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Укладачі: Гончар К. Л., Троцюк А. М., Ясінська О. В.

Рецензенти:

Пилипюк Л. А. – кандидат філологічних наук, доцент кафедри іноземної та української філології Луцького національного технічного університету

Андрієвська В. В. – кандидат філологічних наук, доцент кафедри романської філології Волинського національного університету імені Лесі Українки

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Навчально-методична розробка «English for Information security students» укладена відповідно до вимог робочої навчальної програми курсу «Іноземна мова (англійська) за професійним спрямуванням» для студентів 1-2 курсів факультету інформаційних технологій та математики. Складається з чотирьох змістових модулів. Кожний модуль включає тексти фахового орієнтування та комплекс вправ лексико-граматичного характеру на закріплення фахової лексики.

Призначена для студентів спеціальностей «Кібербезпека», «Комп'ютерні науки та інформаційні технології», «Середня освіта. Інформатика», а також для науковців сфери інформаційних технологій та інформатики, які прагнуть поліпшити знання англійської мови за фахом.

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ПЕРЕДМОВА

Навчально-методична розробка «English for Information security students» призначена для студентів спеціальності «Кібербезпека» та укладена у відповідності до вимог до дійсних робочих програм курсів «Англійська мова за професійним спрямуванням» на факультеті інформаційних систем та математики.

Навчально-методична розробка складається з чотирьох змістових модулів: «The development of computers», «Hardware and Software», «Data processing and computer programming», «Virtual reality». До модулю входить 3-4 основних тексти та цілий комплекс вправ лексичного та комунікативного характеру. Використовуючи підхід, який базується на контенті, автори намагались реалізувати ряд основних засадничих принципів притаманних для нього, як от автентичність навчальних матеріалів (authenticity); обмеженість у використанні мовних структур та тематики текстів (limited/restricted language structures and content); орієнтація на типові професійні ситуації та потреби (professional purpose orientation); особистісна мотивація (self-direction).

Вправи, подані у розділах, спрямовані на формування лінгвістичної та професійної компетенції майбутніх фахівців у сфері інформаційних технологій та інформатики (лексичні вправи на підбір визначення лексичної одиниці, на заповнення пропусків у реченнях; пошук відповідей на поставлені запитання за змістом тексту з розширенням).

Значна увага приділяється засвоєнню студентами граматичного матеріалу. Кожний модуль включає низку граматичних вправ (change the forms of the verbs, select the correct word from the choices in brackets, correct the mistakes in the sentences, fill in the proper form of the suggested verbs, select the correct form of pronouns, select the correct form of prepositions, fill in the correct form of adjectives) спрямованих на вироблення вмінь правильного вживання часових форм, прийменників, прислівників, прикметників, правильної побудови речень у сучасній англійській мові.

Метою навчально-методичної розробки є формування лінгвістично-професійної компетенції студентів як майбутніх фахівців у галузі інформаційних технологій та інформатики. Величезний об'єм опрацьованого матеріалу та широка професійна тематика робить навчально-методичну розробку корисною і для студентів спеціальностей «Комп'ютерні науки та інформаційні технології», «Середня освіта. Інформатика».

MODULE 1

THE DEVELOPMENT OF COMPUTERS

Text 1. PREHISTORY

Basic Vocabulary

screwdriver, <i>n</i> ['skru: ,draɪvə]	викрутка	frame, <i>n</i> [freɪm]	схема, система, рамка
tool, <i>n</i>	інструмент	persist, <i>v</i> [pə'sɪst]	зберігатися
invention, <i>n</i> [ɪn'venʃ(ə)n]	винахід	groove, <i>v</i> [gru:v]	виймка
fossil, <i>adj</i> ['fɒs(ə)l]	застарілий, допотопний	pebble, <i>n</i> ['pebl]	галька, бруковий камінь
ancestor, <i>n</i> ['ænsəstə]	предок	weave, <i>v</i> [wi:v]	плести
evolve, <i>v</i> [ɪ'vɒlv]	розвиватись	virtue, <i>n</i> ['vɜ:tju:]	доброчесність
manual dexterity ['mænjuəl dek'sterətɪ]	спритність	(un)reliable, <i>adj</i> [(,ʌn)rɪ'laɪəbl]	(не)надійний
brute, <i>adj</i> [bru:t]	рук грубий, нерозумний	(in)sufficient, <i>adj</i> [(,ɪn)sə'fɪʃ(ə)nt]	(не)достатній (не)компетентний
inherit, <i>v</i> [ɪn'herɪt]	наслідувати, успадковувати	decorative, <i>adj</i> ['dek(ə)rətɪv]	декоративний
transmit, <i>v</i> [trænz'mɪt]	передавати	precision, <i>n</i> [prɪ'sɪʒn]	точність, акуратність
preserve, <i>v</i> [prɪ'zɜ:v]	зберігати	loom, <i>n</i> [lu:m]	ткацький верстат
distort, <i>v</i> [dɪ'stɔ:t]	викривати	trace back	брати початок від
abacus, <i>n</i> ['æbəkəs]	рахівниця	come into wide-	виходити у широ-
forerunner, <i>n</i> ['fɔ: ,rʌnə]	попередник	spread use	ке використання

Tools are any objects other than the parts of our own bodies that we use to help us do our work. Technology is nothing more than the use of tools. When you use a **screwdriver**, a hammer, or an axe, you are using technology just as much as when you use an automobile, a television set, or a computer.

We tend to think of technology as a human **invention**. But the reverse is closer to the truth. Stone tools found along with **fossils** show that our ape-like **ancestors** were already putting technology to use. Anthropologists speculate that using tools may have helped these creatures **evolve** into human beings; in a tool-using society, **manual dexterity** and intelligence count for more than **brute** strength. The clever rather than the strong **inherited** the earth.

Most of the tools we have invented have aided our bodies rather than our minds. These tools help us lift and move and cut and shape. Only quite recently, for the most part, have we developed tools to aid our minds as well.

The tools of communication, from pencil and paper to television, are designed to serve our minds. These devices **transmit** information or **preserve** it, but they do not modify it in any way (if the information is modified, this is considered a defect rather than a **virtue**, as when a defective radio **distorts** the music we're trying to hear.)

Our interest lies with machines that classify and modify information rather than merely transmitting it or preserving it. The machines that do this are the computers and the calculators, the so-called mind tools. The widespread use of machines for information processing is a modern development. But simple examples of information-processing machines can be **traced back** to ancient times. The following are some of the more important **forerunners** of the computer.

The Abacus. The abacus is the counting **frame** that was the most widely used device for doing arithmetic in ancient times and whose use **persisted** into modern times in the Orient. Early versions of the abacus consisted of a board with **grooves** in which **pebbles** could slide. The Latin word for pebbles is calculus, from which we get the words abacus and calculate.

Mechanical Calculators. In the seventeenth century, calculators more sophisticated than the abacus began to appear. Although a number of people contributed to their development, Blaise Pascal (French mathematician and philosopher) and Wilhelm von Leibniz (German mathematician, philosopher, and diplomat) usually are singled out as pioneers. The calculators Pascal and Leibniz built were **unreliable**, since the mechanical technology of the time was not capable of manufacturing the parts with **sufficient precision**. As manufacturing techniques improved, mechanical calculators eventually were perfected; they were used widely until they were replaced by electronic calculators in recent times.

The Jacquard Loom. Until modern times, most information-processing machines were designed to do arithmetic. An outstanding exception, however, was Jacquard's automated loom, a machine designed not for hard figures but beautiful

patterns. A Jacquard **loom weaves** cloth containing a **decorative** pattern; the woven pattern is controlled by punched cards. Changing the punched cards changes the pattern the loom weaves. Jacquard loom **came into widespread use** in the early nineteenth century, and their descendants are still used today. The Jacquard loom is the ancestor not only of modern automated machine tools but of the player piano as well.

<http://mini-soft.ru/document/tekst-prehistory>

EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or False? Correct the False statements.

1. The strong will inherit the earth. _____
2. In the beginning was the abacus. _____
3. The forerunner of the computer is the mechanical calculator. _____
4. The punched card is still very important for computers today. _____
5. The calculators Pascal and Leibniz built were reliable. _____
6. The mechanical calculator could multiply and divide as well as add and subtract. _____
7. Babbage invented the Jacquard loom. _____
8. "Beware of programmers who carry screwdrivers". _____

3. Give synonyms for the following words:

To aid, strength, to speculate, nothing more than, to lift, ancestors, to manufacture, to single out, precision, to perfect, in recent times, pattern, to develop, information-processing machine.

4. Give antonyms for the following words:

Descendants, automated machine, exception, virtue, intelligence, to transmit, reliable, sufficient, in the early 10th century, in modern times.

5. Find English equivalents in the text:

Використовувати інструменти, технологія використання; використовувати викрутку; молоток; людський винахід; кам'яні інструменти; мавпоподібні предки; перетворювати в людські істоти; спритність рук; суспільство, яке користується інструментами; груба сила; успадкувати землю; допомагати тілу; піднімати, рухати, різати та виготовляти (надавати форму); передавати інформацію; зберігати інформацію; коректувати інформацію; брати початок від

давніх часів; попередники комп'ютера; рахівниця; прилад, який широко застосовують; зберігалось в сучасні часи; перші версії; дошка з виїмками; робити внесок в розвиток; ненадійний; достатня точність; автоматизований ткацький верстат; плести одяг; починати широке використання.

6. Fill in the blanks with the necessary words:

abacus	tools	traces back	ancestor	precision	loom
technology	ancient	pebbles	contributed	grooves	lift
invented	move	unreliable	came into widespread use		cut
preserve	shape	transmit	the so-called mind tools		

1. We use _____ to help us to do our work. 2. The use of tools is nothing more than _____. 3. People _____ most of the tools. 4. The tools help people _____, _____, _____ and _____. 5. The tools of communication _____ and _____ information. 6. _____ are the computers and calculators. 7. The appearance of information-processing machines _____ to ancient times. 8. The _____ was a device used for arithmetic in _____ times. 9. A board with _____ in which _____ could slide is an early version of the _____. 10. Blaise Pascal and Wilhelm von Leibniz _____ to the development of calculators. 11. The first calculators were _____. 12. In the first calculators the parts weren't manufactured with sufficient _____. 13. Jacquard's automated _____ was designed for beautiful patterns. 14. Jacquard looms _____ in the early 19th century. 15. The Jacquard loom is the _____ not only of modern automated machine tools but of the player piano as well.

7. Answer the following questions on the text:

1. What are tools? 2. What was the first tool? 3. What helped ape-like creatures evolve into human beings? 4. What is technology? 5. What tools of communication do you know? 6. What machines classify and modify information? 7. What do you know about Babbage, Pascal, Leibniz, and Jacquard?

8. Retell the text using your active vocabulary.

9. Read the text and fill in the missing words from the box:

mathematician	calculating machine	memory capacitors	mechanic
addition	binary arithmetic	advantage	algorithm
device	engine	analytical	division

The first man to create a _____ was the French scientist Blaise Pascal (1623-1662). He built this _____ called Pascaline when he was only 19 years old. It was entirely _____, the operations it supported were only _____ and subtraction.

Thirty years later German _____ Gottfried Wilhelm von Leibniz designed a calculating machine called the Step Reckoner.

For 150 years there wasn't much progress in calculating machine design, until mathematician Charles Babbage (1792-1871) constructed his difference _____ which had only two operations just like the Blaise Pascal's machine. Because the difference engine calculated only one _____ Charles got bored with it and decided to make another machine which was the _____ engine which had multiplication and _____ too. The _____ of this engine was that it could do many different algorithms. Babbage is considered as "father of the computer".

Next in the series mechanic computers were the machines designed by Konrad Zuse, John Atanasoff and George Stibbitz. Especially interesting was the Atanasoff machine which used _____ and had _____ similar to the DRAM chips.

10. Are the statements True or False? Correct any false statements.

1. The first man to create a calculating machine was the German mathematician Gottfried Wilhelm von Leibniz. _____
2. The operation it supported was only addition. _____
3. Gottfried Wilhelm von Leibniz designed a calculating machine called the Step Reckoner. _____
4. For 150 years there was great progress in calculating machine design. _____
5. The engine constructed by Charles Babbage could do many different algorithms. _____
6. Konrad Zuse is considered as "father of

the computer”. _____ 7. The Atanasoff machine used binary arithmetic and had memory capacitors. _____

11. Answer the questions on the text.

1. Who was the first man to create a calculating machine? 2. What kind of machine was it? 3. What operations did it support? 4. What did Charles Babbage construct? 5. What did the devices have in common? 6. What operations did analytical engine support? 7. What was the advantage of the engine? 8. Why was the Atanasoff machine interesting?

Text 2. COMPUTERS IN MODERN LIFE

Basic Vocabulary

multi-purpose tools	багатоцільові інструменти	computer	комп'ютерна
download	завантажувати	addiction	залежність
keep on one device	зберігати на одному пристрої	affordable	доступний
reduce distance	скоротити відстань	electronic	електронні
interactive whiteboard	інтерактивна дошка	waste	відходи
assistive technology	допоміжні технології	cybercrime	кіберзлочин
screen reader	програма зчитування з екрану	technological	технологічна
IT applications	ІТ-додатки	dependence	залежність
head-mounted display	дисплей на голові	efficient	ефективний
book tickets on the special websites	бронювати квитки на спеціальних вебсайтах	loss of privacy	втрата приватного життя (конфіденційності)
		wireless network	бездротова мережа
		unauthorized use	несанкціоноване використання

Computer is one of the best inventions of the 20th century. People who have grown up with PCs and microchips are often called the digital generation. These devices are **multi-purpose tools** and many of us can't imagine live without them. In the past people couldn't even imagine that letters would be delivered instantly to the addressee, music can be **downloaded** in a few seconds, millions of documents can be **kept on one device**, the quality of photos can be easily improved, video calls can **reduce distance** between friends and relatives.

It is obvious that people can do a lot of things with the help of this multitask invention. Those who drive a car often use a **GPS, Global Positioning System**. With this navigation system you never get lost. Teachers at school use an **interactive whiteboard** – a large touchscreen monitor which is very useful in education. **Assistive technology** helps a lot for people with disabilities. Those who can hardly see use a **screen reader**, a program that reads aloud onscreen texts, menus and icons. **HMD, head-mounted display**, allows us to watch films and enjoy virtual reality, the artificial environment of the latest video games. Communication is becoming easier with **wireless network** which can connect laptops, PDAs (Personal Digital Assistant) and Wi-Fi cell phones to the network all over the world.

Furthermore, all civilized people become accustomed to **making purchases** of goods and services with the help of computers. They buy gadgets, and clothes in the internet shops, reserve hotels and **book tickets on the specialized websites**, receive money for doing some job on the internet platforms. All that can be done at home from a desktop computer or from a smartphone, iPad or tablet. All these gadgets are **affordable** for a big number of people on the planet. Internet services are mainly unified and easy for use.

All the above-mentioned examples show the advantages of computers, but there are some drawbacks as well. First of all, spending a lot of time in front of the computer results in **computer addiction**, an inappropriate and excessive use of computers. Secondly, computers produce **electronic waste**, plastic cases and microchips that are not biodegradable and have to be recycled or just thrown away. Thirdly, our society has developed **technological dependence**. When computers are down, our way of life breaks down: planes stop flying, telephones don't work, banks have to close. In addition, crime committed with the help of computers (**cybercrime**) is creating serious problems. Finally, citizens may feel a **loss of privacy** because of **unauthorized use** of personal data or receiving unwanted electronic messages.

To sum up, computers make people's life tense and hectic. However, computers and **IT applications** provide global communication, advanced business opportunities

and an immediate access to information. Modern world cannot **be efficient** without all these conveniences.

EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or false? Correct the false statements.

1. People who can imagine live without computers are called the digital generation. _____ 2. Those who drive a car often use head-mounted display. _____ 3. Assistive technology helps people with disabilities. _____ 4. A screen reader is a program that reads aloud onscreen texts, menus and icons. _____ 5. Spending a lot of time in front of the computer results in technological dependence. _____ 6. When computers are down, our way of life breaks down. _____ 7. Internet services are not easy for use. _____ 8. Citizens may feel a loss of privacy because of authorized use of personal data. _____

3. Match the words of column A and column B to form word combination.

A	B	
screen	navigation	_____
head-mounted	whiteboard	_____
interactive	display	_____
GPS	recorder	_____
DVD	reader	_____

4. Complete these sentences with word combinations from the previous exercise.

1. The _____ is a piece of software that interfaces with your PC and allow you, via keyboard commands, to get any text information read to you in synthetic speech. 2. A _____, as popularized by virtual reality, lets the user immerse him/herself in a synthetically generated environment. 3. An _____ is a touch-sensitive device where a special pen or your finger can act as a mouse. 4. Tony Adams is now the proud owner of a dark silver Vogue, complete with leather interior, _____, and a _____ with LCD TV screens.

5. What problem do these sentences refer to?

1. We are sorry to announce that most flights are delayed or cancelled. _____
2. He should go to a psychologist. He spends hours surfing the Web. _____
3. Technology changes so quickly that we have to scrap computers when they become obsolete. _____
4. I've been getting emails about offers for lots of different products. _____
5. My computer system has been broken into and some useful information has been destroyed. _____

6. Give synonyms for the following words:

device (n), imagine (v), instantly (adv), keep (v), education (n), assist (v), enjoy (v), connect (v), reserve (v), affordable (adj), addiction (n).

