

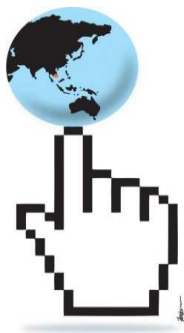
**МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ  
РОССИЙСКОЙ ФЕДЕРАЦИИ**

ФГБОУ ВО «Воронежский государственный технический  
университет»

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# **Highlights on IT**

Утверждено учебно-методическим советом  
университета в качестве учебного пособия



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## ПРЕДИСЛОВИЕ

Настоящее учебное пособие предназначено для студентов, обучающихся по направлениям 09.03.01 «Информатика и вычислительная техника» (направленность: Системы автоматизированного проектирования) и 09.03.02 «Информационные системы и технологии» (направленность: Информационные системы и технологии) очной формы обучения. Оно также может быть полезным для широкого круга учащихся, интересующихся цифровыми технологиями. Пособие имеет практическую направленность и призвано помочь студентам при чтении английских текстов по специальности и при изложении своих мыслей на английском языке.

Данное пособие состоит из 2 частей, первая из которых включает в себя 7 тематических разделов (юнитов), а вторая – это грамматический справочник, состоящий из 10 юнитов. Кроме того в пособие включен список сокращений, встречающихся в текстах, и 6 приложений – сводных грамматических таблиц.

Следует сказать, что работа с разделом, посвященным грамматике, не предполагает непосредственной привязки к определенному тематическому разделу. Грамматический блок может использоваться как самостоятельно, так и по мере возникновения потребности проработать то или иное грамматическое явление. Грамматические таблицы являются обобщением, в них можно найти и те видовременные формы, которые не нашли отражения в части 2.

Каждый тематический раздел включает в себя три смежных по тематике текста, каждый из которых прорабатывается рядом упражнений. Отличительной особенностью данного учебного пособия является жанровое разнообразие материала. Кроме привычных для такого формата научных текстов в пособии представлены научно-публицистические тексты. Аутентичность текстов и их жанровая разноплановость позволяют студентам расширить

лексический запас, выводит на интересные темы для обсуждения, что способствует развитию речевых навыков.

В целом, авторы придерживались определенного единообразия структуры изложения материала и последующих заданий. При этом в каждом разделе есть одно или два отличающихся задания. Они направлены на проработку разных лексико-грамматических явлений, мотивируют студентов мыслить и говорить на заданные темы, а преподавателю дают возможность варьировать занятие в зависимости от уровня студентов

Авторы надеются, что настоящее пособие поможет студентам развить навыки, необходимые для дальнейшей успешной профессиональной деятельности.

От авторов.

# PART 1

## UNIT 1

### DIGITIZED WORLD

*Task 1. Match the following English words and phrases from text A with their Russian equivalents:*

1) generation	a) товары и услуги
2) to enrol for	b) потребление топлива
3) to dispense money	c) банкомат
4) to keep records of smth	d) позволять кому-либо что-то делать
5) fuel consumption	e) осуществлять операции
6) goods and services	f) поколение
7) to let someone do smth	g) выдавать деньги
8) to find out about smth	h) записаться
9) to carry out transactions	i) вести учет чего-либо
10) automatic teller machine	j) узнавать о чем-либо

*Task 2. Read and translate text A:*

### THE DIGITAL AGE

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 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 game 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 cashpoints, or ATMs (automatic teller machines), which dispense money 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 cashpoints; 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.

*Task 3. Answer the following questions:*

1. What is digital age?
2. How are computers used for educational purposes?
3. What can you do with a built-in camera?

4. How are computers used in banking?
5. How can computers help us in the air?

*Task 4. Find the words in the text that have the following meaning:*

- 1)keep, save
- 2)execute, do
- 3)monetary
- 4)screen
- 5)integrated
- 6)connected to the Internet
- 7)collection of factors and figures
- 8)describes information that is recorded or broadcast using a computer
- 9)program used for text manipulation
- 10) copy files from a server to your PC or mobile

*Task 5. Match the following words from the text with their definitions:*

1) to grow up	a) people who work for an organization
2) to improve	b) someone who buys smth. especially from the shop
3) customer	c) to change from being a child into being an adult
4) cashpoint	d) a short stay in a place in between parts of a journey
5) to verify	e) a machine where you can take out money at any time by using a special card
6) staff	f) to get better
7) stopover	g) to check that smth. is true by careful investigation

*Task 6. Match the verbs with the nouns then complete the sentences using these collocations:*

1. to send
2. to give
3. to do
4. to access
5. to store
6. to make
7. to transfer

- a. information
- b. money
- c. phone calls
- d. text
- e. databases
- f. presentation
- g. research

- 1) Thanks to Wi-Fi, it is now easy to.....from cafes, hotels, parks and many other public places.
- 2) Online banking lets you.....between your accounts easily and securely.
- 3) Skype is a technology that enables users to.....over the Internet for free.
- 4) In many universities, students are encouraged to.....using PowerPoint in order to make their talks more visual attractive.
- 5) The Web has revolutionized the way people ..... – with the sites such as Google and Wikipedia, you can find the information you need in seconds.
- 6) Cookies allow a website to ..... on a user’s machine and later retrieve it; when you visit the website again, it remembers your preferences.
- 7) With the fastest mobile phones, you can ..... with multimedia attachments – pictures, audio, even video.

*Task 7. Study the words:*

1) numerical	a) ЧИСЛОВЫЕ
--------------	-------------



2) considerably	b) значительно
3) required	c) требующиеся
4) multiplication	d) умножение
5) to accept	e) принимать
6) a set	f) набор
7) due to	g) из-за
8) simultaneously	h) одновременно
9) comprehension	i) понимание
10) government	j) правительство

*Task 8. Read and translate text B:*

## **COMPUTERS**

Generally, any device that can perform numerical calculations, even an adding machine, may be called a computer but nowadays this term is used especially for digital computers. Computers that once weighed 30 tons now may weigh as little as 1.8 kilograms. Microchips and have considerably reduced the cost of the electronic components required in a computer. Computers come in many sizes and shapes such as special-purpose, laptop, desktop, minicomputers, supercomputers.

Special-purpose computers can perform specific tasks and their operations are limited to the programs built into their microchips. Such computers are the basis for electronic calculators. They can be found in thousands of electronic products, including digital watches and automobiles. Basically, these computers do the ordinary arithmetic operations such as addition, subtraction, multiplication and division.

Special-purpose computers can perform specific tasks and their operations are limited to the programs built into their microchips. Such computers are the basis for electronic calculators. They can be found in thousands of electronic products, including digital watches and automobiles. Basically, these computers do the ordinary arithmetic operations such as addition, subtraction, multiplication and division.



General-purpose computers are much more powerful because they can accept new sets of instructions. The smallest fully functional computers are called laptop computers. Most of the general-purpose computers known as personal or desktop computers can perform almost 5 million operations per second.

Today's personal computers are used for different purposes: for testing new theories or models that cannot be examined with experiments, as valuable educational tools due to various encyclopedias, dictionaries, educational programs, in book-keeping, accounting and management.

Proper application of computing equipment in different industries is likely to result in proper management, effective distribution of materials and resources, more efficient production and trade.

Minicomputers are high-speed computers that have greater data manipulating capabilities than personal computers do and that can be used simultaneously by many users. These machines are primarily used by larger businesses or by large research and university centers. The speed and power of supercomputers, the highest class of computers, are almost beyond comprehension, and their capabilities are continually being improved.

The most complex of these machines can perform nearly 32 billion calculations per second and store 1 billion characters in memory at one time, and can do in one hour what a desktop computer would take 40 years to do. They are used commonly by government agencies and large research centers. Linking together networks of several small computer centers and programming them to use a common language - has enabled engineers to create the supercomputer. The aim of this technology is to elaborate a machine that could perform a trillion calculations per second.

*Task 9. Answer the following questions:*

1. What are the main types of computers?
2. Have microchips and microprocessors reduced the cost of the electronic components?
3. How many operations per second can desktop computers perform?
4. How many operations per second can a supercomputer perform?
5. How many characters in memory per second can supercomputers store?
6. What are the different purposes of modern personal computers?
7. What are the main trends in the development of the computer technology?

*Task 10. Match the following words from the text with their definitions:*

1) a device	a) a particularly powerful mainframe computer.
2) a purpose	b) a tiny detail of semiconducting material used to make an integrated circuit.
3) to weigh	c) work to be done or undertaken
4) a microprocessor	d) a computer of medium power, more than a microcomputer but less than a mainframe.
5) a computer	e) a computer that is portable and suitable for use while traveling.
6) a laptop computer	f) an electronic device for storing and processing data
7) a minicomputer	g) an integrated circuit that contains all the functions of a central processing unit of a computer.
8) task	h) to find out how heavy (someone or something) is

9) a microchip	i) the reason for which something is done or created.
10 )a supercomputer	j) a piece of mechanical or electronic equipment.

*Task 11. Translate the following word combinations into English:*

Электронные калькуляторы; цифровые часы; применение компьютерного оборудования; распределение ресурсов; эффективное производство; высокоскоростные компьютеры; правительственные учреждения, исследовательские центры; разработать суперкомпьютер; выполнять триллион операций в секунду.

*Task 12. Fill in the gaps using the following words from the text in the correct form:*

***to enable, to use, to call, to do, to find, to perform, to reduce.***

1. Microchips and microprocessors have considerably ...the cost of the electronic components
2. Special-purpose computers can ... specific tasks.
3. They can be ... in thousands of electronic products.
4. Basically, these computers can... the ordinary arithmetic operations such as addition, subtraction, multiplication and division.
5. The smallest fully functional computers are ... laptop computers.
6. These machines are ... by larger businesses or by large research and university centers.
7. Linking together networks of several small computer centers and programming them to use a common language - has ... engineers to create the supercomputer.

*Task 13. Are the sentences True or False?*

1. Generally, any device that can perform numerical calculations, even an adding machine, may be called a computer.
2. Computers that once weighed 30 tons now may weigh as little as 3 tons.
3. Computers come in many sizes and shapes: such as special-purpose, laptop, desktop, minicomputers, supercomputers.
4. General-purpose computers are less powerful.
5. Most of the general-purpose computers known as personal or desktop computers can perform almost 2 million operations per second.
6. The most complex of modern computers can perform nearly 32 billion calculations per second.
7. The aim of this technology is to elaborate a machine that could perform a trillion calculations per second.

*Task 14. Match the following English words and phrases from text C with their Russian equivalents:*

1) computer literacy	a) удерживать, сохранять информацию
2) information-dependent society	b) (зд.) цифровое пространство
3) digital terrain	c) обрабатывать информацию
4) to distinguish smth. from smth.	d) решение задач и проблем
5) to retain information	e) (зд.) существенно упростить жизнь
6) to freeze out	f) информационно-зависимое общество
7) to be aware of smth.	g) отличать что-либо от чего-либо
8) to keep life streamlined	h) вытеснять, избавляться (от конкурента, напр.)
9) problem solving	i) компьютерная грамотность
10) to process information	j) отдавать отчет в чем-то, быть в курсе чего-либо

*Task 15. Read and translate text C:*

## **COMPUTER LITERACY**

Computer literacy is the ability to use computers and related technology efficiently, with a range of skills covering levels from elementary use to programming and advanced problem solving. Computer literacy can also refer to the comfort level someone has with using computer programs and other applications that are associated with computers. Another valuable component is understanding how computers work and operate. Computer literacy may be distinguished from computer programming which is design and coding of computer programs rather than familiarity and skill in their use.

Computer literacy is considered to be a very important skill to possess in our information-dependent society. Computers are just as common as pen and paper are for writing, especially among youth. For many applications - especially communicating - computers are preferred over pen, paper, and typewriters because of their ability to duplicate and retain information and ease of editing.

Employers want their workers to have basic computer skills because many companies try to use computers and other technology to improve business efficiency. As a result older workers who do not use the Internet at home and are computer illiterate may be frozen out of the job market even for relatively unskilled jobs such as clerking in an auto parts store.

We should be aware of the potential of computers to influence our everyday life. If you buy something with a bank credit card or pay a bill by check, computers help you process information. When you visit your doctor, your schedules and bills and special services such as laboratory tests, are prepared by computers. Computers have changed almost every aspect of daily life, and people can be sure that the use of computers will only become more prevalent.

While the world continues to advance with smarter, faster technology, the need to be computer literate becomes more imperative. Knowing how to properly use a computer and navigate the digital terrain helps to keep life organized and streamlined. Mobile media devices are becoming increasingly popular, reinforcing the need for being computer literate.

*Task 16. Answer the following questions:*

1. What does computer literacy refer to?
2. How could we distinguish computer literacy from computer programming?
3. Why are computers preferred in communication?
4. What kind of employees may be frozen out of the job market and why?
5. Why is it imperative to be computer literate today?

*Task 17. Find in the text synonyms for the following words:*

- precious
- to have
- capability
- usual
- shop
- prevailing
- employee

*Task 18. Match the following words from the text with their definitions:*

1) to influence	a) to move forward or to make progress
2) efficiency	b) the person or organization that you work for
3) skill	c) the ability to read and write

4) to reinforce	d) to have an effect on someone or something
5) employer	e) the knowledge and ability that enables you to do something well
6) to advance	f) to strengthen something or to provide more evidence or support for some idea or point of view
7) literacy	g) the quality of being able to do a task successfully and without wasting time or energy

*Task 19. Use the following words to complete the sentences 1-5. Then make up your own sentences 6-9 with the words left.*

***employ employment employer employee unemployment***

***literacy literate illiteracy illiterate***

- 1) She told her ..... she was looking for another job
- 2) We engaged six new.....in the last quarter.
- 3) An..... agency is an organization that earns money by helping people to find work.
- 4) Mass.....was only possible after the invention of printing.
- 5) At that time most of the country was..... They couldn't read or write.
- 6) .....
- 7) .....
- 8) .....
- 9) .....

*Task 20. Phrasal verbs are common in conversational English. They are made up of two words: a verb and a preposition. Look at the part of a sentence from text A: As a result older workers who ...*



are computer illiterate may be **frozen out** of the job market.... In colloquial speech phrasal verb 'freeze out' means 'exclude a person from business, society, etc by competition, cold behavior, etc'. Match the following phrasal verbs with their meanings, then complete the sentences changing the form of the verbs if necessary:

back up	to enter a symbol or instruction at the end of computing session to close all files and break the channel between the user's terminal and the main computer
plug in	to allow a machine to stand idle for a time after switching on, to reach optimum operating conditions
log off	to stop working because of mechanical failure
key in	to make an electrical connection by pushing a plug into a socket
warm up	to enter identification data, such as a password, to access a program or data
break down	to make a copy of a file or data or disk
log on	to enter text or commands via a keyboard

1. No wonder it isn't working: you haven't even ..... it .....
2. They ..... the latest data.

3. You have to give your password in order to ..... to the system.
4. My computer's ..... again! I need a new machine.
5. Your printout will arrive in a couple of minutes: the laser's still .....
6. When you've downloaded the information you need, then ..... from the system.
7. If you don't ..... regularly you could lose data.

## UNIT 2

### BIG NAMES IN IT

*Task 1. Study the words from text A:*

1) founder	a) основатель
2) influential	b) влиятельный
3) GDP	с) ВВП (валовый внутренний продукт)
4) intelligent	d) умный
5) to enroll	e) зачислять
6) opportunity	f) возможность
7) wealth	g) благосостояние
8) charitable	h) благотворительный
9) to reduce	i) сократить
10) utility	j) польза

*Task 2. Read and translate text A:*

### BILL GATES



There isn't a person in the world who doesn't know about Bill Gates. He is the founder and co-leader of Microsoft Corporation. His software has literally changed the world. Nowadays nearly everybody uses Microsoft on daily basis.

He is also an American business magnate, who is considered to be one of the richest and most influential people on the planet. William Henry Gates was born on 28 October 1955, Seattle, Washington. Recent estimates of his wealth put it at 84.2 billion US \$ (Jan. 2017), this is the equivalent of the combined GDP of several African economies.

Bill Gates comes originally from a rather intelligent family. The family was wealthy, but his parents encouraged their children to work hard and take nothing for granted.

He studied in private and the most privileged school of Seattle. There he taught himself to programming in Basic, making a simple 'Tic-Tac-Toe' game.

In 1973 Gates enrolled at Harvard, where he studied mathematics and computer science. However, he was more interested in pursuing his own coding, and when he saw an opportunity to found his own company, he dropped out of Harvard without finishing the course.

In recent years he has retired from working full time at Microsoft and instead has concentrated on working with his charitable foundation "The Bill and Melinda Gates Foundation." Gates said that he had no use for money, he would leave only small percentage of wealth to his children. He states "I'm certainly well taken care of in terms of food and clothes," he says, redundantly. "Money has no utility to me beyond a certain point. Its utility is

entirely in building an organization and getting the resources out to the poorest in the world.” His main areas of interest in philanthropy have been improving health, and in particularly helping to reduce diseases, such as polio which affect young children. He has also given more focus to environmental issues. In 2015, he gave \$1 billion to a clean energy project, as he sees supporting new ‘greener’ technologies as a way to help deal with global warming. Asked about the motivation of his giving, Gates replies: “It doesn’t relate to any particular religion; it’s about human dignity and equality,” he says. “The golden rule that all lives have equal value and we should treat people as we would like to be treated.”

