while others...

It can be said that...

What I'm saying is we should...

Summarizing and Generalizing

Generally speaking...

In short...

In brief...

In other words...

To sum up...

In conclusion we can say that...

What needs to be done now is that...

The solution would be...

Clarifying a Point

If you want my opinion...

What I really mean is...

What I'm trying to say is..

My point is that...

The point I'm trying to make is...

Agreeing

I totally agree with you.

I think that's generally true.

That's what I think!

Agreeing in part

You may be right there. However...

I agree with you up to a point, but...

I see what you mean, but...

Disagreeing

I don't think that's quite right.

I'm not sure I agree with you.

I really can't accept that.

I totally disagree with what you said.

That's not how I see it.

Challenging an argument

Prove it!

I'm not convinced by that.

It wouldn't work in practice.

Where are the facts?
What do you mean exactly?

FILE № 2

<p style="text-align: center;"><u>PRESENTATIONS</u></p> <p style="text-align: center;">Useful Phrases</p>	
<p>Preparation is essential for an effective presentation. When giving a presentation, certain keywords are used to signpost the different stages. It's a good idea to memorize them and practice using them, so that they come to mind easily during a presentation.</p>	
<p>► Starting the presentation</p>	<ul style="list-style-type: none"> • Good morning/good afternoon ladies and gentlemen • The topic of my presentation today is ... • What I'm going to talk about today is ...
<p>► Why you are giving this presentation</p>	<ul style="list-style-type: none"> • The purpose of this presentation is ... • This is important because ... • My objective is to ...
<p>► Stating the main points</p>	<ul style="list-style-type: none"> • The main points I will be talking about are firstly ... secondly... next, finally... we're going to look at ...
<p>► Introducing the first point</p>	<ul style="list-style-type: none"> • Let's start/begin with ...
<p>► Showing graphics, transparencies, slides etc.</p>	<ul style="list-style-type: none"> • I'd like to illustrate this by showing you...
<p>► Moving on to the next point</p>	<ul style="list-style-type: none"> • Now let's move on to ...
<p>► Giving more details</p>	<ul style="list-style-type: none"> • I'd like to expand on this aspect/problem/point • Let me elaborate on that • Would you like me to expand on/elaborate on that?

► Changing to a different topic	• I'd like to turn to something completely different
► Referring to something which is off the topic	• I'd like to digress here for a moment and just mention that ...
► Referring back to an earlier point	• Let me go back to what I said earlier about ...
► Summarizing or repeating the main points	<ul style="list-style-type: none"> • I'd like to recap the main points of my presentation <ul style="list-style-type: none"> – first I covered – then we talked about – finally we looked at • I'd now like to sum up the main points which were:
► Conclusion	<ul style="list-style-type: none"> • I'm going to conclude by... saying that/inviting you to/ quoting ... • In conclusion, let me... leave you with this thought/invite you to
► Questions	<ul style="list-style-type: none"> • Finally, I'll be happy to answer your questions. • Now I'd like to invite any questions you may have. • Do you have any questions?

FILE № 3

THE ALGORITHM FOR RENDERING AN ARTICLE

The outline for rendering	Some expressions to be used while rendering an article
1. The title of the article. The headline of the article	<p>The article is entitled ...</p> <p>The article is headlined ...</p> <p>The headline (the title) of the article I have read is</p>
2. The author, (the reporter, the commentator, the newsman, the interviewer, the pressman);	<p>The author of the article is... .</p> <p>The article is written by</p>

where, when the article was published (printed taken from).	It is (was) published in ... It is (was) printed in ...
3. The key-note of the article. The main idea of the article.	The main idea of the article is ... The article is about ... The article is devoted to ... The article deals with ... The article touches upon ... The purpose of the article is to give the reader some informa- tion on The aim of the article is to provide The reader with some material (date)
4. The contents of the article. Some facts, names, figures.	a) Firstly, the author writes, states, stresses, considers, points out, says, thinks, describes, comments on that... b) Secondly, the author reports (says) that... c) Thirdly, the author mentions the facts above ... He concerns (deals with) ... d) In the fourth (fifth) the author cites (quotes) the words of ... e) In conclusion ... The author comes to the conclusion that ...
5. Your opinion of the article.	I found the article interesting (important, up-to-date, out-of- date, dull). The article is of no value. The article is too difficult for understanding. In my opinion To my mind

2. STUDYING FILES

FILE № 1

- A** *Complete the text by putting words 1–7 into the correct form. Consider the text carefully and think about the part of speech needed to fill each gap. Check whether the word you need should be singular or plural.*

HOW WE CHOOSE OUR FRIENDS²⁸

The words *friend* and *free* come from the same root word, suggesting that one aspect of friendship is the freedom to be (1) in the company of another person.

Most friendships begin with shared interests or (2), which gradually develop into mutual trust, openness, affection and (3) We like people who share our attitudes and values. When someone agrees with us or makes the same (4) we have made, we gain confidence in our own views.

There is also a (5) for people to enjoy the companionship of those of the same (6) status and level of education. Friends may also share an altruistic goal, such as a concern for (7) or the cultivation of the arts.

- (1) our
- (2) active
- (3) loyal
- (4) choose
- (5) tend
- (6) economy
- (7) just

B *Discuss the questions:*

1. The text suggests that we choose friends who are like us. Can you think of examples of friends who are very different from each other? Why do you think they became, and remain, friends?
2. What kind of things might bring a friendship to an end?

²⁸ Fast Track to C.A.E. Coursebook by Alan Stanton, Susan Morris. P. 75.

FILE № 2

I'LL BE THERE FOR YOU

(The Rembrandts)

So no one told you life was gonna be this way
Your job's a joke, you're broke, your love life's D.O.A.

It's like you're always stuck in second gear
When it hasn't been your day, your week,
your month, or even your year, but

I'll be there for you
When the rain starts to pour
I'll be there for you
Like I've been there before
I'll be there for you
'Cause you're there for me too...

You're still in bed at ten and work began at eight
You've burned your breakfast so far... things are goin' great

Your mother warned you there'd be days like these
Oh but she didn't tell you when the world has brought
You down to your knees that...

I'll be there for you
When the rain starts to pour
I'll be there for you
Like I've been there before
I'll be there for you
'Cause you're there for me too...

No one could ever know me
No one could ever see me
Seems you're the only one who knows
What it's like to be me

Someone to face the day with
Make it through all the rest with
Someone I'll always laugh with
Even at my worst I'm best with you, yeah

It's like you're always stuck in second gear
When it hasn't been your day, your week, your month
or even your year...

I'll be there for you
When the rain starts to pour
I'll be there for you
Like I've been there before
I'll be there for you
'Cause you're there for me too...
I'll be there for you
I'll be there for you
I'll be there for you
'Cause you're there for me too...
I'll be there for you
(Cause you're there for me too)

FILE № 3

ON HOLIDAY²⁹

Sightseeing

You may do a bit of sightseeing on holiday, or you may do a lot of sightseeing, but you will probably go to a museum or art gallery, and see or visit some of these things: a temple, a castle, a cathedral, a palace, a fountain, a statue, a market.

Many people go on a sightseeing tour of a town (usually in a bus); they can also go on a tour of the castle / the cathedral / the art gallery,

²⁹ Vocabulary in Use. Pre-Intermediate and Intermediate by Stuart Redman. Cambridge University Press. P. 180.

etc. When you are sightseeing, it helps to buy a guidebook (= a book of information for tourists) and a map of the town you are in.

Things that tourists often do on holiday:

look round the shops/have a look round the shops

take photographs

spend a lot of/ lots of money

buy souvenirs (= typical products from the country)

get lost (= lose their way)

go out most evenings (= go to different places for social reasons, e.g. restaurant or disco)

have a good/great time (= enjoy themselves)

Describing 'places'

Bruges is a lovely place (= town) and we found a really nice place (= hotel) to stay.

The town is full of interesting places (= areas/buildings).

These words are often used when we describe places:

Venice is beautiful but it's always packed (= very crowded/full) with tourists in the summer.

New York is very cosmopolitan. (= full of people from different countries and cultures)

Vienna has lots of historical monuments. (= places, e.g. castles, built a long time ago)

Many beautiful cities have become very touristy. (= a negative word: 'too much tourism')

Sao Paulo is a really lively place (= full of life and activity) and the night-life is fantastic.

*Note: If you want to ask if it is 'a good idea' to visit a place, you can use **worth + ~ing**:*

A: If I go to Scotland, is it worth spending a few days in Glasgow?

B: Yes definitely. And if you want to travel round a bit, it's worth renting a car.

Exercises:

- A** Complete this postcard that John sent to his family while he was on holiday. You may need a word or phrase in each space.

Hi everyone, I've been in Paris for almost a week now and I'm having a ⁽¹⁾ _____. I spent the first few days ⁽²⁾ _____ - The Eiffel Tower, Notre Dame, and all the usual tourist attractions. Most places are absolutely ⁽³⁾ _____ with tourists (it's the time of the year I suppose), so yesterday I decided to have ⁽⁴⁾ _____ round the shops and I bought a few ⁽⁵⁾ _____. Today I've been to a couple of very interesting art ⁽⁶⁾ _____. I got ⁽⁷⁾ _____ on my way back to the hotel but it didn't matter because I discovered a really fascinating ⁽⁸⁾ _____ with lots of little stalls selling just about everything from apples to antiques. I ate in the hotel the first night but usually I ⁽⁹⁾ _____ and have dinner in a restaurant - the food is fantastic. I'm afraid I've ⁽¹⁰⁾ _____ a lot of money, but it's a great place and I've ⁽¹¹⁾ _____ lots of photographs so you'll be able to see for yourself when I get back home on the 24th. See you then, John

- B** Which of these places do you usually visit or go to when you are on holiday?

museums art galleries churches/cathedrals tourist shops
concerts bars discos/night clubs castles/palaces/temples
the cinema markets restaurants the theatre

- C** Without using one town more than twice, name a town or city in your country which is:

lively	packed with tourists in the summer
cosmopolitan	famous for its historical monuments
very touristy	really worth visiting if you are interested
in architecture	
not worth visiting	

FILE № 4**PLANS FOR HOLIDAY**

Sydney By plane Alone In January At my pen friend's Ten days To go sailing, to go surfing, to visit museums, to go to the theatres, cinemas, to meet new friends, to see some places of interest, to learn about local culture and traditions About \$4,000	Paris By plane With my girlfriend In May In a hotel One week To go sightseeing, to visit museums, exhibitions, to try French wine To see parks, Elysian Fields (The Champs-Élysées), Louvre, Notre Dame, Eiffel Tower. About \$4000	German By bus Alone In June At my uncle's One month To visit my relatives, to learn more about local culture and traditions, to go shopping, to visit museums, to meet new friends, to go to the theatres, cinemas To visit Museum of Chocolate in Cologne About 3000 euros
Spain By plane With my family In July In a hotel One week To go sightseeing, to visit museums, to eat in restaurants, to go walking, to learn more about local culture and traditions To see corrido About 2000 euros	In the country By car With my family In June At my parent's Three weeks To play with my children, to ride a bike, to go swimming, to go walking, to go camping, to go fishing, to have picnics, to relax, to read books, to lie in the sun About 10 000 roubles	Hawaii By plane With my wife In November In a hotel One week To spend most days on the beach, to lie in the sun, to try scuba diving, to learn more about local culture and traditions About \$2000

Egypt By plane With my boyfriend In October In a hotel Ten days To relax, to lie in the sun, to try scuba diving, to go safari, To see camels, desert About \$1600	London By plane Alone In August With a host family Three weeks To study English, to go sightseeing, to visit museums, to learn about traditions and culture, to try English food To see the British Museum, the Tower and other places of interest About \$12000	Turkey By plane Alone In September In a hotel Two weeks To spend most days on the beach, to lie in the sun, to try scuba diving, to go sightseeing, to go shopping About \$600
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FILE № 5

FOOD AND COOKING³⁰

Fruits

Apple, orange, lemon, strawberry, peach, melon, pear, banana, grapes, pineapple, cherry

Vegetables

Potato, green beans, peas, carrot, cauliflower, pepper, cabbage, aubergine, mushrooms, courgette

Salad

A salad is a mixture of uncooked vegetables. The main ingredient in a salad is lettuce, but it may also contain tomato, cucumber, vinegar, oil

Animals (meat), fish and shellfish

Beef, veal, lamb, pork, shrimp, salmon, oyster, lobster, mussels

³⁰ Vocabulary in Use. Pre-Intermediate and Intermediate by Stuart Redman. Cambridge University Press. Units 58–59.

Which is the odd one out in each group, and why?

- | | | | | |
|---|---------|-----------|----------|-----------|
| 1 | pork | veal | salmon | beef |
| 2 | salmon | shrimp | oyster | lobster |
| 3 | lettuce | aubergine | tomato | cucumber |
| 4 | peach | onion | mushroom | courgette |
| 5 | chicken | lamb | beef | mussels |

Do you eat the skin (= the outside) of these fruits – always, usually, or never? Make three lists.

apples	pineapples	cherries	grapes
pears	bananas	peaches	mangoes
oranges	lemons	melons	strawberries

Using the words above complete these sentences about yourself and your country. If possible, compare your answers with someone else who has done this exercise.

1. In my country _____ is/are more common than _____.
2. In my country _____ is/are more expensive than _____.
3. In my country a mixed salad usually contains _____.
4. In my country we don't grow _____.
5. And we don't often eat _____.
6. Personally, I prefer _____ to _____.
7. I love _____ but I don't really like _____.
8. My favourite meat is _____.

COOKING AND RESTAURANTS

Ways of cooking food

boil: in water, e.g. carrots

fry: in oil or butter above the heat, e.g. sausages

grill: under the heat, e.g. toast or meat

roast: in the oven using oil, e.g. meat

bake: in the oven without oil, e.g. cakes

Note: Food which is not cooked is **raw**.

Cooking steak

If you have steak you can eat it **rare** (= cooked very quickly and still red); **medium-rare** (cooked a bit longer and just red in the middle);

medium (cooked a bit more and just pink); or **well-done** (cooked even longer and not pink at all).

Describing food

tasty: has lots of taste: a positive word; (**tasteless**: a negative word)

bland: without a strong taste; neutral in flavour, e.g. boiled rice

sweet: lots of sugar; (*op*: **bitter**)

salty: lots of salt

hot/spicy: lots of spice, e.g. curry

fresh: recently produced, e.g. fresh bread; recently picked, e.g. fresh fruit

tender: easy to cut; a positive word used to describe meat; (*op*: tough)

fatty: meat with a lot of fat; (*op*: lean)

fattening: food which makes you **put on weight** / **get fat**, e.g. cream, biscuits, etc.

Eating in restaurants

In Britain you often have three courses: **a starter** (e.g. soup), **a main course** (e.g. steak or chicken), and **a dessert** (e.g. strawberries or ice cream). You may also have an **aperitif** (= a drink before the meal, e.g. gin and tonic), and coffee after the meal. When you pay the **bill** (= the money for the meal; AmEng = check), you sometimes also leave a **tip** (= money) for the waiter if service is not included in the price. (10% is a normal tip.) If it is a popular restaurant, you may also need to **book** (= reserve) a table **in advance** (= before you go).

Do you often eat the following food in your country? If so, do you eat it in the same way?

Example: In Britain, we often eat ‘fish’ but not usually ‘raw fish’.

raw fish	fried rice
fried eggs	grilled sausages
baked potatoes	roast beef
raw spinach	roast peppers
fried bread	boiled eggs
grilled cheese	baked bananas

Choose a possible adjective to describe each of these foods.

Adjective

lemon _____
chicken _____
honey _____
bacon _____

Adjective

ice cream _____
filler steak _____
chilies _____
avocado _____

What about restaurants in your country, and your own taste in food? Answer these questions about yourself and your country.

1. Do you normally need to book a restaurant in advance?
2. Is it common to give the waiter a tip? If so, how much?
3. Do you normally eat three courses in a restaurant? If not, how many courses do you normally have?
4. How many of these do you normally find on the table in a restaurant in your country?
Salt (yes/no) pepper (yes/no) oil (yes/no) vinegar (yes/no)
napkins (yes/no)
5. Generally, do you add more salt to your food when you eat in restaurants?
6. Do you like steak? If so, how do you like it cooked?
7. Would you say that food in your country is very spicy?
8. Would you say that food in your country is generally quite fattening?

Ask another person the same questions.

FILE № 6

STUDYING AT (A BRITISH) UNIVERSITY³¹

If you want to go to (= enter *fml*) university, you must first pass examinations that most students take at the age of eighteen (called 'A' levels). Most students take three 'A' levels (three examinations in three different subjects) and they must do well in order to get/obtain a place at university because the places are limited. At the moment, approximately 30 % of young adults go to university in Britain.

³¹ Vocabulary in Use. Pre-Intermediate and Intermediate by Stuart Redman. Cambridge University Press. Unit 79.

If you get a place at university, the tuition (= the teaching) is free, and some students also get (= receive) a grant (= money to pay for living expenses, e.g. food and accommodation) as well. Students at university are called undergraduates while they are studying for their first degree.

Most university courses last (= go on for / continue for) three years, some courses last four years, and one or two courses, e.g. medicine, may be even longer. During this period students can say that they are doing/studying history, or doing / studying for a degree in history, for example. When they finish the course and pass their examinations, they receive a degree (the qualification when you complete a university course successfully). This can be a BA (= Bachelor of Arts) or a BSc (= Bachelor of Science), e.g. I have a friend who has a BA in history, and another who has a BSc in chemistry.

POSTGRADUATE COURSES

When you complete your first degree, you are a **graduate**. (In the US, students also use this word as a verb and say, they ‘graduated in history’ or ‘graduated in chemistry’, for example.) Some students then go on to do a second course or degree (**postgraduate course/postgraduate degree**). These students are then **postgraduates**. There are usually three possible degrees:

MA (Master of Arts) or MSc (Master of Science); usually one year

MPhil (Master of Philosophy); usually two years

PhD (Doctor of Philosophy); at least three years

When people study one subject in great detail (often to find new information), we say they are **conducting / doing / carrying out research** (U); e.g. I’m **doing** some **research into/on** the languages of different African tribes.

A What do you call:

- 1) the money some students receive if they get a place at university?
- 2) the qualification you get at the end of university?
- 3) the name we give students during this period at university?
- 4) teachers at university?

- 5) students when they have completed their first degree?
- 6) students studying for a second degree?
- 7) the study of one subject in great depth and detail, often to get new information?

B *Replace the underlined verbs with different verbs that have the same meaning in the context.*

- 1) Did she receive a grant for her course?
- 2) Is it more difficult to obtain a place at university?
- 3) You have to pass the exams before you can enter university.
- 4) He's studying physics, I think.
- 5) I think they're carrying out some research into the cause of asthma.
- 6) The course goes on for three years.