7. Give antonyms for the following words:

artificial (adv), connect (v), drawback (n), privacy (n), authorized (adj), efficient (adj), convenience (n), reduce (v).

8. Retell the text using your active vocabulary.

9. Read the text about things we can do on the computer.

A secretary uses computers to do the usual office things like write letters and faxes, but what she finds really useful is email. In an international company she can send emails to the offices all over the world.

A publisher uses PCs to produce all sorts of texts in digital format. He publishes e-books and interactive e-learning programs on CL, and helps a local company to design an online newspaper, displayed on the Web.

A bank manager uses financial software to make calculations and then generate graphs or charts. He also uses a database to store information so that it can be easily searched.

Home users like to retouch photos on their computers. They improve photos by making a few touches and then save them on a CD. They can also enjoy looking at music portals on the Web. Surfing the Web every day they often download files, copy music files from the Net to their PCs.

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.

Travel agents use computers to find out about the availability of flights, prices, times, stopovers and many other details.

10. Some words often appear together in IT. Complete these computer uses according to the headlines:

1. Publishing: design _____, publish _____
2. Banks: _____ calculations, store _____
3. Home: _____ the Web, download _____, _____ photos
4. Offices: write _____ and _____, _____ emails.
5. Controlling air traffic: control _____, display data about _____
_____ and weather _____. Computers are used to manage
_____ system and _____ air _____.
6. Tourism: to find out about the _____ of flights, _____, _____,
stopovers and _____.

11. Discuss what computers can do in each of the following areas: Industrial processes, Medicine, Entertainment, Workstations in the race buses.

Useful words:

Industrial processes: machinery, robot, production line, computer-aided manufacturing software

Medicine: patients, medical personnel, database program, records, scanner, diagnose, disease, robot, surgery

Entertainment: game, music, animated image, multimedia, encyclopedia

Useful constructions:

Computers are used to ...

A PC can also be used for ...

Computers can help ... make ... control ... store ... keep ... provide ... manage ... give
... perform ... measure ... test... provide access to ...

12. Look at the words in the box. Are they nouns, verbs or adjectives?

financial	Internet	electronic	print	design	microchips
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13. Match the words in exercise 12 with the following definitions.

1. Tiny pieces of silicon containing complex electronic circuits. _____
2. To make or draw plans for something. _____
3. Relating to money or how money is managed. _____
4. Involving the use of electric current in devices such as TV sets or computers. _____
5. The large system of connected computers around the world. _____
6. To produce text and pictures using printer _____

14. Complete the text “A digital era” with words from exercise 12.

A digital era

Computers have changed the way we do everyday things, such as working, shopping and looking for information. We (1) _____ houses with the help of PCs; we buy books or make flight reservations on the (2) _____; we use gadgets that spring to life the instant they are switched on, for example the mobile phone, the music player, or the car ignition, all of which use (3) _____. Many people now work at home, and they communicate with their office by computer and telephone. This is called ‘teleworking’.

With the appropriate hardware and software, a PC can do almost anything you ask. It’s a magical typewriter that allows you to type and (4) _____ any sort of document. It’s calculating machine that makes (5) _____ calculations. It’s a filing cabinet that manages large collections of data. It’s a personal communicator that lets you interact with friends. It’s a small lab that helps you edit photos and movies. And if you like (6) _____ entertainment, you can also use it to relax with games.

Text 3. TYPES OF COMPUTERS

Basic Vocabulary

come across	наштовхнутися	on the basis of	на основі
range, <i>v</i>	варіюватися	bulk, <i>n</i>	велика кількість
laptop, <i>n</i>	невеликий портативний комп'ютер	mathematical computations	математичні обчислення
palmtop, <i>n</i>	кишеньковий комп'ютер	expectation, <i>n</i>	очікування, сподівання
counterpart, <i>n</i>	аналог; еквівалент	permanent, <i>adj</i>	постійний
desktop, <i>n</i>	настільний комп'ютер	trackball, <i>n</i>	трекбол-миша
to set up, <i>v</i>	встановлювати	form factor	форм-фактор
simultaneously	одночасно	workstation, <i>n</i>	персональний комп'ютер
precise results	точні результати	versatility, <i>n</i>	універсальність, маневреність
lightweight, <i>adj</i>	легкий, нижче середньої ваги	interact, <i>v</i>	взаємодіяти
large-scale, <i>adj</i>	великомасштабний; у великих розмірах		
apart from this	крім того		
unwieldy, <i>adj</i>	громіздкий		

The types of computers **range** from the Hybrid to the Analogue types. The computers you **come across** in the daily course of your day range from **laptops**, **palmtops**, to **desktop** computers, to name a few. But the very word “computers” reminds one of the desktop computers used in offices or homes. Different categories of computers have been devised in keeping with our varied needs.

According to the classification based on operational principle there are two types of computers: analogue and hybrid.

The Analogue computer is almost an extinct type of computer these days. It is different from a digital computer in respect that it can perform numerous mathematical operations **simultaneously**. It is also unique in terms of operation as it utilizes continuous variables for the purpose of mathematical computation. It utilizes mechanical, hydraulic, or electrical energy or operation.

Hybrid computers are a combination of both Analogue and Digital computers. The Digital computers which work on the principle of binary digit system of “0” and “1” can give very **precise results**. But the problem is that they are too slow and incapable of **large-scale** mathematical operation. In the hybrid types of computers, the

Digital **counterparts** convert the analogue signals to perform Robotics and Process control. **Apart from this**, computers are also categorized **on the basis of** physical structures and the purpose of their use. Based on capacity, speed and reliability they can be divided into three categories of computers:

1. The Mainframe Computer – these are computers used by large organizations like meteorological surveys and statistical institutes for performing **bulk mathematical computations**. They are core computers which are used for desktop functions of over one hundred people simultaneously.

2. The Microcomputer – these are the most frequently used computers better known by the name of “personal computers”. This is type of computer meant for public use. Other than Desktop Computer the choice ranges as follows:

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

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

Palmtops, more commonly known as Personal Digital Assistants (PDAs), are tightly integrated computers that often use flash memory instead of a hard drive for storage. These computers usually do not have keyboards but rely on touchscreen technology for user input. Palmtops are typically smaller than a paperback novel, very **lightweight** with a reasonable battery life. A slightly larger and heavier version of the palmtop is the handheld computer.

A tablet PC is a notebook or slate-shaped mobile computer, first introduced by Pen Computing in the early 90s with their PenGo Tablet Computer and popularized by Microsoft. Its touchscreen or graphics tablet/screen hybrid technology allows the user to operate the computer with a stylus or digital pen, or a fingertip, instead of a keyboard or mouse. The **form factor** offers a more mobile way to **interact** with a computer.

Tablet PCs are often used where normal notebook are impractical or **unwieldy**, or do not provide the needed functionality.

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

3. Mini computers like the mainframe computers are used by business organizations. The difference being that it can support the simultaneous working of up to 100 users and is usually maintained in business organizations for the maintenance of accounts and finances.

Yet another category of computer is the Super Computers. It is somewhat similar to mainframe computers and is used in economic forecasts and engineering designs. Today life without computers is inconceivable. Usage of different types of computers has made life both smooth and fast paced.

EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or False? Correct the False statements.

1. The very word “computers” reminds one of the palmtop computers used in offices or homes. _____ 2. The hybrid computer is almost an extinct type of computer these days. _____ 3. There is no difference between the analogue and digital computers. _____ 4. Digital computers utilize mechanical, hydraulic, or electrical energy or operation. _____ 5. Digital computers work on the principle of binary digit system of “0” and “1”. _____ 6. Digital computers are too fast and capable of large-scale mathematical operations. _____ 7. The Microcomputers are computers used by large organizations for performing bulk mathematical computations. _____ 8. Most desktops offer more power, storage and versatility for less cost than their portable brethren. _____ 9. Laptops usually do not have keyboards but rely on touchscreen technology for user input. _____ 10. A tablet PC was first introduced by Pen Computing in the early 80s. _____ 11. Mini computers cannot support the simultaneous working of up to 100 users. _____

3. Give synonyms for the following words:

range (v), devise (v), varied (adj), unique (adj), utilize (v), purpose (n), precise (adj), problem (n), convert (v), categorize (v), survey (n), core (n), frequently (adv), location (n), offer (v), provide (v), additional (adj), enhance (v).

4. Give antonyms for the following words:

different (adj), variable (n), slow (adj), incapable (adj), permanent (adj), integrate (v), input (n), impractical (adj), difference (n), inconceivable (adj), smooth (adj).

5. Give Ukrainian equivalents for the following words and word combinations from the text:

To range from ... to; to come across; to devise computers; to be based on; an extinct type of computer; in respect; to perform numerous operations simultaneously; to utilize variables; to work on the binary digit system; to give precise results; to be incapable of; Mainframe Computer; meteorological surveys; to offer more power, storage and versatility; portable brethren; a pointing device or trackball; to rely on touchscreen technology; to operate the computer with a stylus or digital pen; to be similar to; to be inconceivable.

6. Match the words and phrases to form nominal and verbal word combinations:

- | | |
|-----------------------------|--------------------------------------|
| 1. a combination of both | a) operational principle |
| 2. to name | b) mobile computer |
| 3. classification based on | c) analogue and digital computers |
| 4. categorized on the basis | d) forecasts and engineering designs |
| 5. The expectation | e) with desktop systems |
| 6. rely on touchscreen | f) accounts and finances |
| 7. slate-shaped | g) a few |
| 8. not to provide | h) the needed functionality |
| 9. for the maintenance of | i) technology for user input |
| 10. used in economic | j) of physical structures |

7. Which type of computer do these descriptions refer to?

1. a hand-held computer which can be used as a telephone, a web explorer and a personal organizer _____
2. a typical computer found in many businesses and popular for home use _____
3. a large computer used for intensive data processing and often linked to many terminals _____
4. a small computer that fits into items of clothing _____
5. a portable computer that can be closed up like a briefcase, but it can be as powerful as a desktop PC _____
6. a full-function PC, though it only weighs 1.2 kg – you can go to a meeting and write your notes on it, like a paper notepad _____

8. Translate into English:

1. Типи комп'ютерів варіюються від гібридних до аналогових. 2. Відповідно до наших різноманітних потреб були розроблені різні категорії комп'ютерів. 3. Аналоговий комп'ютер виходить з ужитку в наші дні. 4. Аналоговий комп'ютер використовує безперервні змінні для математичного обчислення. 5. Цифрові комп'ютери занадто повільні і нездатні до масштабних математичних операцій. 6. Мікрокомп'ютер більш відомий під назвою "персональний комп'ютер". 7. Планшетні ПК часто використовуються тоді, коли звичайний ноутбук непрактичний, або громіздкий, або не забезпечує необхідну функціональність. 8. Міні-комп'ютери використовуються бізнес-організаціями. 9. Сьогодні життя без комп'ютерів немислиме. 10. Я працюю в міжнародній компанії і часто користуюся електронною поштою. Завдяки електронній пошті я можу дуже ефективно спілкуватися з офісами по всьому світу.

9. Answer the following questions on the text:

1. What types of computers do you come across in the daily course of your day?
2. What types of computers are there according to the classification based on operational principle?
3. What computer is considered an extinct one these days?
4. What is the difference between analogue and hybrid computers?
5. Why is the

analogue computer unique in terms of operation? 6. What kind of computers are hybrid? 7. What principle do digital computers work on? 8. How else can computers be categorized? 9. What are mainframe computers used for? 10. What are the features of desktops? 11. What do laptops integrate? 12. What are characteristic features of palmtops? 13. When was a tablet PC first introduced? 14. What does the touchscreen technology of a tablet PC allow the user to do? 15. What is a workstation? 16. What is the difference between mini computers and the mainframe computers?

10. Retell the text using your active vocabulary.

Text 4. PERSONAL COMPUTERS

Active vocabulary

suppose [sə'pəʊz]	припускати, гадати	hobbyist ['hɒbiist]	людина, захоп- лена своїм хобі
competitive [kəm'petitiv]	конкурентний, конкуруючий	cathode-ray	електронно- променевиий
online/offline storage	онлайн/офлайн сховище	hard-copy output	друкований продукт
enter ['entə]	входити	fray [frei]	сутичка, бійка
survive [sə'vaiv]	пережити, вцілити, зберігатися	stand-alone system	автономна система
onslaught ['ɒnslɔ:t]	стрімка атака, натиск, напад	plug in	підключати (у мережу)

Personal computers are **supposed** to appear in the late 1970s. One of the first and most popular personal computers was the Apple II, introduced in 1977 by Apple Computer. During the late 1970s and early 1980s, new models and **competitive** operating systems seemed to appear daily. Then, in 1981, IBM **entered** the **fray** with its first personal computer, known as the IBM PC. The IBM PC quickly became the personal computer of choice, and most other personal computer manufacturers fell by the way-side. One of the few companies to **survive** IBM's **onslaught** was Apple Computer, which is sure to remain a major player in the personal computer marketplace. In less than a decade the microcomputer has been transformed from a calculator and **hobbyist's** toy into a personal computer for almost everyone.

What is a personal computer? How can this device be characterized?

- First, a personal computer being microprocessor-based, its central processing unit, called a microprocessor unit, or MPU, is concentrated on a single silicon chip.
- Second, a PC has a memory and word size that are smaller than those of minicomputers and large computers. Typical word sizes are 8 or 16 bits, and main memories range in size from 16 K to 512 K.
- Third, a personal computer uses smaller, less expensive and less powerful input, output and storage components than do large computer systems. Most often, input is by means of a keyboard, soft-copy output being displayed on a **cathode-ray** tube screen. **Hard-copy output** is produced on a low-speed character printer.
- A PC employs card readers as the principal **online** and **offline storage** devices and also as input and output media.
- Finally, a PC is a general-purpose, **stand-alone system** that can begin to work when **plugged in** and be moved from place to place.

Probably the most distinguishing feature of a personal computer is that it is used by an individual, usually in an interactive mode. Regardless of the purpose for which it is used, either for leisure activities in the home or for business applications in the office, we can consider it to be a personal computer.

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EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*

2. Are the statements true or false? Correct any false statements.

1. Personal computers are supposed to appear in the early 1980s. _____
2. New models and competitive operating systems seemed to appear daily. _____
3. IBM entered the fray with its first personal computer in 1990. _____
4. Apple Computer is sure to remain a major player in the personal computer marketplace. _____
5. A PC has a memory and word size that are larger than those of minicomputers. _____
6. A personal computer uses larger, more expensive and powerful input, output and storage

components than do large computer systems. _____ 7. A PC employs card readers as the principal online and offline storage devices and also as input and output media. _____ 8. The most distinguishing feature of a personal computer is that it cannot be used by an individual. _____

3. Give synonyms for the following words:

enter (v), suppose (v), personal (adj), appear (v), fray (n), manufacturer (n), survive (v), transform (v), principal (adj), concentrate on (v), plug in (v).

4. Give antonyms for the following words:

expensive (adj), powerful (adj), soft-copy (n), low-speed (adj), offline storage device, enter (v), appear (v).

5. In the text, find English equivalents for the following word combinations:

Конкуруюча операційна система; з'являтися щодня; вплутатися в бійку; кращий комп'ютер; залишитися в стороні; витримати конкуренцію; головний постачальник на комп'ютерному ринку; іграшка для любителя; мікро-процесорний; цілісний кристал (мікросхема) з кремнію; розмір слова; компоненти меншої потужності; за допомогою; вивести на екран; низько-швидкісний символний принтер; використовувати гнучкі диски; прилади (не) автономного зберігання даних; універсальний; автономна система; відмінна риса; інтерактивний режим; незалежно від мети; дозволя.

6. Answer the questions on the text:

1. When did the first personal computer appear? 2. What was one of the first PC model? 3. What is a personal computer? 4. What are the four main characteristics of a PC? 5. What does the term "microprocessor-based" mean? 6. What are the typical word sizes of a PC? 7. How is input carried out in personal computers? 8. What principle storage devices do PC use? 9. What kind of a system is a PC? 10. What differs personal computers from large computer systems?

7. Fill in the gaps in this paragraph with the words from the box.

help	play	internet	calculations	schedule
type	look after	transfers	computer	connect

Each member of the Browns family can't imagine a day without _____. Their son Michael uses the personal computer to _____ with the homework and to _____ the computer games. Their daughter Katherine studies languages and the computer gives her an opportunity to _____ with other language-learners all over the world. On the _____ she easily finds the books or the articles she wants to read as quickly as possible. The computer enables their father to _____ his customers' money, to do any _____ and money _____ all over the world. As you understand, Mr. Brown is a serious person, he is a bank manager. And what about Mrs. Brown? She is a doctor and her computer allows her to connect with the hospital's main computer, to _____ in orders, for example, for blood tests and to _____ operations.

8. a) Read the text about Bill Gates.

There are few people in the world who have never heard the name of Bill Gates. A multi-billionaire who became several million dollars richer every day. The chairman of Microsoft. How has he made it?

A boy from Seattle had three qualities important for success in the computer business: an enthusiasm for computers, a good commercial sense, and a quick dynamic mind. Computers first fascinated him when he was at school. This interest deepened at Harvard University where he was a brilliant student. That was at this university that he developed "Basic", the early language for personal computers. Even before finishing his studies, Bill understood that the university could not be a source of new ideas and prospects for him. So, he left without graduating and went into business.