*Task 3. Answer the questions:*

1. What is Bill Gates?
2. When and where was he born?
3. Where did Bill Gates study?
4. What did he study?
5. Where does he work full time?
6. What is his attitude to money?
7. What did he do in 2015?

*Task 4. Match the following words from the text with their definitions:*

1) to treat	a) an occasion when an organization, state, etc. is established;
2) to reply	b) relating to the protection of the environment
3) philanthropy	c) a subject or activity, or a part of it;
4) area	d) the giving away of money, esp. in large amounts, to organizations that help people;

5) green	e) to answer
6) to change	f) to exchange one thing for another thing, especially of a similar type;
7) foundation	g) to behave towards someone or deal with something in a particular way.

*Task 5. Find the equivalents in the text:*

Практически каждый, оценки благосостояния, совокупный внутренний валовый продукт, программное обеспечение, ничего не принимать на веру, основать собственную компанию, бросить Гарвард, с точки зрения, относиться к людям.

*Task 6. Insert the missing words and word combinations into the following sentences:*

***interested, founder, equal, nowadays, retired, utility, relate.***

1. He is the ... and co-leader of Microsoft Corporation.
2. ... nearly everybody uses Microsoft on daily basis.
3. He was more ... in pursuing his own coding,
4. In recent years he has ... from working full time at Microsoft.
5. Its ... is entirely in building an organization and getting the resources out to the poorest in the world.
6. It doesn't ... to any particular religion.
7. The golden rule that all lives have ... value.

*Task 7. Are the sentences True or False?*

1. People use Microsoft from time to time.

2. Bill Gates comes originally from a rich family.
3. He studied in an expensive school.
4. Bill Gates was interested in studying in Harvard.
5. He has only food and clothes.
6. He doesn't take care of the poorest in the world.
7. He helps to deal with ecology projects.

*Task 8. Study the words:*

1) to grow up	a) расти
2) to attend	b) посещать
3) to drop out	c) покинуть, выбыть
4) a manufacturer	d) производитель
5) to pre-sell	e) предварительно продать
6) as-yet	f) пока еще
7) to acclaim	g) приветствовать, одобрять
8) to release	h) выпускать
9) a medical leave	i) отпуск по больничному
10) surgery	j) хирургия

*Task 9. Read and translate text B:*

## **STEVE JOBS**



Steven Paul Jobs was born on 24 February 1955 in San Francisco, California. Two students Abdul Fattah Jandali and Joanne Carole

Schieble who were unmarried at the time gave him up for adoption. He was taken in by a working class couple, Paul and Clara Jobs. Steven grew up with them in Mountain View, California.

He attended Homestead High School in Cupertino California and went to Reed College in Portland Oregon in 1972 but dropped out after only one semester, staying on to «drop in» on courses that interested him.

He took a job with video game manufacturer Atari to raise enough money for a trip to India and returned from there a Buddhist. Back in Cupertino he returned to Atari where his old friend Steve Wozniak was still working. Wozniak was building his own computer. In 1976 Jobs pre-sold 50 of the as-yet unmade computers to a local store and managed to buy the components on credit solely on the strength of the order, enabling them to build the Apple the First without any funding at all.

The Apple II followed in 1977 and the company Apple Computer was formed shortly afterwards. In 1985 Jobs was fired from Apple and immediately founded another computer company, NeXT. Its machines were not a commercial success but some of the technology was later used by Apple when Jobs eventually returned there. In the meantime, in 1986, Jobs bought The Computer Graphics Group from Lucasfilm. The group was responsible for making high-end computer graphics hardware but under its new name, Pixar, it began to produce innovative computer animations. Their first title under the Pixar name, Luxo Jr. (1986) won critical and popular acclaim and in 1991 Pixar signed an agreement with Disney, with whom it already had a relationship, to produce a series of feature films, beginning with «Toy Story» (1995).

In 1996 Apple bought NeXT and Jobs returned to Apple, becoming its CEO. With the help of British-born industrial designer Jonathan Ive, Jobs brought his own aesthetic philosophy back to the poor company. He released the iMac in 1998. The company's MP3 player, the iPod, followed in 2001, with the iPhone launching in 2007 and the iPad in 2010. The company's software music player, iTunes, evolved into an online music (and eventually also movie

and software application) store, helping to popularize the idea of «legally» downloading entertainment content.

In 2003, Jobs was diagnosed with pancreatic cancer and underwent surgery in 2004. Despite the success of this operation he became increasingly ill and received a liver transplant in 2009.

He returned to work after a six month break but eventually resigned his position in August 2011 after another period of medical leave which began in January 2011. He died on 5 October 2011.

*Task 10. Answer the following questions:*

1. Where and when was Steven Paul Jobs born?
2. Where did Steve Jobs study?
3. Did he take a job with video game manufacturer?
4. Did Jobs pre-sell 50 of the as-yet unmade computers to a local store in 1976?
5. When was Steve fired?
6. Did Jobs return to Apple, becoming its CEO?
7. When did the company's MP3 player and the iPod, follow?

*Task 11. Find in the text synonyms and antonyms for the following verbs.*

**SYNONYMS**

to quit  
to purchase,  
to go back  
to leave a job  
to keep  
to start  
to promote

**ANTONYMS**

to hire  
to loose  
to be irresponsible  
to break  
to become healthy  
to be unused  
to live

*Task 12. Match the following words from the text with their definitions:*



1) to adopt	a) to copy (data) from one computer system to another;
2) to attend	b) to start an activity or enterprise;
3) to drop out	c) to allow or enable the product to be available for general viewing or purchase;
4) to raise	d) to write one's name on (a letter, card, or similar item) to identify oneself as the writer or sender;
5) to follow	e). to dismiss (an employee) from a job;
6) to fire	f) to go or come after;
7) to sign	g) to increase the amount, level, or strength;
8) to release	h) to quit;
9) to launch	i) to be present at (an event, meeting, or function);
10) to download	j) to take legally another's child and bring it up as one's own.

*Task 13. Complete the sentences using the following words or phrases from the text in the correct form:*

***player, animations, hardware, technology, success, components, game.***

1. He took a job with video ... manufacturer Atari to raise enough money for a trip to India and returned from there a Buddhist.
2. Jobs pre-sold 50 of the as-yet unmade computers to a local store and managed to buy the ... on credit solely on the strength of the order, enabling them to build the Apple.
3. Its machines were not a commercial....
4. Some of the ... was later used by Apple when Jobs eventually returned there.
5. The Computer Graphics Group was responsible for making high-end computer graphics....

6. Under its new name, Pixar, it began to produce innovative computer....

7. The company's software music ... iTunes, evolved into an online music.

*Task 14. Are the sentences True or False?*

1. Steven Paul Jobs was born on 24 February 1955 in Moscow, Russia.

2. Steven grew up in Mountain View, California.

3. He attended Homestead High School in London.

4. In 1986 Jobs bought The Computer Graphics Group from Lucasfilm.

5. After the dismissal, Steve Jobs returned and became CEO of the company.

6. With the help of British-born industrial designer Jonathan Stive, Jobs brought his own aesthetic philosophy back to the poor company.

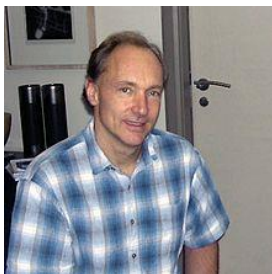
7. The company's software music player, iTunes, didn't evolve into an online music.

*Task 15. Study the words from text C:*

1) conceptual	a) концептуальный
2) scholarship	b) стипендия
3) during	c) во время
4) to deprive	d) лишать, отнимать
5) transaction	e) сделка
6) semblance	f) подобие
7) random	g) случайный
8) to lay (laid)	h) зд. положить в основу
9) internal	i) внутренний
10) feedback	j) обратная связь, поддержка

*Task 16. Read and translate text C:*

## **BERNERS-LEE AND THE WORLD WIDE WEB**



Tim Berners-Lee was born in London (England). His parents, Conway Berners-Lee and Mary Lee Woods, were both mathematicians and worked on the creation of «Manchester Mark I», one of the first computers. Tim went to school in the city of Wandsworth Emanuel, then at King's College in Oxford. There he assembled his first computer with a processor M6800 with a TV as a monitor. Once Tim and his friend were caught during the hacker attack, during which they were deprived of the right to use university computers.

After graduating from Oxford University in 1976, Berners-Lee joined the company «Plessey Telecommunications Ltd» in Dorset, where he worked for two years, working primarily distributed transaction systems. In 1978, Berners-Lee moved to the company «DG Nash. Ltd.», where he focused on software for printers, and created a semblance of multi-tasking operating system. Then he worked for half a year at the European Laboratory for Nuclear Research CERN (Geneva, Switzerland) software consultant. It was there that he wrote for their own needs program "Enkvayr" (Eng. «Enquire», can be translated as "Investigator"), which used random associations and laid the conceptual basis for the World Wide Web. From 1981 to 1984,

Tim Berners-Lee worked for the company «Image Computer Systems Ltd» System Architect.

In 1984 he received a scholarship at CERN and started there the development of distributed systems for the collection of scientific data. During this time, he worked on the system «FASTBUS» and has developed its own system RPC (Eng. Remote Procedure Call).

In 1989, while working at CERN on the internal system of exchange of documents ENQUIRE, Berners-Lee proposed a global hypertext project, now known as the World Wide Web. The project was approved and implemented. From 1991 to 1993, Tim Berners-Lee continued working on the World Wide Web. He collected feedback from users and coordinated the Web.

*Task 17. Answer the questions:*

1. Where was Tim Berners-Lee born?
2. What were his parents?
3. Did Tim Berners-Lee assemble his first computer?
4. When did he graduate from Oxford University?
5. When did he join the company “DG Hash Ltd.”?
6. Where did he work after 1981?
7. Did Berners-Lee propose a global hypertext project, known as the World Wide Web?

*Task 18. Match the following words from the text with their definitions:*

1) a semblance	a) to put into action
2) to graduate	b) officially agree to or accept as satisfactory.
3) to deprive	c) to grow, or cause to grow and become more mature, advanced
4) hypertext	d) a software system that links topics on the screen to related information and graphics, which are typically accessed by a point-

	and-click method.”
5) to develop	e) to deny (a person or place) the possession or use of something
6) to approve	f) successfully complete an academic degree
7) to implement	g) apparent form of something.

*Task 19. Find the equivalents in the text:*

Первый компьютер с процессором; создать подобие многозадачной операционной системы; перейти в другую компанию; консультант по программному обеспечению; писать программы для собственных нужд; концептуальная основа, получать стипендию; система сбора научных данных; система обмена документации; глобальный гипертекстовый проект.

*Task 20. Insert the missing words and word combinations into the following sentences: web; data; systems; program; company, processor, creation. (Sometimes you should change the form of the words).*

1. His parents, Conway Berners-Lee and Mary Lee Woods, worked on the ... of «Manchester Mark I», one of the first computers.
2. He assembled his first computer with a ... M6800 with a TV as a monitor.
3. After graduating from Oxford University in 1976, Berners-Lee joined the ... «Plessey Telecommunications Ltd».
4. He wrote for their own needs ... "Enkvayr" (eng. «Enquire»), which used random associations and laid the conceptual basis for the World Wide Web.

5. Berners-Lee worked for two years, working primarily distributed transaction ....

6. In 1984 he started the development of distributed systems for the collection of scientific....

7. In 1989, while working at CERN on the internal system of exchange of documents ENQUIRE, Berners-Lee proposed a global hypertext project, now known as the World Wide....

*Task 21. Are the sentences True or False?*

1) Tim Berners-Lee was born in London.

2) His parents, Conway Berners-Lee and Mary Lee Woods, were both doctors.

3) Tim went to school in the city of Darlington.

4) He assembled his first computer with a processor M6800 with a TV as a monitor at King's College in Oxford.

5) After graduating from Oxford University in 1976, Berners-Lee joined the company «Plessey Telecommunications Ltd».

6) Tim Berners-Lee collected feedback from users and coordinated the Web.

7) The project “World Wide Web” was not approved and implemented.

*Task 22. Read the quotes and comment on them:*

***1. Technology is so much fun but we can drown in our technology. The fog of information can drive out knowledge.***

(Daniel J. Boorstin)

***2. The real danger is not that computers will begin to think like men, but that men will begin to think like computers.***

(Sydney J. Harris)

3. *Computing is not about computers any more. It is about living.*

*(Nicholas Negraponte)*

### UNIT 3 IT GIANTS

*Task 1. Study the words from text A:*

1) founder	a) основатель
2) influential	b) влиятельный
3) GDP	c) валовый внутренний продукт
4) wealthy	d) состоятельный
5) to retire	e) уйти в отставку
6) foundation	f) фонд
7) to treat	g) относиться к кому-то
8) device	h) устройство
9) to produce	i) производить
10) acquisition	j) приобретение

*Task 2. Read and translate text A:*

#### FACTS ABOUT MICROSOFT

Microsoft Corporation (abbreviated as MS) is an American multinational technology company with headquarters in Redmond, Washington. It develops, manufactures, licenses, supports and sells computer software, consumer electronics, personal computers and services.

Its best known software products are the Microsoft Windows line of operating systems, the Microsoft Office suite, the Internet

Explorer and Edge web browsers. Its flagship hardware products are the Xbox video game consoles and the Microsoft Surface tablet lineup. As of 2016, it is the world's largest software maker by revenue, and one of the world's most valuable companies. The word "Microsoft" is a combination of "microcomputer" and "software".



Microsoft was founded by Paul Allen and Bill Gates on April 4, 1975, to develop and sell BASIC interpreters for the Altair 8800. It rose to dominate the personal computer operating system market with MS-DOS in the mid-1980s, followed by Microsoft Windows. The company's 1986 initial public offering (IPO), and subsequent rise in its share price, created three billionaires and an estimated 12,000 millionaires among Microsoft employees. Since the 1990s, it has increasingly diversified from the operating system market and has made a number of corporate acquisitions—their largest being the acquisition of «LinkedIn» for \$26.2 billion in December 2016, followed by Skype Technologies for \$8.5 billion in May 2011.

Now it has lost the majority of the overall operating system market to Android. The company also produces a wide range of other consumer and enterprise software for desktops and servers, including Internet search (with Bing), the digital services market (through MSN), mixed reality (HoloLens), cloud computing (Azure) and software development (Visual Studio).

Steve Ballmer replaced Gates as CEO in 2000, and later envisioned a "devices and services" strategy. This began with the acquisition of Danger Inc. in 2008, entering the personal computer production



market for the first time in June 2012 with the launch of the Microsoft Surface line of tablet computers; and later forming Microsoft Mobile through the acquisition of Nokia's devices and services division. Since Satya Nadella took over as CEO in 2014, the company has scaled back on hardware and has instead focused on cloud computing, a move that helped the company's shares reach its highest value since December 1999.

*Task 3. Answer the following questions:*

1. What does Microsoft produce?
2. Who founded the company?
3. In what sphere did it dominate?
4. How was the word "Microsoft" created?
5. Who replaced Gates in the company?
6. What was the strategy of Steve Ballmer?
7. How did the focus of the company change in 2014?

*Task 4. Find in the text synonyms and antonyms for the following verbs:*

<b>SYNONYMS</b>	<b>ANTONYMS</b>
individual	to decline
creator	to buy
valuable	worst
blend	employer
to initiate	disconnected
team	loss
to lead	forth

*Task 5. Match the following words from the text with their definitions:*

1) abbreviation	a) coming before the others;
2) to develop	b) the biggest in size or amount;
3) the largest	c) a short form of a word or phrase; the mixture;
4) combination	d) to change into more advanced, larger or stronger form;
5) to dominate	e) to make something or to bring something into existence;
6) to produce	f) to have control over a place or person.
7) first	

*Task 6. Complete the sentences using the following words or phrases from the text in the correct form:*

***technology, to know, to combine, to rise, to produce, to take over, to have scale.***

- 1) Microsoft Corporation is an American multinational ... company.
- 2) Its best ... software products are the Microsoft Windows line of operating systems, the Microsoft Office suite, the Internet Explorer and Edge web browsers.
- 3) The word "Microsoft" is ... of "microcomputer" and "software".
- 4) It ... to dominate the personal computer operating system market.
- 5) The company also ... a wide range of other consumer and enterprise software.
- 6) Since Satya Nadella ... as CEO in 2014.
- 7) The company ... back on hardware and has instead focused on cloud computing.

*Task 7. Are the sentences True or False?*

- 1) Microsoft Corporation is an American multinational technology company.
- 2) It has several headquarters.
- 3) It is one of the world's most profitable companies.
- 4) The word "Microsoft" is made of two words.
- 5) Microsoft doesn't buy other companies.
- 6) Bill Gates is still working as CEO in the company.
- 7) The company advanced on hardware with Satya Nadella.