FILE № 7

Track 5.3

Jeff Welcome to the second programme of Job Hunt, the series that's helping young job seekers. Last week we looked at how to write a CV. This week we'll be looking at how to write a cover letter ... and we'll be talking to Jackie Roberts ... a recruitment manager for a large human resources company based in London, who'll be telling us about how e-mail is changing the face of job applications and recruitment. So, first of all, what exactly is a cover letter? Jackie?

Jackie Well, a cover letter is a short letter of introduction written to accompany your CV. It's often the first contact you have with a potential employer and it's your first chance to make a good impression, and it can often make the difference between getting an interview or having your CV ignored.

Jeff So, what makes a good cover letter?

Jackie Well, a good cover letter is short, concise and to the point. It looks professional and well-organised. It gives you a chance to demonstrate your written communication skills. Although this may sound superficial, presentation and layout are really important and not to be underestimated. Just as you would make an effort to look smart and professional for a job interview, so you should do your best to make as good a first visual impression as possible with your cover letter. It

really is important to take your time over it, don't rush it, and make sure to double check it for spelling mistakes – and always ask someone to do you the favour of reading over it for you before you send it off. It's always easier for an objective eye to spot mistakes or discrepancies.

Jeff What information should you include, Jackie?

Jackie Well, the first thing to remember is that your cover letter should complement and not duplicate your CV. It's there to interpret the factual information included in your CV and to add a personal touch. It should refer clearly to the post you're interested in applying for and it should explain the reasons why you're interested in the post. It should highlight your most relevant skills or experiences and most importantly, it should persuade the employer that they want to interview you for the job.

Jeff Jackie, you've been working in recruitment for over 15 years. What changes have taken place during that time?

Jackie I suppose the most important change for me has been the use of e-mail and the Internet: we post a lot of job adverts on the Net these days, more than we do in the papers, and more and more applicants are applying by e-mail. More than anything else, it's helped speed up the whole process. An application can be sent, read, and an interview arranged within a couple of hours. Before we had to wait a couple of days at least.

Jeff Are there any significant differences between snail mail and e-mail applications?

Jackie Much fewer than you'd imagine – obviously there are minor differences in layout, for example, you don't need to include an address, but all other letter writing conventions should be stuck to. Opening and closing the letter formally and politely, writing in full sentences, organising your letter into clear paragraphs. Not all applicants do this and I must admit it really does annoy me when I receive a short note rather than a cover letter. Some can be short to the point of rudeness – or too informal – some people even add in emoticons – they've obviously been spending far too much time in chat rooms! I'm afraid I don't even bother accessing their attachment at that point and just consign it to the waste bin!

Jeff Thank you very much Jackie. If you want to know more about cover letters, visit our website, that's www.jobhunt.com/cover-

letter, that's all small case and no spaces. And now on to take a look at a couple of sample...

FILE № 8

WRITING COVER LETTER: the format to help. You should write approximately 250 words.

Dear Mr/Ms Last Name, (If you don't know their name: Dear Sir or Madam,)

First paragraph:

Why You Are Writing. Remember to make a clear reference to the post you are applying for.

Middle Paragraphs:

1. Why You Are Interested. Remember to include a short description of your current work position.

2. What You Have to Offer. Convince the readers that you are a suitable candidate and that they should call you *for interview*. *Make connections* between your abilities and the job requirements in the advert.

Final Paragraph:

Your Availability. Remember to let the readers know when you are available for interview and how best to get in touch with you. Include a phone number and times when you can be reached on it.

Yours sincerely, (or 'Yours faithfully' if you don't know the person's name)

Your Typed Name

SOME FINAL REMINDERS

A CV (US resume) is a one or two page document which briefly, but effectively, describes your life experiences and skills. Usually it has the following sections: personal details, education, professional experience, interests, additional skills and references. The purpose of the CV is to impress a potential employer with your quali-

fications and suitability for a job so that he/she will want to meet you on an interview.

The letter of application (also called the covering letter) provides the first direct contact between a candidate and an employer that's why it should be well written and presented to make a good impression. The letter of application normally contains three or more paragraphs in which you should confirm that you wish to apply and say where you learned about the job, say why you are interested in the position, show what you can contribute to the job by highlighting your most relevant skills and experience, indicate your willingness to attend an interview.

STYLE IN FORMAL LETTERS

Greeting: Dear Sir/Madam/Mr White,

- impersonal style
- complex sentence structure – frequent use of Passive Voice – single word verbs – non-colloquial English – formal language
- each paragraph develops one specific topic
- only facts, infrequent use of descriptive adjectives
- no use of short forms

Yours faithfully/ yours sincerely,
Steven Fry

FILE № 9

Track 5.4

Melissa Morrow is telling a friend about her job interview.

DON: So, how did the interview go?

MELISSA: It was very strange.

DON: What happened?

MELISSA: Well, it started off OK. He asked me how much experience I had had, and I told him I had been a public relations officer for ten years. Let's see.... He also asked what I would change about my current job. That was a little tricky.

DON: What did you say?

MELISSA: Well, I didn't want to say anything negative, so I told him that I was ready for more responsibility.

DON: Good. What else did he ask?

MELISSA: Oh, you know, the regular things. He asked what my greatest success had been, and how much money I was making.

DON: Sounds like a normal interview to me. What was so strange about it?

MELISSA: Well, at one point, he just stopped talking for a long time. Then he asked me all these bizarre questions that weren't even related to the job.

DON: Like what?

MELISSA: He asked me if I had cleaned out my car recently.

DON : You're kidding.

MELISSA: No, I'm not. Then he asked me why my employer didn't want me to stay.

DON: That's crazy. I hope you told him that you hadn't been fired.

MELISSA: Of course. Oh, and he asked me if I was good enough to work for his company.

DON: What did you tell him?

MELISSA: I told him that with my skills and experience I was one of the best in my field.

DON: That was a great answer. It sounds like you handled yourself very well!

MELISSA: Thanks. But now I'm asking myself if I really want this job.

DON: Take your time. Don't make any snap decisions.

FILE № 10

Track 5.5

STRESS INTERVIEW

A few weeks ago, Melissa Morrow had an unusual job interview. First, the interviewer asked why she couldn't work under pressure. Before she could answer, he asked if she had cleaned out her car recently. Then he wanted to know who had written her application letter for her. Melissa was shocked, but she handled herself well. She asked the interviewer whether he was going to ask her serious questions. Then she politely ended the interview.

Melissa had had a stress interview, a type of job interview that features tough, tricky questions, long silences, and negative evaluations of the job candidate. To the candidate, this may seem unnecessarily nasty on the interviewer's part. However, some positions require an ability to handle just this kind of pressure. If there is an accident in a nuclear power plant, for example, the plant's public relations officer must remain calm when hostile reporters ask how the accident could have occurred.

The uncomfortable atmosphere of a stress interview gives the potential employer a chance to watch a candidate react to pressure. In one case, the interviewer ended each interview by saying, "We're really not sure that you're the right person for this job ." One excellent candidate asked the interviewer angrily if he was sure he knew how to conduct an interview. She clearly could not handle the pressure she would encounter as a television news anchor—the job she was interviewing for.

Stress interviews may be appropriate for some jobs, but they can also work against a company. Some good candidates may refuse the job after a hostile interview. Melissa Morrow handled her interview beautifully, but later asked herself if she really wanted to work for that company. Her answer was no.

A word of warning to job candidates: Not all tough questioning is legitimate. In some countries certain questions are illegal unless the answers are directly related to the job. If your interviewer asks how old you are, whether you are married, or how much money you owe, you can refuse to answer. If you think a question is improper, ask the interviewer how the answer specifically relates to that job. If you don't get a satisfactory explanation, you don't have to answer the question.

And remember, whatever happens don't lose your cool. The interview will be over before you know it!

Did you know in some countries employers must hire only on the basis of skills and experience. In Canada, most countries in Europe, and In the United States, for example, an interviewer cannot ask an applicant certain questions unless the information is related to the job. Here are some questions an interviewer may NOT ask:

How old are you?
What is your religion?
Are you married?
What does your husband
(or wife) do?

Have you ever been arrested?
How many children do you have?
How tall are you?
Where were you born?

FILE № 11

HELP BOX: Classifying

Classifying means putting things into groups or classes.
We can classify types of computers, parts of a PC, etc.
Some typical expressions for classifying are:

- ... are classified into X types/categories
- ... are classified by...
- ... can be divided into X types/categories

Digital computers can be **divided into** five main **types**: mainframes, desktop PCs, Laptops, tablet PCs and handheld PDAs.

- ... **include(s)**...
- ...**consist(s)** of ...

The basic configuration of a mainframe **consists of** a central system which processes immense amounts of data very quickly.

- **There are X types/classes of ...**
- **X is a type of ...**

A tablet PC is **a type of** notebook computer.

FILE № 12

Track 6.1

For as long as there has been computer hardware, there has also been computer software. But what is software? Software is just instructions written by a **programmer** which tells the computer what to do. Programmers are also known as 'software developers', or just plain 'developers'.

Nothing much is simple about software. Software programs can have millions of lines of code. If one line doesn't work, the whole

program could break! Even the process of starting software goes by many different names in English. Perhaps the most correct technical term is '**execute**', as in "the man executed the computer program." Be careful, because the term 'execute' also means (in another context) to put someone to death! Some other common verbs used to start a software program you will hear are 'run', 'launch, and even 'boot' (when the software in question is an operating system).

Software normally has both **features** and **bugs**. Hopefully more of the former than the latter! When software has a bug there are a few things that can happen. The program can **crash** and **terminate** with a confusing message. This is not good. **End users** do not like confusing **error** messages such as:

Site error: the file /home7/businf6/public_html/blog/wordpress/wp-content/plugins/seo-blog/core.php requires the ionCube PHP Loader ioncube_loader_lin_5.2.so to be installed by the site administrator.

Sometimes when software stops responding you are forced to manually **abort** the program yourself by pressing some strange combination of keys such as ctrl-alt-delete.

Because of poor usability, documentation, and strange error messages, programming still seems very mysterious to most people. That's too bad, because it can be quite fun and rewarding to write software. To succeed, you just have to take everything in small steps, think very hard, and never give up.

I think everyone studying Information Technology should learn at least one programming language and write at least one program. Why? Programming forces you to think like a computer. This can be very rewarding when dealing with a wide range of IT-related issues from tech support to setting up PPC (pay-per-click) advertising campaigns for a client's web site. Also, as an IT professional, you will be dealing with programmers on a daily basis. Having some understanding of the work they do will help you get along with them better.

Software programs are normally written and compiled for certain hardware platforms. It is very important that the software is **compatible** with all the components of the computer. For instance, you cannot run software written for a Windows computer on a Macintosh computer or a Linux computer. Actually, you can, but you need

to have special emulation software or a virtual machine installed. Even with this special software installed, it is still normally best to run a program on the kind of computer for which it was intended.

There are two basic kinds of software you need to learn about as an IT professional. The first is **closed source** or **proprietary** software, which you are not free to modify and improve. An example of this kind of software is Microsoft Windows or Adobe Photoshop. This software model is so popular that some people believe it's the only model there is. But there's a whole other world of software out there.

The other kind of software is called **open source** software, which is normally free to use and modify (with some restrictions of course). Examples of this type of software include most popular programming languages, operating systems such as Linux, and thousands of applications such as Mozilla Firefox and Open Office.

But what is the real difference between open source and closed source software? Is open source software just about saving money? Let's investigate. Let's say for instance you find a bug in the latest version of Mozilla Firefox. The bug is causing a major project to fail and you need to fix it right away. This is not very likely to happen, I realize, but it's just an example. You might take the following steps:

Step 1. Download and unzip (or uncompress) the source code from Mozilla.

Step 2. Use an Integrated Development Environment (IDE) and a debugger to find and fix the bug in the source code. Please note that you will need to know a little C++ to debug applications such as this.

Step 3. Test the fix and then use a compiler to turn the source code into a binary file. This can take a long time for big programs. Once the source code is compiled then the program should work!

Step 4. You are almost done. Now send the bug fix back to the Mozilla Firefox team. They may even use your bug fix in the next release!

Now imagine you find a bug in a proprietary code base such as Microsoft Word. What can you do? Not much, just file a bug report and hope someone fixes it at some point.

This is a rather radical example, but I think it illustrates to a large degree why programmers generally prefer open source software

to closed source alternatives. Good programmers love code and they want access to it. Hiding the code from a programmer is like hiding the car engine from an auto mechanic. We don't like it!

Now you have learned a little about software. You will learn more about software applications and programming in later units.

FILE № 13

MAKING A GLOSSARY

Choose at least 7–8 terms on the topic and do research using dictionaries and Internet resources. Complete the table below.

Word/Expression	Meaning and Russian equivalent	Example (the item in context)

FILE № 14

Track 8.1

By the early 1990's, people were using computers in many different ways. Computers were already installed in most schools, offices, and homes. They were commonly used for writing papers, playing games, financial accounting, and business productivity applications. But very few people used them for communication, research, and shopping the way we do now. A man named Tim Berners-Lee changed all that. In 1990, Lee added an exciting hypertext and multimedia layer to the Internet and called it the World Wide Web. The rest, as they say, is history.

Believe it or not, the Web was not the first attempt at building a worldwide online community. Cutting edge geeks have been using online services such as CompuServe all the way back to the early 1980's. There were thousands of other privately run Bulletin Board Systems (BBS) as well, which served the general interest of curious nerds and researchers from around the world. Perhaps the most ambitious project was the French system Minitel, but it never caught on in the rest of the world and eventually faded into obscurity. Experiences

on these BBS was poor by today's standards. There was no graphics or even color. There was no sound except of course the obnoxious beeps and gurgles a modem makes when it initiates a dial-up connection to a server. Bandwidth was also very slow compared to today's speeds. Typical operating speeds were between 300 and 1200 baud. Today, a typical broadband connection is thousands of times faster than this.

The Web was not built for geeks. It was built for everyone. It was built with very high ideals. No single company, government, or organization controls it. It was new and exciting. New ideas and words appeared almost daily. Obscure technical terms became household words overnight. First it was email. Then it was URL and domain name. Then rather quickly came spam, homepage, hyperlink, bookmark, download, upload, cookie, e-commerce, emoticon, ISP, search engine, and so on. Years later we are still making up new words to describe our online world. Now we "google" for information. We "tweet" what's happening around us to others. The new words never seem to stop!

Just because the web seems so chaotic and unorganized compared to more structured companies and governments, doesn't mean it's total anarchy. In 1994, Tim Berners-Lee started the W3C, a world-wide organization dedicated to setting standards for the Web. This group is probably the most respected authority for what should and should not be Web standards. W3C's mission is to lead the Web to it's full potential.

As a student of English and Technology, you will hear people use the words 'Internet' and 'World Wide Web' almost interchangeably. They are, of course, not the same thing. So what is the difference between the two? Perhaps a simple answer is that the Internet is the biggest network in the world, and the World Wide Web is a collection of software and protocols on that network. I guess a more simple way to put it is, the World Wide Web is an application that runs on The Internet.

The original backbone of the Internet is based on an old military network called ARPANET which was built by ARPA in the late 1960's. ARPANET was built so information could withstand a nuclear war. The idea was not to have a single point of failure. This means if part of the ARPANET was blown up in a nuclear war, the

rest of it will still work! What made ARPANET so successful was it's packet-switching technology, invented by Lawrence Roberts. The idea is that "packets" of information have a "from" address and a "to" address. How they get from point "a" to point "b" depends on what roads are open to them. Packet switching is a very elegant thing. Without it, the Internet would simply not work.

People view the World Wide Web through a software application called a web browser or simply a "browser" for short. Some popular examples of web browsers include Microsoft Internet Explorer, Google Chrome, Mozilla Firefox, and Apple Safari. Browsers allow people to search, view, and even add and edit data on the World Wide Web.

The Web is not supposed to be a passive experience. Creating new pages for the Web is getting easier all the time. Web editing software is specially designed to work with hypertext languages such as HTML, which is the original specification for the Web. Web editing software normally allows for the WYSIWYG creation of text, images, and hyperlinks between related documents. With web applications such as wikis, MySpace and FaceBook, a typical user can create his or her first online presence in a matter of hours.

In the year 1999, the Internet suffered it's first financial crash. Many companies selling products and services on the Web were not living up to sales expectations. This was known as the Dot Com Bubble. There were many reasons why this happened, but perhaps the two most important reasons were a combination of slow connection speeds and too much optimism. Very few people had fast internet connections and many people thought the Internet was "just a passing fad". But we know now that the Internet is not a fad. So what happened? Web 2.0 happened!

What is Web 2.0? It's very hard to say. It's just a phrase to describe a transition from the pre-existing state of 'Web 1.0', which was slow, static, and unusable, to a new, 'second web', which was faster, more dynamic, and more usable for the average person. How did these things happen? Easy. Broadband modems enabled sites like video-streaming YouTube to become possible. Better design and development practices enabled social media sites like MySpace and

then Facebook to attract hundreds of millions of users. Finally, search engine technology improved on sites like Google where people could actually find the information they were looking for.

What will be the future of the Web? Easy. More speed and more power. In the future, digital distribution on the Internet is likely to replace all other forms of media distribution including CDs, DVDs, and even radio and television broadcasts.

I personally feel lucky to be alive in the age of the Web. It is one of the coolest things ever invented. It is unlikely that such another wonderful and major revolutionary invention will occur in our lifetime. But I can still dream about the Next Big Thing. And who knows? Maybe you will invent it.

FILE № 15

<https://www.youtube.com/watch?v=7RT18TFJypo>



Watch “A DAY IN THE LIFE OF AN ETHICAL HACKER” and put down the answers to the questions:

1. What is the difference between an ethical hacker and an offensive hacker?
2. What does an ethical hacker do on a day-to-day basis (proactive and reactive approaches)?
3. What is an ethical hacker’s biggest challenge?
4. Why is ethical hacking rewarding?

3. ADDITIONAL TEXTS

File № 1

FRIENDSHIP IN THE MODERN WORLD

1. Read the text and say what Aristotle's ideas you agree or disagree with.

People often say that our modern way of life, with its individualism and fast speed, has made the world a lonely place. So many of us live and work surrounded by people, but it is hard to find true friendship. The faces we see each day are like pictures in a gallery; the talk that we hear is just sound. Perhaps this is why the websites like 'Facebook', 'Contacts' are so popular these days. They allow people to communicate and even become close without meeting up. It seems that many people's idea of friendship has changed nowadays. But what is friendship? Aristotle was the first western philosopher to discuss friendship in a detailed way. He said that people who chose to live alone were either like animals or gods. He probably meant that it is natural to want friends. Certainly, people who choose to live without friends are frequently regarded as having problems. We either pity them or else we view them as strange.

Aristotle also said that there are three different categories of friends. In the first category, we are friends with people because of some advantage that the friendship gives us. In other words, the friendship has a practical value. Friends in this category would include bosses at work or some of our colleagues. Aristotle's second category of friendship is based on the idea of pleasure. Friends in this category enjoy doing things together and they have a lot of interests in common.