First, he worked for other people, but soon he founded his own company, Microsoft. Buying a smaller company that had developed the DOS system, he changed that system and called it MS-DOS. The right to use MS-DOS was sold to IBM, and since then MS-DOS has become a basic operating system for personal computers. Microsoft has developed a lot of other software products known and used all over the

world. Windows and Excel are probably the best examples. Microsoft is the strongest company on the software market.

b) Answer the questions about Bill Gates' career:

1. What American city is Bill Gates from?
2. What personal qualities helped him to succeed in the world of computers?
3. When did computers first fascinate him?
4. At which university did he study? Did he graduate from the university?
5. What computer language did he develop at the university?
6. What is the basic operating system of personal computers? Who developed it?
7. What Microsoft software products are known and used all over the world?

Speaking:

Talk about a useful application of computer that you had a personal experience with, please say: How did you do this? Was it difficult for you? Has anyone helped you?

GRAMMAR

1. Put in *a / an* or *the*. Sometimes you don't need either word – you leave it blank.

1. There was _____ waiter standing at _____ entrance of _____ restaurant. I ordered him _____ glass of _____ vodka with some juice in it.
2. There was _____ question I wanted to ask _____ biology teacher about _____ kangaroo. She had said _____ kangaroo carried her baby in _____ kind of bag in _____ front part of _____ her body. I wanted to know how many baby kangaroos it could carry at _____ time.
3. "Is that your wife?" "No, my wife's _____ woman in _____ red dress."
4. I work with _____ man and two women. _____ man is quite nice, but _____ women are not very friendly.
5. What's in _____ newspaper?
6. Can you show me _____ that book, please?
7. What's _____ name of _____ woman in _____ blue dress?
8. _____ water turns into _____ ice at 0 degree C.
9. I like _____ steak, but I don't like _____ eggs.
10. She lives in _____ nice flat on _____ fifth floor of _____ old house.
11. It's terrible - _____ eggs are \$ 2 _____ dozen.
12. There was _____ boy and _____ girl in the room. _____ boy was Japanese but _____ girl looked foreign. She was

wearing ____ fur coat. 13. This morning I bought ____ newspaper and ____ magazine. ____ newspaper is in my bag but I don't know where ____ magazine is. 14. "Have you got ____ car?" - "No, I've never had ____ car in my life." 15. We don't go to ____ cinema very much these days. In fact, in ____ town where we live there isn't ____ cinema. 16. Don't stay in that hotel. ____ beds are very uncomfortable. 17. After I leave ____ school, I want to go to ____ university.

2. Insert the right article (a/an/the) if necessary.

1. Do you still live in ____ Bristol? 2. Carol's father works as ____ electrician. 3. After this tour you have ____ whole afternoon free to explore the city. 4. The tomatoes are 99 pence ____ kilo. 5. My grandmother likes ____ flowers very much. 6. I always listen to the radio in ____ morning. 7. What about going to Australia in ____ February? 8. There is ____ new English book on the desk. 9. Loch Ness is ____ most famous lake in Scotland. 10. Peter has ____ aunt in Berlin. 11. Look! There's ____ bird flying. 12. ____ most children like sweets. 13. Great Britain consists of ____ three parts. 14. We celebrate New Year on ____ 31st of December. 15. Last year I gave my mother ____ bracelet for her birthday. 16. Britain is ____ island. 17. What is ____ name of this village? 18. Montreal is a large city in ____ Canada. 19. When I went to Milan, I stayed with ____ Italian friend of mine. 20. Tom is in ____ bathroom. He's having a bath.

3. Make following nouns plural.

1. Postcard. 2. Dish. 3. Watch. 4. Box. 5. Potato. 6. Man. 7. Child. 8. Foot. 9. Sheep. 10. Country.

4. Use following sentences in the plural form.

1. This is my foot. 2. Is this an ox? – No? it isn't. 3. That lady doesn't play the piano. 4. This wolf is eating a sheep. 5. This hobby is not bad. 6. Is this a mouse? 7. This child is looking at the falling leaf. 8. This man is doctor. 9. This deer lives in the forest. 10. I like this tomato.

5. Define whether these nouns countable or uncountable.

1. water ___ 2. fruit ___ 3. coconut ___ 4. bread ___ 5. DVD ___ 6. meat ___ 7. ball ___
8. snack ___ 9. glasses ___ 10. pen ___ 11. milk ___ 12. chair ___ 13. gasoline ___
14. table ___ 15. cream ___ 16. money ___ 17. oil ___ 18. insect ___ 19. sofa ___ 20. yogurt ___
21. school ___ 22. bus ___ 23. food ___ 24. chocolate ___ 25. ship ___.

6. Fill in the blank spaces with some, any, no.

1. Can you see _____ cars in front of the restaurant? No, _____ cars.
2. Have you got _____ cold juice in the fridge? Yes, I have got _____.
3. We'd like _____ crisps. Are there _____? – I'm sorry. There are _____ crisps today.
4. I'd like _____ chocolate but there isn't _____.
5. We'd like _____ bread but there is _____ butter. 6. We'd like hamburgers. Are there _____?
7. Is there much cheese on the plate? – No, there isn't _____ cheese.
8. Have you got _____ CDs? – No, I haven't _____ but I've got _____ DVDs.
9. Have you got _____ money? – No, I've got _____ money.
10. There are _____ good films on TV tonight. Shall we listen to the radio?
11. Have they got _____ children? – No, they haven't got _____ but they've got _____ nephews.

7. Fill in the blanks with many, much, a lot of or lots of.

1. We don't have _____ bread, so we'll have to buy some. 2. There aren't _____ students in my class. 3. He's very busy; he has _____ work to do.
4. Lisbon has _____ interesting places to visit. 5. I can't buy a new car. I don't have _____ money.
6. Hurry up! We don't have _____ time. 7. Your garden's got _____ pretty flowers.
8. There weren't _____ people at the party. 9. "Do you have _____ friends?" "Not _____, but they're good friends."
10. I think you eat too _____ sugar. 11. He gave me _____ chocolates and nice things.

8. Put the verb 'to be' into the Present Simple.

1. Her mother _____ a doctor. 2. This _____ my house. 3. _____ they at school? – No, they _____ not. They _____ in the yard. 4. My friend _____ an engineer. He _____ at work. 5. These _____ his newspapers. 6. You _____ so cute. 7. She _____ my sister. 8. Where _____ your brother? – He _____ at home. 9. Whose book _____ this? – This book _____ his. 10. These _____ my toys. They _____ new.

The Present Simple

positive sentences: I/We/You/They + V (read) He/She/It + Vs (reads) negative sentences: I/we/you/they do not read He/She/It does not read questions: Do I/we/you/they read? Does he/she/it read?	
Meaning	Example
1. permanent situations or states	She owns a large shop.
2. repeated, habitual actions (especially with often, usually , etc.)	I usually get up at 7.00.
3. permanent truths or laws of nature	Money doesn't buy happiness. Water freezes at 0° C.
4. timetables/program (future meaning)	The plane leaves at 6.45.
5. reviews/sports commentaries, dramatic narrative	Mary acts brilliantly in this film.
Time expressions	<i>Every day/week/month/year, usually, often, always, rarely, never, sometimes, in the morning/evening/afternoon/at night, on Mondays etc.</i>

9. Put the verbs in brackets into the Present Simple. Make each sentence negative and interrogative.

1. He (to live) _____ in Australia. 2. Samantha Harry (to work) _____ here. 3. You always (to finish) _____ your work in time. 4. We (to drink) _____ a lot of tea every day. 5. Alice (to love) _____ sweets. 6. She (to eat) _____ pizza very often. 7. He (to like) _____ listening to traditional music. 8. They (to play) _____ football in the park every weekend. 9. Our teacher always (to give) _____ us a lot of homework. 10. He (to wash) _____ his car every Saturday. 11. They (to receive) _____ the *Guardian*. 12. The boy (to have) _____ a lot of friends to play with.

10. Put the verbs in brackets into the Present Simple.

1. My little sister (to go) _____ to school every day. 2. The sun (to rise) _____ in the East. 3. Bad students never (to work) _____ hard. 4. It often (to snow) _____ in winter. 5. He (to wake) _____ up at seven and (to have) breakfast at half past seven. 6. The teacher (to point) _____ at the blackboard when he (to want) _____ to explain something. 7. Mother always (to cook) _____ in the morning. 8. I (to see) _____ what you mean. 9. She (to say) _____ she (to hear) _____ nothing. 10. There (to be) _____ a girl downstairs who (to want) _____ to see you. 11. My friends (to go) _____ there nearly every week. 12. There (to be) _____ some men digging up the road outside my house. 13. It (to be) _____ usual for him to be late.

The Present Continuous

positive sentences: I am reading he/she/it is reading we/you/they are reading negative sentences: I am not reading he/she/it is not reading we/you/they are not reading questions: Am I reading Is he/she/it reading Are we/you/they reading	
Meaning	Example
1. temporary situations	They are staying at the Park Hotel now.
2. actions happening at or around the time of speaking	She is looking for a better job.
3. repeated actions with “always” expressing annoyance or criticism	She is always interrupting us.
4. fixed arrangements in the near future	The Smiths are visiting us tonight.
5. changing or developing situations	His English is getting better.
Time expressions	<i>Now, at the moment, at present, nowadays, today, tonight, still etc.</i>

11. Put the verb in brackets into the Present Continuous form. Make each sentence negative and interrogative.

1. Please be quiet. I (try) _____ to read my book. 2. I (use) _____ the computer at the moment so you can't use it. 3. Mary is ill so Sue (teach) _____ her lessons today. 4. Excuse me, I (look)

_____ for a hotel. Is there one near here? 5. We (wait) _____ for our friends. 6. Jack, you are very careless. You (always/forget) _____ to do your homework! 7. The cost of living (rise) _____ very fast. Every year things are more expensive. 8. I (clean) _____ my shoes now. 9. They (wear) _____ shorts today. It's so hot today. 10. The neighbours are so noisy! They (argue) _____ loudly.

12. Put the verb into the correct form, the Present Continuous or the Present Simple.

1. I (not/belong) _____ to this particular government committee. 2. Hurry! The bus (come) _____. I (not/want) _____ to miss it. 3. Gregory is a vegetarian. He (not/eat) _____ meat. 4. I (look) _____ for the manager. I can't find him anywhere. 5. We are successful because we (take) _____ the time to talk to our customers. 6. John (deal) _____ with all the enquiries about sales. 7. At the moment we (make) _____ a training video for Siemens. 8. _____ (you/know) _____ what Mr. Brown (do) _____? He is not in his office. 9. I (apply) _____ for a job in the sales department, but I don't know if I will be successful. It (depend) _____ on whether or not they have any vacancies. 10. Unemployment (fall) _____ and is now down to 5.6%. 11. Jane is doing some research in the library. She needs it for a book she (write) _____. 12. While Anna is away on holidays, Matt (work) _____ in her office. 13. He (teach) _____ French and German at University and (learn) _____ Greek. 14. There (be) _____ two flights to Honduras this afternoon. The British Airways flight (leave) _____ at 13:00 and (arrive) _____ at 22:00. 15. Inflation (rise) _____ at a rate of 2% per annum.

13. Put the verb in brackets into the Present Simple or the Present Continuous.

1. She always (remember) _____ my birthday. 2. Mr. Brown (work) _____ in a supermarket. 3. I (work) _____ in this factory until I find a better job. 4. Look! It (snow) _____. 5. Can you hear those girls? What (they/talk) _____ about? 6. (you/know) _____ Helen? 7. We (never/go) _____ to work by tube. It is too busy. 8. When I'm in Paris I (usually/stay) _____ in the Hotel du Pont, but this time I (stay) _____ in the more expensive Hotel Notre Dame. 9. Ruth (be) _____ a vegetarian. She (not/eat) _____ meat or fish. 10. My father (be) _____ an engineer, but he (not/work) _____ right now. 11. (you/believe) _____ in ghosts? 12. My parents (live) _____ in Kyiv. Where (your parents/live) _____? 13. We (own) _____ two cars, an estate car and a sports car. 14. Can you drive? No, but I (learn) _____ at the moment. 15. Look! That woman (try) _____ to steal that man's wallet. 16. The River Nile (flow) _____ into the Mediterranean. 17. (you/like) _____ Bon Jovi? 18. I (get) _____ thirsty. Let's get something to drink. 19. Those flowers (smell) _____ lovely. What are they? 20. Jane (repair) _____ her bike. She _____ (know) exactly what to do.

14. Open the brackets putting the verb into the Present Simple or the Present Continuous Tense:

1. Look at Philip. He (to cross) _____ the street. 2. The bus usually (to stop) _____ here. 3. She (to watch) _____ a lot of TV every night. 4. Alex is busy. He (to study) _____ for a test. 5. Today Frank (to work) _____ late. 6. They always (to have dinner) _____ at two o'clock in the afternoon. 7. He never (to rest) _____ at this time. 8. Where (to be) _____ Helen? – She (to listen) _____ to music upstairs. 9. They (to be) _____ at work now. 10. Tom (to need) _____ a new computer.

15. Put all possible questions to the following sentences.

1. He goes to school every day. 2. My sister works here. 3. She is reading at the moment. 4. We rest every weekend. 5. He is preparing for his exams in the library. 6. I have a very good friend. 7. Her daughter is playing chess at the moment. 8. They usually invite friends every Sunday. 9. You are listening to great music now. 10. We are meeting on Monday evening.

16. Make the Present Simple or the Present Continuous:

1. I (not/like) _____ chocolate. 2. She (not/study) _____
_____ at the moment. 3. We often (go) _____ to the cinema. 4. He usually
(not / do) _____ his homework. 5. They (not / eat) _____ rice
every day. 6. We (not/study) _____ every night. 7. (You / like)
_____ spicy food? 8. (She/go/often) _____ to
Scotland? 9. (He/eat) _____ now? 10. We (go) _____
_____ to the cinema this weekend. 11. They (study) _____
now. 12. I (clean) _____ the kitchen every day. 13. She (work) _____
every Sunday. 14. We (not/sleep) _____ now. 15. He (not/go)
_____ to the park very often. 16. It (rain) _____ a lot here. 17. I (go)
_____ on holiday tomorrow. 18. How long (she/stay)
_____ in London? 19. I often (read) _____ at night. 20. We
(not/drink) _____ much wine.

17. Translate into English.

1. Мій друг живе в Лондоні. 2. Ми любимо класичну музику. 3. Зараз його друзі грають у футбол. 4. Скільки часу займає ця подорож? 5. Мої батьки приїжджають в наступну суботу. 6. Перший екзамен ми здаємо 25 травня. 7. Ми йдемо в театр на наступному тижні. 8. Він досі працює над своєю доповіддю. 9. Я вважаю, що ми повинні бути ввічливими. 10. Зараз все залежить від тебе. 11. Моя мама зараз поливає квіти. 12. Що ви тут робите? 13. Кожен день вона повертається з роботи, готує обід та відпочиває. 14. Давайте підемо в кіно. Я думаю, що фільм цікавий. 15. Діти зараз в дворі? – Так, вони там граються зараз.

The Passive Voice

<p><i>The Passive Voice is used</i></p> <p>1) when the agent (the person who does the action) is unknown, unimportant or obvious from the context: Java was developed in 1995</p> <p>2) to make statements more polite or formal. My new vase has been broken. (It's more polite than saying "You've broken my new vase")</p> <p>3) when the action is more important than the agent – as in news reports, formal notices, instructions, processes, headlines, advertisements etc. Java was designed to create Internet applications.</p> <p>4) to put emphasis on the agent. Java was invented by Sun Microsystems.</p>		
<p>The Passive voice is formed by using the appropriate tense of the verb <i>to be + past participle</i></p>		
Present Simple	<p style="text-align: center;"><i>Active sentence</i></p> <p>Waitresses and waiters serve customers.</p>	<p style="text-align: center;"><i>Passive sentence</i></p> <p>Customers are served by waitresses and waiters.</p>
Present Continuous	Tom is preparing that report.	That report is being prepared by Tom.

18. Complete these sentences with the verbs in brackets. Use the Present Simple Passive.

1. E-mails (send) _____ and received by most internet users.
2. Information about goods and services (find) _____.
3. Goods and services (buy) _____ in e-shops.
4. Online newspapers and magazines (read) _____ mostly by adult users.
5. The internet (use) _____ for social networking, especially by young people.
6. Telephone and video calls (make) _____.
7. Videos and films (watch) _____.
8. Listening and music streaming activities (carry) _____ out.
9. Hotel accommodation (search for) _____ by travellers.
10. Financial transactions through internet banking (do) _____.