*Task 8. Study the words from text B:*

1) commercially available	a) коммерчески доступный
2) internal	b) внутренний
3) to simulate colors	c) имитировать цвета
4) a dot	d) точка
5) an expansion slot	e) слот расширения,
6) a heated argument	f) зд. горячий спор
7) hardware failures	g) аппаратные сбои
8) marketing department	h) отдел маркетинга
9) engineering-driven projects	i) конструкторские проекты
10) self-imposed annual salary	j) самостоятельно установленная годовая зарплата

*Task 9. Read and translate text B:*

## **APPLE COMPUTER COMPANY**



### *An Apple II computer with an external modem*

Apple Computer company (now called Apple Inc.) was stated On April 1, 1976 by Steve Jobs and Wozniak along with administrative supervisor Ronald Wayne. (His participation in the new venture was short lived). Wozniak became the vice president in charge of research and development at Apple. He and Jobs decided on the name "Apple" shortly after Jobs returned from an apple orchard in Oregon. Wozniak's Apple I was similar to the Altair 8800, the first commercially available microcomputer, except the Apple I had no provision for internal expansion cards. With expansion cards the Altair could be attached to a computer terminal and be programmed in BASIC. In contrast, the Apple I was a hobbyist machine. Wozniak's design included a \$25 microprocessor (MOS 6502) on a single circuit board with 256 bytes of ROM, 4K or 8K bytes of RAM, and a 40-character by 24-row display controller. Apple's first computer lacked a case, power supply, keyboard, and display, all components the user had to provide.

After the success of the Apple I, Wozniak designed the Apple II, the first personal computer that had the ability to display color graphics, and BASIC programming language built-in. Inspired by "the technique Atari used to simulate colors on its first "arcade games", Wozniak found a way of putting colors into the NTSC system by using a \$1 chip, while colors in the PAL system were achieved by "accident" when a dot occurred on a line. Toward this day he has no idea how it works.

During the design stage, Steve Jobs argued that the Apple II should have two expansion slots, while Wozniak wanted six. After a

heated argument, during which Wozniak had threatened for Jobs to 'go get himself another computer, they decided to go with eight slots. The Apple II became one of the first highly successful mass-produced personal computers in the world.

In 1980, Apple went public to instant and significant financial profitability, making Jobs and Wozniak both millionaires. The Apple II eventual successor, the Apple III, released the same year, was not nearly as successful as the Apple II. According to Wozniak, the Apple III "had 100 percent hardware failures", and that the primary reason for these failures was that the system was designed by Apple's marketing department, unlike Apple's previous engineering-driven projects.

Just as Jobs started Apple's success in the 1970s, he was credited with revitalizing the company in the 1990s. In 1997, Jobs returned to his post as Apple's CEO.

With a new management team, different stock options and a self-imposed annual salary of \$1 a year, Jobs put Apple back on track.

*Task 10. Answer the following questions:*

1. Who decided on the name "Apple" shortly after Jobs returned from an apple orchard in Oregon?
2. Was Wozniak's Apple I similar to the Altair 8800, the first commercially available microcomputer?
3. Could "Altair" be attached to a computer terminal and be programmed in BASIC with expansion cards?
4. Did Apple 1 have provision for internal expansion cards?
5. What did Wozniak's design include?
6. Did Apple II computer have the ability to display color graphics, and BASIC programming language built-in?
7. Was Apple III, as successful as the Apple II?

*Task 11. Find in the text synonyms and antonyms for the following words. The words are given in the same order as in the text:*

**SYNONYMS**

|

**ANTONYMS**

to accomplish  
to happen  
to wish  
to dispute  
to begin  
to show  
to come back

unsuccessful  
unheated  
disability  
destroyed  
unavailable  
insignificant  
unprogrammed

*Task 12. Find the equivalents in the text:*

подключаться к компьютерному терминалу; печатная плата на 256 байт ПЗУ; 8К байт ОЗУ и 40-символьный 24-разрядный контроллер отображения; отсутствие кейса, блока питания, клавиатуры и дисплея; внешний модем; отображать цветную графику; встроенный язык программирования BASIC; этап проектирования; последующий преемник Apple II, первый успешный компьютер массового производства; значительная финансовая рентабельность; опционы на акции.

*Task 13. Complete the sentences using the following words or phrases from the text in the correct form:*

***team, profitability, computers, graphics, supply, terminal, microcomputer.***

1. Wozniak's Apple I was similar to the Altair 8800, the first commercially available... .
2. With expansion cards the Altair could attach to a computer ...and be programmed in BASIC... .
3. Apple's first computer lacked a case, power..., keyboard, and display, all components the user had to provide.
4. Apple II was the first personal computer that had the ability to display color..., and BASIC programming language built-in.
5. The Apple II became one of the first highly successful mass-produced personal... in the world.

6. In 1980, Apple went public to instant and significant financial..., making Jobs and Wozniak both millionaires.

7 .With a new management..., different stock options and a self-imposed annual salary of \$1 a year, Jobs put Apple back on track.

*Task 14. Match the following English words and phrases from text C with their Russian equivalents:*

1) to launch	a) предотвращать
2) overwhelmed	b) жаловаться
3) to prevent	c) арендовать
4) to complain	d) студент второго курса
5) permission	e) разрешение
6) to lease	f) начинать
7) sophomore	g) перегружен

*Task 15. Read and translate text C:*

## THE HISTORY OF FACEBOOK



Zuckerberg launched Facebook from his Harvard University dormitory room on February 4, 2004 with college roommates and fellow Harvard students Eduardo Saverin, Andrew McCollum, Dustin Moskovitz, and Chris Hughes. The group then introduced Facebook to other college campuses.

According to ArieHasit, Zuckerberg's roommate at the time, "he built the site for fun". Hasit explains: We had books called Face Books, which included the names and pictures of everyone who lived in the student dorms. At first, he built a site and placed two pictures, or pictures of two males and two females. Visitors to the

site had to choose who was "hotter" and according to the votes there would be a ranking.

The site went up over a weekend, but by Monday morning, the college shut it down, because its popularity had overwhelmed one of Harvard's network switches and prevented students from accessing the Internet. In addition, many students complained that their photos were being used without permission. Zuckerberg apologized publicly, and the student paper ran articles stating that his site was "completely improper."

The following semester, in January 2004, Zuckerberg began writing code for a new Web site. On February 4, 2004, Zuckerberg launched "The Facebook", originally located at thefacebook.com. Zuckerberg dropped out of Harvard in his sophomore year in order to complete his project. Zuckerberg, Moskovitz and some friends moved to Palo Alto, California in Silicon Valley where they leased a small house that served as an office.

Over the summer, Zuckerberg met Peter Thiel, who invested in the company. They got their first office in mid-2004. According to Zuckerberg, the group planned to return to Harvard, but eventually decided to remain in California. They had already turned down offers by major corporations to buy the company.

Later he recalled: I remember really brightly, you know, having pizza with my friends a day or two after - opened up the first version of Facebook. I thought, "You know, someone needs to build a service like this for the world." But I just never thought that we'd be the ones to help do it. On May 24, 2007, Zuckerberg announced Facebook Platform, a development platform for programmers to create social applications within Facebook. Within weeks, many applications had been built and some already had millions of users. It grew to more than 800,000 developers around the world building applications for Facebook Platform.

Zuckerberg launched the Internet.org project in 2013. He explained that the primary aim of the initiative is to provide Internet access to the 5 billion people. Using a three-tier strategy, Internet.org will also create new jobs and open up new markets.



Zuckerberg and his wife Priscilla Chan announced that over the course of their lives they would give the majority of their wealth to "advancing human potential and promoting equality" in the spirit of The Giving Pledge. On December 1, 2015, they announced they would eventually give 99 percent of their Facebook shares (worth about US\$45 billion at the time) to the Chan Zuckerberg Initiative.

*Task 16. Answer the following questions:*

1. When and where was Facebook launched?
2. Why did he build the site?
3. Why was the site shut down in college?
4. What did he recall later?
5. How did Facebook develop?
6. What did Zuckerberg and his wife announce?
7. How much would they give to the Chan Zuckerberg Initiative?

*Task 17. Match the following words from the text with their definitions:*

1) to introduce	a) level in a competition; ranking;
2) to complain	b) to help somebody experience something for the first time;
3) eventually	c) to say that something is wrong or unsatisfactory;
4) to recall	d) in the end;
5) to announce	e) to give a description of what you remember;
6) to create	f) to make something new, to
7) ranking	

	<p>invent something;</p> <p>g) to tell people about something officially</p>
--	--

*Task 18. Find the equivalents in the text:*

со слов (кого-то), включать (что-либо), закрыть (что-либо), препятствовать (чему-либо), располагаться (где-либо), для того что бы инвестировать (во что-либо), цель (чего - либо),

## UNIT 4

### IT SPECIALIST IN IT INDUSTRY

*Task 1. Match the following English words and phrases from text A with their Russian equivalents:*

1) public institution	a) отдел технической поддержки клиентов
2) to be in demand	b) требования к образованию
3) technical expertise	c) быть востребованным
4) to work one's way up	d) быть в курсе, не отставать от
5) information assurance	

6) to be in charge of smth.	e) техническая
7) to stay up to date	(профессиональная)
8) customer-support division	компетенция
9) to have a degree in	f) иметь диплом о высшем образовании (по какой-либо специальности)
10) education requirements	g) государственное учреждение
	h) отвечать за что-либо
	i) двигаться вверх, продвигаться (по службе)
	j) обеспечение целостности и безопасности информации

*Task 2. Read and translate text A.*

## WHO IS IT SPECIALIST?

An Information Technology (IT) specialist is a person who works with computers and other technologies such as telephones and fax machines. Many companies have someone on staff who helps with the maintenance of computers and computer networks within the organization. He or she may also work for an independent consulting company, a customer-support division of a computer or technology company, a private computer repair shop, or in any number of other settings where a person can come to him to pay him for help with a computer.

Although some IT specialists can handle any issues and problems relating to technology, it is most common for them to work within the field of computers. Because computers have become so pervasive, almost every workplace, school, public institution and private home has one. As such, there is a great number of potential problems that can arise for novice computer users, from how to set up a network to how to troubleshoot software that is not working

properly. As such, IT specialists are much in demand within the computer industry.

An information technology specialist applies technical expertise to the implementation, monitoring, or maintenance of IT systems. Specialists typically focus on a specific computer network, database, or systems administration function. Specialty areas include network analysis, system administration, security and information assurance, IT audit, database administration, web administration. IT specialist is responsible for planning and coordinating the installation, testing, operation, troubleshooting, and maintenance of hardware and software systems; management of networked systems used for the transmission of information in voice, data, and/or video formats. Specialists can be in charge of ensuring the confidentiality, integrity, and availability of systems, networks, and data etc.

Education requirements vary depending on the IT specialty. While some IT specialists work their way up with professional certifications, most experts begin their careers with an information technology degree at the bachelor level. IT certifications are useful for building specialist expertise and staying up to date on the latest advances in a specific area of information technology.

IT specialists typically have a degree in Computer and Information Science, or Information Systems Management or they may have a degree in a field such as Mathematics, Statistics, Operations Research or Engineering where there is a heavy concentration of computer science/information science coursework.

*Task 3. Make up 5 questions to the text, using the question words given:*

***what, why, who, what kind of, where***

*Task 4. Find synonyms for the following words in the text:*

- employees
- newest
- widespread
- learner
- specialist
- unity

*Task 5. Match the following words from the text with their definitions:*

1) issue	a) the process of keeping smth. in good condition by regularly checking it and doing necessary repairs
2) maintenance	b) the process of identifying, planning and resolving a problem, error or fault within a software or computer system
3) to focus on	c) the process of considering smth. in order to understand it or to find out what it consist of
4) to handle	d) to be different in size, amount or degree; to alter
5) analysis	e) an important problem or subject that people are discussing or arguing about
6) to vary	f) to pay special attention to smth.
7) troubleshooting	g) to deal successfully with a difficult situation or to have responsibility for a particular area of work

*Task 6. Look at the box with the verbs and find corresponding nouns in the text. Then unscramble the sentences with some of the words from the box and translate them:*

<b>VERBS</b>	<b>NOUNS</b>
troubleshoot implement install transmit maintain monitor administer manage analyze	troubleshooting

1. is of installation system the easy this.
2. maintenance repairs for pay to it necessary is.
3. visitors the analyzes of the our behavior website system the.
4. large for firm she a industrial troubleshoots .
5. was a implementation new successful of a very it software.

*Task 7. Write the correct preposition for the following words (use the text to help you!), then complete the sentences changing the form if necessary:*

- To work...***
- To focus...***
- To depend...***
- To relate...***
- To be responsible...***
- To be in charge...***

1. She has changed jobs. Do you know what company she ..... now?
2. Your salary will .....hours actually worked.
3. He .....solving computer-related problems.

- 4. We have to .....the new program implementation.
- 5. Who .....IT department before you?
- 6. Don't ask me questions .....programming.

*Task 8. Match the following English words and phrases from text B with their Russian equivalents:*

1) to take responsibility for smth.	a) быть способным что-либо делать
2) to be likely to	b) покупать в готовом виде
3) to buy off the shelf	c) скорее всего
4) in-house development team	d)компетентность
5) to earn the trust of someone	e) брать ответственность за что-либо
6) tailored system	f) служба технической поддержки
7) potential applicant	g) (зд.) система под заказ
8) to be able to do smth.	h) завоевать доверие кого-либо
9) expertise	i) собственная команда разработчиков
10) help-desk	j) потенциальный кандидат

*Task 9. Read and translate text B:*

## **HOW TO BECOME AN IT MANAGER**

IT managers manage projects, technology and people. Any large organisation will have at least one IT manager responsible for ensuring that everyone who actually needs a PC has one and that it works properly. This means taking responsibility for the maintenance of servers and installation of new software, and for staffing a help-desk and a support group.

Medium to large companies are also likely to have an IT systems manager. They are responsible for developing and implementing

computer software that supports the operations of the business. They're in charge of multiple development projects and oversee the implementation and support of the systems. Companies usually have two or three major systems that are probably bought off the shelf and then tailored by in-house development team.

Apart from basic hardware and software expertise, an IT manager should typically have over five years' experience in the industry. Most are between 30 and 45. Since IT managers have to take responsibility for budgets and for staff, employers look for both of these factors in any potential applicant.

Nearly all IT managers have at least a first degree if not a second one as well. Interestingly, many of them don't have degrees in computing science. In any case, the best qualification for becoming a manager is experience. If your personality is such that you are unlikely to be asked to take responsibility for a small team or a project, then you can forget being an IT manager. You need to be bright, communicative and be able to earn the trust of your teams. Most of this can't be taught, so if you don't have these skills then divert your career elsewhere.

*Task 10. Find in the text synonyms and antonyms for the following words.*

**SYNONYMS**

- to guarantee
- clever
- to supervise
- to search
- employees

**ANTONYMS**

- single
- badly
- irresponsible
- minor
- to remember

*Task 11. If you don't have these skills, divert your career elsewhere.*



*This sentence is taken from the text and gives advice. Very often we use **should** (If you don't have these skills, you should divert your career elsewhere).*

- a) Match the following half-sentences and write down sentences with **should**.
- b) Think of some other problems you might have with a computer and write some advice to solve them.

1) If you want to store more information,	a) ....network the computers
2) If you want to speed up your computer,	b)....make a backup
3) If you want to share information through the company,	c) ...get a bigger hard disk
4) If you want to stop the computer when it hangs,	d) ...buy a laptop
5) If you want to protect your data,	e) ...use a non-interlaced monitor
6) If you want to take your work away with you,	f) ...fit a faster microprocessor
7) If you want to reduce screen flicker,	g) ...hit Control, Alt&Delet

*Task 12. Match the following jobs in IT with their descriptions:*

1. Webmaster	a) writes systems software
2. Help-desk troubleshooter	b) manages projects, technology and people
3. Applications programmer	c) maintains the link between PCs and workstations connected in a network
4. Security specialist	d) produces the programs which control the internal operations of computers; designs, tests and

	improve programs for a variety of purposes
5. Systems programmer	e) works as part of telephone service that helps users solve problems that occur on computer systems
6. IT support engineer	f) tests the security of networks systems and advises customers how to introduce and maintain security policies
7. IT manager	g) maintains, updates and modifies the software used by a company (a combination of systems analysis and computer programming)
8. Systems analyst	h) administers a Web server
9. Software engineer	i) installs, maintains, repairs computers and peripherals
10. Computer service engineering technician	j) studies systems in an organization and decides how to computerize them
11. Network support person (computer engineer)	k) writes programs designed to be used for a particular purpose (f.ex. spreadsheets)
12. Systems support person (analyst programmer)	l) provides help for computer users by designing, building and maintaining information technology systems

*Task 13. Match the following English words and phrases from text C with their Russian equivalents:*

1) to share	a) поделиться
2) to fit	b) прийти к заключению
3) knowledge gap	с) подходить (к делу)

4) to approach	d) соответствовать
5) to come to a conclusion	e) пробел в знаниях
6) stellar coding skills	f) основные навыки программирования
7) soft skills	g) коммуникативные навыки
8) overall	h) общий, полный
9) upcoming opening	i) открывающаяся вакансия
10) referral bonus	j) премия за рекомендацию

*Task 14. Read and translate text C:*

## **TECH PROS SHARE ADVICE FOR NEW COMPUTER SCIENCE GRADUATES**

Computer science graduates are in demand. But as veterans in the tech world know, earning a degree is just the beginning of a new professional's education. To help this year's newcomers navigate the transition from academic life to the professional world, we asked tech pros to share their best advice for computer science graduates entering the workforce. Here's what they had to say.