The third category of friendship is the highest form of friendship. In this category, people are friends on a deeper level. The friendship does not depend on anything other than the friends themselves. The relationship is so close that it seems that one soul belongs to two bodies, Aristotle said. Aristotle also said that close friends must have eaten salt together. In other words, they must have shared some of life's good and bad experiences. Most people today would probably agree that these are a fundamental part of true friendship.

2. Answer the questions:

1. Is it really hard to find true friendship?
2. What are three categories of friends according to Aristotle's opinion? Do you support this view?
3. Aristotle said that people who chose to live alone were either like animals or gods. Do you agree? Why?
4. Do you think it is better to have bad friends than to have no friends? Why?
5. Do you have friends? What category of friends do you have? Are you a true friend?

FILE № 2

A WORLD GUIDE TO GOOD MANNERS

How not to behave badly abroad

Travelling to all corners of the world gets easier and easier. We live in a global village, but this doesn't mean that we all behave in the same way.

Greetings

How should you behave when you meet someone for the first time? An American or Canadian shakes your hand firmly while looking you straight in the eyes. In many parts of Asia there's no physical contact at all. In Japan you should bow, and the more respect you want to show, the deeper you should bow. In Thailand the greeting is made by pressing both hands together at the chest, as if you are praying, and bowing your head slightly. In both countries, eye contact is avoided as a sign of respect.

Clothes

Many countries have rules about what you should and shouldn't wear. In Asian and Muslim countries, you shouldn't reveal the body especially women, who should wear long-sleeved blouses and skirts below the knee. In Japan you should take off your shoes when entering a house or a restaurant. Remember to place them neatly together facing the door you came in. This is also true in China, Korea, Thailand and Iran.

Food and drink

In Italy, Spain and Latin America lunch is often the biggest meal of the day. and can last two or three hours. For this reason many people eat a light breakfast and a late dinner. In Britain you might have a business lunch and do business as you eat. In Mexico and Japan lunch is a time to relax and socialize, and the Japanese rarely drink alcohol at lunchtime. In Britain and the USA it is not unusual to have a business meeting over breakfast, and in China it's common to have business banquets, but you shouldn't discuss business during the meal.

Doing business

In most countries the exchange of business cards is essential for all introductions. You should include your company name and your position. In Japan you must present your card with both hands, with the writing facing the person you are giving it to. In many countries business hours are from 9.00 or 10.00 a.m. to 5.00 or 6.00 p.m.

Japanese business people consider it their professional duty to go out after work with colleagues to restaurants, bars, nightclubs. If you are invited, you shouldn't refuse even if you don't feel like staying out late.

EXTRA TIPS:

1. In many Asian countries it is acceptable to smack your lips when you eat. It means that the food is good.
2. In France you shouldn't sit down in a cafe until you've shaken hands with everyone you know.
3. In Afghanistan you should spend at least 5 minutes saying hello.
4. In Pakistan you mustn't wink. It is offensive.
5. In China your host will keep refilling your dish unless you lay your chopsticks across your bowl.
6. Most South Americans and Mexicans like to stand very close to the person they are talking to. You shouldn't back away.
7. In Ireland social events sometimes end with singing and dancing. You may be asked to sing.
8. In America you should eat your hamburger with both hands and as quickly as possible. You shouldn't try a conversation until it is eaten.

HIGHER EDUCATION IN DIFFERENT COUNTRIES

Read the text about higher education in different countries; compare that with higher education in Russia, and write down some features of each higher education system.

In modern society a new “tradition” has appeared most recently: wealthy people tend to send their children abroad to study. For some it is a tribute to the new fashion, but for others – is a major step forward. The most popular is a higher education abroad. In fact it is much more effective to go to learn when you have already decided on the future profession, than just receive secondary education in colleges or high schools.

1. The education in England is considered as the most prestigious. British certificates, diplomas and awarded degrees are the best throughout the world and certainly the most prestigious. Education received in England is a reliable foundation for any career, and a guarantee of high wages (even for beginners)!

Most modern teaching methods, the equipment is constantly modernized at schools and, most importantly, professional teachers of British universities help to fulfill the full academic and creative potential of students.

British universities are in the “tops” of the educational rankings. Many countries have taken the British model of education as a basis.

The knowledge, gained in the courses of English, will form the basis for your future career or guarantee of the successful education in students’ own country. Worldwide, the English language used in business, science and information technology.

The British programs on getting a bachelor’s and master’s degrees last only for 3 and 1 year respectively, compared with 4 and 2 years in most other countries. Thus, due to the intensity of training, its term is reducing, and hence the cost of education and accommodation.

United Kingdom is a multinational and multicultural country. It absorbed the cultural diversity of its former colonies, and many other countries.

Educational traditions of Great Britain, among which, by the way, the tradition of taking students from different parts of the Earth, rooted in the distant past. The UK was one of the first countries in which there were universities. The famous Oxford and Cambridge quickly gained popularity and fame throughout the world and evolved into the international educational centers. As such, they are more than 700 years give the world many talented scientists, writers, and physicians. The share of the UK accounts for nearly 5 % of all researches in the world. But British scientists have received more Nobel Prizes than any other country in the world except the United States.

2. America and Canada are not so popular among European students, because they are on another continent. Flights to America takes a long time (on average about 12 hours), and tires. Nevertheless, education is high quality, and diplomas of many American universities are highly regarded throughout the world.

So, Canadians and foreigners pay for education ridiculous money according to American standards. You can, for example, find a university in the eastern provinces of the country with the cost of the course of about USD 2.500 per year. This is due to the fact that in Canada there are no private schools (except for some private religious schools). All schools are funded by two-thirds of the state budget and public funds. Another thing is that due to the global economic crisis, Canadian prices are rising by an average of 10 % per year. However, they are now much lower, for example, than U.S. Established in 1911 the Association of Universities and Colleges of this country (AUCC) brings together 90 universities and about 100 (of 175) colleges, most of which have a good reputation far beyond the borders of Canada. Two-thirds of university's professors have a doctorate. They have a lot of charges: in Canadian universities more than 500 thousand students and 75 thousand graduate students study.

The close connection between science and practice is the strength of the Canadian university. According to official statistics, a Canadian university science creates in the country the 150-200 thousand jobs annually. Canadians are the leaders in the development of satellite navigation systems and life support systems, methods of relieving stress and pain.

In the U.S. there is no uniform state system of education; each state has the right to determine its own structure. In the U.S. there is

no clear definition of the term “institution of higher education”. Any institution that carries out further training after high school, so-called “post-secondary educational institutions” (postsecondary school), could be equally called “college”, “school”, “institute” or “university”. Higher education is one of the expensive things in the U.S. The procedure of enrollment and screening of applicants to the U.S. institutions of higher education depends on their prestige. There are no uniform requirements for applicants. In particular, some universities carry out the selection by competitive examination, interview, test, while for others the only condition is the presence of secondary education (for example, open enrollment in the two-year colleges). A common requirement for entering the college is to provide documentations of secondary school completion; a list of subjects studied at school and received marks on them, total scores on the tests, the characteristics, the results of interviews during the entering campaign. Every educational institution creates a students’ contingent according to own system without worrying about whether everyone will finish the full course, and where they will be able to work. Formally, the U.S. universities accepted the person of any age. Duration of training is also not limited. The maximum value of average annual expenditure per student ranges from \$7,000 in state universities up to \$15,000 in private institutions. The U.S. has more than 1,350 local colleges and 2,000 colleges and universities, 65 % of which are private.

3. The best balance between price and quality belongs to French institutions of high education. To study there is cheaper than in the English-speaking countries, but graduates of these institutions occupy senior positions in various enterprises. So, for education in state institutions in France you do not have to pay. However, a small fee, which ranges from 130 to 700 euros per semester, depending on the university and the chosen specialty, it is necessary to make for use of the library, laboratories, campus infrastructure, etc. Accommodation in the hostel will cost 140-400 euros per month, food – about 130-200 euros. Therefore, it is the most prestigious education in France and to get into such institution is not easy, especially for a foreigner. Certificate and an excellent knowledge of French at a high level do not guarantee entering the institution.

The University learning process is divided into three cycles. Each of them completed with the pass of exams and get of a diploma.

The first cycle, which comes at the end of the French lyceum (lycée), lasts two years and provides general education. French baccalaureat has nothing similar with the English bachelor. In France, the bac is passed at the end of the lyceum, and only those who have passed all the exams successfully, receive a bachelor's degree and are eligible to enter the college. After two years of study students take exams and receive a diploma of general university education – DEUG, or the degree of scientific and technical education – DEUST. During *the second cycle* of education, which also lasted two years, students have more specialized knowledge. The first year of the second cycle, called licence, ends with the award of the degree of Licentiate. Licentiates, having studied for a year, received a master's degree – maitrise. To do this, the student must choose a theme and write a thesis. *The third cycle*, which many foreigners tend to enter, lasts one year and ends up with getting a full-fledged diploma. There are two types of diplomas. First is a diploma DESS – a diploma of special higher education. It is issued after a year of specialization in a particular occupational area, and provides training from 3 months to six months. Further employment significantly depends on the correct choice of training. The second one is a diploma DEA (Diplôme d'études appliquées) – Diploma of Higher Education in-depth that allows the holder to continue his/her scientific work and apply for the writing of a thesis.

4. Germany's higher education system combines 326 institutions, most of which are public (non-public institutions are required to have a state license on teaching). The base of system is formed by universities (Universitaet) and related institutions of higher education (total number – 78): classical universities (faculties of medicine, humanities and natural sciences, theology, sociology, economics, agriculture and forestry, engineering), technical universities (Technische Universitaet) (Engineering), general universities (Gesamthochschulen) (special professional education and scientific researches), pedagogic institutions (Paedagogische Hochschulen), medical colleges, philosophical-theological and ecclesiastical colleges (Theologische Hochschule), Sports College. Among the non-university higher education institutions there are professional high schools (Fachhochschulen) (professional education in the fields of business, economics, services, agriculture and crafts) and Colleges of Art (Kunsthochschule and Musikhochschule).

The average duration of training in higher educational institution of Germany lasts for 5 years, although there are institutions with a four or six-year courses. The maximum duration of higher education in Germany is 10 years. The enter campaign to universities of Germany is twice a year: spring, before the summer semester and fall semester before the winter. Results of study during the semester can be expressed in credit points, which are awarded to students after each session. University course is divided into two parts: the base (3-4 semesters), which is assigned on the basis of Licentiate (Vordiplom), and primary (4-6 years), following which is assigned to a master's degree (Magister Artium) (students of technical specialties instead of this degree receive a diploma.) In addition to the graduation from the university on basic course, the graduate must defend a thesis or dissertation.

Focus on your ability! Because cheap education is not a measure of non-prestigious. University diplomas of other countries, where education is cheaper (Poland, Czech Republic, etc.) give the graduate an opportunity to find work and settle abroad. In most cases this is the purpose of applicants of the foreign universities.

(From <http://lingualeo.com>)

FILE № 4

Erin Hatton, an assistant professor of sociology at the State University of New York, Buffalo, analyzes the phenomenon of temporary economy in the USA.

Read the beginning of her article and answer the following questions:

What are the main characteristics of the situation?

What are the main concerns?

THE RISE OF THE PERMANENT TEMP ECONOMY

*By Erin Hatton
JANUARY 26, 2013*

Politicians across the political spectrum herald “job creation,” but frightfully few of them talk about what kinds of jobs are being created. Yet this clearly matters: According to the Census Bureau,

one-third of adults who live in poverty are working but do not earn enough to support themselves and their families.

A quarter of jobs in America pay below the federal poverty line for a family of four (\$23,050). Not only are many jobs low-wage, they are also temporary and insecure. Over the last three years, the temp industry added more jobs in the United States than any other, according to the American Staffing Association, the trade group representing temp recruitment agencies, outsourcing specialists and the like.

Low-wage, temporary jobs have become so widespread that they threaten to become the norm. But for some reason this isn't causing a scandal. At least in the business press, we are more likely to hear plaudits for "lean and mean" companies than angst about the changing nature of work for ordinary Americans.

How did we arrive at this state of affairs? Many argue that it was the inevitable result of macroeconomic forces – globalization, deindustrialization and technological change – beyond our political control. Yet employers had (and have) choices. Rather than squeezing workers, they could have invested in workers and boosted product quality, taking what economists call the high road toward more advanced manufacturing and skilled service work. But this hasn't happened. Instead, American employers have generally taken the low road: lowering wages and cutting benefits, converting permanent employees into part-time and contingent workers, busting unions and subcontracting and outsourcing jobs. They have done so, in part, because of the extraordinary evangelizing of the temp industry, which rose from humble origins to become a global behemoth....

For more comprehensive picture, explore
[http://opinionator.blogs.nytimes.com/2013/01/26/
the-rise-of-the-permanent-temp-economy/?_r=0](http://opinionator.blogs.nytimes.com/2013/01/26/the-rise-of-the-permanent-temp-economy/?_r=0)



**WHY YOU NO LONGER FIND GOOD JOBS
ON NEWSPAPER ADS**

Don't bother picking up the newspaper
to search for good job opportunities

*By Timothy Ho
On February 22, 2016*

In the past, the classified space on newspapers used to be where people could turn to for useful information. If they needed to buy a used car, they could flip to classified. If they wanted to buy a house, they could run through the classified ads.

And, if they were looking for a new job, they could turn to classified ads as well.

But should we really still be doing that if we are looking for a fulfilling career in today's context?

Here are some reasons why we think you are much better off dumping the classified section in your search for a good job, and to look elsewhere instead.

1. Companies Prefer Hiring Internally, Or Ex-Employees

It's an open fact that most big companies would prefer internal hires. The clear advantage with an internal hire, or an internal promotion in some cases, is that the company already know the employee's ability and the quality of his or her work.

According to some studies, between 40 to 60 % of external hires are "unsuccessful" compared to 25 % of people who are hired internally. This makes a lot of sense, since there more uncertainties involved with an external hire. More so, the cost of hiring someone externally is also much higher for the company (*e.g. headhunting fee, advertisement fee*) leading to a greater net lost for the company.

Alternatively, hiring managers or HR executives may also turn to recruiting ex-employees who have previously done well at the company. These could include ex-interns whom they already know, or ex-colleagues whom they used to work with.

If a great job at a great company becomes available, you can bet there is an equally great chance the position would be filled inter-

nally before it even becomes available to people outside of the company, unless there is some inherent problem with the job, such as a terrible boss or painful working hours.

2. Through Internal Reference

If the job cannot be filled by someone who is already working at the company or who the company has had past interactions with, the company's HR would still be able to tap upon the existing network of its current employees.

Renowned businessman Jim Rohn once said, "*You're the average of the five people you spend most of your time with.*" This holds true for a lot of things in life. We believe it applies as well when it comes to hiring of an employee.

If a good employee of your company recommends a friend for a position, there is a good chance that the employee would have vetted through his or her friend's suitability for the role, and his character fit for the company. As the saying goes, *birds of a feather flock together*. And also, there's that small fact that the employee would not risk his or her reputation at the company by recommending someone who is incapable of performing.

This is one of the reasons why many companies reward their employees for successful job referrals. HR managers know that the strength of internal referrals cannot be ignored. A good employee is more likely to have friends who could become equally good employees.

3. Companies That Have Strong Ties To Their Alumni Network

There are some top companies around the globe that have very strong ties with certain universities. Some of these ties could be formal collaboration, such as an internship programmes or a scholarship programmes. Others could be less formal (*yet no less stronger*) such as people in the company being alumni themselves and knowing the staff and management of the universities.

For example, many of Google's employees are graduates from Stanford University, University of California, Berkeley, Carnegie Mellon University and Massachusetts Institute of Technology. Google also likes to hire a lot of ex-Microsoft employees. Microsoft in turn hires a lot of graduates from the University of Washington and other top universities in Washington. Other companies such as Apple

(San Jose, Stanford) and Facebook (Stanford, UC Berkeley) have their own universities whom they hire a lot from.

There is no denying the level of talent these universities produced. Yet at the same time, it would be naïve to not believe that some of these companies simply have stronger ties with these universities that lesser companies can only dream of having. And it is through these ties that these companies are able to hire the best, fresh and young talents.

4. The Headhunter Route

The headhunter route is where companies pay top dollars to engage headhunters who would then help them seek out the right talent, regardless of whether these talents are actively seeking for job opportunities.

The simple logic in this scenario is that top talents that companies are looking for are unlikely to be active jobseekers. As such, the onus is on headhunters to source for these talents and to facilitate the hiring or poaching of these talents once they have been found.

More often than not, headhunters who are searching for talents are discreet in ensuring that their clients (the hiring company) are kept anonymous until they have ascertain that the talent they are looking at is interested in the role. That's why you would hardly ever see them advertising out in the open on newspaper or any other form of media.

5. Job Portals

Job portals are where companies or recruitment agencies (on behalf of companies) will advertise roles that they are looking to fill. Job seekers who are looking for roles in certain industries can easily screen out irrelevant job opportunities and focus on what they are interested in. Typically, application and CV are sent and received online, with no manual process involved.

Who Uses Classified Ads?

That is not to say that classified ads are totally useless in today's context. Rather, classified ads have been reduced to roles in which applicants are not hired for white-collar jobs and may not require a CV prior to interview (e.g. walk-in interviews) or mass recruitment exercises and part-time or temp job positions.

So before moaning about the lack of good job opportunities in the newspaper ads next time you flip through it, perhaps it is first worth asking if you might be searching in the wrong place to begin with.

<http://dollarsandsense.sg/why-you-no-longer-find-good-jobs-on-newspaper-ads/>



FILE № 6

Programming is a way of sending instructions to the computer. To create these instructions, programmers use programming languages to create source code, and the source code is then converted into machine (or object) code, the only language that a computer understands. People, however, have difficulty understanding machine code. As a result, first assembly languages and then higher-level languages were developed. Programming languages require that information be provided in a certain order and structure, that symbols be used, and sometimes even that punctuation be used. These rules are called the syntax of the programming language, and they vary a great deal from one language to another.

Categories of Languages.

Based on evolutionary history, programming languages fall into one of the following three broad categories:

Machine Languages.

Machine languages consist of the 0s and 1s of the binary number system and are defined by hardware design. A computer understands only its machine language – the commands in its instruction set that instruct the computer to perform elementary operations such as loading, storing, adding, and subtracting.

Assembly Languages.

These languages were developed by using English like mnemonics. Programmers worked in text editors to create their source files.

To convert the source files into object code, researchers created translator programs called assemblers. Assembly languages are still much easier to use than machine language.

Higher-Level Languages.

These languages use syntax that is close to human language, they use familiar words instead of communicating in digits. To express computer operations, they use operators, such as the plus or minus sign, that are the familiar components of mathematics. As a result, reading, writing, and understanding computer programs is easier.