19. Use the passive voice to rewrite these sentences.

1. We use this room for our guests. _____
2. They don't feed the lions at the zoo every day. _____
3. You can open the bottle with this opener. _____

4. Too many emails stress people. _____
5. My parents don't give me any pocket money. _____
6. Poachers kill hundreds of tigers every year. _____
7. Most African governments protect rhinos. _____
8. They build many new houses every year. _____
9. Students at this course do a lot of homework. _____
10. They don't make these cars in Japan. _____

20. Complete these sentences with the verbs in brackets. Use the Present Continuous Passive.

1. Look at that! A new supermarket (build) _____ in this street.
2. Your car will be ready soon. It _____ just (wash) _____.
3. You can't see the horses, they (feed) _____ now.
4. What's the problem? The film (not/show) _____ today.
5. Wait a minute please. The dinner (prepare) _____ for you.
6. Because of the fire children (not/teach) _____ at their classrooms.
7. I can't use my PC. A new operating system (install) _____ on it.
8. The pool is now full of hair because swim caps (not/use) _____ in it.
9. Christmas is coming and much more goods (display) _____ in shops.
10. I'm sorry, it's 10 o'clock. Customers (not/serve) _____ anymore.

21. Make two new sentences in the passive voice

Example: People say Tom Cruise is the richest movie star.

a) It is said that Tom Cruise is the richest movie star.

b) Tom Cruise is said to be the richest movie star.

1. Everybody thinks that Hakan is a good football player.
 - a) It _____
 - b) Hakan _____
2. They say that his books are still popular.
 - a) It _____
 - b) His books _____

3. They are reporting that at least 10.000 dolphins are caught in the nets of tuna fishers every year.
- a) It _____
- b) At least 10.000 dolphins _____
4. They estimate that 1500 square kilometers of rainforests is cut every year.
- a) It _____
- b) 1500 square kilometers of rainforests _____
5. We know that pencil lead is made from graphite, clay, water and wax.
- a) It _____
- b) Pencil lead _____
6. They report that the railway line is buried under tons of rock and earth.
- a) It _____
- b) The railway line _____
7. People don't think that inflation goes down.
- a) It _____
- b) Inflation _____
8. People are expecting that the third bridge is going to be built over the Bosphorus Strait.
- a) It _____
- b) The third bridge _____
9. People believe that he is living abroad.
- a) It _____
- b) He _____
10. People expect that taxes are being reduced.
- a) It _____
- b) Taxes _____

22. Read the following sentences and write another one with the same meaning:

1. It is believed that the wanted man is living in New York.
- _____

2. It is said that many people are homeless after the floods.

3. It is expected that the government loses this election.

4. It is known that the Prime Minister is in favour of the new law.

5. It is believed that the thieves get in through the kitchen window.

6. It is thought that the prisoner is escaping by climbing over the wall.

7. It is claimed that he drives through the town at 90 miles an hour.

8. It is reported that two people are seriously injured in the accident.

9. It is said that three men are being arrested after the explosion.

10. It is believed that Maria wins the prize.

MODULE 2

HARDWARE AND SOFTWARE

Text 1. FIVE GENERATIONS OF COMPUTERS

Basic Vocabulary

circuitry	схема	to specify	конкретизувати
punched card	перфокарта	instructions	інструкції
magnetic drums	магнітний барабан	magnetic core	технологія
superconductor, <i>n</i>	надпровідник	technology	магнітного ядра
malfunction, <i>n</i>	неспрацьовування, відмова	drastically, <i>adv</i>	радикально, докорінно
energy-efficient	енергозберігаючий	hallmark, <i>n</i>	ознака; критерій
vacuum tube	електронна лампа	predecessor, <i>n</i>	попередник
usher in, <i>v</i>	оголошувати, сповіщати	miniaturize, <i>v</i>	зменшувати розмір
widespread use	масове використання	to interface, <i>v</i>	з'єднувати з
realm, <i>n</i>	область, галузь, сфера		комп'ютером
respond, <i>v</i>	відповідати, робити щось у відповідь	to run	запускати дода-
subject to, <i>v</i>	піддавати	application	ток

The history of computer development is often referred to in reference to the different generations of **computing devices**. Each generation of computer is characterized by a major **technological development** that fundamentally changed the way computers operate, resulting in increasingly smaller, cheaper, more powerful, more efficient and reliable devices.

First Generation (1940-1956) Vacuum Tubes

The first computers used **vacuum tubes** for **circuitry** and **magnetic drums** for memory, and were often enormous, taking up entire rooms. They were very expensive to operate and **in addition to** using a great deal of electricity, generated a lot of heat, which was often the **cause of malfunctions**.

First generation computers **relied on** machine language, the lowest-level programming language understood by computers, to perform operations, and they could only solve one problem at a time. Input was based on **punched cards** and **paper tape**, and output was **displayed on printouts**.

The UNIVAC and ENIAC computers are examples of first-generation computing devices. The UNIVAC was the first commercial computer delivered to a business client, the U.S. Census Bureau in 1951.

Second Generation (1956-1963) Transistors

Transistors replaced vacuum tubes and **ushered in** the second generation of computers. The transistor was invented in 1947 but did not **see widespread use** in computers until the late 1950s. The transistor was far superior to the vacuum tube, allowing computers to become smaller, faster, cheaper, more energy-efficient and more reliable than their first-generation **predecessors**. Though the transistor still generated a great deal of heat that **subjected the computer to damage**, it was a vast improvement over the vacuum tube. Second-generation computers still relied on punched cards for input and printouts for output.

Second-generation computers moved from **cryptic binary machine language** to symbolic, or assembly, languages, which allowed programmers **to specify instructions in words**. High-level programming languages were also being developed at this time, such as early versions of COBOL and FORTRAN. These were also the first computers that **stored their instructions in their memory**, which moved from a magnetic drum to **magnetic core technology**.

The first computers of this generation were developed for the atomic energy industry.

Third Generation (1964-1971) Integrated Circuits

The development of the **integrated circuit** was the **hallmark** of the third generation of computers. Transistors were miniaturized and placed on **silicon chips**, called **semiconductors**, which **drastically** increased the speed and efficiency of computers.

Instead of punched cards and printouts, users interacted with third generation computers through **keyboards** and **monitors** and **interfaced** with an operating system, which allowed the device to **run many different applications** at one time with a central program that **monitored the memory**. Computers for the first time became

accessible to a mass audience because they were smaller and cheaper than their predecessors.

Fourth Generation (1971-Present) Microprocessors

The **microprocessor** brought the fourth generation of computers, as thousands of integrated circuits were built onto a single silicon chip. What in the first generation filled an entire room could now fit in the palm of the hand. The Intel 4004 chip, developed in 1971, located all the components of the computer – from the central processing unit and memory to **input/output controls** – on a single chip.

In 1981 IBM introduced its first computer for the home user, and in 1984 Apple introduced the Macintosh. Microprocessors also moved out of the **realm of desktop computers** and into many areas of life as more and more everyday products began to use microprocessors.

As these small computers became more powerful, they could be linked together **to form networks**, which eventually led to the development of the Internet. Fourth generation computers also saw the development of GUIs (graphical user interface), the mouse and **handheld devices**.

Fifth Generation (Present and Beyond) Artificial Intelligence

Fifth generation computing devices, based on **artificial intelligence**, are still in development, though there are some applications, such as **voice recognition**, that are being used today. The use of parallel processing and superconductors is helping to make artificial intelligence a reality. **Quantum computation** and molecular and nanotechnology will radically change the face of computers in years to come. The goal of fifth-generation computing is to develop devices that respond to natural language input and are capable of learning and self-organization.

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EXERCISES

- 1. Read and translate the text. Learn the words from *Basic Vocabulary*.**
- 2. Are the statements True or False? Correct the False statements.**

1. A term “advancement” in computer terminology is a change in technology a computer is/was being used. _____ 2. Second generation computers could only solve one problem at a time. _____ 3. The fourth generation was VLSI microprocessor based. _____ 4. The fourth generation was based on integrated circuits. _____ 5. First generation of computer started with using vacuum tubes as the basic components for memory and circuitry for CPU (Central Processing Unit). _____ 6. The fourth generation of computers is marked by the use of Very Large Scale Integrated (VLSI) circuits. _____ 7. The fifth-generation computers became accessible to a mass audience because they were smaller and cheaper than their predecessors. _____ 8. In 1984 IBM introduced its first computer for the home user, and in 1981 Apple introduced the Macintosh. _____ 9. Fourth generation computers also saw the development of GUIs (graphical user interface), the mouse and handheld devices. _____ 10. Fifth generation computing devices are based on artificial intelligence. _____ 11. Transistors were miniaturized and placed on semiconductors. _____ 12. The goal of fourth-generation computing is to develop devices that respond to natural language input and are capable of learning and self-organization. _____

3. In groups A and B, match the pairs of synonyms:

A: different, major, respond, strong, enormous, allow, reliable, damage, store, introduce, artificial.

B: extremely large, keep, main, distinctive, permit, harm, present, synthetic, powerful, react, dependable.

5. Give Ukrainian equivalents for the following words and word combinations from the text:

computing devices; vacuum tubes; punched cards and paper tape; printouts; transistors; integrated circuit; silicon chips; semiconductors; microprocessor; input/output controls; network; handheld devices; artificial intelligence; voice recognition.

6. Match the terms with their definitions:

paper tape, <i>n</i>	a sealed glass tube containing a near-vacuum which allows the free passage of electric current
printout, <i>n</i>	a system of electric circuits
punched card	a card perforated according to a code, formerly used to program computers
vacuum tube	paper in the form of a long, narrow strip with holes punched in it, used in older computer systems for conveying data or instructions
integrated circuits	a page or set of pages of printed material obtained from a computer's printer
transistor, <i>n</i>	a small electronic part in a television or radio, which controls the flow of electricity.
circuitry, <i>n</i>	a very small electronic circuit printed on a single silicon chip.
voice recognition	the set of keys that you press in order to operate a computer
memory, <i>n</i>	a screen which is used to display certain kinds of information, for example in airports or television studios.
microprocessor, <i>n</i>	an electrical circuit which links one computer with another
interface, <i>n</i>	part of the computer where information is stored before it is transferred to disks or magnetic tapes
monitor, <i>n</i>	the main microchip, which controls most important functions of a computer
keyboard, <i>n</i>	computer analysis of the human voice

7. Fill in the blanks with the proper word or word combination from the table below:

integrated circuit	microprocessor	silicon chip	memory
printout	interface	output	input data

1. If a lot of programs are open, a computer will swap data to the virtual memory and back to random access _____ as needed. 2. Unfortunately, it doesn't make the greatest use of the Windows _____. 3. The simplest _____ consists of

three layers, one of which is made of semiconductor material. 4. To the right-hand side of this most advanced display is the _____ time control. 5. If the _____ specified it, the file will close and the process terminates. 6. With modern technology many thousands of bistables (бістабільна схема) can be formed on one _____. 7. Often the computer can be connected to a printer to provide an instant _____. 8. _____ from and input to the serial port can be controlled either by software or hardware.

8. Match the words or phrases in two columns to form word combinations from the text:

- | | |
|----------------------------------|---------------------------------------|
| 1. in reference to the different | a) entire rooms |
| 2. characterized by a major | b) problem at a time |
| 3. to take up | c) in computers |
| 4. to rely on | d) generations of computing devices |
| 5. to solve one | e) the generation of computers |
| 6. computer delivered | f) machine language |
| 7. to see widespread use | g) technological development |
| 8. cryptic binary | h) to form networks |
| 9. to store the instructions | i) machine language |
| 10. hallmark of | j) the face of computers |
| 11. to allow the device | k) to a business client |
| 12. to be linked together | l) to natural language |
| 13. radically change | m) in the memory |
| 14. devices that respond | n) to run many different applications |

9. Answer the questions on the text:

1. When was the approximate period of the use of the first-generation computers?
2. What disadvantages did the first-generation computers have?
3. What was the successor to the vacuum tube?
4. What did so-called second-generation computers use?
5. What were they able to do?
6. What advantages did the second-generation computers have?
7. What programming languages did they use?
8. What was the hallmark of the

third-generation computers? 9. What could the third-generation computers perform? 10. How did the forth-generation computers differ from other generations? 11. What are the fifth-generation computing devices based on? 12. What is the goal of fifth-generation computing?

10. Translate into English using your active vocabulary:

1. Кожне покоління комп'ютерів характеризується великим технологічним розвитком. 2. Перші комп'ютери використовували електронні лампи для мікросхем і магнітні барабани для пам'яті. 3. Комп'ютери першого покоління спиралися на машинну мову. 4. Транзистор дозволив комп'ютерам стати меншими, швидшими, дешевшими, енергоефективними та надійнішими. 5. У той час також розроблялися мови програмування високого рівня, такі як COBOL та FORTRAN. 6. Розробка інтегральної мікросхеми стала ознакою комп'ютерів третього покоління. 7. Операційна система комп'ютерів третього покоління дозволила пристрою одночасно запускати багато різних програм із центральною програмою, яка контролювала пам'ять. 8. Обчислювальні пристрої п'ятого покоління, засновані на штучному інтелекті, ще розробляються. 9. Квантові обчислення, молекулярні та нанотехнології кардинально змінять комп'ютери у наступні роки. 10. У 1981 році IBM представила свій перший комп'ютер для користувачів.

11. Retell the text using your active vocabulary.

Text 2. HARDWARE

Basic Vocabulary

capacity, <i>n</i>	місткість	connect, <i>v</i>	з'єднувати
circuitry, <i>n</i>	ланцюги	convert, <i>v</i>	перетворювати
CPU,		sophisticated, <i>adj.</i>	складний
microprocessor, <i>n</i>	мікропроцесор	temporary, <i>adj.</i>	тимчасовий
keyboard, <i>n</i>	клавіатура	storage hardware	пристрої збері-
hard disk	жорсткий диск,		гання даних
	«вінчестер»	tier, <i>n</i>	ярус
		affect, <i>v</i>	впливати

input hardware	пристрої введення даних	direct, <i>v</i>	направляти
modem, <i>n</i>	модем	execute, <i>v</i>	виконувати
mouse, <i>n</i>	пристрій для переміщення об'єктів на екрані, «миша»	interpret, <i>v</i>	перекладати, тлумачити
output hardware	вихідні пристрої відображення інформації	provide, <i>v</i>	керувати
printer, <i>n</i>	принтер	reach, <i>v</i>	досягати
scanner, <i>n</i>	сканер	retrieve, <i>v</i>	витягувати
sensitive, <i>adj</i>	чутливий	roll, <i>v</i>	катати, перекочувати
processing hardware	пристрої обробки даних	CD-ROM (compact disc read-only memory)	накопичувач на компакт дисках
volatile, <i>adj</i>	нестійкий, тимчасовий	ROM (read-only memory)	постійний пристрій, що запам'ятовує

Webster's dictionary gives us the following definition of the **hardware** – the devices composing a computer system. Computer hardware can be divided into four categories:

- 1) input hardware
- 2) processing hardware
- 3) storage hardware
- 4) output hardware.

The purpose of the **input hardware** is to collect data and convert it into a form suitable for **computer processing**. The most common **input device** is a **keyboard**. It looks very much like a typewriter. The **mouse** is a handheld device connected to the computer by small cable. As the mouse is rolled across the **mouse pad**, the **cursor** moves across the **screen**. When the cursor reaches the desired location, the user usually pushes a button on the mouse once or twice to signal a menu selection or a command to the computer.

The **light pen** uses a light sensitive photoelectric cell to signal screen position to the computer. Another type of input hardware is **optic-electronic scanner** that is used to input graphics as well as typeset characters. **Microphone** and **video camera** can be

also used to **input data** into the computer. Electronic cameras are becoming very popular among the consumers for their relatively low price and convenience.

The purpose of **processing hardware** is to retrieve, interpret and direct the execution of **software** instructions provided to the computer. The most common components of processing hardware are the Central Processing Unit and main memory.

The Central Processing Unit (CPU) is the brain of the computer. It reads and interprets software instructions and coordinates the processing activities that must take place. The design of the CPU affects the processing power and the speed of the computer, as well as the amount of main memory it can use effectively. With a well-designed CPU in your computer, you can perform highly sophisticated tasks in a very short time.

Memory is the system of component of the computer in which information is stored. There are two types of computer memory: RAM and ROM.

RAM (random access memory) is the volatile computer memory, used for creating, loading, and running programs and for manipulating and temporarily storing data;

ROM (read only memory) is non-volatile, non-modifiable computer memory, used to hold programmed instructions to the system.

The more memory you have in your computer, the more operations you can perform.

Storage hardware. The purpose of **storage hardware** is to store computer instructions and data in a form that is relatively permanent and retrieve them when needed for processing. Storage hardware serves the same basic functions as do office filing systems except that it stores data as electromagnetic signals. The most common ways of storing data are **Hard disk, floppy disk** and **CD-ROM**.

Hard disk is a rigid disk coated with magnetic material, for storing programs and relatively large amounts of data.

Floppy disk (diskette) – thin, usually flexible plastic disk coated with magnetic material, for storing computer data and programs. There are two formats for floppy disks: 5.25" and 3.5". 5.25" is not used in modern computer systems because of it

relatively large size flexibility and small capacity. 3.5" disks are formatted 1.4 megabytes and are widely used.

CD-ROM (compact disc read only memory) is a compact disc on which a large amount of digitized read-only data can be stored. CD-ROMs are very popular now because of the growing speed which CD-ROM drives can provide nowadays.

Output hardware. The purpose of output hardware is to provide the user with the means to view information produced by the computer system. Information is output in either hardcopy or softcopy form. **Hardcopy output** can be held in your hand, such as paper with text (word or numbers) or graphics printed on it. **Softcopy output** is displayed on a monitor.