### **Accept the knowledge gap and be ready to learn**

"It's a myth that the knowledge gained from your degree will prepare you 100% for your role. Fitting into tech culture is all about knowledge. If you don't know how to perfectly manipulate a CSS or how to write a JS script, you will get laughed at. You WILL be an outsider. The key is to OWN it. The knowledge gap is just temporary. The best response to fitting in is to be curious and inquisitive. Asking questions goes a very long way. Trying to learn will garner you respectability. The more you try to fight the knowledge and technical gap, the worse it will be for you. Roll with the waves until you become an integral part of the team." – *Pierre Tremblay, director of human resources at Dupray*

## **Develop problem-solving skills**

"Companies who know what they're doing will want to see how you think and problem solve. They may give you a problem or scenario and ask you to talk through how you would approach solving it. They want to know that you can think through the process, ask the right questions, and come to a conclusion. This may or may not involve writing code. ... The specific language(s) you know are not as important as your ability to learn and to problem solve. Anyone can pick up a language. It's much harder to find someone who fully understands software development." – *Ann Gaffigan, CTO at National Land Realty*

## **Remember the users**

"Staying mindful of User Interface (UI) and User Experience (UX) is crucial. Not all computer science professionals know how a user actually engages with an interface, but job applicants who understand those nuances will rise above the pool of other candidates. At the end of the day, we don't create programs that are used by other computer scientists." – *Dane Pelfrey, vice president of product development at Businessolver*

## **Sharpen customer service skills**

"We find that a lot of recent computer science graduates have very similar skills and experience, so when hiring, we look for other things. Any customer service experience is valued here (like retail or waiting tables), because that tells us the candidate knows how to communicate with others well. We look for humble candidates because there is always something to learn – even if someone comes to us with stellar coding skills, we need to know that he or she will be able to take criticism and also be open to learning other programs." – *Aryana Jaleh, social media manager at Eboxlab*

## **Work on communication skills**

"One of the most critical items that I see missing from many new grads entering industry is a lack of proper communication skills. As

helpful as it is to know technical concepts such as algorithm analysis, if your coworkers and management don't enjoy being around you, you are going to find it difficult to have sustained career success. I highly recommend computer science and software engineering graduates to deliberately work on soft skills such as communication and learning to get along with team members. It will lead to a more enjoyable career path and better overall work culture." – *Jordan Hudgens, CTO of CronDose.com, co-founder of devCamp, and graduate student in the computer science department at Texas Tech University*

### **Work your networks**

"Referral networks are one of the strongest ways a company will grow. Generally people will recommend people they know to be competent and will fit well with the organization. Keep tabs with all of your friends at different companies and ask them if there are upcoming openings. A lot of times companies will have referral bonuses for their employees so your friends will be incented to help!" – *Pablo Stern, CTO and senior vice president of engineering at Radius*

*Task 15. Answer the following questions:*

1. Are computer science graduates fully ready for work?
2. How can you develop your technical (hard) skills?
3. Why do you think your ability to solve problems is so important?
4. What else may raise you above the pool of other candidates?
5. Why is customer service experience important?
6. What are 'soft skills'?
7. How can keeping tabs with all your friends at different companies help?

*Task 16. Find in the text synonyms and antonyms for the following verbs.*

**SYNONYMS**

|

**ANTONYMS**

- to add
- to get on
- correct
- simple
- to support
- to add to (value, price)

- inattentive
- to sell
- question
- permanent
- unimportant
- same

*Task 17. Match the following words from the text with their definitions:*

1) graduate	a) to learn something without really studying it
2) to earn	b) a person who has finished studying at a university or college and who has passed their last exams
3) myth	c) a story or belief that is not true
4) to garner	d) to influence somebody so that they do or think what you want
5) executive	e) wanting to find out as much as possible about things
6) to manipulate	f) to get
7) to pick up	g) to add, to gather
8) inquisitive	h) to be stimulated
9) to be incited	i) a person who has an important position in a business or organisation
10) to gain	j) to get money by working

*Task 18. Anyone can pick up a language.*

*This sentence is taken from the text and uses a phrasal verb ‘pick up’ which means ‘learn without taking lessons or studying’. Can you find any other examples of using phrasal verbs in the text? Match the following phrasal verbs with their meanings, then make up your own sentences:*

1. put off	a. ring
2. go on	b. it is finished
3. give up	c. leave the ground
4. go off	d. perform, conduct
5. take off	e. continue
6. carry out	f. postpone
7. run out of	g. stop doing something

## Unit 5

### ARTIFICIAL INTELLIGENCE: ITS IMPACT ON SOCIETY

*Task 1. Match the following English words and phrases from text A with their Russian equivalents:*

1) to outperform	a) подвергать сомнению
2) to question	b) инициировать, вызывать
3) to align smth. with	с) устранять, ликвидировать
4) to thwart	d) приводить к массовым жертвам
5) to perform a narrow task	e) долгосрочная цель
6) long-term goal	f) распознавание лиц
7) to trigger	g) превосходить, опережать
8) to undergo	h) (зд.) приводить в соответствие
9) facial recognition	i) выполнять узкую задачу
10) to cause mass casualties	j) подвергаться, претерпевать, испытывать

*Task 2 Read and translate text A:*

### ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) is intelligence demonstrated by machines in contrast to intelligence displayed by humans. Artificial intelligence today is properly known as narrow (weak) AI, in that it

is designed to perform a narrow task (e.g. only facial recognition or only internet searches). However the long-term goal is to create general (strong) AI. While weak AI may outperform humans at specific tasks such as playing chess or solving equations, strong AI would outperform humans at nearly every cognitive task.

There are some people who question whether strong AI will ever be achieved, and others who insist that the creation of superintelligent AI is guaranteed to be beneficial. They believe that such a system could potentially undergo recursive self-improvement, triggering an intelligence explosion leaving human intellect far behind. By inventing revolutionary new technologies, such a superintelligence might help us eradicate war, disease and poverty. Their opponents have expressed concern that it might be the last event in human history unless we learn to align the goals of the AI with ours before it becomes superintelligent.

Most researchers consider two possible scenarios when talking about AI dangers: the AI is programmed to do something devastating, the AI is programmed to do something beneficial but it develops a destructive method for achieving its goal.

In the first case autonomous weapons that are programmed to kill get in the hands of the wrong person and could cause mass casualties. To avoid being thwarted by the enemy, these weapons would be designed to be extremely difficult to simply “turn off”, so humans could lose control of such a situation. The second problem might arise whenever we fail to fully align the AI’s goals with ours, which is strikingly difficult. For example you might ask an intelligent car to take you to the airport as fast as possible, and it is likely to get you there chased by police, doing not what you wanted but literally what you asked for.

As these examples illustrate, the concern about advanced AI isn’t malevolence but competence. Our civilization will flourish as long as we win the race between the growing power of technology and the wisdom with which we manage it.

*Task 3. Answer the following questions:*



1. What does AI stand for and what does it mean?
2. What is the difference between weak AI and strong AI?
3. Why might superintelligent AI be the last event in human history?
4. What are the dangers of AI?
5. What do the examples in the text illustrate?

*Task 4. Match the following words from the text with their definitions:*

<ol style="list-style-type: none"> <li>1) opponent</li> <li>2) competence</li> <li>3) wisdom</li> <li>4) devastating</li> <li>5) destructive</li> <li>6) beneficial</li> <li>7) to flourish</li> <li>8) to eradicate</li> <li>9) to chase</li> <li>10) to illustrate</li> </ol>	<ol style="list-style-type: none"> <li>a) smth. useful that helps people or improves their lives</li> <li>b) the ability to use your experience and knowledge to make sensible decisions or judgments</li> <li>c) the ability to do smth. well or effectively</li> <li>d) to make smth. clear by using examples, stories or diagrams</li> <li>e) someone's adversary or enemy</li> <li>f) smth. that causes great damage or distress</li> <li>g) smth. that destroys or severely damages smth.; disastrous</li> <li>h) to run after someone or follow them quickly in order to catch them</li> <li>i) to be active or successful, to develop quickly and strongly</li> <li>j) to destroy or remove smth. completely</li> </ol>
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*Task 5. Find the equivalents in the text and then make up your own sentences:*

*Потерять контроль над ситуацией, выразить обеспокоенность, достичь цели, отвезти кого-то куда-то, выигрывать гонку, управлять технологиями, оставить далеко позади, не суметь чего-то сделать.*

*Task 6. Match the following English words and phrases from text B with their Russian equivalents:*

1) to require	a) способность
2) severe restriction	b) специальный, устроенный для данной цели
3) missing limb	c) система восприятия
4) implanted device	d) требовать
5) capability	e) неразличимый
6) ad hoc	f) недостающая конечность
7) volumetric video	g) вживленный прибор
8) indistinguishable	h) сетчатка глаза
9) perception system	i) серьезное ограничение
10) retina eye	j) объемное видение

*Task 7. Read and translate text B:*

### **ROBOTS IN MEDICINE**

In modern medicine robots play an increasing role, which requires a new kind of training for the next generation of doctors. Usage of robots reduces hospital stays and improves patients' prognosis and saves costs. Mechanical replacements for missing limbs and organs that can interact with the human organic system are a long-standing goal of the medical community. Research into replacement of hearts, limbs, eyes, ears and other organs offers hope for the development of effective implanted devices and replacement limbs that can function for long periods of time. Robotic devices can also

provide assistance to people with severe restrictions on movement, in many cases allowing them at least some capability to move around or nearby their homes.

**Robot NursyBoy** intended to prevent or reduce medical errors by the patient. This robot is not just beeps when need to take medicines, but also delivers an additional notification to the patient on ad hoc bracelet on the arm. This allows the patient to know when need to take the necessary dose of medication, if the pills are still in the compartment, the device shows that the drug was not taken, and recalls that the reception was done. Patients will not be able to skip taking medications because this device is designed in such a way that will emit a loud noise and rattling on hand as long as the drugs will not be accepted. When an emergency occurs the robot will automatically connect by means of video voice communication with the medical center or family finding and viewing the patient (communication Wi-Fi or telephone). After receiving medicines on the LCD touch monitor is displaying the special directions of how it looks like and how it is necessary to take it – for example, before or after a meal, or diluted in water.

**Artificial Eye** could help the blind see again. Artificial Eye Gaze in the shape of the natural form of human eye. Artificial eye heralds the emergence of new small-footprint devices with a wide field of view and low distortion. The resulting picture is indistinguishable from the image seen by human eye. So it will be possible to transfer the images directly into the brain of blind people with help of electronic eyeball. This development will allow to solve the problem for blind people and to make a new step in science, having opened a new direction in personal video perception systems in the field of volumetric video.

This is a completely new idea of developing a flat lens with a tiny camera that could revolutionize the eyeball. Curved glass can bend the light coming from many angles in such a way that it all ends up at the same focal point, an electric sensor.

The sensors and the lens only focus one wavelength of light that can handle normal color images. The camera would transmit images to a nerve-stimulating chip at the back of the eye, resulting

in a complete electronic vision system, translate images from camera into electrical impulses that can be understood by the nerves inside the brain.

Chip to generate a signal which is as close as possible looks like a real retina eye. Wherever you change the input, the brain will adapt over time. The digital information picked up from the camera is sent to a thin film. This thin film is surgically implanted in the back of the patient's eye. The electrical signals stimulate the nerves in the retina and that make the patient able to see.

*Task 8. Answer the following questions:*

1. How do robots penetrate in medicine?
2. What is the main function of Robot NursyBoy?
3. How does Artificial Eye help blind people?
4. Have you heard about any other robots helping sick, elderly or disabled people?

*Task 9. Find in the text synonyms and antonyms for the following words. The words are given in the same order as in the text.*

**SYNONYMS**

- contemporary
- to need
- to lower
- aim
- expectation
- progress
- to miss

**ANTONYMS**

- extinction
- ineffective
- few
- enlarge
- silence
- sighted
- huge

*Task 10. Match the following words from the text with their definitions:*

1) to provide	a) to remember something
2) blind	b) a line that is not straight
3) to deliver	c) not able to see
4) to recall something	d) to bring something out of shape, to misshape.
5) to dilute	e) to give something to somebody who needs it
6) curve	f) to add water to another liquid
7) to distort	g) to take something to the place where it must go

*Task 11. Complete the sentences using the following words or phrases from the text in the correct form:  
to stimulate, to be, will be, digital, to look, to develop, to occur.*

1. Chip to generate a signal which is as close as possible ... like a real retina eye.
2. This is a completely new idea ... a flat lens with a tiny camera that could revolutionize the eyeball.
3. It ... possible to transfer the images directly into the brain of blind people.
4. The ... information picked up from the camera is sent to a thin film.
5. The electrical signals ... the nerves in the retina.
6. The resulting picture ... indistinguishable from the image seen by human eye.
7. When an emergency ... the robot will automatically connect with the medical center or family.

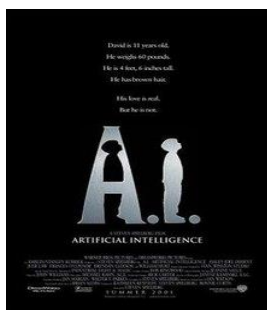
*Task 12. Find some information about the latest robots in medicine on the Internet and prepare a short report.*

*Task 13. Study the words and phrases from text C:*

1) to contract a disease	a) подхватить болезнь
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2) to feel uneasy with	b) испытывать неловкость
3) to be jealous of	с) испытывать ревность к
4) to be on the run	d) быть в бегах
5) to drift off to sleep	e) погрузиться в сон
6) to persuade someone to do smth.	f) убедить кого-то что-то сделать
7) to be thrilled by smth.	g) быть заинтригованным, заинтересованным чем-либо
8) to turn out to be	h) оказаться
9) will	i) (зд.) воля
10) to boo	j) освистывать

*Task 14. Read and translate the plot of a science fiction drama film A.I. Artificial Intelligence (2001) directed by Steven Spielberg. Have you seen this film?*



In the late 22nd century in Madison, David, a Mecha robot that resembles a human child and is programmed to display love for his owners, is given to Henry Swinton and his wife Monica. Their son Martin, after contracting a rare disease, is not expected to recover. Monica feels uneasy with David, but eventually warms to him and activates his imprinting protocol, causing him to have an enduring childlike love for her.

Martin is cured of his disease and brought home. As he recovers, he grows jealous of David. He tricks David into entering the parents' bedroom at night and cutting off a lock of Monica's hair. Later at a pool party, one of Martin's friends pokes David with a knife, activating David's self-protection programming. David grabs Martin and they fall into the pool. Martin is saved from drowning, but Henry persuades Monica to return David to his creators for destruction. Instead, she abandons David with his robotic teddy bear Teddy in the forest. She tells him to find other unregistered Mecha who can protect him.

David is captured for an anti-Mecha "Flesh Fair" where unlicensed robots are destroyed before cheering crowds. David is placed on a platform with Gigolo Joe, a male sex worker Mecha who is on the run. Before destruction, the crowd, thinking David is a real boy, begins booing. In the chaos, David and Joe escape. Joe agrees to help David find Blue Fairy from *The Adventures of Pinocchio* who, he believes, can turn him into a real boy.

Joe and David meet "Dr. Know", a holographic answer engine and then Professor Hobby, David's creator, who tells him he was built in the image of the professor's dead son David. The engineers are thrilled by his ability to have a will without being programmed.

Disheartened, David lets himself fall from a ledge of the building but rescued by Joe, flying an amphibicopter. David tells Joe he saw the Blue Fairy underwater, and wants to go down to meet her. Joe is captured by the authorities but before he is pulled up, he activates the amphibicopter's dive function for David, telling him to remember him for he declares "I am, I was." David and Teddy dive to see the Fairy, which turns out to be a statue. David repeatedly asks the Fairy to turn him into a real boy. Eventually the ocean freezes.

Two thousand years later humans are extinct and the Mecha have evolved into an advanced silicon-based form called Specialists. They find David and Teddy, and discover they are original Mecha who knew living humans. The Specialists revive David and use his memories to reconstruct the Swinton home. David asks the Specialists if they can make him human, but they cannot. However,

he insists they recreate Monica from DNA from the lock of her hair, which Teddy has kept. The Mecha warn David that the clone can live for only a day, and that the process cannot be repeated. David spends the next day with Monica and Teddy. Before she drifts off to sleep, Monica tells David she has always loved him.