Machine languages are considered first-generation languages, and assembly languages are considered second-generation languages. The higher-level languages began with the third generation. Third-generation languages (3GLs) can support structured programming, use true English like phrasing, make it easier for programmers to share in the development of programs. Besides, they are portable, that is, you can put the source code and a compiler or interpreter on practically any computer and create working object code. Some of the third-generation languages include the following: FORTRAN, COBOL, BASIC, Pascal, C, C++, Java, ActiveX.

Fourth-generation languages (4GLs) use either a text environment, much like a 3GL, or a visual environment. In the text environment, the programmer uses English-like words when generating source code. In a 4GL visual environment, the programmer uses a toolbar to drag and drop various items like buttons, labels, and text boxes to create a visual definition of an application. Many 4GLs are data base aware; that is, you can build programs with a 4GL that work as front end (an interface that hides much of the program from the user) to databases. Programmers can also use 4GLs to develop prototypes of an application quickly. Some of the fourth generation languages are Visual Basic and Visual Age.

A 5GL would use artificial intelligence to create software based on your description of what the software should do.

<http://lingualeo.com/ru/jungle/programming-languages-21386#/page/1>

Answer the questions:

1. What are three broad categories do programming languages fall into?

2. What is a machine language?
3. What is an assembly language?
4. What is a higher-level programming language?
5. What are differences between fourth-generation languages and fifth-generation languages? Give examples.

FILE № 7

THE WORLD WIDE WEB: WHAT IS IT?

The Web – also known as the World Wide Web – is the vast network of interconnected information we are able to access via the Internet.

What is the Internet?

There are a lot of terms surrounding the concept of the Web, and it can get confusing quickly! First, it's important to know what the Internet is. The Internet and the Web are two terms that used interchangeably referring to the same thing; however, they are definitely two different entities.

The Internet refers to the global network of computer systems all over the world that are connected via cables, wireless, or via the cloud.

Development of the technologies that became the Internet began decades ago. "Internet" was originally coined in the 1970s.

At that time, only the very meager beginnings of a public global network were in place. Throughout the 1970s, 1980s, and 1990s, a number of smaller national networks like ARPANET, BITNET, CSNET, and NSFNET evolved, merged, or dissolved, then finally joined with non-US networks to form the global Internet.

The development of the World Wide Web (WWW) portion of the Internet happened much later, although many people consider this synonymous with creating the Internet itself.

In summary, no single person or organization created the modern Internet, including Al Gore, Lyndon Johnson, or any other individual. Instead, multiple people developed the key technologies that later grew to become the Internet:

Email – Long before the World Wide Web, email was the dominant communication method on the Internet. Ray Tomlinson

developed in 1971 the first email system that worked over the early Internet.

Ethernet – The physical communication technology underlying the Internet, Ethernet was created by Robert Metcalfe and David Boggs in 1973.

TCP/IP – In May, 1974, the Institute of Electrical and Electronic Engineers (IEEE) published a paper titled "A Protocol for Packet Network Interconnection." The paper's authors – Vinton Cerf and Robert Kahn – described a protocol called *TCP* that incorporated both connection-oriented and datagram services. This protocol later became known as TCP/IP.

So the Web's not the same as the Internet?

Many people use these two terms to refer to the Web, and that's not quite correct. The Internet and the Web are two very different things. The Internet is the underlying foundation that makes all this activity possible. It is a vast network of smaller networks. People, organizations, and businesses connect to the Internet in order to access the resources made available on the Web.

The Web is what we are familiar with in our daily lives: it's what we use to find something, check the weather, or connect with other people.

How do I see all these websites; in other words, how do I connect to the Internet?

There are a number of ways you can connect to the greater Web, and there are several different types of Internet connections. For example, a dial-up connection connects to your phone line, and is the slowest of possible online connections. DSL and cable connectivity provide more speed and access to data; DSL connects via your home phone line, and a cable connection is part of your television's cable data connection. These are both known as broadband connections, and work very well for the majority of what Web searchers need to do.

If you're looking for something even faster and flexible, than 3G and 4G are what you need. These are wireless connections, great for connecting any kind of device (including smartphones and tablets), but you can also get these kind of connections for your home internet you use on a PC.

If you'd rather not have to deal with cables and connect several different devices to the Internet at the same time, than a wireless home network (Wi-Fi) is what you're going to need. In order to this, you'll need a wireless router, which processes the Internet connection from your modem and makes it available to more than one device. Many modems already have this capability built in.

What is a Web browser?

A Web browser is a tool that helps us access the Web. A Web browser is quite different from an operating system, such as Windows or Mac; i.e., it's not a system that helps you manage programs. It's also not the same as a search engine, which is a very complicated program that helps people find what they're looking for on the Web.

Every single Web page on the Internet is displayed via a web browser, so it's a very important piece of software. There are several different types of Web browsers available to you depending on what you're looking for:

- Internet Explorer
- Google Chrome
- Firefox
- Opera
- Safari

What is a search engine?

A search engine is a tool we can use to search the vast collection of Web pages available to us on the Internet. Examples of popular search engines are:

- Google
- Yahoo
- Bing

*About.com Guide, by Wendy Boswell
and Bradley Mitchell, February, 2016*

FILE № 8

MALWARE

Malware, a shortened combination of the words **malicious** and **software**, is a catch-all term for any sort of software designed with malicious intent.

That *malicious intent* is often theft of your private information or the creation of a back-door to your computer so someone can gain access to it without your permission. However, software that does *anything* that it didn't tell you it was going to do could be considered malware.

Malware is sometimes called *badware* and is often used synonymously with many of the common types of malware, listed below.

In legal documents, malware is sometimes referred to as *computer contamination* so if you ever see that, it's just a fancy way of saying malware.

What are Common Types of Malware?

Though some of these terms can be used to describe software with a legitimate, non-malicious intent, malware is generally understood to exist in one or more of the following forms:

Notable Mac Viruses and Malware to Look Out For

- **Virus:** Infects program files and/or personal files
- **Spyware:** Software that collects personal information
- **Worm:** Malware that can replicate itself across a network
- **Trojan horse:** Malware that looks, and may even operate, as a legitimate program
- **Browser hijacker:** Software that modifies your web browser
- **Rootkit:** Software that gains administrative rights for malicious intent

There are other types of programs, or parts of programs, that could be considered malicious due to the simple fact that they carry a malicious agenda, but the ones listed above are so common that they get their own categories.

Some types of *adware*, the term for advertisement-supported software, are sometimes considered malware, but usually only when those advertisements are designed to trick users in to downloading other, more malicious, software.

How Does a Malware Infection Happen?

Malware can infect a computer or other device in a number of ways. It usually happens completely by accident, often times by



way of downloading software that is bundled with a malicious application.

Some malware can get on your computer by taking advantage of security vulnerabilities in your operating system and software programs.

Outdated versions of browsers, and often their add-ons or plugins as well, are easy targets.

Most of the time, however, malware is installed by users (that's you!) overlooking what they're doing and rushing through program installations that include malicious software. Many programs install malware-ridden toolbars, download assistants, system and Internet optimizers, bogus antivirus software, and other tools *automatically*... unless you explicitly tell them not to.

Another common source of malware is via software downloads that at first seem to be something safe like a simple image, video, or audio file, but in reality is a harmful executable file that installs the malicious program.

See the *How Do You Protect Yourself From a Malware Infection?* section below for help on preventing these types of infections from happening in the first place.

How Do You Remove Malware?

Aside from the most serious of malware infections, most is removable with some simple steps, although some is easier to remove than others.

The most common types of malware are actual programs like the legitimate software you use everyday. Those programs can be uninstalled, just like anything else, from Control Panel, at least in Windows operating systems.

Other malware, however, is more complex to remove, like rogue registry keys and individual files that can only be removed manually. These types of malware infections are best removed with anti-malware tools and similar specialized programs.

How Do You Protect Yourself From a Malware Infection?

Obviously, the smartest way to avoid malware is to take precautions to prevent the malware from infecting your computer or device in the first place.

The most important way to prevent malware from reaching your computer is by making sure you have an antivirus/antimalware program installed and that you have it configured to *constantly* look for signs of malicious activity in downloads and active files.

Beyond software that automatically keeps an eye out for malware, the most important thing you can do to protect your computer is to change your behavior.

One way is to avoid opening email and other messaging attachments from people or organizations you don't know or don't trust. Even if you *do* know the sender, make sure that whatever is attached is something you were expecting or can follow up about in another message. One clever way malware is spread is by auto-mailing copies of itself to friends and family in an email contact list.

Avoid allowing malware to take advantage of security vulnerabilities in your programs by making sure you're updating your software when updates are available, especially ones for Windows.

About.com, By Tim Fisher, PC Support Expert, 2015

FILE № 9

5 SIGNS YOUR WEB APPLICATION HAS BEEN HACKED

***Website defacements?
Database dumps?
Mysterious Files?
Here's how to tell if your web
application has been hacked***

By Fahmida Y. Rashid



When customers interact with your business, they most likely go through a Web application first. It's your company's public face -- and by virtue of that exposure, an obvious point of vulnerability.

Most attacks against Web applications are stealthy and hard to spot. That's a problem, because once attackers get in, they lurk undetected on networks for an average of 205 days, according to the 2015

Verizon Data Breach Investigations Report. Most organizations find out they've been compromised from someone else, such as when they get a call from law enforcement or an irate customer.

How can you tell if your Web application has been hacked? "When your Web application is compromised, it will start to do things out of the ordinary," says Steve Durbin, managing director of Information Security Forum. The key is to gain a thorough understanding of what constitutes normal behavior for your application, then keep your eyes peeled for aberrations.

Here are five signs your Web application has been compromised -- and where to begin your investigation. You'll also find some commonsense advice about securing your Web application, whether or not you've been hacked.

Sign No. 1: The application is not doing what it was designed to do

Monitoring applications is the single best way to notice when something suspicious is occurring.

Perhaps the application now takes much longer to render the results page from the database than it used to. Perhaps the application is displaying pages at unexpected times or redirecting users to a different page. Perhaps network traffic has increased, but there's no accompanying marketing campaign to explain the surge. A small Web shop that normally sees about 50 orders a day, for example, should question a day with 5,000 orders.

These are not necessarily indicators a Web application has been compromised, of course. Slow page loads can easily result from temporary connectivity issues -- or even a DDoS attack, if you think attackers would have any reason to launch one. But it's always better to investigate something screwy right away instead of waiting for a major disturbance.

If the application redirects users to a different page, find out why. Is a malicious ad taking over the page function? Has the code on the page been modified recently? Has the info in the database been tampered with? Regularly interact with the application in the production environment to parse normal behavior so that unexpected behaviors can be flagged right away for immediate investigation.

Sign No. 2: You find unexpected log messages

Logs can be a gold mine of attack information if set up correctly. Sifting through database logs can show unexpected queries and reveal when information is being dumped. If database logs show multiple errors in a short period of time, that may be a sign someone is poking around the application looking for – or has already found – a SQL injection vector. Trace back to where the database queries originated and make sure the application is correctly handling inputs.

Your Web server software can log inbound and outbound network connections through system FTP and HTTP logs. (They are turned on, right?) Those logs can pick up warning signs of unauthorized or malicious activity.

Web servers should generally only initiate connections with internal databases. If there are outbound network connections from your Web server to public IP addresses, it's time to ask why. Unexplained file transfers show data is leaving the Web server. That could be a clue that attackers have already siphoned data from the application and are transferring the contents to remote servers.

Don't be so focused on what's moving outside the network that you ignore lateral movement. If the Web server is communicating with other internal network resources, such as user file shares and individual user computers, that can be a sign attackers have gained entry and are moving around the network. If the application lets users upload files, then make sure it uses a dedicated file server and not a general one employed within the enterprise, for example.

Much like server logs, application logs can tell you when things go wrong, provided they've been set up correctly and are monitored. Make sure the application logs admin-level tasks, such as creating user accounts, or admin accounts. If the application creates admin-level or other privileged accounts, verify the accounts are legitimate -- not established by attackers.

Web applications should also show when administrators are logging in, so you should regularly check for access from unexpected locations and times. Verify what the administrator accounts are doing. Unexplainable instances of Web application administrator account access is typically a strong indicator of a breach.

If there's an increase in the number of errors related to form submissions or more errors show up when pages are loaded, chances are the application is trying to do something it wasn't designed to. If you notice an increase in errors, trace the page that's triggering the errors and find out what may have changed.

Signs No. 3: You find new processes, users, or jobs

Monitor processes running on the Web server, to detect when the server spawns unknown processes or runs a known process at an unusual time. An unknown process is generally a big clue your application is no longer under your control.

Once an attacker has an account on the server, there is little the attacker can't do. Regularly monitor the server for users being created, especially those with elevated privileges. Those accounts aren't typically created on the fly, so it's worth following up whenever an account is created. If certain users who shouldn't be requesting elevated privileges or root access are suddenly making those requests, you may be witnessing an attacker use a stolen credential.

Get in the habit of looking at crontabs on Linux servers or Scheduled Tasks on Windows servers and knowing what normal entries look like. If new jobs are added, that could be a clue the application is doing something unexpected. Perhaps it's only an ad hoc maintenance job -- but it could be an attacker's attempt to get the application to phone home periodically to get new instructions from the command-and-control server. The attacker could also be sending extracted data in small automated batches to a remote server.

Signs No. 4: Files have changed

Do the timestamps on your Web application files show files you last changed years ago have been recently edited? If the Web server wasn't correctly configured or the application has a vulnerability, attackers could modify the application to run their own malicious code. This could be injected JavaScript or a rewritten module. Check timestamps to make sure files aren't being modified without authorization. If the file has been modified, compare the files against an earlier version to find out what changed.

Several utilities can scan the application to look for malicious code. Run them periodically to make sure the changes don't sneak in. (Sucuri is one such tool.)

Are there a lot of new files on the Web server that can't be accounted for with normal usage? New files showing up in the Web root is a problem, especially if they are scripts or other types of executable files. Adding files to Web root should be a thoroughly documented process and never a surprise. If you are finding new files in Web root or elsewhere on the server, then you have a breach. The attacker may be using your application to serve malware to unsuspecting site visitors or running a script redirecting them elsewhere. It could also be a text file containing harvested data.

There have been cases of attackers creating a whole new directory and installing their own application. Instead of touching the actual Web application, they piggyback on the domain and the server to run their own tools.

If the application uses third-party plug-ins, check to make sure plug-ins aren't getting updated or installed without warning. Don't install plug-ins simply because they make your site look cool -- exercise due diligence to make sure the plug-in won't add malicious functionality to the site. Scanning tools such as the one from White Hat Security can help uncover potential attack code.

Signs No. 5: You get warnings

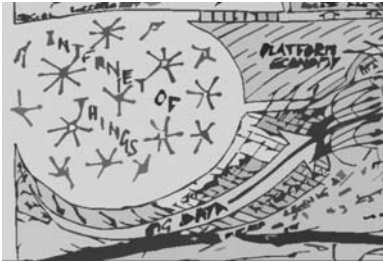
If your application has been compromised and is actively spreading malware, chances are other security tools have picked up on it. Google is very quick about blocking pages that have a bad reputation among Chrome users; other browsers regularly update their blacklists as well. Regularly check your application from other browsers to see if there are any messages – or look up your site using Google's Safe Browsing tool.

Monitor social media and help desk emails for complaints from users. If users say they aren't getting password reset emails because the messages are being treated as spam, it's worth investigating whether your application has been flagged as a spam relay.

<http://www.infoworld.com/article/2999475/security/5-signs-your-web-application-has-been-hacked.html>

WHY IS SECURING THE INTERNET OF THINGS SO DIFFICULT?

by Jon Collins Jun 3, 2016 – 5:08 AM



It's inevitable, isn't it, that the security industry should be all over the Internet of Things. If you're feeling like you've heard it all before, you probably have. Top of the list of topics is that the 'things' themselves are going to be insecure. They're running operat-

ing systems and software, neither of which may have been considered with security in mind.

The consequence is a massive increase in what security pros know as the 'attack surface', that is, the scope of stuff that can be targeted by malicious hackers, fraudsters or other nondescripts. The resulting challenge is very real, particularly given the personal nature of information being captured – from heart rates to locations – and its potential for misuse.

In the spirit of a brainstorm, let's make an assumption however: that there is nothing we can do about it. The genie is well and truly out of the bottle, let us say, and our every movement and behaviour can and will be logged for personal, commercial and governmental purposes. While we may benefit, we also may need to live with the security risks.

This ultra-transparent scenario may not become the case, but even if it doesn't, there will be situations that make it seem that way. What is more, the devices that we rely upon will inevitably become both smarter, and more susceptible to attack. We need to face up to our complicity in this: who thinks about data security before buying a fitness device, for example?

By seeing such risks as read, we can bank them and move on to other areas of concern. The above covers data, but in its most granular

sense – facts about individuals, or login details, are a risk in themselves. But there's a deeper level – that the data is open to manipulation.

For sure, insurers may refuse to cover an individual whose fitness device shows the occasional heart flutter. But what if the data stream itself is modified, through malice or through incompetence, such that numerous heart rates incorrectly indicate a flutter?

Some have speculated about the potential to modify agricultural data as a way of manipulating futures markets. Equally, a home automation company could rig your systems so it made more money – for example, turning on the heating for 29 seconds extra every day. Not a figure to register on one thermostat, but one that would ring up a large amount of small change.

So, not only do we need mechanisms to protect the confidentiality of our data, based on the same assumption that the bad thing is reasonably likely to happen, we also need to consider how to prove that the data is valid.

One possibility is to make every single sensor reading linked to a security key, but the phrase sledgehammer and nut springs to mind. Equally, the scale of the solution would be too costly to be achievable.

Is there an answer? Yes indeed, and it lies in taking a leaf from the works of the Jericho Forum, that body of Chief Information Security Officers founded in 2002 and disbanded a decade later, when the group deemed its work on 'de-perimeterisation' to be complete. Complete? Really? How could information security ever be complete?

The CISOs realised that they needed to manage data wherever it was, rather than trying to keep it in one place – and to do so, they needed a way to identify who, or what, was creating or accessing it. In November 2010 they announced the Identity and Access Management Commandments, a set of design principles technologies need to adopt.

This finding – that identity needs to be present – is profound. A corollary principle has been adopted by Google in its Beyond Corp initiative for its internal systems, which treats networks as insecure and instead, enables data access based on being able to identify the device, and the person, making the access request.

We could take this insight one step further. That data which cannot prove its provenance (i.e. from an identifiable person or de-

vice) could, or even should be treated as invalid. The notion of security by design is a start, but perhaps it will only be through identity by design that we can architect the Internet of Things to be both transparent and trusted.

<https://gigaom.com/2016/06/03/why-is-securing-the-internet-of-things-so-difficult/>

FILE № 11

A HACKER EXPLAINS WHY US NUKES CONTROLLED BY ANCIENT COMPUTERS IS ACTUALLY A GOOD THING

*pszoldra@techinsider.io (Paul Szoldra,
Business Insider May 28, 2016 5:02 AM
Tags: air force, hacker, L0pht, top-stories, U.S.*



Above: "Forty years of removable storage: 1970s – 8" floppy: up to 1 MB. 1980s – ZX Microdrive: 85-100K. 2010s – SDHC card: 16 GB. SDXC cards can store up to 2TB."