Monitor is a component with a display screen for viewing computer data, television programs, etc. **Printer** is a computer output device that produces a paper copy of data or graphics. **Modem** is an example of **communication hardware** – an electronic device that makes possible the transmission of data to or from computer via telephone or other communication lines.

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EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or false? Correct the false statements.

1. Computer is an electronic device therefore hardware is a system of electronic devices. _____ 2. The purpose of the input hardware is to collect data and convert it into a form suitable for computer processing. _____ 3. Scanner is used to input graphics only. _____ 4. The purpose of processing hardware is to retrieve, interpret and direct the execution of software instructions provided to the computer. _____ 5. CPU reads and interprets software and prints the results on paper. _____ 6. User is unable to change the contents of ROM. _____ 7. 5.25" floppy disks are used more often because they are flexible and have more capacity than 3.5" disks. _____ 8. Printer is a processing hardware because its purpose is to show the information produced by the system. _____ 9. Modem is an electronic device that makes possible the transmission of data to or from computer via telephone or other communication lines. _____ 10. The

purpose of storage hardware is to store computer instructions and data in a form that is relatively permanent and retrieve them when needed for processing. _____

3. Match the verbs on the left with an appropriate word on the right:

- | | | |
|---------------|-------------------|-------|
| 1. to operate | a) a new document | _____ |
| 2. to click | b) a computer | _____ |
| 3. to open | c) data | _____ |
| 4. to save | d) a back-up copy | _____ |
| 5. to make | e) on an icon | _____ |

4. Translate the terms into English and match the words with their definitions:

- | | |
|---------------|--|
| 1) процесор | a) nonvolatile, non-modifiable computer memory, used to hold programmed instructions to the system |
| 2) клавіатура | b) the part of a television or computer on which a picture is formed or information is displayed |
| 3) миша | c) the set of keys that you press in order to operate a computer |
| 4) вінчестер | d) volatile computer memory, used for creating loading, and running programs and for manipulating and temporarily storing data |
| 5) модем | e) rigid disk coated with magnetic material, for storing computer program and relatively large amount of data |
| 6) екран | f) an electronic device that makes possible the transmission of data to or from computer via communication lines |
| 7) дискета | g) the brain of the computer |
| 8) ПЗУ | h) a palm-sized device used to point at and select items on a computer display screen and for controlling the cursor |
| 9) ОЗУ | i) a flexible plastic disk used for storing computer data and program |

5. Complete the sentences with a word from the box:

virus	memory	save	print	laptop	cut	crash	copy	paste
-------	--------	------	-------	--------	-----	-------	------	-------

1. If you click on _____, the computer will store the data for you.
2. If you click on _____, you will have two versions of something.
3. If you click on _____, the computer will take something out.
4. If you click on _____, it will put in something you wanted to move.
5. If you click on _____, you can get a paper copy.
6. If a computer has a _____ because there is a software problem, it could _____.
7. If your computer is very slow, it may need more _____.
8. If you want to work on a plane or train, you need to use a _____ computer.

6. Give synonyms for the following words:

collect (v), suitable (adj), location (n), signal (v), convenience (n), purpose (n), retrieve (v), affect (v), design (v), sophisticated (adj.), component (n).

7. Give antonyms for the following words:

input device, sophisticated (adj.), permanent (adj.), output hardware, hardcopy form, connect (v), change (v), flexible (adj.).

8. Answer the following questions on the text:

1. How is the word hardware defined in the Webster's dictionary? 2. What groups can hardware be divided into? 3. What is input hardware? Give the examples of input hardware. 4. What is the mouse designed for? What is a light pen? 5. What is the purpose of processing hardware? 6. What is memory? What are the basic types of memory? 7. What are the ways of storing data? 8. What is modem used for? Can PC-user communicate with other people without a modem? 9. What is the purpose of output hardware? Give the examples of output hardware.

9. Retell the text using your active vocabulary.

10. Find words in the text which have the following meaning: *electronic mail; easy to use; a software problem; stop working; have experience of working with computers; an extra copy on a floppy disk; a system that allows computers users to connect with computers all over the world; the part of the computer where information is stored*

More and more people are becoming computer-literate as many programs and machines are so user-friendly. You can now connect your computer to computers all over the world using the Internet. People send each other e-mail messages using this system or network. If your computer is slow it may need more memory. It may crash if there is not enough memory or it has a bug. Make sure you make a back-up copy of your work.

Speaking

A lot of people are becoming computer-literate. Are you computer-literate? Do you find most computers “user-friendly”?

Text 3. TYPES OF SOFTWARE

Basic Vocabulary

aid, <i>v</i>	допомагати	mainboard, <i>n</i>	материнська плата
attach, <i>v</i>	приєднувати	memory capacity	місткість пам'яті
conduct, <i>v</i>	проводити	peripheral, <i>adj</i>	периферійний
control, <i>n</i>	контроль	provide with	забезпечувати
developer, <i>n</i>	розробник	regardless	незважаючи на
general-purpose	загального	secure, <i>v</i>	забезпечувати безпеку
	призначення	Web-browser	«браузер», програма,
specific, <i>adj</i>	конкретний		яка дозволяє користувачу
handle, <i>v</i>	поводитись з		шукати і зчитувати інформацію з мережі
internal, <i>adj</i>	внутрішній		Інтернет

A computer to complete a job requires more than just the actual equipment or hardware we see and touch. It requires **Software** – programs for directing the operation of a computer or electronic data.

Software is the final computer system component. These computer programs instruct the hardware how to conduct processing. The computer is merely a general-purpose machine which requires specific software to perform a given task. Computers can input, calculate, compare, and output data as information. Software determines the order in which these operations are performed.

Programs usually fall in one of two categories: **system software** and **applications software**.

System software controls standard internal computer activities. An operating system, for example, is a collection of system programs that **aid** in the operation of a computer regardless of the application software being used. When a computer is first turned on, one of the systems programs is loaded into the computer's memory. This software contains information about **memory capacity**, the model of the processor, the disk drivers to be used, and more. Once the system software is loaded, the applications software can be brought in.

System programs are designed for the specific pieces of hardware. These programs are called drivers and coordinate **peripheral hardware** and computer activities. User needs to install a specific driver in order to activate a peripheral device. For example, if you intend to buy a printer or a scanner you need to worry in advance about the **driver program** which, though, commonly **goes along with** your device. By installing the driver, you «teach» your **mainboard** to «understand» the newly attached part.

Applications software satisfies your specific need. The **developers** of application software rely mostly on marketing research strategies trying to do their best to attract more users (buyers) to their software. As the productivity of the hardware has increased greatly in recent years, the programmers nowadays tend to include as much as possible in one program to make software interface look more attractive to the user. This class of programs is the most numerous and perspective from the marketing point of view. Data communication within and between computers systems is **handled** by system software. Communications software **transfers** data from one computer system to another. These programs usually **provide** users with **data security** and **error checking** along with physically transferring data between the two computer's memories. During the past five years the developing electronic network communication has stimulated more and more companies to produce various communication software, such as **Web-Browsers** for Internet.

EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or False? Correct the false statements.

1. Computer programs only instruct the hardware how to handle data storage. _____ 2. System software controls standard internal computer activities. _____ 3. System software is very dependable on the type of application software being used. _____ 4. The information about memory capacity, the model of the processor and disk drivers are unavailable for system software. _____ 5. The driver is a special device usually used by car drivers for Floppy-disk driving. _____ 6. It is very reasonable to ask for a driver when you buy a new piece of hardware. _____ 7. Software developers tend to make their products very small and with poor interface to save computer resources. _____ 8. Communication software is in great demand now because of the new advances in communication technologies. _____ 9. Application software is merely a general-purpose instrument. _____ 10. Web-Browser is the class of software for electronic communication through the network. _____

3. Give synonyms for the following words:

complete (v), require (v), conduct (v), transfer (v), error (n), stimulate (v), produce (v), in advance, intend (v), strategy (n), aid (v), contain (v).

4. Give antonyms for the following words

final (adj.), specific (adj.), internal (adj.), attractive (adj.), increase (v), satisfy (v), teach (v), turn on, load (v).

5. Match the following computer terms with their definitions:

- | | |
|-------------------|--|
| 1. word processor | a) an output device used to print documents |
| 2. spreadsheets | b) a small picture representing an object, process or function |
| 3. database | c) pictures and symbols a computer program can produce |
| 4. graphics | d) the software that is used to prepare documents or letters |
| 5. virus | e) a program used to enter and arrange numbers and financial information |

6. laser printer f) programs which allow you to store, look at or change a large amount of information quickly and easily
7. an icon g) a software problem or error in a program

6. Add another word, abbreviation, or part of a word, to complete common computer words and phrases:

- | | | |
|--------------------|------------------|----------------|
| 1. soft_____ | 2. a word_____ | 3. floppy_____ |
| 4. _____friendly | 5. _____literate | 6. key_____ |
| 7. a computer_____ | 8. _____ROM | 9. laser_____ |
| 10. lap_____ | 11. spread_____ | 12. _____mail |

7. Complete this text about using a computer for word processing using your active vocabulary:

I wrote a report on the _____¹ this morning. When I finished, I _____² out two copies – one for me and one for my boss. Then, without any warning, the computer went _____³, and I'm afraid I lost the whole document. This is very unusual because normally I _____⁴ the data while I'm writing and then make a _____⁵ copy when I have finished this morning I forgot.

Anyway, I gave the report to my boss, hoping that she would not ask me to change it in any way. She did. She thought it was a bit long and said it would be better if I used more _____⁶ to illustrate some of the written information. She also thought it would make the report look more attractive.

I went back and rewrote most of the report when the computer was OK, only I _____⁷ part of the middle section which was rather repetitive, and I added extra _____⁸ as my boss advised. It did look better by the time I'd finished, and this time I remembered to _____⁹ it and make a _____¹⁰ copy.

8. Answer the following questions on the text “Types of software”:

1. What is software? What is its main function?
2. What two basic groups software (programs) can be divided into?
3. What does system software do?
4. What is an operating system?
5. What is a driver? What is its function?
6. What is application software?
7. What is application software used for?
8. What is the tendency in

application software market in the recent years? 9. What is the application of the communication software?

9. Translate into English using your active vocabulary:

1. Програмне забезпечення визначає порядок виконання операцій. 2. Прикладні програми виконують поставлене вами конкретне завдання (задовольняють ваші потреби). 3. Цей клас програм – найчисельніший і перспективний з точки зору маркетингу. 4. Системні програми призначені для конкретних приладів комп'ютерної системи. 5. Встановлюючи драйвер, ви «вчите» систему «розуміти» новоприєднаний прилад. 6. Коли комп'ютер вмикається, одна з системних програм повинна бути завантажена в його пам'ять. 7. Розвиток систем електронної комунікації за останні п'ять років стимулювало виробництво відповідних програмних продуктів зростаючою кількістю компаній-розробників.

Speaking

1. What software programs are you familiar with? Have you used CD-ROM? If so, what programs did you use and why?
2. Do you think the Internet will have an important influence on our daily lives? Give your reasons.

Text 4. INPUT AND OUTPUT DEVICES

Basic Vocabulary

peripherals, <i>n</i> – зовнішні, периферійні пристрої	a beam of light – промінь світла
alphanumeric keypad – алфавітно-цифрова клавіатура	speech Input device – пристрій введення мовлення
user programmable keys – програмовані користувачем клавіші	sound card – звукова карта
to execute a command or program - виконувати команди або програми	display terminals – дисплейні термінали
	hardcopy – паперова копія
	impact printer – ударний принтер
	non-impact printer – безударний принтер

backspace key – клавіша "зворотний хід"	to etch the symbols on paper – залишати слід на папері
hand-held – ручний	print resolution роздільна здатність друку
training simulators – тренажери	print speed швидкість друку
source document – вихідний документ	
bar code reader – зчитувач штрих-кодів	

The computer will be of no use unless it is able to communicate with the outside world. Input/Output devices are required for users to communicate with the computer. In simple terms, input devices bring information INTO the computer and output devices bring information OUT of a computer system. These input/output devices are also known as **peripherals** since they surround the CPU and memory of a computer system. Some commonly used Input/Output devices are listed in table below.

Input Devices	Output devices
Keyboard	Monitor
Mouse	LCD
Joystick	Printer
Scanner	Plotter
Light Pen	Audio Output
Touch Screen	
Digital Camera	
Speech Input Device	

Input Devices

Keyboard is a text base input device that allows the user to input alphabets, numbers and other characters. A standard PC keyboard has various groups of keys.

Alphanumeric Keypad consists of keys letters and numbers, arranged as on a typewriter. There are twelve *function keys* labelled F1, F2, F3... F12. The functions assigned to these keys differ from one software package to another. These keys are also **user programmable keys**. *Special-function Keys* have special functions assigned to them and can be used only for those specific purposes. For example, *Enter key* is similar to the 'return' key of the typewriter and is used **to execute a command or program**.

Backspace key is used to delete the character to the left of your cursor position. ***Delete key*** is used to delete the character to the right of your cursor position. ***Shift key*** is used to type capital letters when pressed along with an alphabet key and to type the special

characters located on the upper-side of a key that has two characters defined on the same key. *Esc key* is usually used to negate a command and to cancel or abort executing programs. *Numeric keypad* is located on the right side of the keyboard and consists of keys having numbers (0 to 9) and mathematical operators defined on them. This keypad is provided to support quick entry for numeric data. *Cursor Movement Keys* are arrow keys and are used to move the cursor in the direction indicated by the arrow (up, down, left, right).

Mouse is a **hand-held** that lets you move a cursor and select items on the screen. It has one or more buttons to communicate with the PC. A scroll wheel lets you move through your documents or web pages. The pointer looks like an I-bar, an arrow or a pointing hand.

An *optical mouse* has an optical sensor instead of a ball underneath.

A *wireless mouse* has no cable. It sends data via infrared signals or radio waves.

Mouse Actions:

Left Click is used to select an item.

Double Click is used to start a program or open a file.

Right Click is usually used to display a set of commands.

Drag and Drop allows you to select and move an item from one location to another. To achieve this place the cursor over an item on the screen, click the left mouse button and while holding the button down move the cursor to where you want to place the item, and then release it.

Joystick is a vertical stick which moves the graphic cursor in a direction the stick is moved. It typically has a button on top that is used to select the option pointed by the cursor. Joystick is used as an input device primarily with video games, training simulators and controlling robots.

Scanner is an input device used for direct data entry from the **source document** into the computer system. It converts the document image into digital form so that it can be fed into the computer. Capturing information like this reduces the possibility of errors typically experienced during large data entry. Hand-held scanners are commonly

seen in big stores to scan codes and price information for each of the items. They are also termed the bar code readers.

A **bar code** is a set of lines of different thicknesses that represent a number. **Bar Code Readers** are used to input data from bar codes. Most products in shops have bar codes on them. Bar code readers work by shining a **beam of light** on the lines that make up the bar code and detecting the amount of light that is reflected back.

Light Pen is a pen shaped device used to select objects on a display screen. It is quite like the mouse (in its functionality) but uses a light pen to move the pointer and select any object on the screen by pointing to the object. Users of Computer Aided Design (CAD) applications commonly use the light pens to directly draw on screen.

Touch Screen allows the user to operate/make selections by simply touching the display screen. Common examples of touch screen include information kiosks, and bank ATMs.

A **digital camera** can store many more pictures than an ordinary camera. Pictures taken using a digital camera are stored inside its memory and can be transferred to a computer by connecting the camera to it. A digital camera takes pictures by converting the light passing through the lens at the front into a digital image.

The “Microphones - Speech Recognition” is a **speech Input device**. To operate it we require using a microphone to talk to the computer. We also need to add a **sound card** to the computer. The Sound card digitizes audio input into 0/1s. A speech recognition program can process the input and convert it into machine-recognized commands or input.

Output Devices

Monitor is an output device that resembles the television screen and uses a Cathode Ray Tube (CRT) to display information. The monitor is associated with a keyboard for manual input of characters and displays the information as it is keyed in. It also displays the program or application output. Like the television, monitors are also available in different sizes.

Liquid Crystal Display (LCD) was introduced in the 1970s and is now applied to display terminals. Its advantages like low energy consumption, smaller and lighter have paved its way for usage in portable computers (laptops).

Printers are used to produce paper (commonly known as **hardcopy**) output. Based on the technology used, they can be classified as **Impact or Non-impact printers**. *Impact printers* use the typewriting printing mechanism wherein a hammer strikes the paper through a ribbon in order to produce output. Dot-matrix and Character printers fall under this category.

Non-impact printers do not touch the paper while printing. They use chemical, heat or electrical signals **to etch the symbols on paper**. Inkjet, Deskjet, Laser, Thermal printers fall under this category of printers.

When we talk about printers we refer to two basic qualities associated with them: resolution, and speed. **Print resolution** is measured in terms of number of dots per inch (dpi). **Print speed** is measured in terms of number of characters printed in a unit of time and is represented as characters-per-second (cps), lines-per-minute (lpm), or pages-per-minute (ppm).

Plotters are used to print graphical output on paper. It interprets computer commands and makes line drawings on paper using multi-coloured automated pens. It is capable of producing graphs, drawings, charts, maps etc. Computer Aided Engineering (CAE) applications like CAD (Computer Aided Design) and CAM (Computer Aided Manufacturing) are typical usage areas for plotters.