*Task 15. Translate the following word combinations from the text:*

imprinting protocol, unlicensed robots, to fly an amphibicopter, to activate the function, to recreate someone from DNA, self-protection programming, to reconstruct smth., holographic answer engine, to resemble a human child, to turn someone into a real boy

*Task 16. Why do you think the plot is written in the Present tense? Find all examples of the Passive voice (is programmed) and then make up 5 sentences with them. (You can change the tense!)*

*Task 17. Have you seen any other sci-fi movies? Talk about your favourite movie of this kind.*

## UNIT 6

### VIRTUAL REALITY VS AUGMENTED REALITY

*Task 1. Match the following English words and phrases from text A with their Russian equivalents:*

1) total immersion	a) зрительное восприятие
2) sensory feedback	b) эффект погружения
3) to aim	c) нацеливаться на что-либо
4) to be responsive to	d) показывать, проявлять
5) state of engagement	e) объемный, трехмерный
6) sense of immersion	f) полное погружение
7) to experience	g) состояние вовлеченности
8) to exhibit	h) испытывать что-либо
9) visual perspectives	i) обратная связь по сигналам
10) three-dimensional	j) реагирующий на что-либо



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*Task 2. Read and translate text A:*

### **VIRTUAL REALITY**

Virtual reality (VR) is a realistic three-dimensional environment that is created with a mixture of interactive hardware and software, and presented to the user in such a way that it is accepted as a real environment. It aims to achieve total immersion. Total immersion means that the sensory experience feels so real that we forget it is a virtual-artificial environment. VR literally makes it possible to experience anything, anywhere, anytime.

The key elements of VR are:

- virtual world
- immersion,
- sensory feedback
- interactivity.

A virtual world is a three-dimensional environment that is often realized through a medium where one can interact with others and create objects as part of that interaction. Here visual perspectives are responsive to changes experienced in the real world.

Virtual reality immersion is the perception of being physically present in a non-physical world. Mental immersion is a deep mental state of engagement while physical immersion is exhibited physical engagement in a virtual environment.

VR requires such senses as vision, hearing, touch and more to be simulated. Sensory feedback is achieved through integrated hardware and software.

Interaction is crucial for VR. If the virtual environment responds to a user's action in a natural manner, excitement and senses of immersion will remain. If the virtual environment cannot respond quick enough, the human brain will quickly notice it and the sense of immersion will diminish.

*Task 3. Answer the following questions:*

1. What does Virtual reality mean?
2. What is the aim of VR?
3. What does total immersion mean?
4. What are the key elements of VR?
5. Why is interaction crucial for VR?

*Task 4. Match the following words from the text with their definitions:*

<ol style="list-style-type: none"> <li>1) medium</li> <li>2) perception</li> <li>3) to simulate</li> <li>4) to notice</li> <li>5) crucial</li> <li>6) artificial</li> <li>7) to diminish</li> <li>8) vision</li> <li>9) hearing</li> <li>10) to interact</li> </ol>	<ol style="list-style-type: none"> <li>a) the ability to see clearly</li> <li>b) smth. that you use to communicate or express things</li> <li>c) to pretend that you are feeling or doing smth.</li> <li>d) to communicate or work together</li> <li>e) created by people</li> <li>f) to become aware of smth.</li> <li>g) recognition of things using your senses</li> <li>h) the sense that makes it possible to be aware of sounds</li> <li>i) extremely important</li> <li>j) to become reduced in size, importance or intensity</li> </ol>
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*Task 5. Use the following derivatives to complete the sentences:  
**to interact    interactive    interaction***

1. You should expect a very high level of.....with the system.
2. The main problem here is how people would..... .
3. One of the best things about the book is its.....infographics.

*Make up your own sentences with these derivatives:*

***To simulate    simulation    simulator***

*To immerse immersion immersive*  
*To respond response responsive*

*Task 6. Match the following English words and phrases from text B with their Russian equivalents:*

1) enhanced version	a) наружная сторона
2) superimposed image	b) расширенная версия
3) to overlay	c) содействовать
4) self-contained device	d) прозрачные очки
5) see-through goggles	e) автономное устройство
6) image alignment	f) устройство дополненной реальности
7) augmented reality device	g) управление прикосновением к экрану
8) to provide assistance	h) накладывать что-либо на что-то
9) outward-facing position	i) наложенное изображение
10) touch a pad command	j) выравнивание изображения

*Task 7. Read and translate text B:*

### AUGMENTED REALITY

Augmented reality (AR) is an enhanced version of reality where live direct or indirect views of physical real world environments are augmented with superimposed computer-generated images over a user’s view of the real world. The origin of the word “augmented” is “augment” which means to **add**. In the case of AR graphics, sounds and touch feedback **are added** into user’s natural world. Unlike virtual reality, which requires a user to inhabit an entirely virtual environment, augmented reality simply overlays virtual information on top of existing natural environment. As a result AR users experience a new and improved world where virtual information is used as a tool to provide assistance in everyday activities. From a technological point of view this is done by

overlaying projected images on top of a pair of see-through goggles or glasses.

Augmented reality devices are often self-contained – they don't need a cable or desktop computer to function. Augmented realities can be displayed not only on screens and monitors but also on handheld devices or glasses and even contact lenses.

The key components to augmented reality devices are:

- sensors and cameras
- projection
- processing
- reflection.

Sensors (they gather a user's real world interactions) and cameras (they visually scan to collect data) are usually located on the outside of the augmented reality device. The device takes this information and formulates a digital model to determine appropriate output.

A projector is found on a forward and outward-facing position on wearable augmented reality headsets. It can essentially turn any surface into an interactive environment.

As augmented reality devices are mini-supercomputers packed into tiny wearable devices, they require significant computer processing power. Apart from a CPU, a GPU, flash memory, GPS, Bluetooth/Wifi microchip and so on, advanced AR devices also utilize an accelerometer, a gyroscope and a magnetometer to provide for truly immersive experience.

Mirrors reflecting incoming light are used in AR devices to assist with image alignment to the user's eye.

Augmented reality devices are controlled by touch a pad or voice commands. The touch pads are somewhere on the device that is easily reachable. Voice commands work very similar to the way they do on our smartphones.

*Task 8. Answer the following questions:*

1. What is augmented reality?
2. What is the origin if the word "augmented"?
3. What happens to virtual information in AR?

4. Can augmented realities be displayed only on screens and monitors?
5. What are the key components to augmented reality devices?
6. How do sensors work?
7. What are mirrors used for?
8. How are augmented reality devices controlled?

*Task 9. Match the following words from the text with their definitions:*

<ol style="list-style-type: none"> <li>1) device</li> <li>2) to function</li> <li>3) to scan</li> <li>4) tool</li> <li>5) reflection</li> <li>6) glasses</li> <li>7) immersive</li> <li>8) to inhabit</li> <li>9) to utilize</li> <li>10) projection</li> </ol>	<ol style="list-style-type: none"> <li>a) instrument or piece of equipment that help you to do a particular kind of work</li> <li>b) to use smth. (formal word)</li> <li>c) to live somewhere</li> <li>d)the act of putting a film or an image onto a wall or screen</li> <li>e) to do the work, to act</li> <li>f) an object which can be used for a particular purpose</li> <li>g) to examine smth. quickly</li> <li>h) seeming to surround you so that you feel completely involved in smth.</li> <li>i) the process by which light and heat are sent back from a surface and do not pass through it</li> <li>j) two lenses in a frame that you wear in order to see better</li> </ol>
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*Task 10. Read the following descriptions and decide which one is about*

- a) *accelerometer*
- b) *gyroscope*
- c) *magnetometer*

1. .... is used to measure the tilt and orientation of your head

2. ....is used to function as a compass and figure out which direction your head is pointing.

3.....is used to measure the speed in which your head is moving.

It is said that they all **provide for truly immersive experience**. Can you explain what it means?

*Task 11. Look at the following words from the text. What parts of speech are they? How are they formed? Can you think of more examples?*

*Wearable*

*Reachable*

*Handheld*

*Self-contained*

*Overlaying*

*Task 12. Match the following English words and phrases from text C with their Russian equivalents:*

1) inverse	a) смекалистый пользователь
2) seek to accomplish	b) пользоваться большим спросом, быть нарасхват
3) tech moguls	c) цифровое воссоздание
4) savvy user	d) управляемый компьютером
5) digital recreation	e) технические воротилы («шишки»)
6) haptic feedback	f) тактильная навигация (вибрация)
7) to be sought after	g) реальная обстановка, окружение
8) real life setting	h) стараться достичь чего-либо
9) computer-driven	i) вымысел, выдумка
10) figment	j) обратный, противоположный

*Task 13. Read and translate text C:*

## **AUGMENTED REALITY VS. VIRTUAL REALITY?**

Both Augmented reality and Virtual reality are inverse reflections of one in another with what each technology seeks to accomplish and deliver for the user. Virtual reality offers a digital recreation of a real life setting, while augmented reality delivers virtual elements as an overlay to the real world. These realities may be similar and different but it is not always virtual reality vs. augmented reality.

Both technologies enable experiences that are becoming more commonly expected and sought after for entertainment purposes. While in the past they seemed merely a figment of a science fiction imagination, new artificial worlds come to life under the user's control, and deeper layers of interaction with the real world are also achievable. Leading tech moguls are investing in developing new adaptations, improvements, and releasing more and more products and apps that support these technologies for the increasingly savvy users.

Augmented reality enhances experiences by adding virtual components such as digital images, graphics, or sensations as a new layer of interaction with the real world. Contrastingly, virtual reality creates its own reality that is completely computer generated and driven.

Virtual Reality is usually delivered to the user through a head-mounted, or hand-held controller. This equipment connects people to the virtual reality, and allows them to control and navigate their actions in an environment meant to simulate the real world. Augmented reality is being used more and more in mobile devices such as laptops, smart phones, and tablets to change how the real world and digital images, graphics intersect and interact.

But they do not always operate independently of one another, and in fact are often blended together to generate an even more immersing experience. For example, haptic feedback – which is the vibration and sensation added to interaction with graphics – is considered an augmentation. However, it is commonly used within a virtual reality setting in order to make the experience more lifelike through touch.

*Task 14. Are these sentences True or False:*

1. Digital recreation of a real life setting is offered by VR.
2. Augmented reality is completely different from virtual reality.
3. AR creates computer-driven reality.
4. Deeper layers of interaction are likely to achieve.
5. Head-mounted and hand-held controllers allow people to control their lives.

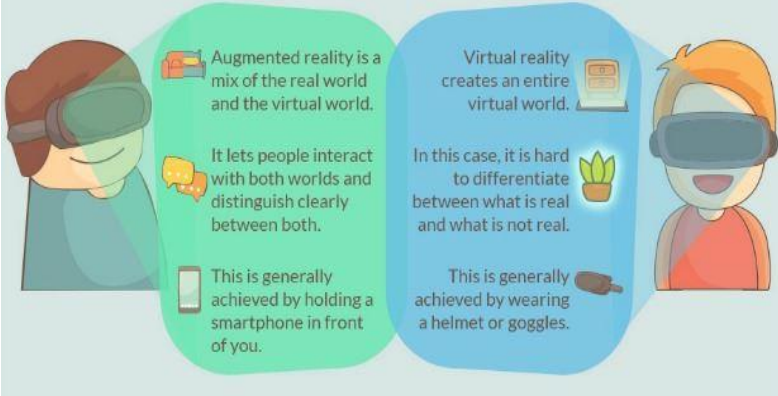
*Task 15. Match the following words from the text with their definitions:*

1) laptop	a) a small flat computer that is controlled by touching the screen or by using a special pen
2) setting	b) physical feeling
3) tablet	c) a flat piece of smth. or a quantity of smth. that covers a surface or that is between two other things
4) to interact	d) a computer that is small enough to carry and is flat when closed
5) to generate	e) to mix smth. together
6) layer	f) the reason for which smth. is made or done
7) purpose	g) a particular place or surroundings which someone or smth. is in
8) to blend	h) to create conditions or processes similar to smth. that exists
9) to simulate	i) to cause smth. to begin and develop
10) sensation	j) to communicate or work together

*Task 16. Talk about the differences between augmented and virtual realities using this picture.*



## Augmented Reality Vs. Virtual Reality



*Task 17. Read the statements and decide whether you agree or disagree with them. Say to what extent you agree or disagree and try to give your arguments:*

*-agree strongly*

*-agree*

*-not sure*

*-disagree*

*-disagree strongly*

### **Big Brother is watching you...**

1. It's OK for data about personal shopping habits to be collected and shared.
2. The government should have the right to record everyone's internet activities.
3. Biometric identity cards would be useful in the fight against terrorism.

- 4. We need more traffic cameras with number-plate recognition to make the roads safer.
- 5. I'm in favour of CCTV (close circuit television) cameras because they help to reduce crime.

*Task 18. VR stands for Virtual Reality. What do the following abbreviations stand for? Look up in the abbreviations list at the end of the book.*

- WWW
- TCP/IP
- ICT
- CPU
- GPS
- LCD
- IAS

## UNIT 7

### ASPECTS OF INFORMATION SECURITY

*Task 1. Match the following English words and phrases from text A with their Russian equivalents:*

1) disruption	a) собирать, накапливать
2) perusal	b) несмотря на
3) to amass	с) проверка безопасности
4) consistency of data	d) разрушение; разрыв, подрыв
5) power outage	e) основной принцип
6) denial-of-service	f) внимательное чтение, прочтение
7) maintaining the privacy	g) поддержка тайны, секретности
8) security testing	
9) regardless	

10) core principal	h) выход из строя электроприборов i) отказ от обслуживания j) непротиворечивость данных
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*Task 2. Read and translate text A.*

## INFORMATION SECURITY

**Information security**, sometimes shortened to **InfoSec**, is the practice of defending information from unauthorized access, use, disclosure, disruption, modification, perusal, inspection, recording or destruction. It is a general term that can be used regardless of the form the data may take (electronic, physical, etc...)

Governments, military, corporations, financial institutions, hospitals, and private businesses amass a great deal of confidential information about their employees, customers, products, research and financial status. Most of this information is now collected, processed and stored on electronic computers and transmitted across networks to other computers.

Should confidential information about a business' customers or finances or new product line fall into the hands of a competitor or a black hat hacker, such a breach of security could lead to exploited data and/or information, exploited staff/personnel, fraud, theft, and information leaks. Also, irreparable data loss and system instability can result from malicious access to confidential data and systems. Protecting confidential information is a business requirement, and in many cases also an ethical and legal requirement.

For the individual, information security has a significant effect on privacy, which is viewed very differently in different cultures.

The field of information security has grown and evolved significantly in recent years. There are many ways of gaining entry into the field as a career. It offers many areas for specialization

including: securing network(s) and allied infrastructure, securing applications and databases, security testing, information systems auditing, business continuity planning, etc.

The CIA triad (confidentiality, integrity and availability) is one of the core principles of information security.

**Confidentiality** refers to preventing the disclosure of information to unauthorized individuals or systems. For example, a credit card transaction on the Internet requires the credit card number to be transmitted from the buyer to the merchant and from the merchant to a transaction processing network. The system attempts to enforce confidentiality by encrypting the card number during transmission, by limiting the places where it might appear (in databases, log files, backups, printed receipts, and so on), and by restricting access to the places where it is stored. If an unauthorized party obtains the card number in any way, a breach of confidentiality has occurred.

Confidentiality is necessary for maintaining the privacy of the people whose personal information is held in the system.

**Integrity.** In information security, data integrity means maintaining and assuring the accuracy and consistency of data over its entire life-cycle. This means that data cannot be modified in an unauthorized or undetected manner. This is not the same thing as referential integrity in databases, although it can be viewed as a special case of Consistency as understood in the classic ACID (automated classification and interpretation of data) model of transaction processing. Integrity is violated when a message is actively modified in transit. Information security systems typically provide message integrity in addition to data confidentiality.

**Availability.** For any information system to serve its purpose, the information must be available when it is needed. This means that the computing systems used to store and process the information, the security controls used to protect it, and the communication channels used to access it must be functioning correctly. High availability systems aim to remain available at all times, preventing service disruptions due to power outages,

hardware failures, and system upgrades. Ensuring availability also involves preventing denial-of-service attacks.

*Task 3. Answer the following questions:*

1. What is the definition of Information security?
2. Which confidential information is stored on electronic computers?
3. What can the information leakage lead to?
4. Can you give an example of black hat hackers activities?
5. Could you briefly explain the meanings of CIA triad?
6. Do you think Information security is growing profession?
7. Do you think it is well-paid sphere for a young graduate?

*Task 4. Match the following words from the text with their definitions:*

1) black hat hacker	a) to scramble, to put into code
2) malicious	b) to take place, to happen
3) to breach	c) to make changes, to make different
4) to disclose	d) a hacker who “violates computer security for little reason beyond maliciousness or for personal gain”
5) to evolve	e) harmful
6) to enforce	f) that cannot be put right or restored
7) irreparable	g) to uncover, to allow to be seen, to make known
8) to encrypt	h) to develop
9) to occur	i) to break through, to make a gap in something
10) to modify	j) to make effective

*Task 5. Find the equivalents in the text:*

несанкционированный доступ; вредоносный доступ; финансовые организации; частный бизнес; финансовое

положение; попасть в руки конкурента; используемые в собственных интересах данные; неустойчивость системы; иметь значительное влияние; распечатанная квитанция; запрет доступа; точность и непротиворечивость информации; сбой в работе оборудования; хакерская атака типа «отказ в обслуживании»

*Task 6. Insert the missing words and word combinations into the following sentences:*

***unauthorized access; information security; cyber attacks; confidential information; fraud, to restrict, disclosure, to prevent, requirement.***

*Sometimes you should change the form of the words:*

1. Your prompt action ..... a serious accident.
2. .... is a stable and growing profession.
3. They were sent to prison for ..... .
4. Our company conference room is very small, so we have to ... the number of people we invite to the meeting.
5. If you disclose this ... , you may lose your job.
6. The computer programs, and in many cases the computers that process the information, must be protected from ..... .
7. Educational and professional .... for IT specialists are really high in modern world.
8. A .... is deliberate exploitation of computer systems, technology-dependent enterprises and networks.
9. Information ... enables an attacker to gain valuable information about a system.