A new government report on Wednesday revealed that America's nukes are still being controlled by antique computers with 8-inch floppy disks, but a former white hat hacker says that's not necessarily a bad thing.

"The biggest security issue here isn't that the computer is 40 years old, but rather the quality of the lock on the door where the computer is housed," Cris Thomas, a strategist for Tenable Network Security, said in a statement.

Thomas, known in hacker circles by his pseudonym Space Rogue, was one of the founding members of the legendary hacker collective L0pht. The group famously testified to the U.S. Senate in 1998 that it could take down the Internet in 30 minutes.

Interestingly, having the nuclear arsenal running on decades-old computers with floppy disks makes it incredibly difficult to hack, a fact that some in the Air Force actually used as an example of why upgrading isn't really necessary.

Thomas said that the IBM Series/1 computer the Pentagon is using to control nukes is most likely air-gapped – meaning it's not connected to the Internet or a network that would give remote access – so a hacker would need to be sitting at the terminal to actually do any damage.

He also said the machines are “notoriously reliable,” so he wasn't surprised they were still being used.

“As long as they can make regular copies of the software on the 8 inch floppy's so that they don't degrade, and they have a ready supply of spare parts and new floppies, there's no reason why the system wouldn't last another 40 years,” he said.

There is a caveat: While an outdated machine would make it hard for hackers, it also makes it hard to fix things if something goes wrong, since the coding languages it uses are aging as well. Fewer programmers are around that even know COBOL or FORTRAN, he explained.

Regardless, the report noted that the DoD plans to update “data storage solutions, port expansion processors, portable terminals, and desktop terminals by the end of fiscal year 2017.”

<http://venturebeat.com/2016/05/28/a-hacker-explains-why-us-nukes-controlled-by-ancient-computers-is-actually-a-good-thing/>

FILE № 12

SAMSUNG LAUNCHES \$200 GALAXY TAB IRIS, AN EYE-SCANNING TABLET FOR AUTHENTICATING INDIA'S CITIZENS

Paul Sawers May 25, 2016 2:38 AM

Samsung has announced a new tablet that features iris-recognition technology, built specifically for government and enterprise bodies in India.



Eye is your passport



Above: Samsung Tab Iris

Priced at INR 13,499 (\$200), the Android 5.0 Samsung Galaxy Tab Iris sports a 7.0" WSVGA (1024×600) display, 1.2 Ghz Quad Core processor, a 3,600mAh battery, and other average specifications. But the real kicker here is, of course, the onboard Iris camera, which allows public-facing organizations to authenticate the identity of individuals by scanning their eyes.

But why India?

The Unique Identification Authority of India (UIDAI) is a government agency set up for the express purpose of collecting biometric and demographic data on the country's residents and storing it in a central database. Each individual is then allocated a 12-digit number, known as a Aadhaar.

The program has been controversial, with some groups calling it unconstitutional because it infringes on people's privacy. Indeed, similar schemes have been vetoed elsewhere in the world, but in March, India passed the new Aadhaar bill, which is designed to make the Aadhaar number mandatory for all government subsidies and is part of a push toward a cashless and paperless society. This is where Samsung India's new tablet comes into play.

It's "ready for Aadhar authentication through an integrated and highly secure biometric device," according to a press release issued today. "The Galaxy Tab Iris will provide cashless and paperless services in various applications such as banking, eGovernance services such as passport, taxation, healthcare and education."

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So Samsung hopes the Galaxy Tab Iris will be used for services such as E-PDS (Electronic Public Distribution system), MNREGA (Mahatma Gandhi National Rural employment Guarantee Act) payments, pension schemes, tax filings, passport renewals, car registrations, and even passenger verification at airports or railway stations.

Samsung's move into biometric tablets isn't entirely surprising – in March 2015, SRI International, the original creators of Apple's famous SIRI virtual assistant, announced an exclusive license of its Iris on the Move (IOM) technologies to Samsung. The first fruits of this deal were supposed to lead to a special customized version of the Samsung Galaxy Tab Pro 8.4 tablet with a built-in iris-scanner, though it's not entirely clear whether that device ever made it into the B2B marketplace.

Though the Samsung Galaxy Tab Iris will undoubtedly lead to continued controversy, India hopes it will help banks and government agencies streamline the authentication process, as it negates the need for paperwork, signatures, and other time-consuming procedures. But perhaps more than that, it also helps circumvent literacy and language barriers – India is home to many languages and dialects, which can cause problems, particularly for those traveling to other regions.

“We're excited to offer biometric-based services to the billion plus people enrolled in Aadhar,” said Dr. Alok Nath De, corporate vice president and chief technology officer of Samsung India's research and development team. “Our India R&D team has made significant investments in biometric technology research, and we built this product leveraging our knowledge in hardware design, biometrics and security for a high-speed scan, greater accuracy and high reliability.”

Dr. Alok Nath De added that Samsung is also offering an identity software development kit (SDK) to allow developers to build digital services that work with the technology. “This will encourage our startup ecosystem to rapidly build relevant apps and services,” he said. “We strongly believe this overall offering will in turn strengthen government programs.”

The case for iris-recognition technology

While fingerprint scanners are becoming the norm on mobile devices, as a mechanism for letting users unlock their device and login to apps, iris-recognition technology has hitherto been absent from phones and tablets. While it no doubt comes with its own unique and beneficial security credentials, the practicalities of holding a device up to your face to unlock it perhaps precludes the technology from becoming standard on consumer phones and tablets.

This is why the technology lends itself better to a B2C scenario, where a tablet can be mounted roughly at head-level to allow a

person to identify themselves speedily. Whether iris-scanners take off in India, let alone globally, remains to be seen, but it seems the up-take will very much hinge on legislation, which will vary widely on a country-by-country basis. There is still a great deal of mistrust among the citizens of the world that their governments can't be trusted with sensitive biometric data, so it's probably safe to assume that this kind of technology won't be implemented at scale any time soon.

There could be other use-cases though. If a phone or tablet has an iris-scanner built-in, it could be used as an additional, opt-in form of security for the super security conscious to unlock their devices. Or banks could perhaps offer it as an added protection layer to access online accounts.

Whatever happens, Samsung clearly wants to be at the forefront of the eye-based security push. The company filed for a couple of patents in Europe last week, one for the "Samsung Iris" and the other for the "Samsung Eyeprint" trademarks. With its new Samsung Note 6 expected to launch later this year, the Korean tech titan could have a few innovative tricks up its sleeve come launch.

<http://venturebeat.com/2016/05/25/samsung-targets-india-with-200-galaxy-tab-iris-an-iris-recognition-tablet-for-authenticating-citizens/>

FILE № 13

FULL METAL SCRUBS: IT SECURITY FOR SURGICAL ROBOTS COULD SAVE YOUR LIFE

Aike Müller, Keezel May 29, 2016 9:04 AM



Above: January 11, 2016: Robot for minimally invasive operations controlled by the surgeon. Medical robot da vinci.

Big news this month on the medical front when a surgical robot called STAR – Smart Tissue Autonomous Robot – succeeded, in both a lab setting and using live animal tissue, to stitch together pieces of pig intestinal tubing with very little guidance from humans.

Not only that, but it managed to do so with the same if not better accuracy and safety than doctors, according to the researchers behind the experiment.

This is a momentous advancement for medical robots and telesurgery alike, and with sales of such robots expected to double to \$6.4 billion (a yearly increase of 10.2 %) by 2020, according to an Allied Market Research report published in January, we're only going to hear about more and more progress in the near future.

Which is beyond fantastic. Ever since the first telesurgery was performed in 2001, when a surgeon in New York successfully took out the gall bladder of a patient in Strasbourg, there has been increasing hope of one day providing excellent medical care to people who would otherwise be thousands of miles away from any surgical help. People in remote areas with no access to proper medical care, people in underprivileged nations, people in war zones, people who wouldn't be able to survive the air transport to where the surgeon they need is located or who don't have enough time to wait for that surgeon to be flown out to their respective location.

I have no doubt that telesurgery is the future and that medical robots (not only surgical ones) are not far from becoming ubiquitous, if not the norm in hospital care and possibly out-patient care as well.

But there's a problem. One that we need to start fixing now, before medical robots become ubiquitous and the norm.

All these surgical robots will operate over public networks and poor connections, sometimes even wireless ones, which leaves them exposed to hacking and other types of malicious attacks.

And even though it might seem that these privacy and security concerns are better suited for a sci-fi horror movie in the SAW vein than real life, a surgical robot has already been hacked. Luckily, it happened in a controlled environment and by a team of researchers, but given that we have yet to see an Internet-connected device that can't be hacked, this does not bode well for a future of "Paging Doctor Robot to OR 1."

A year ago, in May 2015, University of Washington researchers led by Tamara Bonaci tested Raven II, a telesurgery robot designed to operate in extreme conditions, namely poor connections over public networks, by submitting it to cyber attacks that modified its behavior:

- They delayed, deleted, or changed the order of the commands sent to the robot
- They modified the distance the Raven II's arm was supposed to move, as well as the rotation degree
- They performed a complete takeover of the robot.

Worried yet? Well, add this to your list of worries then: Once hacked, a surgical robot can become the victim of a denial of service attack if the hacker decides to flood the system with commands.

And while a denial of service attack can mean significant monetary loss for a company, be it in the form of clients/business lost or ransom payment made to hackers, where a surgical robot is concerned, an attack of this nature can mean loss of human life. Terrifying, isn't it?

Or maybe not. Maybe you're thinking that this was just an experiment and since no real-life incidents have been reported to date (which is a fact), there's no need to panic.

But let's not forget that these surgical and non-surgical robots operate and will continue to do so within the boundaries and the privacy and security means of the healthcare industry – an industry that is so plagued by breaches, data theft, and ransomware that IBM named 2015 “The Year of the Healthcare Breach” in its Cyber Security Intelligence Index.

And if the past months are any indication, 2016 could very well turn out to be “The Year of the Healthcare Breach – The Sequel.”

Since February, over a dozen hospitals and even more healthcare institutions have been the victim of ransomware, their systems rendered unusable, their staff forced to resort to pen, paper, and fax machines (remember those?), their urgent surgeries postponed, their patients transferred, and ultimately, their money shelled out to hackers.

After the highly publicized case of Hollywood Presbyterian Medical Center, which was forced to declare a state of emergency and pay 40 bitcoin (approx. \$17,000) to regain access to its files and equipment, reports of similar attacks kept pouring in.

In March, the same ransomware – named Locky – hit Methodist Hospital in Henderson, Kentucky and left personnel unable to access patient files. Soon after that, it was reported that MedStar Health, a healthcare organization operating over 120 entities including 10 hospitals in the Baltimore–Washington area, had been attacked by some type of ransomware as well.

Add this to the fact that, as research carried out by Sergey Lozhkin at Kaspersky Lab brought to light, there are a lot of cases where medical equipment is not separated from the local office network, and all that bright future of telesurgery and medical robots looks riddled with potential breaches. And ensuing malpractice lawsuits.

So as I said, it's high time we started thinking of a solution. It's high time hospitals and other healthcare institutions started thinking more seriously about IT security and taking important steps towards protecting not only their patients' data from hackers, but their patients' robot-doctors and all other medical devices too.

The info is all out there. The regulations are too, albeit maybe not all of them at this time, but they're definitely in the making. For example, the National Institute of Standards and Technology is set to release best practices aimed at helping hospitals deal with cyber threats in the near future. The issue is implementation. HIPAA has been around since the late '90s, and even though it clearly states that healthcare institutions should take all measures necessary to protect the confidentiality of patient data from known threats, breaches have been a dime a dozen in the past two years, with nearly 90 % of healthcare organizations having suffered at least one such incident.

The same goes for encryption. Not only is it out there, but it's never been more available (ever since the Snowden revelations in 2013). Despite this, as a Sophos survey found, the healthcare industry has one of the lowest rates of data encryption: Only 31 % of organizations reported using extensive encryption, while a whopping 20 % said they didn't use it at all.

To make a bad situation worse, it appears that the healthcare budgets for security have either remained the same or even dropped in the past year, as the Ponemon Institute shows in its Sixth Annual Benchmark Study on Privacy and Security of Healthcare.

This needs to change and fast. Medical devices, especially tele-surgery ones, need to have their own networks, separated from the corporate network.

In turn, these networks need to be encrypted. They need to have bespoke VPNs and the authenticity of the parties involved in the communication needs to be mutually verified so that man-in-the-middle attacks don't happen.

Hospitals and healthcare organizations need to hire full-time system admins and IT security professionals to train their entire staff and then test them on operational security until no one clicks on a suspicious link in an email, no matter who the sender is (or at least appears to be).

Because when it comes to surgical robots, hospitals, and the healthcare system as a whole, well-implemented and adhered to IT security best practices could mean the difference between a 1-inch incision and a 10-inch one. Between perfectly spaced out stitches and surgical complications with a long recovery time. Sometimes even between life and death.

<http://venturebeat.com/2016/05/29/full-metal-scrubs-it-security-for-surgical-robots-could-save-your-life/>

FILE № 14

SCUBO IS AN OMNIDIRECTIONAL ROBOT **FOR UNDERWATER EXPLORATION**



Arduino Team – June 13th, 2016

A team from ETH Zurich has created an incredible submersible robot called Scubo as a way to scan entire coral reefs. Equipped with six onboard webcams, the omnidirectional device is capable of exploring the deep sea from every angle.

What's more, users can take a virtual dive by throwing on a pair of VR glasses to make it feel as if they're swimming with marine life.

Scubo consists of an Arduino Due for hard real-time tasks, an Intel NUC for high-performance calculation, an IMU, and a pressure sensor – all housed inside a carbon cuboid. Eight thrusters are symmetrically mounted to the outside, one at each corner, while a tube goes through the box to ensure proper water flow and to keep the electronics cool. The system is neutrally buoyed and weight in the form of screws can be added to the thruster arms to adjust buoyancy and the center of gravity.

One of its creators Johann Diep tell us, “We chose to work with Arduino because it offers the required interface (I2C, SPI, etc.), it is easy to program (none of us ever worked with Arduino at the beginning), and there is a large community on the web that is very supportive with our questions.”

A tether connects Scubo to a computer outside the water and the power source, which allows the camera pictures to be viewed live and the batteries to be recharged with a steady current. According to the team, this highly extends the operation time, though the batteries would last approximately 120 minutes under standard conditions without recharging.



Scubo is based on ROS, and with the `rosserial_arduino` package, they are able to send or receive commands on a laptop from the Arduino. This enables them to steer the bot with a SpaceMouse joystick while monitoring all the sensor messages (pressure, leakage, temperature, voltage, etc.) at the same time.

It should be noted that Scubo isn't only restricted to coral research either. In fact, the underwater machine was built with modularity and entertainment in mind as well. Users can easily attach their own sensors, lights and HD cameras via one of five universal ports.

We are confident that Scubo has great potential for the future. Since every necessary sensor is already implemented, Scubo can be programmed to scan a coral reef or any other place fully autonomous. Telepresence could be used in many aquariums or in the sea for entertainment. Because of the module ports different kinds of sensors and

devices can be connected and used, for example to generate a geographical map of the sea floor or to inspect boats.

Whether corals in the Caribbean, the shore of Lake Zurich or even a virtual dive in an aquarium – Scubo not only convinces with its captivating technology but also with its modern design. Innovation starts when science meets entertainment.

<https://blog.arduino.cc/2016/06/13/scubo-is-an-omnidirectional-robot-for-underwater-exploration/#more-14096>

FILE № 15

WITH \$3.2 MILLION, NOTION BRINGS THE INTERNET OF THINGS TO HOME MONITORING

Dean Takahashi June 2, 2016 8:00 AM



Notion brings the Internet of Things to home monitoring.

Notion has raised \$3.2 million in venture funding so that it can bring the Internet of Things (making everyday objects smart and connected) to home monitoring. Notion is offering a home-awareness system that uses sensors to alert you when something is going wrong, such as a home intrusion or water leak.

Denver-based Notion has already shipped more than 10,000 preordered units to homes around the country. The funding from XL Innovate, a venture capital firm that specializes in insurance, and Liberty Mutual Strategic Ventures will help the company grow to its next stage.

Notion wants to expand on the Web and in retail to provide millions of homeowners with safety, peace of mind, and savings. The company is trying to go a step further than rivals such as Google's Next by creating a complete system of smart sensors. Notion's initial product is a small, multi-function sensor with eight different capabilities. Each sensor starts at \$129, with discounts for multiple purchases.

The sensor can recognize water leaks, the opening of doors and windows, temperature changes, smoke alarms going off, acceleration and motion (for movement, like an earthquake), light changes, natural frequency, and angular rate. These sensors can detect whether a door or window has been broken, for example, or whether anything else is amiss.

Notion said the home-monitoring system can be up and running within five minutes or less. It sends alerts to homeowners via a mobile app on both iOS and Android.

Traditional home security systems cost an average of \$2,500 over the required three-year contract period. And most do-it-yourself alternatives can be overly complicated, resulting in a poor user experience and inadequate coverage. While insurance companies already provide discounts for security systems, the second leading cause of insurance claims is actually water leaks, which cause in excess of \$8 billion in losses every year (Source: ISO, a Verisk Analytics business).

"For years, people have been able to receive discounts on their homeowners' insurance by installing a security system. However, these systems typically come with high costs, long-term contracts, and minimal functionality, resulting in only about 20 percent adoption in the US," said Brett Jurgens, cofounder and CEO of Notion, in a statement. "Our goal is to provide the remaining 112 million homeowners [who are] without a security system, with the smartest solution to protect their homes and families. We want to bring the promise of IoT to all homeowners by addressing their biggest needs in a readily accessible and affordable package."

Notion has already sold over \$500,000 worth of devices and shipped all of its crowdfunded preorders, as of May 2016.

"By bringing a super smart and simple IoT solution to homeowners, Notion can change both a homeowner's experience as well as transform the insurance industry," says Martha Notaras, a partner at

XL Innovate. “Simple, reliable sensors that are easily deployed and capable of capturing relevant data can lead to a significant prevention of property damage. Homeowners benefit by having 24/7 insight into the health of their home and insurers can offer loss reduction initiatives. It’s a win-win.”

Notaras is joining the Notion board of directors. The company has 11 employees and has raised \$5.7 million to date. Founders Jurgens and Ryan Margoles grew up together and had been thinking about startup ideas for a while. One day, Margoles had a smoke alarm go off because the battery was low. His new golden retriever puppy was frazzled by the time Margoles got home from work. He thought it would be a good idea to build a smart smoke alarm that could alert you when you weren’t home. He and Jurgens say they had this idea before Nest came out with Nest Protect.