The Audio output is the ability of the computer to output sound. Two components are needed: Sound card – Plays contents of digitized recordings, Speakers – Attached to sound card.

<https://digitalworld839.com/input-and-output-devices/>

EXERCISES

1. Read and translate the text. Learn the words from Basic Vocabulary.
2. Are the statements True or False. Correct any False statements.

1. Input/output devices are also known as the CPU. _____ 2. There are twelve *function keys*. The functions assigned to these keys do not differ from one software package to another. _____ 3. Backspace key is used to delete the character to the right of your cursor position. _____ 4. *Esc key* is usually used to negate a command and to cancel executing programs. _____ 5. Double Click is used to select an item. _____ 6. Joystick is used as an output device. _____ 7. Scanner converts the document image into digital form so that it can be fed into the computer. _____ 8. Bar Code Readers are used to input data from bar codes. _____ 9. A digital camera can store less pictures than an ordinary camera. _____ 10. Printers are used to produce hardcopy. _____ 11. Non-impact printers touch the paper while printing. _____ 12. Plotters are used to print graphical output on paper. _____

3. Define to what part of speech the derivatives of these verbs belong paying attention to the word-forming suffixes and prefixes. Translate these words.

To assign: assigned, assignment, assignable.

To associate: association, associated, associator, associative, associativity.

To consume: consumer, consumable, consumed.

To convert: conversion, converted, inconvertibility, convertibility.

To define: definition, defined, undefinable.

To digitize: digit; digital; digitization; digitizer.

To enter: entrance, entered, unentered.

To function: function, functional, functionality.

To move: movement, movable, movability, mover, unmoved.

To print: printable; printed; printer; printing.

To produce: producer, produced, produce (n).

To program: programming, programmed, programable, unprogrammed.

To represent: representation, representative.

To scan: scanning; scanner, scanning, scanned.

To select: selection, selected, selective, unselected.

To recognize: recognition; recognizer; recognizable; unrecognizable.

4. Give Ukrainian equivalents for the following phrases.

to be of no use, a text base input device, user programmable keys, to execute a command or program, to negate a command, to send data via infrared signals, the bar code reader, a pen shaped device, take pictures, speech input device, to digitize audio input into 0/1s, manual input of characters, to produce paper output, resolution and speed, to print graphical output on paper.

5. Match the words and phrases to form word combinations.

- | | |
|--------------------------------|----------------------------------|
| 1. communicate | a) left of your cursor position |
| 2. input devices bring | b) for numeric data |
| 3. delete the character to the | c) with the outside world |
| 4. support quick entry | d) price information |
| 5. move through | e) to the computer |
| 6. scan codes and | f) in portable computer |
| 7. input data from | g) information into the computer |
| 8. add a sound card | h) the documents |
| 9. convert into | i) on paper |
| 10. pave its way for usage | j) automated pens |
| 11. etch the symbols | k) machine-recognized command |
| 12. use multi-coloured | l) bar codes |

6. Translate into English.

1. Пристрої введення/виводу необхідні користувачам для зв'язку з комп'ютером. 2. Для швидкого введення цифрових даних передбачена цифрова клавіатура. 3. Сканер використовується для прямого введення даних з вихідного документа в комп'ютерну систему. 4. Сенсорний екран дозволяє користувачеві керувати, торкаючись екрана дисплея. 5. Цифровий фотоапарат робить знімки, перетворюючи світло, що проходить через об'єктив, в цифрове зображення. 6. Монітор - це пристрій виведення, що нагадує екран телевізора. 7. Ручні сканери зазвичай зустрічаються у великих магазинах для сканування кодів та

інформації про ціну для кожного товару. 8. Для виведення звуку комп'ютером потрібні два компоненти: звукова карта, яка відтворює вміст оцифрованих записів, та динаміки прикріплені до звукової карти.

7. Answer the following questions on the text.

1. Why are input/output devices required for users? What are their functions?
2. What devices belong to input devices/output devices?
3. What is the function of keyboard? What keys does it involve? Give the example of some of them.
4. What actions can you perform with Mouse?
5. What is Joystick used for?
6. Can we say that a bar code is a scanner? Where is it mostly used?
7. What are the examples of touchscreen?
8. What output devices do you use?
9. What types of printers do you know? What printer do you have or would like to have at home? Give your reasons.
10. What can plotters produce?

8. Retell the text using your active vocabulary.

GRAMMAR

1. Write the appropriate comparative and superlative form of these adjectives:

- 1 light _____
- 2 clever _____
- 3 sunny _____
- 4 hard _____
- 5 thin _____
- 6 good _____
- 7 poor _____
- 8 short _____
- 9 late _____

- 10 happy _____
- 11 shady _____
- 12 stupid _____
- 13 rainy _____
- 14 soft _____
- 15 fat _____
- 16 bad _____
- 17 rich _____
- 18 long _____
- 19 early _____
- 20 sad _____

2. Underline the best word.

1. Don't eat the fish. It smells *bad* / *badly*. 2. It's a *two-hours* / *two-hour* train journey from here to Manchester. 3. I stumbled across *an asleep* / *a sleeping* man in the doorway. 4 They ran home through the rain, and when they arrived were *sheer* / *soaking* wet. 5. As far as Maria was concerned, it was a *losing* / *lost* opportunity. 6. Tom opened the door and found a very *large* / *enormous* parcel on the doorstep. 7 I read that article, but I thought it was *mere* / *complete* rubbish! 8. The smell of *baking-fresh* / *freshly baked* bread made me feel hungry. 9. That suitcase looks really *heavy* / *heavily*. 10. What's the matter with you? You look *worrying* / *worried*.

3. Put *very* in front of the adjective where possible, or leave blank (-).

e.g. I put my foot in the water, and it was - freezing!

1. Please don't make that silly noise! It's _____ annoying! 2. When we first saw the wave we were shocked, because it was _____ enormous. 3. You really should read this book. It's _____ interesting. 4 Jeff has been missing for two days, and we're _____ worried. 5. Unfortunately, the ring I found turned out to be _____ worthless. 6. At the end of the race, most of the runners felt _____ exhausted. 7. By the end of the second week, many of the villagers were _____ starving. 8. It's

_____unusual for so much rain to fall here in July. 9. I've checked the figures again, and I can assure you that they are _____correct. 10. How do you do. I'm _____ pleased to meet you. 11. When I realized what she had said, I was _____ upset.

4. Complete the sentences using the correct forms.

1. The president hopes that people of all races will live together _____ (*peaceful*)
2. She told us that the streets in the capital city were _____ (*dirty, ugly*)
3. Do you think nuclear energy is _____? (*safe*) 4. I get all the food _____ from the farmers. (*direct*) 5. The minister was _____ worried that the deal would not pass parliament. (*deep*) 6. Marty drove home from the party as _____ as he could and got there _____. (*fast, safe*) 7. When the director found out about the scandal he shouted _____ at his employees. (*angry*) 8. The old woman walked across the street very _____. (*careful*) 9. She didn't see me. She _____ knocked me down with her brand-new car! (*near*) 10. After a few weeks people forgot about him _____. (*complete*) 11. He _____ works anymore, because he already has enough money. (*hard*) 12. She _____ climbed down from the tree as soon as the bear had disappeared. (*slow*) 13. He is a very _____ volleyball player. (*good*) 14. Bob excused himself _____ and went home. (*polite*) 15. English is an _____ language to learn, however he couldn't learn grammar rules so _____. (*easy, easy*) 16. The sun shone _____ in the sky. (*bright*) 17. The new colleague seems to be _____ intelligent. (*high*) 18. The boy felt _____ because he knew what he had done. (*guilty*)

5. Fill in *too* or *enough*.

1. I can't carry this suitcase. It's _____ heavy. 2. This bag isn't big _____. I can't put all my possessions in it. 3. Is your meal warm _____? If not, I'll put it in the microwave. 4. Mom was _____ worried to go to sleep, so she stayed up all night. 5. I don't like this fizzy drink. It's much _____ sweet. 6. I'll ring you up later. I haven't got _____ time at the moment. 7. She's _____ young to

drink alcohol. She's not even 15 yet. 8. We weren't able to buy tickets for both games because we didn't have _____ money. 9. I couldn't see her anywhere because it was getting _____ foggy. 10. You can't play in our first team. You're not good _____

6. Fill in the correct form: Adjective or Adverb

1. If anything goes _____, someone must be blamed. (*wrong*) 2. The parliament was _____elected. (*free*) 3. You shouldn't go up that ladder. It's not _____. (*safe*) 4. Coffee in the morning smells _____. (*fantastic*) 5. The western part of the US was colonized _____by the Spanish. (*main*) 6. The sun was shining _____in the sky. (*bright*) 7. She likes to wear _____clothes when she goes out. (*colorful*) 8. My son was _____disappointed because he didn't get the job. (*bitter*) 9. Don't be so _____when you leave and close the door _____, please. (*noisy, quiet*) 10. The plane was able to land _____ on the main runway. (*safe*)

7. Use *as....as* or *so....as*.

1. These houses are _____ high _____ those. 2. Peter is _____ thin _____ his brother. 3. This room is not _____ comfortable _____ that one on the first floor. 4. I'm not _____ strong _____ a horse. 5. Their apartment is twice _____ big _____ ours. 6. The blue car is _____ fast _____ the red car. 7. Peter is not _____ tall _____ Fred. 8. The violin is not _____ low _____ the cello. 9. This copy is _____ bad _____ the other one. 10. Oliver is _____ optimistic _____ Ivan.

8. Underline the correct variant.

1. She has never seen a) *so* b) *such* c) *what* d) *as* a small house. 2. Some people are working a) *hard as* b) *hardly* c) *harder than* d) *as hardest than* others. 3. Grandmother can't hear them a) *very good* b) *very well* c) *much good* d) *much well*. 4) The film was a) *so* b) *by far* c) *very* d) *even* funnier than I expected. 5. His car is not a) *moderner* b) *more modern* c) *most modern* d) *so modern* as mine. 6. He's a good guitarist, but he plays the piano a) *very good* b) *quite well* c) *much better* d) *too hardly*. 7. The teacher complains: 'The others were bad, but these pupils are a) *worse* b) *more bad*

10. Put the verbs into the Present Perfect. Put each sentence in negative form.

1. They (*have*) _____ a cold. 2. She (*get up*) _____ up at seven. 3. We (*have*) _____ breakfast at eight. 4. Peter (*go*) _____ to school. 5. Anna (*get*) _____ home at two. 6. He (*want*) _____ an ice cream. 7. I (*hate*) _____ peppermint. 8. Kelly _____ TV. (*watch*) _____ 9. She (*do*) _____ her homework. 10. Our teacher (*live*) _____ in Oxford Street. 11. Eric and Tom (*wear*) _____ blue shirts. 12. My sister (*sing*) _____ a song. 13. My mum (*cook*) _____ spaghetti. 14. Mr. Black (*work*) _____ in his office. 15. The girls often (*read*) _____ a book.

11. Make questions in the Present Perfect tense.

1. You (*hear*) from her lately? _____
2. Someone (*wind*) the clock? _____
3. You (*explain*) the exercise? _____
4. The post (*come*)? _____
5. Charles (*pass*) his exam? _____
6. You (*make*) a mistake? _____
7. Mary (*water*) the flowers? _____
8. You ever (*ride*) a camel? _____
9. They (*repair*) the road? _____
10 You (*spend*) all your money? _____

12. Complete the following sentences using “since” or “for”:

1. Nobody has written to me _____ many years. 2. I haven't eaten any meat _____ I was a boy. 3. I have known him _____ 1990. 4. You haven't sent me any money _____ fifteen days. 5. It hasn't rained here _____ March. 6. I've lived here _____ seven days. 7. He hasn't ridden a bicycle _____ two months. 8. She has worn the same old dress _____ last Monday. 9. They haven't come to see us _____ three weeks. 10. We haven't seen you friends _____ ages. 11. We have been in England _____ four months. 12. Mrs. Brown has been busy _____ she came back from her holiday. 13. We have had a lot of rain _____

three months now. 14. Mr. Pitt has been in hospital _____ his accident. 15. They have been on strike _____ November.

13. Fill in blank spaces with correct form of the given verbs (Present Perfect).

*take / work / find / see / speak / know / begin / do / learn /
eat / have / write / give / live / buy / be*

1. I met Barbara when we were in elementary school. We _____ each other for over twenty years. 2. We _____ many new words since we started this course. 3. That's a wonderful movie. I _____ it three times. 4. Mr. and Mrs. Tonner _____ married for 10 years. 5. You are late! The class _____ already _____. 6. Robert is my neighbor. He _____ next door to me for five years. 7. Mary _____ several letters to her parents since she left home. 8. We _____ in that restaurant several times. 9. Our teacher _____ us a lot of help with the homework assignment. 10. She _____ to her landlord many times about the broken window. 11. We have a new camera. We _____ some beautiful pictures of the grandchildren. 12. They _____ all their homework already. 13. Mrs. Baxter _____ all her groceries for the week. 14. Tommy _____ a bad cold for two weeks. 15. Frank _____ for that company for many years. 16. After three months of looking, she _____ a beautiful apartment to rent.

14. Translate into English using the Present Perfect tense.

1. Вони купили новий будинок. _____
2. Якраз почався дощ. _____
3. Ти пролив каву на мою сукню. _____
4. Вони забруднили річку. _____
5. Він часто бував у Німеччині цього року. _____
6. Ви коли-небудь бачили НЛЮ? _____

7. Вони ще не надіслали астронавта на Марс. _____
8. Цього року ми побудували 10 нових шкіл. _____
9. Я щойно закінчив аспірантуру з інформатики. _____
10. Мій комп'ютер ламався три рази сьогодні. _____
11. Прем'єр міністр зустрівся з представниками бізнесу сьогодні. _____

The Past Simple

positive sentences: I/We/You/He/She/It/They + Ved (translated) negative sentences: I/we/you/He/She/It/They did not + V (translate) questions: Did I/we/you/he/she/it/they + V (translate)?	
Meaning	Example
1. past actions which happened one after the other	She sealed the letter, put a stamp on it and posted it.
2. past habit or state	He used to go/went to school on foot.
3. complete action or event which happened at a stated past time	The plane left an hour ago.
4. action which happened at a definite past time although the time is not mentioned. This action is not connected with the present.	Shakespeare wrote a lot of plays.

15. Make these sentences negative and interrogative.

1. They were here yesterday. 2. Trish was a manager at Cisco LTD. 3. Tom was a driver. 4. We were surprised very much. 5. You were the best in your class. 6. The dog was angry. 7. That horse was black. 8. Their children were upset. 9. You were the most qualified lawyers. 10. These houses were old. 11. The flowers were fresh. 12. The vase was antique. 13. The palace was too ancient. 14. The pies were hot. 15. The apples were sour.

16. Choose the right form of the verb *to be*:

1. The sky (was, is) _____ clear today. 2. The children (are, were) _____ at the theatre yesterday. 3. Kravchuk (is, was) _____ the first president of independent Ukraine. 4. Henry (is, was) _____ very angry now. 5. We (are, were) _____ at the school stadium last week. 6. They (are, were) _____ at the station now. 7. Taras Shevchenko (is, was) _____ the soul of Ukrainian nation. 8. The scouts (are, were)

_____ in the forest all this week. 9. Hanna (is, was) _____ at the exhibition of water colours yesterday. 10. The weather (is, was) _____ rather warm last night. 11. The students (are, were) _____ in the library now. 12. The girls (are, were) _____ sad now because of low grades. 13. The kitchen (is, was) _____ large and light.

17. Put all types of questions to the following sentences.

1. The boys were in the gym. 2. The birds were in the sky. 3. Terry was there yesterday. 4. The trees were red and yellow in autumn. 5. Nash was in the cinema on Monday. 6. We were glad to see him at the party. 7. The tiger was very dangerous. 8. The hunters were happy to kill the zebra. 9. Potatoes were tasty.

18. Give the Past Simple form of the following verbs and learn their meaning.

To close, to manage, to retire, to peep, to hope, to note, to like, to love, to dance, to skate, to ski, to help, to trust, to clap, to stop, to grab, to stretch, to link, to gaze, to stare, to astonish, to wish, to want, to tame, to try, to cry, to dry, to miss, to kiss, to work, to climb, to tease, to please, to mix, to fix, to peel, to deny, to support, to supply, to produce, to persuade, to turn, to bake, to type, to sign, to phone, to aim, to object, to agree, to dedicate, to narrate, to scratch, to announce, to appeal, to nibble, to train, to borrow, to frighten, to decide, to impress, to imagine, to deliver, to spy, to continue, to mop, to improve, to scream, to sneeze, to cough, to rescue, to smile

19. Open the brackets putting the verb in the Past Simple tense.

1. Yesterday she (*to try*) _____ to find her key. 2. They (*to be*) _____ to Paris last month. 3. We (*not to have*) _____ the test two days ago. 4. When (*to get up*) _____ you _____ yesterday? 5. Mary (*to write*) _____ a letter to her friend on Wednesday. 6. He (*not to call*) _____ me at 9. 7. They (*to hear*) _____ the news yesterday. 8. We (*not to drink*) _____ tea, we (*to have*) _____ coffee. 9. My friend (*to leave*) _____ the town two months ago. 10. The family (*to stay*) _____ in that hotel last summer.