*Task 7. Match the following English words and phrases from text B with their Russian equivalents:*

1) criminal	a) вред, ущерб
2) to dial a number	b) хаос
3) password	с) наказывать

4) damage	d) неспособный (сделать что-л.)
5) chaos	e) умный
6) clever	f) пароль
7) fault	g) набрать номер
8) sick	h) преступник
9) unable	i) больной
10) to punish	j) вина

*Task 8. Read and translate text B.*

### **NEW KIND OF CRIMES**

Criminals in the past used to have guns, masks and escape cars. Now they have a computer, a telephone and a piece of computer equipment called a modem. They simply dial a telephone number to link their own computer with the others, and then, using a password (a secret word or phrase), enter a company's computer system (for example, in a bank or a government office). In 1999 two American teenagers broke into a computer system and added rude messages to some information and made other important data disappear. The damage cost over two million dollars to correct. A 12-year old boy in Detroit used his own computer to enter the computer system of a large company and caused financial chaos.

In Britain, computer crime costs companies about 400 million pounds a year. Often, the computer criminals do not want to make money; they just want to show the world how clever they are.

They also like creating computer viruses. They program a computer disc with a special fault in it. When a computer copies the disc, the fault enters the computer's memory. That means it gets onto any other disc each time you put a new disc into your computer. Some viruses are just silly messages. For example, one puts the message «peace and love» on your computer screen while you are working. Other viruses use all the 'memory on the computer', and the computer is sick and unable to work. A hospital in Britain recently

lost all of its records about sick patients because of a computer virus.

*Task 9. Answer the following questions:*

1. What kind of people do you think write computer viruses? Why do they do it?
2. In what way should computer criminals be punished?
3. Have you ever faced the problem of computer viruses?
4. What influence can a virus have on your computer?

*Task 10. Find synonyms and antonyms for the following words in the text. The words are given in the same order as in the text:*

**SYNONYMS**

- merely
- to connect
- loss
- to improve
- stupid

**ANTONYMS**

- present
- another's
- small
- stupid
- hate

*Task 11. Match the following words from the text with their definitions:*

1) to escape	a) to show where the mistakes are in something and make it right
2) equipment	b) words that one person sends to another
3) to link	c) notes about things that have happened
4) to correct	d) special things that you need for doing something
5) to enter	e) to join one person or things to another
6) message	f) to manage to avoid something dangerous or



7) records	unpleasant g) to put information on paper or in a computer
------------	---

*Task 12. Read this article about a computer infection.*

*a) Fill in the gaps with the following words and word combinations putting them in the right place:*

- BotNet**
- spyware**
- worm**
- keylogger**
- pharming**
- zombies**
- denial of service**
- identity theft**

Conficker has been in the news a lot recently. It is a (1)....., which unlike a virus does not need to be attached to an existing program to infect a machine, and which seems to receive regularly updated instructions from its controllers. It has created a (2)..... – a network of infected machines. Once infected, these machines are known as (3)..... At this point no one knows what the purpose of Conficker is. At present it has infected ten million computers. These could be used for a (4)..... attack where all the infected computers attempt to access one site simultaneously.

It is probably controlled by criminals who want to steal users' personal information, i.e (5)..... There are a number of ways of doing this: a (6).....records information via a keyboard, (7).....literally means harvesting users' information while they are online. We will probably soon see if Conficker consists of this type of passive monitoring (8)..... or whether it will mount a more active attack once it receives a new set of instructions.

*b)The information in the article is no longer news. So, retell it in the Past Tense.*

***NB!*** Conficker was first detected in November of 2008. The name Conficker is a combination of the words configuration and ficker.

*Task 13. Study the words:*

1) circuit	a) схема
2) mere	b) простой
3) authority	c) полномочия, власть
4) hacking	d) взлом
5) not bogus criteria	e) не фиктивные критерии
6) available	f) доступный
7) challenging	g) зд. стимулирующий, побуждающий
8) all-encompassing	h) всеохватывающий
9) to endeavor	i) пытаться
10) exhilaration	j) драйв, весёлое возбуждение

*Task 14. Read and translate text C:*

## **THE FIRST HACKERS**

The first "hackers" were students at the Massachusetts Institute of Technology (MIT) who belonged to the TMRC (Tech Model Railroad Club). Some of the members really built model trains. But many were more interested in the wires and circuits underneath the track platform.

Spending hours at TMRC creating better circuitry was called "a mere hack." Those members who were interested in creating innovative, stylistic, and technically clever circuits called themselves (with pride) hackers.

During the spring of 1959, a new course was offered at MIT, a freshman programming class. Soon the hackers of the railroad club were spending days, hours, and nights hacking away at their

computer, an IBM 704. Instead of creating a better circuit, their hack became creating faster, more efficient program - with the least number of code lines. Eventually they formed a group and created the first set of hacker's rules, called the Hacker's Ethic.

Steven Levy, in his book Hackers, presented the rules:

Rule 1: Access to computers - and anything, which might teach you, something about the way the world works - should be unlimited and total.

Rule 2: All information should be free.

Rule 3: Mistrust authority - promote decentralization.

Rule 4: Hackers should be judged by their hacking, not bogus criteria such as degrees, race, or position.

Rule 5: You can create art and beauty on a computer.

Rule 6: Computers can change your life for the better.

These rules made programming at MIT's Artificial Intelligence Laboratory - a challenging, all-encompassing endeavor. Just for the exhilaration of programming, students in the AI Lab would write a new program to perform even the smallest tasks. The program would be made available to others who would try to perform the same task with fewer instructions.

(5) Hackers were given free regime on the computer by two AI Lab professors, "Uncle" John McCarthy and Marvin Minsky, who realized that hacking created new insights. Over the years, the AI Lab created many innovations: LIFE, a game about survival; LISP, a new kind of programming language; the first computer chess game; The CAVE, the first computer adventure; and SPACEWAR, the first video game.

*Task 15. Answer the following questions:*

1. Who were the first hackers?
2. Where was the new course of programming offered in spring 1953?
3. Who presented the rules for the hacker?

- 4. Did these rules make programming at MIT's Artificial Intelligence Laboratory - a challenging, all-encompassing endeavor?
- 5. Were Hackers given free regime on the computer by two AI Lab professors, "Uncle" John McCarthy and Marvin Minsky?
- 6. What innovations did AI Lab create?
- 7. Can computers change your life for the better?

*Task 16. Find synonyms and antonyms for the following words in the text. The words are given in the same order as in the text:*

**SYNONYMS**

- to construct
- to name
- to propose
- to explain
- to show
- to transform
- to accomplish

**ANTONYMS**

- inefficient
- slower
- limited
- the biggest
- unavailable
- different
- old

*Task 17. Match the following words from the text with their definitions:*

1) to endeavor	a)achieve or complete successfully
2) to hack	b) continue to live or exist, especially in spite of danger or hardship
3)to realize	c) bring (something) into existence

4) to promote	d) further the progress of (something, especially a cause, venture, or aim); support or actively encourage
5) to perform	e) cause (something desired) to happen
6) to survive	f) use a computer to gain unauthorized access to data in a system
7) to accomplish	g) try hard to do something

*Task 18. Find the equivalents in the text:*

Первые "хакеры"; эффективные программы; правила хакера, этика Хакера; доступ к компьютерам; лаборатория «Искусственного интеллекта», написать новую программу, новый вид языка программирования; компьютерная игра в шахматы; первая видео игра.

*Task 19. Are the sentences True or False?*

1. Spending hours at TMRC (Tech Model Railroad Club) creating better circuitry was called "a mere hack."
2. Those members who were interested in creating innovative, stylistic, and technically clever circuits called themselves (with pride) hackers.
3. All MIT students were not interested in creating programs.
4. The first hackers were Tambov State University students.
5. The freshman programming class was offered at MIT in the spring of 1959.
6. They formed a group and created the first set of hacker's rules, called the Hacker's Ethic.
7. Hackers must belong to a particular race and position.

## PART 2

### GRAMMAR REVISION

#### UNIT 1

##### Articles

1. There are two articles in English: the Indefinite article (**a/an**) and the Definite article (**the**)
2. The Indefinite article **A/An** (before vowels) is used when we mention smth. for the first time (*We've bought **a** new computer*); before a countable noun in the singular to summarize (***A** computer is very useful in our life*); before nouns denoting professions (*He is **a** computer engineer*); in certain numerical expressions (***a** couple, **a** dozen, **a** hundred, **a** thousand, **a** lot of, **a** great number of*, etc.); in expressions of time, frequency, price, speed, weight, etc. (***a** dollar, once **a** week, hundreds of operations **a** minute*)
3. The Definite article **The** is used before countable and uncountable nouns to talk about the specific things or people (***The** lab equipment is reliable*); before the nouns meaning unique things (***the** sun, **the** Earth, **the** world etc.*); when the thing has already been mentioned (*They have bought a computer. **The** computer is not so expensive.*); with ordinal numbers (***the** first, **the** second, **the** third etc.*); before the superlative degree of the adjectives (***the** most powerful machine*); before the names of seas, oceans, rivers, mountain ranges (***the** Nile, **the** Pacific ocean, **the** Alps*); with names of the countries which contain the preposition of or the words Union, Republic, Federation, States,

Kingdom (*the United States of America, the UK, the Russian Federation etc.*)

4. The article is **not** used before plural countable nouns; before uncountable nouns (*Information is very important for studies*), before abstract nouns (*I need advice*); before proper names; before the names of singular countries (*Spain, South Africa*); before cardinal numbers (*one, two, three*) etc...
5. Learn some phrases with **a, the or zero article**: *at a time, to have a good time, for a long time, to go for a walk, to be in a hurry, to be at a loss, to have a look, to have a headache, as a result of; in the morning(afternoon, evening), on the right (left), on the one (other) hand, to go to the cinema, to play the guitar, to tell the time, to pass the time; at work, by bus (train, plane etc.), by chance, by mistake, by means of, at home, in fact, from time to time, to go to work (school), to go to bed, to have breakfast (lunch, tea) etc.*

*Task 1. Complete the sentences with a/an, the or zero article:*

1. We have English classes twice ....week.
2. I've read.....interesting article on Virtual Reality.
3. I always go to...work by....car.
4. ....life is interesting.
5. She is ....lab technician.
6. Let's go for....walk. ....sun is shining!
7. Have you been to.....France?
8. ...Everest is ....highest mountain in....world.
9. This is ...first time I've been to ....USA.
10. ....President of .....company announced ....very important decision.

*Task 2. Read the text and fill in the gaps with a/an, the or zero article:*

Yesterday I was sitting on the 6 o'clock train when I saw (1)\_\_\_ strange man walking along the platform. He came into the carriage of (2)\_\_\_ train where I was sitting, and he sat in the seat opposite mine. He opened (3)\_\_\_ newspaper and started reading it. On (4)\_\_\_ front page of (5)\_\_\_ newspaper, there was (6)\_\_\_ picture of (7)\_\_\_ bank robber. The words under (8) \_\_\_picture were: "Wanted by the police". It was (9)\_\_\_ same man!

## UNIT 2

### Parts of speech

#### Pronouns

SUBJECT PRONOUNS	OBJECT PRONOUNS	POSSESSIVE PRONOUNS	REFLEXIVE PRONOUNS
I	<i>me</i>	<i>my</i>	<i>myself</i>
<i>you(singular)</i>	<i>you</i>	<i>your</i>	<i>yourself</i>
<i>he</i>	<i>him</i>	<i>his</i>	<i>himself</i>
<i>she</i>	<i>her</i>	<i>her</i>	<i>herself</i>
<i>it</i>	<i>it</i>	<i>its</i>	<i>itself</i>
<i>we</i>	<i>us</i>	<i>our</i>	<i>ourselves</i>
<i>you (plural)</i>	<i>you</i>	<i>your</i>	<i>yourselves</i>
<i>they</i>	<i>them</i>	<i>their</i>	<i>themselves</i>

Subject pronouns **I you they** etc. are used before verbs. Object pronouns **me you them** etc. are used after verbs. Possessive pronouns are followed by nouns (**my car, your ticket** etc.). Reflexive pronouns are used after certain verbs (*kill, cut, behave, enjoy, hurt, teach* etc.) when the subject and the object of the verb are the same person (**He hurt himself**)



## Nouns

1. The plural of a noun is usually **-s** or **-es** (after o , ss, x, sh, ch).: singular (=one) - plural (=two or more)

a flower – **some** flowers

a nice place – **many** nice places

2. Some plurals do not end in **-s**:

this man – these men, one foot - two feet, that sheep - those sheep, a woman - some women, a tooth - all my teeth, a child - many children, a mouse - some mice, a person - some people

**People** is plural (=they), so we say **people are/people have etc.**

**Police** is plural: *The police are here.*

3. A noun can be **countable or uncountable.**

Countable nouns: a **car** a **man** a **key** an **idea** an **accident**

Countable nouns can be singular or plural: a car – cars, two cars, some cars, many cars.

You cannot use the singular (car/house/key) alone. You need **a /an**:

*We can't get in without a key.*

Uncountable nouns: **water money music electricity**

Uncountable nouns have only one form:

*I've got some money. Money isn't everything.*

You cannot use **a /an** + uncountable nouns. But you can say **a piece of.../a glass of... etc.** + uncountable noun:

A glass of water, a can of oil, a bar of chocolate, a piece of cheese, a bottle of milk, a piece of music a game of tennis

4. You can use **some** and **any** with plural countable nouns:

*We played some games. Did you play any games?*

We use **many** and a **few** with plural countable nouns:

*I have a few jobs to do. We didn't take many photos.*

You can use **some, any, much, little** with uncountable nouns:

*We listened to some music. We didn't do much shopping.*

5. Many nouns can be used as countable or uncountable nouns, usually with a difference in meaning. Compare:

I bought **a paper** to read.(= a newspaper) - I need **some paper** to write on.(= material)

Enjoy your holiday. Have **a good time!** - I can't wait. I haven't got **time.**

6. There are some nouns that are usually uncountable in English but often countable in other languages: **information advice weather news bread hair furniture work scenery accommodation luck luggage traffic permission progress damage behavior chaos knowledge education**

News is uncountable, not plural: *The news was very bad.*

## Adjectives

1. Adjectives describe nouns. They have the same form in both the singular and the plural and normally go *before* nouns. They also go without nouns after some verbs: appear, be, sound, become, feel, seem, smell, taste, look, get, etc.. Ex: It looks nice.

2. Most adjectives have three forms: **positive, comparative** and **superlative**

3. The **comparative** form is **-er** or **more...**

- We use **-er** for short words (one syllable): cheap – cheaper fast – faster large – larger

- We also use **-er** for two-syllable words that end in **-y (-y → -ier)**: lucky → luckier early → earlier easy → easier pretty → prettier

- We use **more ...** for longer words (two syllables or more): **more modern more serious more expensive**

- You can use **-er** or **more...** with some two-syllable adjectives, especially: **quiet clever narrow simple**  
It's too noisy here. Can we go somewhere quieter/more quiet?

- In comparative sentences we often use **than**

This question is easier **than** the last one.

My computer is better **than** yours.

При сравнении равных качеств двух предметов используется парный союз **as...а**стаккой же, как ... My computer is **as good as** yours.

При отрицании равенства качеств двух предметов используется парный союз **not so... as не такой...**, как...My computer is **not as** good as yours.

#### 4. The **superlative** form is - **est** or **most** ... .

- In general we use –est for short words and most ... for longer words. (the rules are the same as those for comparative)

**long** → longest    **easy** → easiest    **hard** → hardest

**most** famous    **most** boring    **most** difficult

- We normally use **the** before a superlative (**the longest** / **the most** famous etc.):
- After superlatives we use **in** with places (towns, buildings etc) and groups of people (a class / team / company etc.):

What is the longest river **in** the world? Who is the best student in the group?

We normally use **of** for a period of time:

What was the happiest day **of** your life?

- We often use the Present Perfect (I have done) after a superlative:

What's **the best** film **you've ever seen**?

#### 1. These adjectives have irregular comparative and superlative forms:

**good** – better – **the best**

**bad** – worse – **the worst**

**far** – further (or farther) – **the furthest**

**many** – more – **the most**

**little** – less – **the least**

### Adverbs

1. We use adverbs to describe **how** someone or something does an action. Most adverbs are formed by adding **-ly** to the adjective  
She answered all the questions **correctly**

2.If an adjective ends with **-y**, the adverb ends with **-ily**  
They solved the problem **easily**

3.Some adverbs are irregular (they don't end with -ly)  
**good - well**

1. Some adjectives and adverbs have the same form: **hard, late, early, fast, far, much, little, high, low, near**

It's a hard day. (adjective) He works hard. (adverb)

*Task 1. Use the correct pronoun:*

1. I felt so nervous before the exam! .....hands were wet.
2. Open....books on page 7.
3. Will you help..... with.....problem?
4. Mobile phones have made life easier. ....help communication a lot.
5. Students nowadays do.....homework on a computer.
6. Linda and Sam are going as volunteers to Africa. ....holidays start next week.
7. My computer is not new. ....breaks down too often.
8. Jimmy is too young to have a mobile phone, but .... Sister has got one.
9. Excuse me, can you show .... ticket?
10. We are late and .... teacher is angry.