<http://venturebeat.com/2016/06/02/with-3-2-million-notion-brings-the-internet-of-things-to-home-monitoring/>

FILE № 16

THE NEXT OPPORTUNITY **FOR WEARABLE TECHNOLOGIES: AESTHETICS**

by Jody Ranck May 10, 2016 – 8:26 AM PDT



Many of us have seen both the hype around wearables as well as the growing number of critiques of the hype. But one thing is clear: what we see in the market now is just the beginning, a warm up band for the main act to follow.

In my previous post I discussed the problem of sustainable use of tracking devices and how consumers abandon them within months typically. But is the battle for the wrist and smart-watches really the future of wearable technology? Why the wrist and

why do products designed for the wrist and marketed for their aesthetics such as the Fitbit Alta fail to impress from a design perspective?

Furthermore, could user experience be wrapped up with aesthetics and could this be an important factor even for medical devices? Of course it is. We need only go back nearly a decade to find examples of how aesthetics were used to rethink wearable technology. It might be time to re-visit the past to see the future.

Nearly a decade ago, diabetes blogger Amy Tenderich posted a blog bemoaning the fact that diabetics needed their own Steve Jobs to re-design the insulin pump. The device worn by many diabetics to manage insulin levels was viewed as a clunky medical device devoid of any aesthetic considerations. Functionality trumped aesthetics. But sick people, or those struggling with chronic diseases and/or aging, do care about aesthetics, especially if they have the device on the body.

A design firm in San Francisco discovered the blog post and within a short time re-designed an insulin pump that could make diabetics feel better about wearing the device. We hear a lot about patient engagement these days and in this context, aesthetics mean a lot.

Devices are not solely about data and the data are not the only dimensions of disease or wellness. These can become aspects of identities. To illustrate the case, a similar design effort was sponsored by the UK Design Council over a decade ago to rethink the hearing aid and create “hear ware”.

At the time, ‘Hearing Aids’ were viewed as stigmatized and associated with the aging body. Introducing an aesthetic component helped designers to re-imagine hearing devices well beyond the hearing aid, to address hearing challenges we all face, such as being in a noisy restaurant or when exposed to noise pollution. The competition featured in the Victoria and Albert Museum featured devices resembling jewelry with a wider range of functions.

Now enter Amanda Parkes, a New York-based technologist/designer with a PhD from MIT’s Media Lab. Notice as well, the location: New York, the heart of high fashion in the US. Famous for her invocation, “Let Silicon Valley have the wrist, I’ll take the body”, Amanda is deep into re-imagining wearables from both a fashion perspective and materials design. From smart fibers to fiber batteries and bio-materials, she is rethinking the whole concept of the wearable

from an aesthetic angle and materials. Wearables, meet Bauhaus design principles.

When we look at what is going on in the labs these days, with sensors in the form of tattoos that can detect ever more powerful biometric indications, we need to begin thinking about the body as an interface. Many of these sensors will be invisible. They may be connected to your mobile money application as well.

When the novelty of wearing a shrunken iPhone on the wrist wears off, there is much more work to be done from an innovation standpoint. Parkes makes the case for diversity, as many in the tech sector do these days, but for rethinking form, function and appearance.

Perhaps in no other sector will diversity in design from an age, gender, ethnicity, you name it subjectivity; aesthetics follows broader cultural norms and trends. And this matters in healthcare too. I'm betting the next generation of market leaders in this sector will grasp this, and in doing so will find themselves pushing on an open door. Aesthetics matters for the afflicted as much for the well, if not more so.

<https://gigaom.com/2016/05/10/the-next-opportunity-for-wearable-technologies-aesthetics/>

4. VOCABULARY BANK

FILE № 1. Family relationships:

relationship – родство, отношение

unit – единство

old maid – старая дева

spinster – старая дева

to turn out – оказываться

to bring up – воспитывать, растить

to keep the house – вести домашнее хозяйство

to raise children – растить детей

custom – обычай

breathhtaking – захватывающий

"Pride and Prejudice" – «Гордость и предубеждение» (роман Дж. Остин)

to retain – сохранять, удерживать

fascination – очарование, обаяние, привлекательность
to reveal – открывать, раскрывать, обнажать
urgent – насущный, актуальный
to concern – касаться, иметь отношение к
to be in one's forties – быть в возрасте от 40 до 50 лет
to juggle – совмещать
steady – постоянный
to seek – искать
generation – поколение
to suffer from – страдать от
lack of attention – недостаток внимания
nuclear family – полная семья
single-parent family – неполная семья
to consist of – состоять из
divorce rate – уровень разводов
occurrence – возникновение, случай
adultery – измена
unfaithful attitude towards – предательское отношение к
spouse – супруг, супруга
separation – расставание
communication breakdown – невозможность общения
to be incompatible – быть несовместимыми
clash – конфликт
brawl – перебранка, скандал
squabble – спор, мелкая ссора
difference – разногласие
to resolve – улаживать, решать
hug – крепкое объятие
abuse – оскорбление, надругательство
to taunt – насмехаться, говорить колкости
to humiliate – унижать
to hit – бить, ударять
lamentably – печально, грустно
wellbeing – благополучие
boredom – скука

FILE № 2. Family tree

Family

husband, wife, spouse;
father, mother, parents;
son, daughter, child, children;
brother, sister, siblings, twins;
grandfather, grandmother, grandparents;
grandson, granddaughter, grandchild, grandchildren;
great-grandfather, great-grandmother, great-grandchild;
stepfather, stepmother, stepbrother, stepsister;
half-brother, half-sister (единокровные – брат/сестра по одному родителю);
adopted son, adopted daughter, adopted child;
foster family, foster father, foster mother, foster parents,
foster son, foster daughter, foster child;

Relatives

uncle, aunt; nephew, niece;
cousin, first cousin, second cousin (троюродный (ая));
close relatives, distant relatives;
my family, my relatives, my folks, my kin;

Relatives by marriage

in-laws, father-in-law, mother-in-law,
son-in-law, sons-in-law, daughter-in-law, daughters-in-law;
brother-in-law, brothers-in-law, sister-in-law, sisters-in-law;

Age groups

child, baby, infant;
teenager, adolescent; adult, grownup;
young man, young woman, old man, old woman;

Marital status and related words

single, married, engaged, separated, divorced; widower, widow;
fiance, engagement, engagement ring;
bride, bridegroom, wedding;
divorce, ex-husband, ex-wife; alimony, child support;
girlfriend, boyfriend;
lover, paramour, beau, mistress;

Other related words

pregnancy, birth; the baby is due in June; child care, kindergarten, babysitter.

FILE № 3. Describing a person

APPEARANCE

I am / You are / He is / She is ...

tall, short, overweight, fat, slim, young, old
... years old, about 25, in his(her) forties.
beautiful / pretty (women), handsome (men)
sun-tanned, pale, attractive, good-looking, cute, nice; plain, plain-looking, unattractive, ugly...

I have / You have / He has / She has (got) ...

blue / green / grey / brown eyes, freckles, a beard, a full beard, a moustache, a goatee, a stubbly beard, blond hair, red hair, brown hair, black hair, dyed hair, blond highlights, short hair, long hair, straight hair, curly hair / curls, a bald head, a square / round / triangular / oval face, a big / small / long nose, big / small ears...

I wear / You wear / He wears / She wears ...

glasses, contact lenses, earrings, a necklace, a wristband, a bracelet, jeans, a tie...

He takes after his father in appearance, but he is like his mother in character.

He looks like his mother, but he takes after his father in character.

She is average height, dark-haired, quite thin, and wears glasses. She's about fifty.

He is old, short, medium-build, with gray hair and a beard.

He is a handsome middle-aged man.

CHARACTER³²

Many positive words describing character have clear opposites with a negative meaning.

Positive	Negative
warm and friendly	cold and unfriendly
kind	unkind
nice, pleasant	horrible, unpleasant
generous (= happy to give/share)	mean (= never gives to others)
optimistic (= thinks positively)	pessimistic (= thinks negatively)
cheerful (= happy and smiling)	miserable (= always seems unhappy)
relaxed and easy-going	tense (= nervous; worries a lot; not calm)
strong	weak
sensitive	insensitive (= does not think about others' feelings)
honest (= always tells the truth)	dishonest

Jane is very tense at the moment because of her exams, but she's usually quite relaxed and easy-going about most things. I think the weather influences me a lot: when it's sunny I feel more cheerful and optimistic, but when it's cold and raining I get very miserable. He seemed a bit unfriendly at first, but now I've got to know him I realise he's very warm and kind. The shop assistant told me that the dress I tried on looked better on people younger than me. I thought that was very insensitive of her, but at least she was being honest, I suppose.

Character in action

People often talk about qualities of character that you may need in a work situation. Again, some of these words come in pairs of opposites: one positive and one negative.

Positive	Negative
hard-working	lazy (= never does any work)

³² Vocabulary in Use. Pre-Intermediate and Intermediate by Stuart Redman. Cambridge University Press. Unit 44.

punctual (=always on time)	not very punctual; always late
reliable	unreliable (= you cannot trust / depend on someone like this)
clever, bright (infml)	stupid, thick (infml)
flexible	inflexible (= a very fixed way of thinking; unable to change)
ambitious	unambitious (= no desire to be successful and get a better job)

Some pairs of opposites do not have a particularly positive or negative meaning:

He is very shy when you first meet him because he finds it difficult to talk to people and make conversation; but when he knows people quite well he's much more self-confident.

People often say the British are very reserved (= do not show their feelings), but when you get to know them they can be very emotional like anyone else.

Using nouns

Some important qualities are expressed through nouns.

*One of her great qualities is that she **uses her initiative**. (= she can think for herself and take the necessary action; she does not need to wait for orders all the time).*

*That boy **has got no common sense** (= he does stupid things and doesn't think what he is doing). His sister, on the other hand, **is very sensible**. (= has lots of common sense)*

Related words

a bookworm, a history buff, a sports fan, a music fan, a movie fan, a TV addict;

a computer whiz kid, a computer freak, a dandy; a junk collector, a homebody, a couch potato, lazybones, a workaholic, a Jack of all trades; an adventurer, a thrill seeker.

Idioms

life and soul of the party

The life and soul of the party is the most lively and amusing person present at an event.

I'm so glad we invited Emily. She was the life and soul of the party.

mouse potato

This term refers to a person who spends a lot of time in front of the computer.

My son and his friends are all mouse potatoes – constantly glued to the computer!

tough cookie

A person who is a tough cookie is one who is self-confident and ambitious and will do what is necessary to get what they want.

I'm not worried about Jason's future – he's a tough cookie!

Wet blanket

A person who is a wet blanket is so boring or unenthusiastic that they prevent others from enjoying themselves.

Come on! Relax ! Don't be such a wet blanket!

FILE № 4. Who speaks? What? Where?³³

<u>Country</u>	<u>Nationality</u>	<u>Language</u>
Germany	German	German
France	French	French
Italy	Italian	Italian
Spain	Spanish	Spanish
Britain	British	English
Portugal	Portuguese	Portuguese
Japan	Japanese	Japanese
Korea	Korean	Korean

³³ Vocabulary in Use. Pre-Intermediate and Intermediate by Stuart Redman. Cambridge University Press. Unit 41.

China	Chinese	Mandarin (also Cantonese)
Thailand	Thai	Thai
Australia	Australian	English
The United States of America	American	English
Saudi Arabia	Saudi Arabian	Arabic
Brazil	Brazilian	Portuguese
Sweden	Swedish	Swedish
Switzerland	Swiss	Swiss-German, French, Italian
Egypt	Egyptian	Arabic
Holland	Dutch	Dutch
Mexico	Mexican	Spanish
Russia	Russian	Russian
Israel	Israeli	Hebrew
Greece	Greek	Greek
Turkey	Turkish	Turkish
Argentina	Argentinian	Spanish

Note:

When you are talking about people in general from a particular country, there are some nationalities that you can make plural with an 's', but others can only be formed with the definite article (and no plural 's');

<i>Brazilians</i>	<i>The British</i>
<i>Germans</i>	<i>The French</i>
<i>(The) Italians are (usually very ...)</i>	<i>The Swiss are (usually very ...)</i>
<i>Russians</i>	<i>The Dutch</i>
<i>Israelis</i>	<i>The Japanese</i>

- *With both groups you can also use the word 'people': British people, German people, etc.*
- *When you talk about one person from these countries, you need to add woman/man/person to the group on the right: a Brazilian but a Japanese person; a German but a Swiss person, etc.*

FILE № 5. Studying at University

to enter a university – поступить в университет

to graduate from a university – окончить университет

to take exams – сдавать экзамены

to pass exams – сдать экзамены (успешно)

to study – учиться

faculty – факультет

dean – декан

scientific advisor/supervisor – научный руководитель

lecturer – лектор

to give / deliver a lecture – читать лекцию

to attend lectures – посещать лекции

a group-mate – одногруппник

senior students – студенты старших курсов

a first (second)-year student – студент первого (второго) курса

to research – проводить исследование

to do /to conduct/ to carry out research – проводить исследование

assignment – задание

subject – предмет

term – семестр

to obtain – получать

to do well – делать/выполнять хорошо, делать успехи

tuition (teaching) – обучение

to get a grant – получить грант (стипендию)

accommodation – проживание

undergraduates – учащиеся (студенты, получающие свою первую степень)

a postgraduate – студент, получающий последующие степени (магистрант, аспирант, докторант)

the Bachelor's Degree – степень (звание, диплом) бакалавра;

the Master's Degree – степень (звание, диплом) магистра;

to study for the first/second degree – учиться с целью получить квалификацию (на первой ступени образования – бакалавр, на второй ступени образования – магистр)

to study for a degree in ...

to get a degree – получать степень

to last – длиться, продолжаться

course – курс (программа)
to defend a graduate paper – защищать дипломную работу, выпускную квалификационную работу
an advanced degree – более высокая степень
to receive a degree in a certain subject
to complete a university course successfully – успешно закончить университетский курс
to complete the first degree – получить первую степень/квалификацию
BA (Bachelor of Arts) – степень бакалавра гуманитарных наук
BSc (Bachelor of Science) – степень бакалавра естественных наук
a graduate – выпускник (имеющий степень/квалификацию)
to do a course / degree (postgraduate course/postgraduate degree)
to get/do a degree
MA (Master of Arts) – степень магистра гуманитарных наук
MSc (Master of Science) – степень магистра естественных наук
MPhil (Master of Philosophy) – степень магистра философии
PhD (Doctor of Philosophy) – доктор философии (соответ. кандидат наук)

FILE № 6. Omsk State University

residence hall (hostel) – общежитие
dormitory tower – общежитие
laundry – прачечная
self-catering – самообслуживание
canteen – столовая
library – библиотека
facilities – возможности, условия
gym – спортивный зал
premises – помещения
designate – предназначать
rehearse – репетировать
contribute – предоставлять, вносить вклад
in charge of – возглавлять (работу по..), отвечать за..
administer – осуществлять, обеспечивать

FILE № 7. Skills and qualities

active – активный

industrious – трудолюбивый, усердный

adaptable – быстро адаптирующийся

intellectual – интеллектуальный

ambitious – амбициозный

leader – лидер

broadminded – с широкими взглядами, интересами

mature – психологически зрелый

cheerful – неунывающий, жизнерадостный

motivated – с четкой мотивацией

competitive – способный соревноваться, конкурентоспособный

optimistic – оптимистичный

cooperative – открытый к сотрудничеству

organized – организованный

creative – творческий

curious – любопытный

outgoing – человек с легким, открытым характером

determined – решительный

patient – терпеливый

eager – устремленный

easygoing – коммуникабельный

purposeful – целеустремленный

energetic – энергичный

quick – бодрый

enthusiastic – полный энтузиазма, энергии

reliable – надежный

entrepreneurial – предприимчивый (способный реализовывать идеи)

resourceful – изобретательный, находчивый

flexible – психологически гибкий

self-confident – уверенный в себе

friendly – дружелюбный

self-sufficient – самостоятельный, самодостаточный

generous – щедрый

serious – серьезный

good natured – приятный

sociable – коммуникабельный
hardworking – способный много работать, трудолюбивый
successful – успешный
helpful – полезный
supportive – готовый предоставить поддержку
honest – честный
tactful – тактичный
imaginative – имеющий богатое воображение
thorough – добросовестный
independent – независимый
trustworthy – заслуживающий доверия

FILE № 8. Career and employment

career – карьера
promotion – продвижение (по службе)
post/position – должность
challenging position – должность, требующая большой отдачи
(своеобразный вызов, трудности, испытания)
opening – вакансия
search for – искать
pursue "help wanted" ads (in newspapers) – регулярно просматривать объявления о найме на работу (в газетах)
to apply for (a job) – подавать документы
to fill the position – занять должность
curriculum vitae – биография
resume – резюме
accept resume – принимать / брать резюме
give / submit resume – предоставлять / давать резюме
hand over resume – передавать резюме
reject / refuse resume – отказывать / отвергать резюме
letter of application – сопроводительное письмо
a covering letter, a cover letter
references available upon request – рекомендации предоставят по требованию
inquire about – спрашивать / наводить справки
samples – образцы
supporting documents – подтверждающие документы

relevant skills – подходящие навыки
irrelevant – неподходящий (не относящийся к делу)
specifics – конкретные детали, примеры (не общего плана)
experience – опыт
strength – сильная сторона
weakness – слабая сторона
shortcoming – недостаток
creative – творческий
to work under pressure – работать в тяжелых условиях (в напряжении)
to get along with people – ладить с людьми
collective thinker – умеющий думать «коллективно»
to have a degree in (Accounting, BA) – иметь степень
to have a good command of (English) – хорошо владеть
interview – собеседование
request an interview – просить назначить собеседование
be granted an interview – получить приглашение на собеседование
responsibilities – обязанности
to deal with – иметь дело с, работать с
to do/work overtime – работать сверхурочно
to work shift-work – скользящий график (по четным или по суткам и т.д.)
to be on flexi-time – гибкий, свободный график
to work nine-to-five – жесткий, фиксированный рабочий день
human resources/staff/personnel – штат, персонал, работники
to hire – нанимать
to employ
to engage
to recruit – вербовать, нанимать, давать работу
recruit – новичок
personal – личный
personnel – персонал
shortlist of candidates (applicants) – конечный список кандидатов
applicant – кандидат
requirements – требования
criterion – criteria (критерий)
appointment – назначение
hierarchy – иерархия

executive – руководитель
subordinate – подчиненный
skilled (unskilled) worker – квалифицированный (неквалифицированный) рабочий
to sack – уволить (выбросить с работы)
to get the sack
to be fired – быть уволенным
to be dismissed
to be made redundant быть уволенным по сокращению штатов
to be laid off

FILE № 9. Introduction to computer software

abort (v) – to end a program or a process before its completion. *When the word processor application crashed, the user had to abort the program and lose all his unsaved changes* (прервать, завершать; аварийно завершаться).

bug (n) – an error in a computer program. *An average developer will create one bug for every 10 lines of code written* (ошибка в программе, сбой, дефект).

compatible (adj) – capable of being used without modification. *The IBM 360 was the first commercially successful computer family with a wide range of compatible parts* (совместимый; совместимое устройство).

crash (n) – a computer failure due to faulty hardware or a serious software bug. *The user was advised to reboot the computer after a serious crash in which the computer no longer responded* (сбой, аварийный отказ).

end user – a person who uses a product or service on a computer. *Developers must maintain a close relationship with end users if they want to have a successful career* (конечный пользователь).

error (n) – an incorrect action attributable to poor judgment, ignorance, or inattention. *The computer reported a "division by zero" error and automatically aborted the program* (ошибка).

execute (v) – to start a program on a computer. *The program was set to execute every night at midnight* (выполнять, запускать программу).

feature (n) – something a computer program is "supposed" to do; these are often reasons to use a particular program or upgrade to a more recent version. *The man upgraded his copy of Word because of a new feature that allowed him to spell-check documents in Spanish* (особенность, характеристика, функция).

closed source – software in which the license stipulates that the user cannot see, edit, or manipulate the source code of a software program. *I wanted to develop a new feature for the program, but I couldn't because it was closed source* (программы с закрытыми исходниками).

proprietary – privately developed and owned technology. *Because of proprietary code, you may not modify or redistribute the source code of Windows or Macintosh operating systems* (частный, собственный, патентованный).

open source – a program in which the code is distributed allowing programmers to alter and change the original software as much as they like. *The article stated that many programmers prefer open source solutions because they can modify features and fix bugs without waiting for an upgrade or patch from the manufacturer* (программы с открытым исходным кодом, открытые исходные тексты, открытые исходники)

programmer (computer programmer, developer, coder, or software engineer) – a person who writes or modifies computer programs or applications. *The software company needed to hire three new programmers to help debug their flagship application.*

debug (v) (NOTE: debugging – debugged) – to test a program and locate and correct any faults or errors. *They spent weeks debugging the system* (отлаживать, исправлять ошибки).

terminate – to end (останавливать, прекращать, внезапно завершать)

FILE № 10. Computers

Volatile/non-volatile memory, the core of a computer, peripherals, kernel, keyboards, numeric keypads, pointing devices (including mouse, touch pad and tracker ball), remote controls, joysticks, touch screens, graphics tablet, magnetic stripe readers, chip readers, PIN pads, digital cameras, video cameras, web cams, scanners, microphones, sensors, MICR, OMR, OCR, barcode readers, light pens; monitors (CRT, TFT), printers (laser, ink jet and dot matrix), plotters, speakers, control devices (motors, buzzers, lights, heaters); to fetch, to decode, to writeback, sockets, memory slots, a chipset, flash memory, magnetic tape, punch cards, and zip drives, folder, network connectivity, compatibility with, open source (open source code), close source operating system, freeware...