20. Complete the sentences with the Past Simple of the verbs in parentheses:

1. They (*watch*) _____ TV last night. 2. Priscila (*talk*) _____ to her friends all day. 3. I (*have*) _____ a terrible headache yesterday. 4. Bob (*come*) _____ home from school late. 5. They (*arrive*) _____ late and (*miss*) _____ the bus. 6. She (*study*) _____ hard and (*pass*) _____ the exam. 7. He (*call*) _____ the office to tell them he was sick. 8. I (*speak*) _____ to the director as he was leaving the room. 9. Dr. Johnson (*get up*) _____ early this morning. 10. Mary (*do*) _____ her homework and (*go*) _____ to school. 11. Chris (*find*) _____ a ten-dollar bill. 12. The dog (*follow*) _____ us down the road. 13. Those students (*work*) _____ hard last semester. 14) Kelly (*stop*) _____ at the corner and (*call*) _____ us. 15) I (*try*) _____ to talk to Helen last night.

21. Complete the following text with verbs from the box in their past form:

say – drink – go – send – speak – get – forget – eat – hear - buy – can - tell
– know – put – be(x5) – drive

Last weekend my boyfriend and I _____ to a very nice party. We _____ a mysterious invitation to a party in our mailbox but we _____ (not) who _____ it; anyway, we decided to go. John, my boyfriend, _____ a very big present and _____ it in our car; then we _____ for two hours before coming to a very big house. It _____ a very elegant five-story house but all the lights _____ off and there was no noise either. We _____ very confused and a little scared. I _____ John to go back home, but he insisted on staying. When we knocked on the door, I realized it _____ open. I _____ a little noise and when we walked in the house most of my friends and family _____: “HAPPY BIRTHDAY SUSAN!” It was a surprise party for me! We _____ delicious food and _____ lots of wine and beer. I _____ with all my beloved ones all night long and _____ (not) believe how lucky I _____ – they (not)

_____ my birthday, they just celebrated it some days later to surprise me!

22. Complete the interview.

A: When _____ you eighteen years old?

B: I _____ eighteen years old in 2016.

A: And when _____ you born?

B: I _____ born on 30 June.

A: _____ your birthday party on the same day?

B: No, it _____. It _____ a week later.

A: Why _____ your birthday party on the same day?

B: I have a twin brother and he _____ at home. He _____ in France.

A: _____ you and your brother born at the same time?

B: No, we _____. I _____ born one hour after him.

A: _____ your parents happy to have twins?

B: Yes, they _____. But our grandma _____ She _____ shocked.

23. Complete the sentences with verbs in the Present Perfect or the Past Simple tense.

1. – (you/see) _____ any good films lately? Yes, actually, I (see) _____ a great movie last Saturday afternoon.
2. – How long (Sonia/work) _____ as a lawyer? She _____ (begin) two months ago.
3. – (you/enjoy) _____ your stay in Spain so far? Very much, but I (not like) _____ the food at all. It (cook) _____ with a lot of oil.
4. My sister's computer (stop) _____ working this morning.
5. Emily (leave) _____ her job at the hospital because she (want) _____ to travel round the world.
6. Lucas (be) _____ born in France but his parents (take) _____ him to Germany when he was 5 years old.
7. Why (Patrick/decide) _____ to sell his car? He (spend) _____ a lot of money on it and so he wants to get rid of it.
8. What (the kids/eat) _____ for lunch today? They (have) _____ lunch at school, so I don't know.
9. Martha

(arrive) _____ home very tired yesterday. She (go) _____ to bed straight away. 10. The firemen (manage) _____ to put out the fire pretty fast. 11. Last year his father (threaten) _____ Paul to punish him if he failed any exams. 12. The thief (admit) _____ having stolen the money from the safe. 13. My brother (live) _____ in Canada for ten years. He is visiting me for Christmas. 14. Helen (buy) _____ a new printer but it _____ (not be) very expensive. 15. I (leave) _____ my calculator on the desk but someone (take) _____ it. 16. The Spice Girls (bring) _____ out their first record in 1996. 17. Lucy's baby (get) _____ ill and she _____ (phone) the doctor last night. 18. Steve (not go) _____ hunting since last winter. 19. I (meet) _____ a famous writer last week in a London library. 20. Brian and his friend Laura (walk) _____ around the streets of the city.

<p>The Past Simple Passive is formed by using the verb <i>to be in the Past Simple + past participle</i></p>		
Past Simple	Tom opened the door. They built the houses last year.	The door was opened by Tom. The houses were built last year.

24. Change the following sentences into Passive voice.

1. Someone sold this old hat to my wife. 2. They introduced me to her husband. 3. Someone broke into my office. 4. The assistant handed me a note. 5. One of the cleaners has found my purse. 6. Someone has taken my wallet. 7. They advised me to get a visa. 8. Nobody has given out the news yet. 9. Everybody admired your last book. 10. The local council opened a new shopping centre. 11. They haven't decided anything yet. 12. Lots of people have parked their cars on the pavement. 13. The helpers have not packed the boxes yet. 14. Beckham scored the goal in the 35th minute. 15. The doctors have made the announcements over the loudspeakers.

25. Put the following sentences into the Passive Voice.

1. Did the man steal your wallet? 2. That boy has helped the old man. 3. The policeman arrested the man. 4. The teacher corrected my homework. 5. The cat surprises me. 6.

Is she drawing a bird? 7. She doesn't call the police. 8. He didn't kill the bird. 9. I don't pronounce the word. 10. The news doesn't shock me. 11. We have collected the marbles. 12. Did she clean the window? 13. The boy stole my bicycle. 14. My father has built the house. 15. We don't plant corn. 16. It didn't confuse her. 17. The news interrupted the film. 18. The postman delivers some letters. 19. The horse is pulling the cart. 20. Have you paid the bill?

26. Translate into English.

1. Міжнародний семінар щойно завершився. 2. Ми не бачили її з того часу, як вона вийшла з офісу. 3. Ти вже прочитав цю статтю? 4. Коли він приїхав до Києва? – Він приїхав 3 роки тому. 5. Будівництво цієї споруди почалось минулої весни. 6. Я не бачив його приблизно місяць. 7. Вона була майже у всіх європейських країнах цього року. 8. Моя мама вже приготувала обід. 9. Багато років тому вони збудували великий будинок. 10. Моя бабуся тут живе з того часу як була дитиною.

COMPOUNDS

Compound nouns consist of two or more words used together as a single word. It is formed from two nouns, or an adjective and a noun, e.g. *science fiction, hard drive, ink-jet printer, silicon chip, first aid box, search engine, traffic jam, software engineer, income tax, web portal, control panel, self-test, baby sitter, clipboard, writing paper, washing machine, pedestrian crossing.*

27. Which compound do these definitions refer to?

1. a small piece of silicon which is used in computers _____
2. a site that offers email, news, forum, web searching, online shopping and link to other sites _____
3. a utility used to adjust computer setting such as fonts, sound and networks _____
4. the read/write head of a disk drive _____
5. a computer bus used by the CPU to communicate memory locations _____

28. Complete these sentences with a compound noun.

software engineer	mail merge	search engine	self-test	add-on
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1. _____ enables you to combine two files, one containing names and addresses and the other containing a non-specific letter intended for multiple recipients. 2. A USB headset is a useful _____, the ideal accessory for your computer games and music. 3. The printer's _____ didn't identify any errors. 4. Because the Web has no central organization, every Web surfer needs a _____ – a special site that locates other sites based on words or phrases you type in. 5. They are seeking a _____ to help write and test a new operating system.

29. Complete the sentences with suitable compound nouns.

1. I'm late because there was a terrible _____ in the centre of town. 2. My _____ didn't ring this morning and I didn't wake up until 9.30. 3. Mary really wanted to see the film but she couldn't find a _____ for the children, so she had to stay at home. 4. When I'm driving I always wear _____ if it's very bright and sunny. 5. You have to pay _____ on your salary in Britain; the amount depends on how much you earn. 6. In some countries you have to have a _____ box in your car for minor injuries and illnesses. 7. My brother loves _____, but I prefer true stories about the present or the past.

Compound adjectives are made up of two words, normally with hyphen between them. The second part can be:

- a past participle, e.g. menu-driven, voice-activated, object-oriented;
- a present participle, e.g. space-saving
- an adjective, e.g. hands-free, stand-alone

30. Complete these sentences with a compound adjective.

1. A _____ telephone allows people with limited mobility to dial and answer the phone with just the sound of their voice. 2. A fax machine is a _____ device, so it does not require any other device to function. 3. A _____ application is operated by making choices from menus instead of giving instructions on a keyboard. 4. In some countries it is obligatory to use a _____ car kit when you are using a mobile phone while driving. 5. An _____ language like C++ lets the programmer concentrate on individual unit (e.g. a piece of text, a graphic or a table) and give each object functions which can be

changed easily. 6. They've launched a new _____ computer, an entire PC embedded inside a keyboard.

31. Complete the compound adjectives in these sentences.

1. They were both wearing short-_____ shirts. 2. We stayed in a five-_____ hotel. 3. There is a shop in London which sells things for left-_____ people. 4. He's just bought a brand-_____ car. 5. One little girl was badly-_____; she kept shouting during lunch and then threw food all over the floor. 6. She's just got a _____-time job; she works three hours a day on Mondays, Wednesday and Fridays. 7. It was a very badly-_____ article: I noticed several punctuation mistakes and lots of spelling mistakes. 8. They are very well-_____, so they can afford to go to expensive restaurants. 9. It's a twenty-_____ walk to the house, but it takes much less than that in the car. 10. She's got a little stall in the market where she sells second-_____ things. 11. When I saw her last night, she was dancing with a very good-_____ young man in a white suit. 12. I was astonished when the man at the next table gave the waiter a ten-_____ note as a tip.

MODULE 3

DATA PROCESSING AND COMPUTER PROGRAMMING

Text 1. DATA PROCESSING AND DATA PROCESSING SYSTEM

Basic vocabulary

data processing system	система обробки даних	sequence ['si:kwəns]	послідовність, порядок
series ['si(ə)ri:z]	послідовний ряд		проходження
to convert [kən'vɜ:t]	перетворювати	hierarchy ['haɪərə:kɪ]	ієрархія
resource	ресурс, засіб	to enter	вводити дані
to accomplish [ə'kɒmplɪʃ]	завершувати, здійснювати, виконувати	successively	послідовно
facilities [fə'sɪlɪtɪz]	устаткування, можливості	comprehensive groupings	універсальні утворення
display	дисплей, показ	related	пов'язаний
manner	спосіб	database	база даних
		to house	містити в собі

The necessary data are processed by a computer to become useful information.

In fact, this is the definition of **data processing**. *Data* are a collection of unorganized but able to be organized facts into useful information. *Processing* is a **series** of actions or operations that

convert inputs into outputs. When speaking of data processing, the input is data, and the output is useful information. So, *data processing* can be defined as a **series** of actions or operations that converts data into useful information.

The term *data processing system* is used to include the **resources** that are used to **accomplish** the processing of data. Four types of resources are singled out: people, materials, facilities, and equipment. People provide input to computers, operate them, and use their output. Materials (boxes of paper and printer ribbons) are consumed in great quantity. **Facilities** are required to house the computer equipment, people and materials.

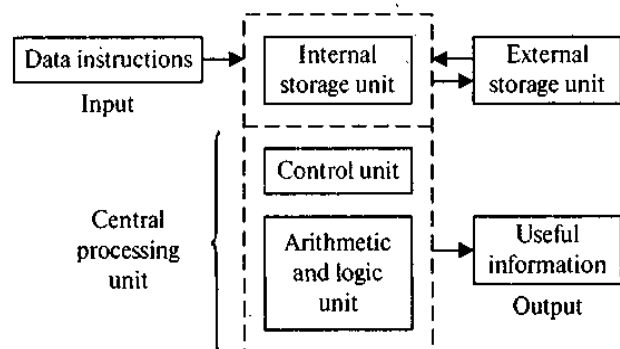


Fig. 3. Computer data processing system

Basic data processing operations

All data processing systems are characterized by the following five basic operations:

- a) *Inputting* is the process of entering data, which are collected facts, into a data processing system.
- b) *Storing* is saving data or information so that they are available for initial or for additional processing.
- c) *Processing* represents performing arithmetic or logical operations on data in order to convert them into useful information.
- d) *Outputting* is the process of producing useful information, such as a printed report or visual **display**.
- e) *Controlling* is directing the **manner** and **sequence** in which all of the above operations are performed.

Data storage hierarchy

It is known that data, once **entered**, are organized and stored in **successively** more **comprehensive groupings** which are generally called a data storage hierarchy. The general groupings of any **data storage hierarchy** are as follows.

- 1) *Characters* – all written language symbols: letters, numbers, and special symbols.
- 2) *Data elements* (sometimes called data items or fields) – meaningful collections of related characters.
- 3) *Records* – collections of **related** data elements.
- 4) *Files* – collections of related records. A set of related files is called a **database** or a databank.

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EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or False. Correct any False statements.

1. Data are a collection of organized facts into useful information. _____
2. Processing is a series of actions that convert outputs into inputs. _____
3. There are four types of resources: people, materials, facilities, and equipment. _____
4. Three basic operations

are characteristic of all data processing systems. _____ 5. Outputting is the process of entering data. _____ 6. Data elements mean the same as data items or fields. _____ 7. Files are collections of related data elements. _____ 8. A set of related files is called a database. _____

3. Give synonyms for the following words.

database (n), data (n), data elements, accomplish (v), available (adj.), house (v), convert (v), equipment (n), hierarchy (n), related (adj.)

4. Give antonyms for the following words.

computerized (adj.), accomplish (v), available (adj), ease (n), accuracy (n), store (v), access (n), respond (v), challenge (n), information-dependent (adj.).

5. Give English equivalents for the following words.

Системи обробки інформації; визначення (терміну) обробки даних; сукупність фактів; послідовність дій; перетворення вхідних даних на корисну інформацію; включати ресурси; завершити обробку даних; забезпечувати введення інформації у комп'ютер; стрічки принтера; витратити у великій кількості; розміщувати комп'ютерне обладнання; ввід даних; зберігання даних; початкова обробка даних; додаткова обробка; видача корисної інформації; надруковане повідомлення; зорове відображення; послідовність запам'ятовування інформації; записані символи мови; елементи інформації; база даних; набір взаємопов'язаних файлів.

6. Match the words and phrases to form word combinations.

1.	collection of unorganized but	a)	equipment, people and materials
2.	a series of actions	b)	in great quantity
3.	to accomplish	c)	producing useful information
4.	be consumed	d)	of related data elements
5.	to house the computer	e)	able to be organized facts
6.	characteristic of	f)	the processing of data
7.	the process of	g)	that convert inputs into outputs
8.	meaningful	h)	related records
9.	collections	i)	collections of related characters

10.	collections of	j)	all data processing systems
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7. Match the terms with the definitions:

- 1. data processing system a) a series of actions or operations that convert inputs into outputs.
- 2. inputting b) successively comprehensive groupings
- 3. controlling c) the process of producing useful information, such as a printed or visual display.
- 4. processing d) a series of actions or operations that converts data into useful information.
- 5. outputting e) directing the manner and sequence in which all of the above operations are performed.
- 6. storing f) the process of entering data
- 7. records g) meaningful collections of related characters.
- 8. characters h) collections of related data elements.
- 9. data storage hierarchy i) saving data or information so that they are available for further processing.
- 10. data elements j) all written language symbols: letters, numbers, and special symbols.

8. Answer the following questions on the text.

1. What is processing? 2. What is data processing? 3. What does the term of data processing system mean? 4. What basic operations does a data processing system include? 5. What is inputting / storing / outputting information? 6. What do you understand by resources? 7. What does data storage hierarchy mean? 8. What are the general groupings of any data storage hierarchy?

9. Complete the text with the words from the box.

effectively	informal-dependent	combine	computer-oriented	humans
error-prone	cost-effective	storage	communications	challenges

(1) _____ - _____ data processing systems or just computer data processing systems are not designed to imitate manual systems. They should (2) _____ the capabilities of both (3) _____ and computers. Computer data processing systems can be designed to take advantage of the following four capabilities of computers: accuracy, ease of (4) _____, capacity of (5) _____ and speed.

Thus, an important objective in the design of computer data processing systems is to allow computers to do what they do best and to free humans from routine, (6) _____ - _____ tasks. The most (7) _____ - _____ computer data processing system is one that does the job (8) _____ and at the least cost. By using computers in a cost-effective manner, we will be better able to respond to the (9) _____ and opportunities of our post-industrial, (10) _____ - _____ society.

10. Translate into English using your active vocabulary.

1. Після введення дані можуть передаватися куди завгодно комунікаційними мережами. 2. Комп'ютери здатні зберігати величезні обсяги інформації. 3. Обсяг даних, які можна зберігати на таких пристроях, як магнітні диски, постійно збільшується. 4. Швидкість, з якою можуть реагувати комп'ютерні системи обробки даних, може становити частку секунди. 5. Обчислювальні операції включають арифметичні операції та операції порівняння. 6. Важливо відзначити різницю між обробкою даних і системою обробки даних. 7. Обробка даних — це правила, за якими дані перетворюються на корисну інформацію. 8. Система обробки даних – це програма, оптимізована для певного типу обробки даних.