*Task 2. Fill in the gaps with the correct object pronoun:*

My husband and I are very lucky. We have many close friends in this city, and they are all interesting people.

Our friend Andrew is a scientist. We see (1) \_\_\_\_\_ when he isn't busy in his laboratory. When we get together with (2) \_\_\_\_\_, he always tells (3) \_\_\_\_\_ about his new experiments. Andrew is a very close friend. We like (4) \_\_\_\_\_ very much.

Our friend Maggie is an actress. We see (5) \_\_\_\_\_, when she isn't making a movie in Hollywood. When we get together with (6) \_\_\_\_\_, she always tells (7) \_\_\_\_\_ about her life in Hollywood. Maggie is a very close friend. We like (8) \_\_\_\_\_ very much. Our friends Bobby and Marlin are journalists. We see (9) \_\_\_\_\_, when they are not traveling around the world. When we get together with (10) \_\_\_\_\_, they always tell (11) \_\_\_\_\_ about their meetings with famous people. Bobby and Marlin are very close friends. We like (12) \_\_\_\_\_ very much.

*Task 3. Use the correct pronoun instead of the words in italics:*

1. *Jim and Ted* exchanged mobiles.
2. *Linda's* parents bought her a new laptop.
3. Computers allow *the disabled* to live more independently.
4. *Computer scientists* believe that *virtual reality* is a very promising area of research.
5. When we studied at University our teachers gave *me and my fellow students* a lot of assignments.

*Task 4. Match the expressions with their meanings:*

1) Enjoy yourself!	a) Feel comfortable
2) Behave yourself!	b) Don't wait to be offered smth
3) Help yourself to .....!	c) Be good
4) Make yourself at home!	d) Have a good time

*Task 5. Complete the sentences using the comparative form of the adjective in brackets and **than** (if necessary) or the superlative form:*

1. This software is..... (expensive) that one.
2. A storage device has.....(great) capacity the main memory.

3. This company produces ..... (reliable) computers in the world.
4. Interacting with a computer is .....(good) way to understand it.
5. The latest computers use .....(little) energy compared with the earliest models.
6. Mechanical devices .....(slow) electromagnetic devices.
7. We think that .....(bad) virus in the world hasn't been created.
8. This hackers' attack is justly considered .....(bad) attack of the year.
9. Who was.....(successful) creator of personal computer peripherals?
10. Do you agree that voiceprints' analysis .....(easy) fingerprints'?

*Task 6. Use the following adjectives and adverbs in the right place:*  
**good the best easy carefully reliable efficiently logically**

1. Using computers is really so .....that even small children can do it!
2. Integrated circuits can make computers more .....
3. With this technology tasks can be performed more.....
4. Using cards with magnetic stripes is .....method of identification.
5. The ability to think .....is a very important skill for everyone.
6. Are you .....at compiling programs?
7. Before making any important decisions you should think .....

*Task 7. Read the text and choose the correct variant:*

Robert Noyce was (*a/an/the*) risk-taker who was successful both as (*a/an/the*) engineer and as (*a/an/the*) entrepreneur. (*A/an/the*) son of an Iowa minister, he was informal, genuine, and methodical. Even when he was running one of (*more/ the most*) successful businesses in the Silicon Valley, he dressed (*informal/informally*)

and his office was an open cubicle that looked like everyone else's. A graduate of the Massachusetts Institute of Technology (MIT), he started working for one of the first computer-related businesses in 1955.

As (*a/an/the*) engineer, he co-invented the integrated circuit, which was the basis for (*late/later*) computer design. As (*a/an/the*) businessman, Noyce co-founded Intel, (*more/the most*) successful company in the Silicon Valley and the first company to introduce the microprocessor. (*A/an/the*) directors of Intel could not have anticipated the effects that the microprocessor would have on the world. It made (*possibly/possible*) the invention of the personal computer and eventually led to the birth of thousands of new (*business/businesses*). In fact, many (*persons/people*) consider his role to be one of (*more/the most*) significant in the Silicon Valley story.

### UNIT 3

#### Present Simple

1. The present simple form: **I/we/you/they work**  
**He/she/it works**

The present simple negative form: **I/we/you/ they don't work**  
**He/she/it doesn't work**

We use **do/does** to make questions: **Do I/we/you/they work?**  
**Does he/she/it work?**

2. We use the present simple to talk about things in general. We are not thinking only about the present. We use it to say that something happens all the time or repeatedly, or that something is true in general. It is not important whether the action is happening at the time of speaking:

*Output devices allow us to enter information into the computer.*

3. We use the present simple when we say how often we do things:

*People often use programming languages.*

#### Present Continuous

1. The present continuous form:

I **am** (=I'm) **surfing** the Web

He/she/it is (=he's etc.) **surfing** the Web

We/they/you are (=we're etc.) **surfing** the Web

The negative form:

I am not (=I'm not) **surfing** the Web

He/she/it is not (=he isn't etc.) **surfing** the Web

We/they/you are not (=we aren't etc.) **surfing** the Web

The question form: Am I **surfing** the Web?

Is he/she/it **surfing** the Web?

Are we/they/you **surfing** the Web?

2. We use the present continuous when we talk about something which is happening at the time of speaking:

-Where is James?

-He **is installing** his new computer system at the moment.

3. We also use the present continuous when we talk about something which is happening around the time of speaking, but not necessarily exactly at the time of speaking:

*Silvia is working hard this term because she has plans to enter the University.*

### **Present Simple vs. Present Continuous**

1. Remember: we use the present continuous to talk about something which is happening at or around the time of speaking (*Tom is working on a new computer program*); we use the present simple to talk about things in general or things which happen repeatedly (*Tom works as a programmer*).

2. The present continuous is used for temporary situations (*Mike is doing a two-year course in Computer Sciences*); the present simple is used for permanent situations (*Mike works for a big computer company. He lives in Boston.*)

3. Some verbs are not normally used in continuous tenses: **want, need, prefer, like, love, hate, belong, see, hear, know, realize, believe, suppose, mean, understand, remember, forget, seem**. But there are exceptions: **have, think**. For example:

*What do you think about WikiLeaks ? (=What is your opinion?)*

*What are you thinking about? (=What is going in your mind?)*



*Task 1. Choose the correct tense form: present simple or present continuous:*

1. When I ..... (work) on a computer more than two hours, my eyes ..... (get) tired.
2. A computer system ..... (consist) of two parts: the software and the hardware.
3. At the moment the CPU ..... (process) the instructions and data contained in the main memory.
4. The CPU ..... (be) a microprocessor which ..... (execute) program instructions and .....(coordinate) the activities of all other components.
5. How do you see anything? Look! That lamp ..... (reflect) off the screen and this one ..... (shine) directly into your eyes?
6. Virus writers now.....(look) for methods to create more complicated and more inconspicuous viruses.

*Task 2. Use the verbs in brackets in the Present Simple tense:*

1. John.....(browse) on the Internet and .....(download) anything that looks interesting.
2. ....the company.....(design) high specification workstations?
3. Call me on this number if your machine.....(crash) again.
4. This utility.....(not/detect) and.....(not/eliminate) all viruses.
5. Using this procedure .....(ensure) that unauthorized users cannot enter the system.
6. When you.....(install) this program it automatically .....(check) the specifications of the PC and .....(adapt) to them.
7. ...the program.....(access) the information on the hard disk and ....(output) it to the screen?

*Task 3. Use the verbs in brackets in the Present Continuous tense:*

1. Listen to those people. What program.....(they/ speak) about?
2. Excuse me, I.....(look) for a computer shop. Is there one near here?
3. Listen! Can you hear those students at the front desk? They.....(discuss) a new make of plotters.
4. I.....(not/ work) this week. Our computer network has been damaged by an unknown virus.
5. Liz wants to work as a sales manager, so she.....(learn) how to deal with computers.

## UNIT 4

### Past Simple

1. The past simple form often ends in –ed: to install- **installed**  
But many important verbs are irregular and the past simple does not end in -ed: to buy – bought  
Remember: the past of the verb **to be** is **was/were!**
2. In past simple questions and negative forms we use did/didn't + the infinitive: it performed Did it perform? It didn't perform.
3. We don't use **did** with the verb **to be**:  
it **was** out of order **was** it out of order? it **wasn't** out of order
4. We use the past simple to talk about actions or situations in the past. We often say **when** it happened (yesterday, a week ago, last month etc.):  
*Chris phoned me yesterday. He wanted to discuss something with me.*

### Past Continuous

1. The past continuous form: I/he/she/it **was playing**  
We/they/you **were playing**  
The past continuous negative form:  
I/he/she/it was not (wasn't) playing  
We/they/you were not (weren't) playing

The past continuous question form: Was I/he/she/it playing?  
Were we/they/you playing?

2. We use the past continuous to say that someone was in the middle of doing something at a certain time. The action or situation had already started before this time but hadn't finished: *What were you doing at 10 o'clock last night?*

3. The past continuous doesn't tell us whether an action was finished or not: *Margaret was playing computer games* . (We don't know whether she finished playing or not).

4. The past continuous and the past simple are often used together to say that something happened in the middle of something else: *While I was surfing the Internet, I burnt my dinner.*

### **Past Continuous vs. Past Simple**

1. We use the past continuous for incomplete or continuing actions in the past (I was writing e-mails for most of the morning); we use the past simple for a single and complete action in the past (I sent him an e-mail two hours ago).

2. We use the past continuous for an interrupted action in the past (When Sue came home, Sally was downloading the movie); we use the past simple to say that one thing happened one after another (When Sue came home, Sally downloaded the movie).

*Task 1. Put the verbs in brackets in the Past Simple tense:*

1. He.....(reconfigure) the field structure in the file.
2. .... you.....(download) any information about this subject?
3. I.....(find) the problem when I.....(launch) this program.
4. We.....(not/dump) the information onto the hard disk of the server.
5. She .....(type) the password but....(fail) to open the file.

*Task 2. Use the following verbs in the Past Simple tense:*

**Upgrade update disable contain crash**

1. The file that was lost.....important documents.
2. To prevent anyone changing the data he.....the keyboard.
3. The electricity was cut off and the computers..... .
4. We .....our printer.
5. He.....his files.

*Task 3. Choose the correct tense form: Past Simple or Past Continuous:*

2. When he.....(buy) the laptop, he .....(leave) his driver's license on the counter.
3. When Alice .....(come) home, her husband .....(watch) online videos .
3. I .....(work) in Photoshop when Alex ..... (call) me.
4. She .....(access) the employee's file stored on the computer without his consent.
5. Where ..... you (repair) your scanner?
6. The technical staff..... (try) to correct a programming fault when the light .....(switch off).

## UNIT 5

### Present Perfect

1. We form the Present Perfect with **have/has + past participle**. The past participle often ends in -ed, if the verb is regular (installed, performed).

The negative form:

***I (we, you, they) have not (haven't) lost the file.***

***She (he) has not (hasn't) got the message.***

The question form:

***Have I (we, you, they) lost the file?***

***Has she (he) got the message?***

2. When we use the Present Perfect tense there is a connection with the present. This tense is used to relate the past to the present.

*I (we, you, they) have lost the file! (= I have not got it now)*

3. We often use the present perfect to give new information or to announce a recent happening. *She (he) has just got the message.*

4. We often use *just, already, never, ever, not yet, today, for, since, this (week, month)* with the present perfect.

5. *Remember:* we use the Past Simple for situations or actions during a period of time that **ended** in the past (He studied Computer Science for 3 years.= He finished his studies). We use the Present Perfect for situations or actions in a period of time **from the past until now** (He has studied Computer Science for two years. = He still studies it).

## Past Perfect

1. We form the Past Perfect tense with **had + past participle:**

*I had ('d) already gone out when you called the office. (positive form)*

The negative form:

*He had not (hadn't) finished the installation when I got to work.*

The question form:

*Had you made a mistake?*

2. You use the Past Perfect tense when you are looking back from a point in past time, and you are concerned with the effects of something which happened at an earlier time in the past:

*He had already had his own business when he turned 20.*

*He felt much happier once he had found a new job.*

3. We use the following expressions with the Past Perfect tense: **after, already, as soon as, before, by the time, just, till/until, when, yet:**

*When he arrived at the office, the boss had already left.*

*Remember:* If **before or after** is used, the Past Perfect tense is optional:

*After they discussed the current project, the train arrived, they went on to talk about future plans.*

*Compare the use of Past Perfect and Past Simple:*

- When Alex got home, Dylan installed a new program. (First Alex got home, then Dylan installed a new program).
- When Alex got home, Dylan had installed a new program. (Dylan did it before Alex got home)

*Task 1. Put the verbs in brackets in the Present Perfect tense:*

1. Jim..... (detect/ just) a boot virus.
2. Many organizations.....(lose/ already) a lot of time and money dealing with intruder activity in the past few years.
3. Computers and microchips..... (become) part of our everyday life by now.
4. - (you/ visit) the computer exhibition yet?  
 - No, I..... . But I'd like to. What about you?  
 - I (be/ just) there.
6. He (not/ work) as a system administrator since last winter.

*Task 2. Choose the correct tense form: Past Simple or Present Perfect:*

1. He ..... (describe/ just) the way of compiling the program.
2. Peter: .....you (play) this game before?  
 Philip: Yes, I..... I.....(play) it when I was a student.
3. I .....(not/ see) our leading programmer today. I wonder where he is.
4. Oh no! I.....(delete) all the client records!.
5. He ..... (not work) in IT department since December.
6. First, he ..... (install) anti-virus software, then he .....(connect) to the Internet.

*Task 3. Make sentences with the Present Perfect and **for** or **since***

1. I / not / play / the World of Tanks / Sunday.
2. she / work / in this department / more than five years.
3. you / see / Jack / the meeting last week?

4. these machines / not / service / a year.
5. we / be / good friends / we studied at University.

*Task 4. Choose the correct variant:*

1. I *saw/had seen* her presentation before so I *didn't want/hadn't wanted* to see it again.
2. By the end of the week she *deleted/had deleted* some messages from the server.
3. I *received /had received* an e-mail from the boss and *sent/had sent* it to my colleague.
4. The teacher *wanted/had wanted* to know if I ever *had/had had* any problems with viruses.
5. He couldn't use the ISP as *he didn't pay/ hadn't paid* for his online time.

## UNIT 6

### Future Simple

1. We form the Future Simple Tense with the help of **will**. In spoken English we normally use the short forms **I'll** and **we'll**. We use it when we decide to do something at the time of speaking.

*Oh, I have left my computer on! I **will** go and switch it off.*

2. We also use it when we are making predictions about the future based on the general beliefs, opinions or attitudes.

*I am sure you **will** get that job!*

4. Remember: for talking about the future we can also use **be going to**. We use it for actions that we decided to do *before* we speak (*I'm **going to clean** my desktop*) and when there is something in the present situation that shows what will happen in the future (in a game: *Look at her! **She is going to kill** my soldier!*).

*Task 1. Use will or be going to and the verbs in bracket:*

1. Have you decided what to do with your old mobile? – Yes, I..... (give) it to my kid.
2. I know you are good at computers. .... you (help) me to install an antivirus program?
3. I've lost a very important file! – Oh, don't worry! I.....(think of) something .
4. Make a back-up copy or.....(lose) all your information.
5. Have you checked the spelling in this document? – Not yet, I.....(do) it tonight.
6. I'm sure robots.....(do) the housework for people in the near future.
7. Do you think new technologies .....(allow) us to live longer?
8. Your son likes writing programs. ....he (be) a programmer?
9. Is it likely or unlikely that in ten years we.....(work) in virtual offices?
10. Your Internet is working so slowly! – I know, I.....(change) the provider.

*Task 2. How likely is that these predictions will come true in the next 50 years? Make up your own sentences:*

1. Scientists/build/factories/ in space.
2. People/learn/to control/the weather.
3. Newspapers / disappear.
4. Virtual reality/ change/ our lifestyles.
5. Ordinary people/travel/to Mars.
6. Humans/live/beyond 150 years.
7. Doctors/ use/ electronic instruments/in surgery.
8. Scientists/discover/cure for cancer.
9. Humans/marry/robots.
10. Writing skills/ be needed.

## **UNIT 7**

### **Present and Past Simple Passive**



1. The present simple passive form: am/is/are + past participle

Active: The device controls the copy flow.

Passive: The copy flow **is controlled** by the device.

2. We use the passive voice to describe an action when we don't know who does (or did) the action, when it is not important who does (or did) the action and when we are more interested in the action than in the person who does (or did) something:

*The "bold" attribute **is toggled** on and off by pressing this function key.*

3. The past simple passive form: was/were + past participle

Active: The traced the fault to a faulty cable.

Passive: The fault **was traced** to a faulty cable.

You may use **by** if you want to say who did or what caused the action. This program was installed **by** our programmer.

4. When changing a sentence from the active to the passive:

- the object of the active sentence becomes the subject in the passive sentence.