FILE № 11. Programming languages

Assembly languages, low-level languages, high-level languages, compiler or an interpreter, object code, markup languages, XML, VoiceXML, HTML, bug, object-oriented features, entrenched code base, longest standing, persistent, and influential programming languages, portability and applicability, a scripting language, shell scripting...

FILE № 12.

ARPANET (Advanced Projects Research Agency Network) – the predecessor to the Internet developed by ARPA and the first worldwide network with packet switching

The current public Internet owes a big debt to ARPANET, which was the original global network.

backbone – a central high speed network that connects smaller, independent networks

Homeland Security is worried that an attack on the Internet backbone could cripple the country for weeks or months.

BBS (Bulletin Board System) – a predecessor to modern websites, these were early online communities that users could dial into using a modem

The network administrator ran his own BBS as a boy back in the 1980s.

cookie – a text file created by web sites which contains personal information about an end user

The web's use of cookies is quite controversial because most users have no idea that their information is being collected and stored on their computer.

domain name – the unique name which identifies a web site.

The domain name of Microsoft Corporation is microsoft.com

download – the transfer a file or files from a remote computer to the user's computer

The professor asked us to download the example database from the school's server.

e-commerce (electronic commerce) – the term for buying and selling goods and services over the world wide web

Although e-commerce started out small, it has grown into a multi-billion dollar industry.

emoticon – a symbol that uses the characters on a computer keyboard to convey emotion an email or instant message, such as the smiley face :)

One of the most popular emoticons is perhaps the wink and smile ;) which is used to convey irony or satire.

hyperlink – a document cross-reference technique enabling the retrieval of a related document or resource simply by clicking on an underlined word or image.

The man made a hyperlink from his personal homepage to his friend's business.

hypertext – any electronic cross-referencing document first prophe-sized by Vannevar Bush in 1945

The woman asked her professor if the textbook was available as hypertext.

HTML (Hypertext Markup Language) – the coding or tagging syntax used to write documents for web browsers

A good web developer will know most HTML tags without looking in a book.

URL (Uniform Resource Locator) – the address which specifies the location of a file on the Internet

One uses a URL to go directly to a particular web site.

upload – to transfer a file from a local computer to a remote computer

The boy decided to upload a picture of his new girlfriend to his Facebook page.

WWW (World Wide Web) – a global hypertext system operating on the Internet that enables electronic communication of text and multimedia.

The World Wide Web is the best thing to happen to computing since birth of the PC.

W3C (World Wide Web Consortium) – an organization which develops specifications and guidelines for the World Wide Web.

The W3C recommends that Web developers no longer use font tags in their HTML documents.

<https://www.english4it.com/unit/6/vocabulary>

FILE № 13. Internet security

Malicious, to infect, to prevent, to steal, identification cards, to identify, illegally, to encode, intruder, malware (malicious software), addiction, inappropriate content, cyber bullying, to harass, theft, black-mail, victim, to encounter, to break into, to be accused of, defense, to prosecute, infringement, piracy, copyright, cybercrime, privacy, civil and criminal records, legitimate, vulnerability, to take precautions, a thief – thieves, **hacker, cracker**, white hat **hackers**, black hat **hackers**, grey hat **hackers**, phishing, to verify, cookies, freeware, encryption, decryption, spyware, firewalls, cyberstalking, IP spoofing...

FILE № 14. Information technologies

Technological advances, Artificial Intelligence (AI), robotics, biometrics, nanotechnology, nanocomputers, nanobots, nanotubes, android, humanoid robot, biometrics, ubiquitous computing, pervasive computing, ubiquitous devices, embedded computers, automata, joints, actuators, expert systems, neural networks, high fidelity EEG acquisition system, cognitive suite, wearables...

5. GRAMMAR FILES

FILE № 1

Phonetic symbols

used in the dictionary

Consonants

p	pen	/pen/	s	so	/səʊ/
b	bad	/bæd/	z	zoo	/zu:/
t	tea	/ti:/	ʃ	shoe	/ʃu:/
d	did	/dɪd/	ʒ	vision	/ˈvɪʒn/
k	cat	/kæt/	h	hat	/hæt/
g	got	/ɡɒt/	m	man	/mæn/
tʃ	chain	/tʃeɪn/	n	no	/nəʊ/
dʒ	jam	/dʒæm/	ŋ	sing	/sɪŋ/
f	fall	/fɔ:l/	l	leg	/leg/
v	van	/væn/	r	red	/red/
θ	thin	/θɪn/	j	yes	/jes/
ð	this	/ðɪs/	w	wet	/wet/

Vowels and diphthongs

i:	see	/si:/	ʌ	cup	/kʌp/
ɪ	happy	/ˈhæpi/	ɜ:	bird	/bɜ:d/
ɪ	sit	/sɪt/	ə	about	/əˈbaʊt/
e	ten	/ten/	eɪ	say	/seɪ/
æ	cat	/kæt/	əʊ	go	/ɡəʊ/
ɑ:	father	/ˈfɑ:ðə(r)/	aɪ	five	/faɪv/
ɒ	got	/ɡɒt/	aʊ	now	/naʊ/
ɔ:	saw	/sɔ:/	ɔɪ	boy	/bɔɪ/
ʊ	put	/pʊt/	ɪə	near	/nɪə(r)/
u	actual	/ˈæktʃuəl/	eə	hair	/heə(r)/
u:	too	/tu:/	ʊə	pure	/pjʊə(r)/

(r) indicates that British pronunciation will have /r/ only if a vowel sound follows directly; otherwise it is omitted. In American pronunciation, every 'r' of the ordinary spelling is retained.

<http://eng4me.ru/fonetika/transkripcij>

FILE № 2

Word Order in the English sentence / Порядок слов

Обстоятельство времени	Подлежащее	Сказуемое	Дополнение	Обстоятельство образа действия	Обстоятельство места	Обстоятельство времени
------------------------	------------	-----------	------------	--------------------------------	----------------------	------------------------

Глагол "to be" (быть, являться, существовать, значить)

Present	Past	Future
(I) am		will be
(he, she, it) is	(ед.ч.) was	(I,we) shall be
(we, you, they) are	(мн.ч.) were	

Глагол "to have" в английском языке

<i>Present</i>	Past	Future
(I, we, you, they) have	had	will have
(he, she, it) has	had	(I,we) shall have

Для образования вопросительной и отрицательной формы с глаголом **to have** используется вспомогательный глагол **do/don't (does/doesn't, did/ didn't)**.

He has three brothers.

Do you **have** a brother?

I **don't have** a brother, but I **have** two sisters.

We had a meeting yesterday.

Did you **have** a car when you lived in London?

Оборот there is/are
there is/are; there was/were; there will be;
there have/has been; there had been

Русский	Английский	
В этой комнате есть (имеется) телефон	There is a telephone in this room	Is there a telephone in your room? – No, there isn't (a telephone in my room). No, there is no telephone in my room
В саду (имеется) много яблонь	There are many apple-trees in the garden	Are there many apple-trees in the garden? – No, There aren't
Вчера в институте было собрание	There was a meeting at the Institute yesterday	Was there a meeting in the square? – No, there wasn't
Там будет много людей	There will be many people there	Will there be many people there? – No, there won't. No, there won't be any people there

Pronouns / Местоимения

Личные местоимения			Притяжательные местоимения	
	Имени- тельный падеж	Объектный падеж	Первая форма	Абсолютная форма
	<i>Употреб- ляется в ро- ли подле- жащего</i>	<i>Является до- полнением</i>	<i>Употребля- ется перед существи- тельными</i>	<i>Употребля- ется само- стоятельно без сущест- вительных</i>
Ед. число	I – я you – ты, вы he – он she – она it – он, она, оно	те – мне, меня you – тебя, те- бе, вас, вам him – его, ему her – ее, ей it – его, ему, ее, ей	my – мой your – твой, ваш his – его her – ее its – его, ее	mine yours his hers
	It – обозначает любой пред- мет. (В английском языке неодушевленные предметы не имеют рода.)			
Мн. число	we – мы they – они	us – нас, нам them – их, им	our – наш their – их	ours theirs
	Местоимения <i>they/them</i> обо- значают одушевленные и неодушевленные предметы.			

Degrees of Comparison / Степени сравнения

Имена прилагательные и наречия образуют, как и в русском языке, две степени сравнения: сравнительную и превосходную.

The Volga is longer than the Dnieper (longer – сравнительная степень).

The Volga is the longest river in Europe (longest – превосходная степень).

Односложные прилагательные (а также двусложные прилагательные, оканчивающиеся на -y, -er, -ow) образуют сравнительную степень путем прибавления суффикса **-er** Превосходная степень образуется путем прибавления суффикса **-est**

Положительная степень	Сравнительная степень	Превосходная степень
sharp острый	sharper более острый, острее	sharpest самый острый, острейший
busy занятый	busier более занятый	busiest самый занятый
clever умный	cleverer более умный, умнее	cleverest самый умный, умнейший
narrow узкий	narrower более узкий, уже	narrowest самый узкий
polite вежливый simple простой	politer более вежливый, вежливее simpler более простой, проще	politest самый вежливый simplest самый простой, простейший

Большинство двусложных прилагательных, а также прилагательные, состоящие из трех или более слогов, образуют сравнительную степень при помощи слова **more**, а превосходную – **most**.

Положительная степень	Сравнительная степень	Превосходная степень
Important важный	more important более важный	most important active самый важный

Некоторые прилагательные образуют степени сравнения от другого корня

Положительная степень	Сравнительная степень	Превосходная степень
good хороший bad плохой little мало much, many много far дальний, далекий old (старший)	better лучше worse хуже less меньше more больше farther (о расстоянии) further (о времени и расстоянии) older (о возрасте) elder (о старшинстве)	best лучший worst худший least меньше всего most больше всего farthest furthest elder eldest

Для сравнения качества предметов используют также следующие формулы:

than – чем

Moscow is **larger than** St. Petersburg.

as ... as – такой же ... как

He works **as hard as** you.

not so ... as – не так(ой) ... как

She is **not so beautiful as** her mother.

the more ... the better – чем ... тем

The more you work **the better** you know the language.

much, far – намного, гораздо, значительно

The husband was **much older** than the wife.

a bit, a little – немного

Could you speak a **bit louder**?

Запомните следующие примеры:

Ваша комната **в два раза больше** моей. – Your room is **twice as large as** mine.

Этот ящик **в три раза тяжелее** того. – This box is **three times as heavy as** that one.

Он **в два раза старше**. – He is **twice as old**.

Моя комната **в два раза меньше** вашей. – My room is **half the size of** yours.

Мой чемодан **в два раза легче** вашего. – My case is **half the weight of** yours.

FILE № 5

Plurals / Множественное число имен существительных

Имена существительные образуют множественное число при помощи окончания -s или -es:

map – maps, bag – bags, rose – roses, class – classes, potato – potatoes, shelf – shelves, city – cities

В английском языке есть ряд существительных, которые сохранили старое образование множественного числа путем изменения корневой гласной: a man – men [men], a woman – women ['wimin], a child – children, a mouse – mice, a tooth – teeth; а также существительные, которые имеют одинаковые формы единственного и множественного чисел: a fish – fish, a sheep – sheep.

Некоторые существительные, заимствованные из латинского и греческого языков, сохраняют свои формы множественного числа:

analysis – analyses, axis – axes, basis – bases, crisis – crises, focus – foci, phenomenon – phenomena, criterion – criteria, datum – data, formula – formulae.

Существительные, имеющие одну форму числа:

knowledge – знание(я)

means – средство(а), способ(ы)

evidence – доказательство(а)

advice – совет(ы)

news – новость(и)

FILE № 6

English Tenses. Active Voice / Времена английского глагола. Действительный залог

	Present	Past	Future
Simple Indefinite	(I, we, you, they) dance (he, she, it) dances <ul style="list-style-type: none"> повторяющееся, регулярное действие; констатация факта; характеристика способностей, привычек, взглядов, ... с глаголами восприятия, желания, владения (to see, hear, to want, to like...) <p>usually, every day/night/morning/month/week/year often, always, seldom, rarely once/twice/three times a week/day/year...</p>	danced / knew <ul style="list-style-type: none"> повторяющееся, регулярное действие в прошлом; факты – достоверные истории действие, не связанное с настоящим <p>yesterday, last week/month/year/, in 1998/ ..., on Monday, ago, the other day ...</p>	(I, we) shall dance (you, she, he, it, they) will dance <ul style="list-style-type: none"> незапланированное будущее обещания, предположения, относящиеся к будущему <p>tomorrow next week/year in ... days/weeks...</p>
Continuous to be + P1 (V-ing)	am, is, are dancing <ul style="list-style-type: none"> действие совершается, ситуация развивается <u>подчеркивается</u> незавершенный, длительный (длящийся) или временный характер действия запланированное будущее (Я собираюсь, ...) 	was, were dancing <ul style="list-style-type: none"> действие совершалось в какой-то момент (период) времени <u>подчеркивается</u> незавершенный, длительный (длящийся) или временный характер действия в прошлом два соотнесенных (одновременных, но разной продолжительности) действия 	shall/will be dancing <ul style="list-style-type: none"> Будущее действие в развитии, в процессе совершения в какой-то определенный момент (отрезок времени) в будущем

	Present	Past	Future
	Now, these days...	When I came/she saw..., yesterday at 3 o'clock, from ... till ... o'clock, at that moment, all day yesterday, all the time, the whole evening...	When you phone..., tomorrow at 3 o'clock, from ... till ... o'clock, ...the whole evening.... all day tomorrow
Perfect to have + PII (V-ed/ III ф.)	<p>have, has danced действие произошло, но оно связано с настоящим, что подчеркивается указанием на результат, итог, важность на данный момент, настоящий (не оконченный) период времени (сегодня, а не вчера) описание, оценка опыта</p> <p>often, always, rarely, seldom, ever, never</p> <p>recently, lately, for, since, this morning, this year....today just already (+) yet (-, ?) so far (+, ?) How long...?</p>	<p>had danced предпрошедшее подчеркивает действие, которое произошло, завершилось ранее другого действия или момента в прошлом</p> <p>When I came ...by Saturday, by the end of the year, before, after, ...</p>	<p>shall/will have danced подытоженное будущее действие закончится к определенному моменту в будущем</p> <p>by ... o'clock tomorrow...</p>
Perfect Continuous to have been + PI	<p>have, has been dancing при имеющемся результате <u>подчеркивается длительность</u>, процесс</p> <p>since, for, for a long time, all day long, all the morning, the whole evening...</p>	<p>had been dancing <u>длительное</u> действие в прошлом, начавшееся ранее другого действия (момента) в прошлом</p> <p>for a long time, for ... hours,</p>	<p>shall/will have been dancing длительное будущее действие, которое начнется ранее другого будущего действия (момента) и будет еще совершаться в момент его наступления</p>

	Present	Past	Future
Simple Indefinite	<p>They clean the room every week. She cleans the room every day.</p> <p>They don't clean the room every week. She doesn't clean the room every day.</p> <p>Do they clean the room every week? Yes, they do. No, they don't</p> <p>Does she clean the room every day? Yes, she does. No, she doesn't.</p>	<p>They cleaned the room yesterday. She cleaned the room yesterday.</p> <p>They didn't clean the room yesterday. She didn't clean the room yesterday.</p> <p>Did they clean the room yesterday? Yes, they did. No, they didn't.</p> <p>Did she clean the room yesterday? Yes, she did. No, she didn't.</p>	<p>They will clean the room next week. She will clean the room next week.</p> <p>They will not clean the room next week. She will not clean the room next week.</p> <p>Will they clean the room next week? Yes, they will. No, they won't.</p> <p>Will she clean the room next week? Yes, she will. No, she won't.</p>
Continuous to be + PI (V-ing)	<p>She is cleaning the room now.</p> <p>She is not cleaning the room now.</p> <p>Is she cleaning the room now? Yes, she is. No, she isn't.</p>	<p>When I came she was cleaning the room.</p> <p>When I came she was not cleaning the room.</p> <p>Was she cleaning the room when you came? Yes, she was. No, she wasn't.</p>	<p>Tomorrow from 11 till 12 she will be cleaning the room.</p> <p>Tomorrow from 11 till 12 she will not be cleaning the room.</p> <p>Will she be cleaning the room from 11 till 12 ? Yes, she will. No, she won't.</p>

	Present	Past	Future
Perfect to have + PII (V-ed/ III φ.)	<p>She has already cleaned the room.</p> <p>She hasn't cleaned the room yet.</p> <p>Has she cleaned the room so far?</p> <p>Yes, she has.</p> <p>No, she hasn't.</p>	<p>When I came she had already cleaned the room.</p> <p>When I came she hadn't cleaned the room yet.</p> <p>Had she cleaned the room when you came?</p> <p>Yes, she had.</p> <p>No, she hadn't.</p>	<p>She will have cleaned the room by 2 o'clock.</p> <p>She will not have cleaned the room by 2 o'clock.</p> <p>Will she have cleaned the room by 2 o'clock?</p> <p>Yes, she will. No, she won't.</p>
Perfect Continuous to have been + PI	<p>She has been cleaning the room all the morning.</p> <p>She hasn't been cleaning the room all the morning.</p> <p>Has she been cleaning the room all the morning?</p> <p>Yes, she has.</p> <p>No, she hasn't.</p>	<p>When I came she had been cleaning the room for two hours.</p> <p>She hadn't been cleaning the room for two hours when I came.</p> <p>Had she been cleaning the room for two hours when I came?</p> <p>Yes, she had.</p> <p>No, she hadn't.</p>	<p>When I phone her in 20 minutes she will have been cleaning the room for two hours.</p> <p>She will not have been cleaning the room for two hours...</p> <p>Will she have been cleaning the room for two hours ...?</p> <p>Yes, she will. No, she won't.</p>

Примечания:

1. Глаголы, не употребляющиеся в Continuous:

(ментальная деятельность): *to know, to think, to believe, to mean, to remember, to understand...*

(отношения): *to love, to like, to adore, to hate, to have, to own, to need...*

(чувства, ощущения): *to see, to hear, to smell, to taste...*

(абстрактные отношения): *to be, to involve, to contain, to cost...*

НО:

- *What are you thinking about?* (значение 'думать', а не 'считать, полагать', сам процесс)
- *Who is she seeing now?* (значение 'встречаться')
- *You are being selfish.* (значение 'вести себя')
- *We are having dinner.* (в составе устойчивых выражений)

be always doing обозначает, что действие происходит настолько часто, что сам говорящий считает это не совсем нормальным.