- the active verb changes into a passive form.

- the subject of the active sentence becomes the agent and is either introduced with the preposition **by** or omitted.

- only transitive verbs (i.e. verbs which take an object) can be changed into the passive.

**Active:** *Steve found some defects in the equipment.*(transitive verb)

**Passive:** *Some defects in the equipment were found by Steve.*

**But:** All the customers come from the local area. (The verb "come" is intransitive so the sentence cannot be changed into the passive.)

*Task 1. Put the verbs in brackets into **the Present Simple (active or passive)**:*

1. Hardware is the physical parts the computer ... (to make).

2. Computer programs ... computer programmers (to design).

3. Most programs ...using a programming language like Java and Python (to write).

4. A few programmers ... programs in the computer's own language called machine code (to write).

- 5. A computer is only useful if it ... both hardware and software (to have).
- 6. Computers ... billions of calculations per second (to do).

*Task 2. Put the verbs in brackets into the correct form Past Simple (active or passive):*

- 1. The earliest computer, the abacus, .....to perform basic arithmetic operations (to use).
- 2. First electronic computers ... vacuum tubes (to use).
- 3. The second generation of computers ... about thanks to the invention of the transistor (to come).
- 4. The first transistor computer ... at the University of Manchester in 1953 (to create).
- 5. First microchips-based central processing units ... of multiple microchips for different CPU components (to consist).
- 6. Lights and switches ... by screens and keyboards (to replace).
- 7. The nature of the underlying electronic components ... (not to change).
- 8. Steve Jobs ... what Xerox PARC team had developed (to show).

*Task 3. Change the sentences below from active into passive:*

- 1. The compiler automatically corrects the syntax errors.  
Passive: .....
- 2. This company developed a new brand of screen cleaner.  
Passive: .....
- 3. The operating system uses a metafile to hold data that defines where each file is stored on disk.  
Passive: .....
- 4. They modified the keyboard for European users.  
Passive: .....
- 5. You launch the word processor by double clicking on this icon.  
Passive: .....
- 6. We checked the validity of the password.  
Passive:.....

- 7. This procedure sorts all the files into alphabetical order.  
Passive: .....
- 8. The sales department keeps the information about the company's clients in a database.  
Passive: .....
- 9. The machine monitors each signal as it is sent out.  
Passive: .....
- 10. We completely computerized our stock control.  
Passive: .....

## UNIT 8

### Modal verbs

- 1. Modal verbs (**can, could, may, might, must, ought to, should**) are used to talk about *ability, possibility, obligation, permission, necessity, advice* etc.
- 2. Modals are always the first word in a verb group. All modals except for "ought" are followed by the base form of the verb: *I must leave soon*. But: *She ought to go back to Russia*.
- 3. To make a clause negative, you put a negative word immediately after the modal: *You must not worry*. "Not" is often shortened to "n't": *We couldn't leave earlier*. The negative of **can** is **cannot (can't)**.
- 4. To make a question, you put the modal in front of the subject: *Could you give me an example?*
- 5. Instead of some modal verbs we can use other verbs and expressions: **be able to** instead of **can** (*They will be able to work from home*), **have to** instead of **must** (*I always have to do the checking*)
- 6. We use **can** to talk about ability in the present (*She can speak English*), to ask for smth. (*Can you pass me the documents, please?*), to talk about permission (*You cannot access these files!*)
- 7. We use **could** to talk about past ability (*He couldn't launch a program when he was child*), to ask for permission (*Could I use*

your laptop?), to ask for smth. politely (**Could** you say your name again, please?)

8. We use **must** to talk about obligation and necessity in the present or future (You **must** switch off computers before leaving) . We use

**mustn't** to talk about prohibition (You **mustn't** touch this switch!)

9. We use **should** or **ought to** to give advice and to ask for advice (You **should** study harder if you want to pass the exam.)

10. We use **may** or **might** to talk about things that are possible now or in the future (I **might** not go to work tomorrow)

*Task 1. Translate into Russian paying attention to **modal verbs and similar structures**.*

1. Psychologists now recognize Internet Addiction Syndrome (IAS) as a new illness that might cause serious problems.

2. This illness is not fake, and it must be taken seriously

3. Nowadays you can hardly find an office without a computer.

4. Computer addicts should consult specialists.

5. The problems may increase dramatically.

6. If your PC is infected with a virus, your data can be at risk.

7. I'll have to start again! – I've just erased the only clean copy.

8. The user cannot gain access to the confidential information in the file without a password.

9. Computers can be classified according to their size and complexity.

10. You can't decrypt the message because you don't know the key.

*Task 2. Choose the correct variant:*

1. You *don't have to/ mustn't* touch that. You'll get electrocuted.

2. You *have to/must* visit this website. It's really interesting.

3. You *have to/should* try this new version – it's much more reliable.

4. You *may/must* find all the documents by the time the meeting starts!
5. To be able to work with this new software you *can/should* learn more.

## UNIT 9

### Conditionals

1. Conditional sentences consist of **if-clause** (real or unreal condition) and the **main clause**. We use conditional clauses to talk about a situation and its results.

2. There are three basic types of conditionals:

#### ***Type 1 (real condition)***

(If + present tense), [will+ bare infinitive]

If you **study** harder, you **will pass** the test.

We use this type to talk about things that may happen in the future.

#### ***Type 2 (unreal condition in the present or future)***

(If + past tense), [would+ bare infinitive]

If you **studied** harder, you **would pass** the test.

We use this type to talk about things that are untrue in the present or unlikely to happen in the future.

#### ***Type 3 (unreal condition in the past)***

(If+ past perfect), [would+ have+ past participle]

If you **had studied** harder, you **would have passed** the exam.

We use this type to talk about something in the past that could have happened, but did not or should not have happened, but did.

3. Conditionals can also be introduced by: ***unless, providing, provided (that), as long as, in case, on condition (that), otherwise, what if, supposing, even if***

4. Note the structure: **If I were you, I would(n't) do smth.** It has **were** instead of **was** and is used to give advice.

**If I were you, I wouldn't buy** the latest Apple model.

5. The conditional clause can come before or after the main clause.

When the clause with the conditional linking word (**if, unless, etc.**) is at the beginning of the sentence, there is a comma. When the main clause begins the sentence, there is no comma.

[You will get an electric shock] \_(if you touch that)!

*Task 1. Put the verbs into correct form:*

1. If I had access to the Internet, I.....(do) this work easily.
2. If something..... (go) wrong, the computer will signal you.
3. If I were you, I.....(not/choose) a complex password.
4. If we had known the results beforehand, we.....(not/start) out research.
5. He would have got access to the network if he.....(use) the right password.
6. If I don't finish this work by lunchtime, the boss .....(not/be) pleased.
7. If you press the "delete" key, you.....(delete) the data.
8. If I.....(be) you, I would sent him an e-mail straight away.

*Task 2. Make up your own sentences:*

1. If I had to spend a week without any gadgets, .....
2. If I have more time, .....
3. If he hadn't forgotten the password, .....
4. If I had a well-paid job, .....
5. If my boss asks me to work overtime, .....
6. I would be very upset if.....
7. If I didn't live in Russia, .....
8. If I didn't study English, .....
9. If the Internet hadn't been invented, .....
10. If I were Bill Gates, .....

**UNIT 10**  
**The Gerund and The Infinitive**

1. **The Gerund** is the non-finite form of the Verb. It is formed from the Verb and ends in **-ing**. The Gerund can behave like a **Verb** and a **Noun**.

2. **The Gerund** as a **Noun** can perform the following functions in a sentence: *the subject* (**Reading** is her favorite pastime), *the direct object* (I suggest **postponing** the meeting), *the prepositional object* (after certain prepositions: **of, in, for, by, after, without etc...** I am **proud of working** for this company), *the predicate noun* (Your task is **dealing** with complaints)

3. **The Gerund** is used after certain **verbs and phrases**: *avoid, delay, deny, dislike, enjoy, finish, forgive, give up, keep on, go on, mention, miss, mind, put off, postpone, spend, waste, prevent, recall, quit, suggest, understand, save, stand, admit, consider, appreciate, be busy, can't help, it's no use etc.*

4. **The Gerund** as a **Verb** can take a direct and an indirect **object**, can be modified by an **Adverb** (One of his responsibilities is **maintaining** equipment **regularly**)

5. As a **Verb** the **Gerund** can be used in the **Indefinite (Active and Passive)** and the **Perfect (Active and Passive)** forms:

	<b>Active</b>	<b>Passive</b>	<b>Meaning</b>
<b>Indefinite</b>	Doing	Being done	Refers to the <i>present or future</i> ( <i>She enjoys learning new things</i> )
<b>Perfect</b>	Having done	Having been done	The action of the Gerund happened <i>before</i> the action of the verb ( <i>Having completed the course he got a well-paid</i>

			<i>job</i>
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6. The **to Infinitive** is used:

- as the subject of a sentence (To know foreign languages is important)
- to express purpose (She went to Spain to study Spanish)
- after certain verbs (advise, agree, decide, expect, promise, refuse etc) (She promised to solve the problem)
- after certain adjectives, nouns (I'm very glad to be here. She made an effort to fix it.)
- after question words where, how, what, who, when, which (but not why!) (He doesn't know how to play this game)
- with too and enough (He is too young to study at University. You are skilled enough to do this job)

7. The **Infinitive** without **to** is used:

- after modal verbs (You must be at work before 8)
- after make/let/see/hear/feel+object (They don't let him play computer games every day)

*Task 1. Fill in the gaps using the correct gerund: sending, waiting, signing, buying, reading, going, meeting, arriving. Translate the sentences:*

1. I will call you after ... (прибытие) at the university.
2. I am looking forward to... (встреча) you.
3. Students always dream about ... (пойти) on holiday.
4. My favorite occupation is... (чтение) scientific news.
5. We are interested in ... (покупка) these textbooks.
6. This contract requires.... (подписание).
7. We thank you for..... (пересылка) us new information about your company.



*Task 2. Complete the sentences using either to-Infinitive or Infinitive without to:*

1. First computing machines were used only.....mathematical problems (solve).
2. The help desk technician advised me ..... a new program (install).
3. This option lets you.....text messages (edit).
4. If you don't want to lose all your data you should... the files (save).
5. We are here.....recent developments in computer science (discuss).
6. Has she told you what... .... such mistakes (do, avoid)?
7. Students must be able .... their time in an effective way (organize)
8. She said she was happy.....the news (hear).
9. He showed me what button..... (press).
10. They decided .....part in this experiment (not take).

## ABBREVIATIONS LIST

**ACID** – Automated Classification and Interpretation of Data  
**ATM** – Automatic Teller Machines  
**B2B** – Business-to Business  
**B2C** – Business-to-Consumer  
**B2G** – Business-to-Government  
**CCTV** – Close Circuit Television  
**CEO** – исполнительный директор  
**GDP** – ВВП (внутренний валовый продукт)  
**CIA** – Confidentiality, Integrity and Availability  
**CPU** – Central Processing Unit  
**CSS** – Cascading Style Sheets  
**CTO** – Chief technical officer/Chief technology officer  
**CU** – Control Unit  
**DARPA** – Defense Advanced Research Projects Agency  
**GPS** – Global Positioning System  
**HP** - Hewlett-Packard  
**IAS** – Internet Addiction Syndrome  
**IBM**- International Business Machines  
**ICT** – Information and Communication Technology  
**IS** – Information System  
**IS** - information services  
**IT** – Information Technology  
**JS** – JavaScript  
**LCD** – Liquid-Crystal Display  
**MIS** - management information services  
**MIT** - Massachusetts Institute of Technology  
**MS** - Microsoft Corporation  
**MSP** - managed service providers  
**PC** – Personal Computer  
**PDA** – Personal Digital Assistant  
**PIN** – Personal Identification Number  
**TCP/IP** – Transmission Control Protocol/Internet Protocol  
**UI** – User Interface

**URI** – Universal Resource Identifier

**UX** – User Experience

**WEEE** – Waste Electrical and Electronic Equipment

**Wi-Fi** – Wireless Fidelity

**WWW** – World Wide Web

**Appendix 1:**

**Grammar Revision**  
**SIMPLE TENSES (Active Voice)**

		Present Simple	Past Simple	Future Simple
<b>FORM</b>	<b>Affirmative</b>	V (V+s) she plans we plan	V+ <i>ed</i> V2 she <i>planned</i> we <i>wrote</i>	Shall / will +v she will plan we will plan
	<b>Negative</b>	she does not (doesn't) plan we do not plan	she did not plan we didn't write	she will not / won't plan we will not / won't plan
	<b>Interrogative</b>	Do we plan? Does she plan?	Did we write? Did she plan?	Shall we plan? Will she plan?
<b>USAGE</b>		repeated or usual actions facts or generalizations	action(s) in the past, past habitual action, past facts or generalizations	a voluntary future action a promise a prediction
<b>EXAMPLE</b>		marketing “drives” many of the day-to- day decisions made by operating management	marketing “drove” many of the day-to- day decisions made by operating management	marketing will “drive” many of the day-to-day decisions made by operating management

**Appendix 2:**

# Grammar Revision

## PROGRESSIVE TENSES (Active Voice)

		<b>Present Progressive</b>	<b>Past Progressive</b>	<b>Future Progressive</b>
<b>FORM</b>	<b>Affirmative</b>	am is + Ving are He is planning	was were + Ving He was planning	will + Ving He will be planning
	<b>Negative</b>	He is not planning	He was not planning	He will not / won't be planning
	<b>Interrogative</b>	Is he planning?	Was he planning?	Will he be planning?
<b>USAGE</b>		<ul style="list-style-type: none"> <li>• action in progress "at this very moment" or around it.</li> <li>• near future, particularly plans</li> </ul>	<ul style="list-style-type: none"> <li>• an interrupted action in the past</li> <li>• two past events in parallel</li> </ul>	<ul style="list-style-type: none"> <li>• interrupted action in the future</li> <li>• two parallel actions in the future</li> </ul>
<b>EXAMPLE</b>		<i>They <u>are having</u> a meeting about the catalogue.</i>	<i>We <u>were discussing</u> our expansion plans when he came.</i>	<i>I can't see you on the 12th because I <u>will be attending</u> a training course.</i>

### Appendix 3:

## Grammar Revision

### PERFECT TENSES (Active Voice)

		Present Perfect	Past Perfect	Future Perfect
<b>FORM</b>	<b>Affirmative</b>	have has + Ved/ 3  He has written	had + Ved/ 3  He had written	will have + Ved/ 3 He will have written
	<b>Negative</b>	He has not written	He had not / hadn't written	He will not / won't have written
	<b>Interrogative</b>	Has he written?	Had he written?	Will he have written?
<b>USAGE</b>		<ul style="list-style-type: none"> <li>• unspecified time before now</li> <li>• duration before now</li> </ul>	<ul style="list-style-type: none"> <li>• completed action or duration before something in the past</li> </ul>	<ul style="list-style-type: none"> <li>• completed action or duration before something in the future</li> </ul>
<b>EXAMPLE</b>		<i>They <u>have</u> already <u>discussed</u> this problem</i>	<i>He <u>had</u> <u>completed</u> his experiment by the time his chief came.</i>	<i>I <u>will have</u> <u>taken</u> part in many conferences by 2020.</i>

**Appendix 4:**

# Grammar Revision

## PERFECT PROGRESSIVE TENSES (Active Voice)

		<b>Present Perfect Progressive</b>	<b>Past Perfect Progressive</b>	<b>Future Perfect Progressive</b>
<b>FORM</b>	<b>Affirmative</b>	He has been writing	He had been writing	He will have been writing
	<b>Negative</b>	He has not been writing	He had not been / hadn't been writing	He will not / won't have been writing
	<b>Interrogative</b>	Has he been writing?	Had he been writing?	Will he have been writing?
<b>USAGE</b>		<ul style="list-style-type: none"> <li>• duration from the past until now</li> </ul>	<ul style="list-style-type: none"> <li>• duration before something in the past</li> <li>• cause of something in the past</li> </ul>	<ul style="list-style-type: none"> <li>• duration before something in the future</li> <li>• cause of something in the future</li> </ul>
<b>EXAMPLE</b>		<i>We <u>have been analyzing</u> the results of the experiment since last week (and still are).</i>	<i>I <u>had been solving</u> this problem for a week when I realized I should use another approach.</i>	<i>They <u>will have been testing</u> this material until they get all the necessary data.</i>

**Appendix 5:**

**Grammar Revision**

**PASSIVE VOICE**

	<b>Simple</b>	<b>Progressive</b>	<b>Perfect</b>
<b>Present</b>	am is + V ③ are	am being is being + V ③ are being	have been + V ③ has been
<b>Past</b>	was + V ③ were	was being + V ③ were being	had been + V ③
<b>Future</b>	will be + V ③		will have been + V ③

**Appendix 6:**

**MODAL VERBS**

<b>Functions</b>	<b>ability possibility</b>	<b>obligation</b>	<b>no obligation</b>	<b>advice</b>	<b>speculation</b>
Modal Verbs	can	must have to	needn't	should	may might could

<b>Functions</b>	<b>asking for permission (more polite)</b>	<b>previously arranged plan; obligation resulting from previous arrangement</b>
Modal Verbs	Could	be to



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