I am always losing my keys. – ***Я постоянно теряю свои ключи.***

2. Выражение будущего:

Present Simple – для действия, происходящего по расписанию
The train leaves at 3.30 tomorrow.

Present Continuous

Be doing – для запланированного (и организованного) действия:

We are having a party tomorrow.

Be going to do – для запланированного (и еще не организованного) действия, только намерение:

We are going to buy a new car.

Something is going to happen in the future – вся ситуация сейчас заставляет нас поверить, что это произойдет. *He is going to fall into the hole.* (Мы видим, что перед ним колодец, который он не видит; он наверняка в него упадет).

It's going to rain. – Похоже, будет дождь.

Future Simple

(Помимо обозначения действия, которое произойдет в будущем по объективным причинам):

1. Решение выполнить действие принято в момент речи:
Let's have a party. – Oh, it's a great idea. We ll invite a lot of people.
2. Обещание выполнить действие:
I won't tell anybody what happened.
3. Предложение выполнить действие:
That bag looks heavy. I ll help you with it.
4. С выражениями: **probably, (I) think, (I) expect, (I'm) sure:**
I'm sure you'll pass the exam.

3. Оборот used to do – регулярное действие в прошлом. (В настоящее время действие не происходит). – He used to smoke a lot. – Раньше он много курил (сейчас не курит).

would do – регулярное действие в прошлом. В отличие от **used to do** употребляется только с динамическими глаголами (т.е. глаголами активного действия). He would run a lot. – Раньше он много бегал.

Соответственно, с глаголами типа want, think, be употребляется только **used to do**.

4. Past Indefinite – Present Perfect

Present Perfect	Past Indefinite
ever, never recently, lately for, since this morning, this year... today just already (+) yet (-, ?) so far (+, ?)	the other day on Monday... in 19... ago last year... yesterday
How long...?	When ...?

FILE № 7

Passive Voice / Страдательный залог

	Present	Past	Future
Simple Indefinite to be + PII	<p>The room is cleaned every day.</p> <p>Is the room cleaned every day? Yes, it is. No, it isn't.</p>	<p>The room was cleaned yesterday.</p> <p>Was the room cleaned yesterday? Yes, it was. No, it wasn't.</p>	<p>The room will be cleaned next week.</p> <p>Will the room be cleaned next week? Yes, it will. No, it won't.</p>
Continuous to be being+ PII (V-ed/III)	<p>The room is being cleaned now.</p> <p>Is the room being cleaned now? Yes, it is. No, it isn't.</p>	<p>When I came the room was being cleaned.</p> <p>Was the room being cleaned when you came? Yes, it was. No, it wasn't.</p>	
Perfect to have been+ PII (V-ed/ IIIф.)	<p>The room has just been cleaned.</p> <p>Has the room been cleaned? Yes, it has. No, it hasn't.</p>	<p>When I came the room had been cleaned.</p> <p>Had the room been cleaned when you came? Yes, it had. No, it hadn't.</p>	<p>The room will have been cleaned by 5 o'clock.</p> <p>Will the room have been cleaned by 5 o'clock? Yes, it will. No, it won't.</p>
Perfect Continuous	↑	↑	↑

FILE № 8

Reported (Indirect Speech) / Косвенная речь

Прямая речь (Direct speech)	Непрямая/Косвенная речь (Indirect speech)
I. 1. Tom says, "I am happy." 2. She says, "I don't know this man." 3. They say, "Close the window, please." 4. They say, "Don't close the window, please." 5. The manager asks me, "Do you live in Omsk?" 6. I ask them, "Where is John?"	I. 1. Tom says (that) he is happy. 2. She says (that) she doesn't know this man. 3. They ask me to close the window. 4. They ask not to close the window. 5. The manager asks me if I live in Omsk. 6. I ask them where John is.
II. 1. Tom said, "I am happy." (Present Simple) 2. Tom said, "I was happy." (Past Simple) 3. Tom said, "I will be happy." (Future Simple) 4. Tom said, "I can be happy." (can) 5. Tom said, "I am working till six today." (Present Continuous) 6. Tom said, "I have done this work." (Present Perfect) 7. She said to him, "Come at 3 o'clock" 8. She said to him, "Don't come at 3 o'clock" 9. She asked him, "Have you done this work?" 10. She asked him, "Where do you live?"	II. 1. Tom said that he was happy. (Past Simple) 2. Tom said (that) he had been happy. (Past Perfect) 3. Tom said (that) he would be happy. (Future in the Past Simple) 4. Tom said (that) he could be happy. (could) 5. Tom said (that) he was working till six." (Past Continuous) 6. Tom said that he had done his work. (Past Perfect) 7. She asked him to come at 3 o'clock. 8. She asked him not to come at 3 o'clock 9. She asked him if he had done that work. 10. She asked him where he lived.
This (these) Now Here Today Yesterday Tomorrow Ago Next week	That (those) Then There That day The day before The next day Before The following week

FILE № 9

Modal Verbs / Модальные глаголы can, may, must, should, ought to, need

Не употребляются самостоятельно, а только в сочетании с инфинитивом смыслового глагола. Не обозначают действия, а *выражают возможность, способность, вероятность, необходимость* совершения действия, выраженного смысловым глаголом (тем, что следует за модальным).

Модальные глаголы

- не имеют формы инфинитива
- не изменяются по лицам и числам: I can run. – She can run.
- отрицательные и вопросительные предложения конструируют сами (без вспомогательных глаголов): She can't run. Can she run?
- инфинитив смыслового глагола следует за модальным без частицы **to** (искл. **ought to**): She began to read. – She can read.

Значение	Глагол (наст. вр.)	Глагол (прош. вр.)	Эквивалент
возможность, способность <i>могу, умею</i>	can	could	to be able to
разрешение	may, can		to be allowed to
<i>Предположение:</i> может быть, возможно	may/might		
должно быть, наверняка	must		
не может быть	can't		
Обязательство (должен)	must		to have to (вынужден) to be to (должен по расписанию, по договоренности)
Совет (следует)	should ought to		had better would rather
нужно	need		have to
нет необходимости	needn't		don't/doesn't/didn't have to

Conditionals / Условные предложения

Тип	Придаточное предложение	Главное предложение	Перевод на русский язык
I. Реальное условие. Относится к настоящему и будущему времени	If the weather is clear, Present Indefinite/ Present Continuous	we will go for a walk. Will + глагол	Если погода <u>улучшится</u> , мы <u>пойдем</u> на прогулку.
II. Маловероятное условие. Относится к настоящему и будущему времени	If you moved to the country, Past Indefinite/ Past Continuous	you would (could) buy a bigger house. would could + глагол might	Если <u>бы</u> вы переехали за город, вы <u>бы</u> могли купить больший дом.
III. Нереальное условие. Относится к прошедшему времени. Выражает сожаление	If he had known the facts, Past Perfect	he would have told us what to do. would could + have+IIIф might	Если <u>бы</u> он <u>тогда</u> знал эти факты, он <u>бы</u> сказал нам, что делать.

- Союзы: **if** – если, **in case** – в случае, **provided** – при условии, если, **unless** – если не.
You **won't** pass the exam, **unless** you **work** hard.
- Во втором типе условных предложений глагол “**to be**” всегда имеет форму “**were**” в британском варианте; в современном американском возможен – “**was**”:
If I **were** a millionaire, I would buy you a palace.
- Существуют предложения смешанного типа; одна часть относится ко II, а другая – к III типу условия.
If I **had taken** the medicine **yesterday**, I **would be** well **now**.
- “На вашем месте” – If I were you... If I were in your position....

I wish/wished

I **were** beautiful. – Как бы мне хотелось быть красивой.

... we **knew** her address. – Как жаль, что мы не знаем ее адреса.

... I **had brought** my camera. – Жаль, что я не взял в собой фотоаппарат.

... the hotel **had been** better. – Жаль, что гостиница была такой плохой.

... they **could come** to see us tomorrow. – Как жаль, что они не смогут зайти к нам завтра.

FILE № 11

Participles I, II/ Причастия I, II

Причастие I (Participle I) – неличная форма глагола, обладающая свойствами глагола, прилагательного и наречия. Соответствует формам причастия и деепричастия в русском языке.

Формы причастия I

	active	passive
Indefinite	asking – спрашивающий; спрашивая	being asked – будучи спрошенным
Perfect	having asked – спросив; после того, как спросил	having been asked – будучи спрошенным; после того, как его спросили

Participle I Indefinite обозначает действие, одновременное с действием глагола-сказуемого.

While translating difficult texts we use a dictionary. Переводя трудные тексты, мы пользуемся словарём.

Participle I Perfect обозначает действие, предшествующее действию, выраженному глаголом-сказуемым.

Having read the book I returned it to the library. Прочитав книгу, я вернул её в библиотеку.

Причастие II

Причастие II (**Participle II**) – неличная форма глагола (III основная форма глагола), имеет одну неизменяемую форму со страдательным значением и обозначает действие, которое испытывает на себе лицо или предмет. Оно соответствует в русском языке причастию страдательного залога.

Причастие II правильных глаголов имеет ту же форму, что и **Past Indefinite**, и образуется при помощи прибавления суффикса **-ed** к основе глагола **to ask – asked, to help – helped**.

Подобно причастию I, причастие II обладает свойствами глагола, прилагательного и наречия. Как и глагол, оно обозначает действие.

The books *discussed* at the lessons *are* always interesting. Книги, *обсуждаемые* на уроках, всегда интересны.

Функции причастия II

В предложении причастие II может быть:

a. **Определением.**

A *written* letter lay on the table. Написанное письмо лежало на столе.

They are reconstructing the house *built* in the 18th century. Они реставрируют здание, *построенное* в 18 веке.

b. **Обстоятельством.** Перед причастием II в функции обстоятельства могут стоять союзы *if, unless, when*.

If built of the local stone, the road will serve for years. Построенная из местного камня, дорога будет служить долгие годы.

FILE № 12

Gerund / Герундий Формы герундия

Герундий – неличная форма глагола, которая имеет признаки глагола и существительного. Герундий можно переводить существительным, инфинитивом, деепричастием или глагольной формой в придаточном предложении.

Герундий сочетается с

- предлогом (He is interested **in** computing)
- притяжательным местоимением (I'm thinking of **his** going to the south)
- существительным в притяжательном падеже (I'm thinking of our **group's** going to the south)

	active	passive
Indefinite	asking	being asked
Perfect	having asked	having been asked

FILE № 13

Infinitive / Инфинитив

Формы инфинитива

	active	passive
Indefinite	to ask	to be asked
Continuous	to be asking	–
Perfect	to have asked	to have been asked

Complex Object / Сложное дополнение

Это сочетание существительного в общем падеже (brother, device) или местоимения в объектном падеже (me, you, him, her, it, us, them) с инфинитивом или причастием, выступающим в предложении как сложное дополнение.

I'd like to dance.

I'd like her to dance.

Переводится придаточным предложением с союзами что, как, чтобы, причем существительное (местоимение) переводится подлежащим придаточного предложения, а инфинитив – сказуемым.

1. want, would like, consider, suppose, assume, believe, know, expect...

I want your group to study better.

2. see, feel (felt), hear (heard), watch. – инфинитив следует без частицы to

I heard him play the guitar.

I saw her crossing the street.

3. let, make “заставлять” – инфинитив следует без частицы to

He made him tell the truth.

Complex Subject / Сложное подлежащее

Это сочетание подлежащего (существительного в общем падеже или местоимения в именительном падеже) с инфинитивом глагола, указывающим на действие данного подлежащего.

He is known to work here.

Переводится придаточным предложением с союзом «что». Перевод начинают со сказуемого (is known), которое становится сказуемым главного предложения и переводится неопределенно-личным предложением (известно, говорят, полагают ...). Подлежащее (he, they...) становится подлежащим придаточного предложения, а инфинитив (to work, to test, ...) – его сказуемым.

1. Глаголы в страдательном залоге:

is/are/was/were	said	говорят
	known	известно
	supposed	предполагают (полагают)
	considered	полагают
	assumed	предполагают (полагают)
	believed	полагают, считают
	expected	ожидают
	found	обнаружено
	seen	видно
	reported	сообщают

He is supposed to be working on his report.

2. Глаголы в действительном залоге:

to seem, to appear	казаться
to prove, to turn out	оказываться
to happen	случаться

He happened to be ill at that time.

3. Словосочетания (глагол to be + прилагательное):

to be likely – вероятно, скорее всего

to be unlikely – маловероятно

to be certain, to be sure – несомненно, безусловно, конечно, наверняка.

He is likely to pass the exam.

FILE № 14

Irregular verbs /

Список неправильных глаголов для заучивания

be [bi:]	was [wɒz], were [wɜ:]	been [bi:n]	быть
become [bi:kʌm]	became [bi:keim]	become [bi:kʌm]	становиться
begin [bi'gin]	began [bi'gæn]	begun [bi'gʌn]	начинать
break [breik]	broke [brʊk]	broken ['brʊk(e)n]	(с) ломать
bring [brɪŋ]	brought [brɔ:t]	brought [brɔ:t]	принести
build [bild]	built [bilt]	built [bilt]	строить
buy [bai]	bought [bɔ:t]	bought [bɔ:t]	купить
choose [tʃu:z]	chose [ʃəuz]	chosen [tʃəuz(ə)n]	выбирать
come [kʌm]	came [keim]	come [kʌm]	приходить
cost [kɒst]	cost [kɒst]	cost [kɒst]	стоить
cut [kʌt]	cut [kʌt]	cut [kʌt]	резать
do [du:]	did [did]	done [dʌn]	делать
drink [drɪŋk]	drank [dræŋk]	drunk [drʌŋk]	пить
drive [draɪv]	drove [drouv]	driven ['drɪvn]	ехать (приводить в движение)
eat [i:t]	ate [eit]	eaten ['i:tn]	есть (кушать)
fall [fɔ:l]	fell [fel]	fallen ['fɔ:lən]	падать
feel [fi:l]	felt [felt]	felt [felt]	чувствовать
find [faɪnd]	found [faʊnd]	found [faʊnd]	находить

forget [fə'get]	forgot [fə'gɒt]	forgotten [fə'gɒt(ə)n]	забывать
get [get]	got [gɒt]	got [gɒt]	получать
give [giv]	gave [geiv]	given [givn]	давать
go [gou]	went [went]	gone [gɒn]	идти
grow [grou]	grew [gru:]	grown [groun]	расти
have [hæv]	had [hæd]	had [hæd]	иметь
hurt [hɜ:t]	hurt [hɜ:t]	hurt [hɜ:t]	причинить боль
keep [ki:p]	kept [kept]	kept [kept]	хранить
know [nou]	knew [nju:]	known [noun]	знать
learn [lɜ:n]	learnt [lɜ:nt]	learnt [lɜ:nt]	учить (познавать)
leave [li:v]	left [left]	left [left]	оставить
lose [lu:z]	lost [lɒst]	lost [lɒst]	терять
make [meik]	made [meid]	made [meid]	делать
meet [mi:t]	met [met]	met [met]	встретить
pay [pei]	paid [peid]	paid [peid]	платить
put [put]	put [put]	put [put]	класть
read [ri:d]	read [red]	read [red]	читать
rise [raiz]	rose [rouz]	risen ['rizn]	подниматься (расти)
run [rʌŋ]	ran [ræŋ]	run [rʌŋ]	бежать (течь, управлять)
say [sei]	said [sed]	said [sed]	говорить
see [si:]	saw [sɔ:]	seen [si:n]	видеть
sell [sel]	sold [sould]	sold [sould]	продавать
send [send]	sent [sent]	sent [sent]	посылать
show [ʃəu]	showed [ʃəud]	shown [ʃəun]	показывать
sleep [sli:p]	slept [slept]	slept [slept]	спать
speak [spi:k]	spoke [spouk]	spoken ['spouk(e)n]	говорить

spend [spend]	spent [spent]	spent [spent]	тратить
take [teik]	took [tuk]	taken ['teik(ə)n]	брать, взять
teach [ti:tʃ]	taught [tɔ:t]	taught [tɔ:t]	учить
tell [tel]	told [tould]	told [tould]	рассказывать
think [θɪŋk]	thought [θɔ:t]	thought [θɔ:t]	думать
understand [ʌndə'stænd]	understood [ʌndə'stʊd]	understood [ʌndə'stʊd]	понимать
win [win]	won [wʌn]	won [wʌn]	выиграть
write [rait]	wrote [rout]	written ['ritn]	писать

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и профессионально ориентированной англоязычной речи*

Составители: **Голерова** Светлана Николаевна,
Невежина Светлана Борисовна,
Оськина Светлана Дмитриевна

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