11. Retell the text using your active vocabulary.

Text 2. COMPUTER PROGRAMMING

Basic Vocabulary

coding	кодування	debugging the code	налагодження коду
programming	програмування	eliminate	ліквідувати
handle	обробляти		звести результати
flow chart	блок-схема	tabulate the results	в таблицю

The terms “**Coding**” and “**Programming**” are often used as synonyms. But if we'll examine this computer processes a bit deeper we'll face that coding is more specifically short process of writing instructions which **handles** the computer to accomplish only a part of operations, whereas programming consists of the complete number of instructions produced to the computer to make it perform a specific task.

There are five steps of programming. The first step requires a clear and exact determination of all future calculations and which then are diagrammed by a so-called **flow chart**. The flow chart is a diagram or a picture of a code which is always useful for visualizing the relations between different parts of the code. This diagram is usually made before putting in the particular instruction. There are three types of symbols used in a flow chart: the first represents calculation functions, the second shows various alternatives of decisions, the third one eliminates spare lines and indicates which line to follow if the diagram has to continue on the next page.

The second step is the process of actual coding, during which all digits are assigned to the symbols to prepare the final code. Here it is necessary to mention about a symbolic coding aid. Symbolic coding writes a code not in the form of numerical addresses, but in the form of symbolism. This means that when the computer receives the specific address, symbolic coding aids assign them into the symbols or names to produce the actual code.

Then comes the third step when the final code is resided into computer's memory. The use of the subroutine (subcode) may be faced many times during the program's computation but stored only once in the whole code. The fourth step consists of **debugging the code**. This is the technique of detecting, diagnosing and correcting the errors which may appear in the programs.

And finally comes the last fifth step which makes running the code and **tabulating the results**. One of the most important details of the process of coding is that the actual

bits in the instruction are given not in a binary code. The instruction is represented in the octal equivalent. This means, that two **octal numbers** represent the instruction and every address will be represented by three octal numbers.

https://kpfu.ru/staff_files/F1015215013/Basic_English_topics_for_mathematicians_and_computer_learners_2016_1_.pdf

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or False. Correct any False statements.

1. Programming consists of the limited number of instructions produced to the computer to make it perform a specific task. _____ 2. There are five steps of programming. _____ 3. The flow chart is not useful for visualizing the relations between different parts of the code. _____ 4. There is only one type of symbols used in a flow chart. _____ 5. The second step of programming is the process of actual coding. _____ 6. During the program's computation, the use of the subcode may be stored many times in the whole code. _____ 7. One of the details of the process of coding is that the actual bits in the instruction are given in a binary code. _____

3. Give synonyms for the following words.

Examine (v), handle (v), consist of (v), produce (v), require (v), visualize (v), symbol (n), eliminate (v), indicate (v), diagram (n), mention (v), reside (v), detail (n), instruction (n).

4. Give antonyms for the following words.

Coding (n), deep (adj.), handle (v), compose (v), require (v), visualize (v), mention (v), continue (v), actual (adj.), temporary (adj.), spare (adj.), initial (adj.).

5. Match the Ukrainian equivalents for the following English word combinations:

1 memory location temporaries	а засоби символічного кодування
2 the final code	б незалежні змінні
3 symbolic coding aids	с правильна адреса
4 to eliminate the spare lines	д кінцевий код
5 independent variables	е вихідні умови
6 the proper address	ф вісімкова стенографія

7 initial conditions

g робочі осередки пам'яті

8 octal shorthand

h усувати зайві лінії

6. Complete the definitions and give Ukrainian equivalents.

a) diagram	b) a symbolic coding	c) solving definite computer tasks
d) debugging	e) octal equivalent	f) running the code
g) instructions or data		

1. A program is a set of instructions required for _____.
2. A code is the representation of _____ in the form of symbols.
3. A flow chart is a _____ which represents a sequence of logical actions of all parts of any program.
4. _____ writes a code in the form of symbolism.
5. _____ is the technique of detecting, diagnosing and correcting the errors.
6. The last stage of programming makes _____ and tabulating the results.
7. Coding is written in the _____.

7. Answer the following questions on the text.

- 1 What is the difference between coding and programming?
- 2 How many steps of programming do you know? Describe them.
- 3 What is the flow chart?
- 4 When is the flow chart made?
- 5 How many types of symbols are used in a flow chart?
- 6 When does a symbolic coding take place?
- 7 How many times can the subcode be stored in the final code?
- 8 In which form is the instruction represented to the computer?

8. Translate into English:

Що таке програмування?

Робот, виробничий верстат або побутовий прилад керується людиною. При цьому людина не стоїть біля приладу і не віддає їй команди одна за одною, а певним чином записує їхню послідовність у пам'ять машини. Послідовність команд, що визначає діяльність обчислювальної машини в заданих умовах, являє собою програму.

На сьогоднішній день складання подібних програм – програмування – широко поширений вид людської діяльності. Програма – це план діяльності виконавця, наприклад, комп'ютера, щодо вирішення певного типу завдань. Щоб скласти план, важливі логічне та інші форми мислення, знання умов виконання

програми та можливостей виконавця, передбачення можливих помилок, а також вміння писати програми зрозумілою виконавцю мовою – конкретною мовою програмування. Це і є основні знання, вміння та навички програміста.

9. Give a brief summary of the text using your active vocabulary.

Text 3. PROGRAMMING LANGUAGES

Basic Vocabulary

programming, <i>n</i>	програмування	data processing	опрацювання
to execute, <i>v</i>	виконувати		даних
machine code	машинний код	to process, <i>v</i>	опрацьовувати
to resemble, <i>v</i>	бути схожим, мати	artificial	штучний інтелект
	подібність	intelligence	
compiler, <i>n</i>	компілятор	markup	мови, які викорис-
application, <i>n</i>	використання	languages	товуються для
speech recognition	розпізнавання мови		створення web-до-
high / low level	мови високого /		кументів
languages	низького рівня	symbolic	символічні мови
	програмування	languages	
to dial the phone	набрати номер	to format files	форматувати
number	телефону		файли

Programming is the process of writing a program using a computer language. A **program** is a set of instructions which a computer uses to do a specific task (e.g. a solution to a Maths problem).

The only language a PC can directly execute is **machine code**, which consists of 1s and 0s (binary code) that are processed by the **CPU** (central processing unit). This language is difficult to write, so we use symbolic languages that are easier to understand. For example, **assembly languages** use abbreviations such as ADD, SUB, MPY to represent instructions. The program is then translated into machine code by software called an **assembler**.

Machine code and assembly languages are called low-level languages because they are machine oriented.

High-level languages, however, are closer to human languages; they use forms resembling English, which makes programming easier. The program is translated into machine code by software called a **compiler**. Here is a brief description of some of the many high-level languages:

FORTRAN (acronym for FORmula TRANslation). This language is used for scientific and mathematical applications. It consists of algebraic formulae and English phrases. It was first introduced in the United States in 1954.

COBOL (acronym for COMmon Business-Oriented Language). It is popular for business applications. COBOL is written using English statements, and deals with problems that do not involve a lot of mathematical calculations. It was first introduced in 1959.

ALGOL (acronym for ALGOrithmic Language). Originally called IAL, which means Internationsl Algebraic Language. It is used for mathematical and scientific purposes. ALGOL was first introduced in Europe in 1960.

PL/1 Programming Language 1. It was developed in 1964 to combine features of COBOL and ALGOL. The language is used for data processing as well as scientific applications.

BASIC (acronym for Beginners All-purpose Symbolic Instruction Code) was developed in 1965 at Dartmouth College in the US for use by students who require simple language to begin programming. Visual BASIC is now used to create Windows applications.

C developed in the 1970s to support the UNIX operating system. It is very popular today because it is small, so it is not too hard to learn, it is very efficient and portable so one can use it with all kinds of computers. The language is used to write system software, graphics and commercial programs. There are also various versions of C – C⁺⁺ and ObjectiveC, which represent a new style of programming.

PASCAL (named after Blaise Pascal and developed in 1971) is a high-level structured computer programming language used for teaching and general programming.

PROLOG (from the first elements of PROgramming and LOGic, developed in 1970s) and **LISP** (from LISt Processor, developed in 1950s) are high-level computer programming languages which are used for work in artificial intelligence.

Java – is a computer programming language used especially in creating websites. It was designed in 1990s to produce programs that will run on any computer system. **Java applets** are small programs that run automatically on web pages and let you watch animated characters, and play music and games.

The languages used to create Web documents are called **markup languages**; they use instructions (markups) to format and link text files. Examples are:

- **HTML** – the code used to create Web pages
- **VoiceXML** – it makes Internet content accessible via **speech recognition** and phone. Instead of using a web browser on a PC, you use a telephone to access voice-equipped websites. You just **dial** the phone number of the website and then give spoken instructions, **commands**, and get the required information.

A high-level language is a problem-oriented programming language. It is independent of the architecture of the computer which supports it. This has two advantages:

1. the person writing the program does not have to know anything about the computer the program will be run on;
2. programs are portable.

Programs written in one of these languages should be converted by means of a compiler into a lower-level language or machine code so that the CPU could understand it.

People communicate instructions to the computer in symbolic languages and the easier this communication can be, the wider the application of computers will be. Scientists are reported to be already working on Artificial Intelligence and the next generation of computers may be able to understand human languages.

- 1. Read and translate the text. Learn the words from *Basic Vocabulary*.**
- 2. Are the statements True or False. Correct any False statements.**

1. Programming is the process of writing a program using a natural language. _____
2. The only language a PC can directly execute is **BASIC**. _____ 3. Machine code and assembly languages are called low-level languages. _____ 4. Low-level languages use forms resembling English, which makes programming easier. _____ 5. FORTRAN is used for scientific and mathematical applications. _____ 6. ALGOL is popular for business applications. _____ 7. PL/1 Programming Language 1 was developed in 1965 at Dartmouth College in the US. _____ 8. C developed in the 1970s to support the UNIX operating system. _____ 9. Java – is a computer programming language used especially in creating websites. _____ 10. There are also various versions of C – C⁺ and ObjectiveC, which represent a new style of programming. _____ 11. VoiceXML makes Internet content accessible via speech recognition and phone. _____ 12. A high-level language is dependent of the architecture of the computer which supports it. _____ 13. People communicate instructions to the computer in markup languages. _____

3. Give synonyms for the following words.

Do (v), specific (adj.), abbreviation (n), resemble (v), brief (adj.), application (v), involve (v), introduce (v), purpose (n), commercial (adj.), today (adv.), various (adj.), design (v), instructions (n), required (adj.), convert (v).

4. Give antonyms for the following words.

Directly (adv.), low-level (adj.), software (n), written (adj.), combine (v), begin (v), efficient (adj.), portable (adj.), create (v), independent (adj.), disadvantage (n), human language.

5. Give Ukrainian equivalents for the following phrases.

a set of instructions, directly execute, be translated into machine code, low-level / high-level languages, a brief description, be used for scientific and mathematical applications, to involve a lot of mathematical calculations, to combine features, be used for data processing, to produce programs that will run on any computer system,

accessible via speech recognition and phone, to communicate instructions in symbolic languages.

6. Match the terms with their definitions:

- | | |
|------------------------|--|
| 1. programming | a) basic language which consists of binary codes |
| 2. machine code | b) programming language such as C, Java or Visual BASIC |
| 3. assembly language | c) writing computer programs |
| 4. high-level language | d) low-level language translated into machine code by an assembler |
| 5. Java applet | |
| 6. compiler | e) software which converts a source program into machine code |
| 7. mark-up language | f) language used to create and format documents for the Web |
| | g) small self-contained program written in Java. |

7. Fill in the gaps with the following words: *Programming, compiler, programmed, program, assembler, language, programmer, portable, low-level, machine code.*

1. A computer _____ is a set of instructions that tells the computer what to do. 2. Converting an algorithm into a sequence of instructions in a programming language is called _____. 3. Most computers _____ make a plan of the program before writing it. 4. Coding is the translation of the logical steps into a programming _____. 5. In the next century computers will be _____ in natural languages like English or French. 6. A _____ is a special program that converts a program written in a high-level language into a program written in a lower level language. 7. It is difficult to use _____, which is the only language understood by the processor. 8. A special program called _____ converts a program written in a low-level language into machine code. 9. If the same program can be used for different computers, it is called _____. 10. In a _____ language each instruction has a corresponding machine equivalent.

8. Choose the correct word to complete each sentence. You may have to change some words slightly.

1. instruction, instruct, instructed, instructor

- a) Our maths _____ explained to us the principles of binary arithmetic.
- b) We were _____ to document our programs very carefully.
- c) Both _____ and data have to be changed to machine code before the computer can operate on them.

2. compilation, compiler, compile, compiled

- a) Our university computer does not have PASCAL _____.
- b) Usually, a programmer _____ his program before he puts in the data.
- c) A source program cannot be directly processed by the computer until it has been _____.

3. result, results, resulting

- a) The linkage editor links systems routines to the object module. The _____ program, referred to as the load module, is directly executable by the computer.
- b) The _____ of these mathematical operations were obtained from the university mainframe and not from my micro.

4. specification, specify, specific, specified, specifically

- a) Our company bought three packages with very _____ applications: payroll, accounts receivable, and accounts payable.
- b) An applications program is designed to do a _____ type of work, such as calculating the stress factor of a roof.
- c) Did the analyst give the new programmer the _____ necessary to start on the project?

9. Summarize the information on different high-level computer languages by completing the table below.

Language	Developed	Function	Characteristics
FORTRAN			

	1959		
		Mathematical and scientific purposes	
			Combines features of COBOL and ALGOL
BASIC			
		To support the UNIX operating system	
Java			

10. Answer the following questions on the text.

1. What is programming? 2. What is a program? 3. What is machine code? 4. What does machine code consist of? 5. What processes the CPU? 6. Why is it necessary to use symbolic languages? 7. How can the languages be translated into the machine code? 8. What are low-level languages? 9. What is an assembler? 10. What is a high-level language? 11. What is the difference between the low-level and the high-level languages? 12. What advantages does a high-level language have? 13. Why is C very popular today?

11. Complete the article about *VoiceXML* application language with the following words : HTML, dial, VoiceXML, commands, speech recognition

Internet: Voice recognition takes off

You don't need a sophisticated cell phone to surf the Internet when you're on the road – just your own voice. That's the idea behind a new breed of voice service that is popping up all over the place. Subscribers (1) _____ a toll-free number and use spoken (2) _____ to listen to anything from weather conditions to stock quotes, or flight information to news stories. Half a dozen of these services – such as Audiopoint, BeVocal, TellMe and TelSurf Networks – have already gone live or are testing their systems.

These launches are happening because two crucial technologies have come of age. (3) _____ software from companies such as Lucent, Nuance and Speechworks can now understand a wide range of accents and diction without having to be trained to a specific voice. And computer languages such as VoiceXML make it as easy to write voice services as (4) _____ has made it to write web pages. With (5) _____, the human voice becomes a substitute for a computer mouse and the spoken command for a click. It doesn't, however, call up conventional web pages, but content which is specially composed for a telephone: sound clips, number, music, spoken text.

The Economist

12. Translate into English using your active vocabulary:

1. Програмування – це процес написання програми за допомогою комп'ютерної мови. 2. Машинний код складається з одиниць і нулів, які обробляються центральним процесорним блоком. 3. Мови високого рівня програмування використовують форми, що нагадують англійську мову. 4. Програма трансформується в машинний код програмним забезпеченням, що називається компілятором. 5. Мова програмування FORTRAN складається з алгебраїчних формул та англійських фраз. 6. Яка мова програмування використовується для написання системного програмного забезпечення, графіки та комерційних програм? 7. Java – це комп'ютерна мова програмування, яка використовується при створенні веб-сайтів. 8. VoiceXML робить контент

Інтернету доступним через розпізнавання мовлення та телефон. 9. Мова високого рівня програмування не залежить від архітектури комп'ютера, який його підтримує. 10. Люди передають інструкції комп'ютеру символічними мовами. 11. Наступне покоління комп'ютерів, можливо, зможе зрозуміти людські мови.

13. Retell the text using your active vocabulary.

14. Speak about the new programming language you have heard of or read about.

GRAMMAR

PERSONAL PRONOUNS

Personal Pronouns	Objective Pronouns
I	me
you	you
he	him
she	her
it	it
we	us
they	them
Function in the sentence: the subject	Function in the sentence: the object

1. Rewrite the sentences and change the underlined nouns into personal or objective pronouns.

1. Jane told Alice to help Mary and Peter. 2. I met Betty in the library yesterday. 3. My mother came out. My mother was surprised to see Peter and me there. 4. Kate will phone David in the evening. 5. Charles gave me the book as a present. 6. The flowers were in the vase. 7. Robert and Mark met Lucy in the cinema yesterday. 8. Mike must go to see Jane and Marta. 9. Mrs. Swift always gives the students homework. 10. Mary works at National Bank. 11. The cups are in the cupboard. 12. Derek lives in Oakland, California. 13. My brother and I enjoy watching movies on Friday evenings. 14. Tom was speaking to Jim and Mike. 15. Our colleagues usually attend all our meetings.

2. Fill in objective pronouns.

1. Who is that woman? Why are you looking at _____? 2. Do you know that man? Yes, I work with _____. 3. I am talking to you. Please listen to _____. 4. These

photos are nice. Do you want to look at _____? 5. I like that camera. I am going to buy _____. 6. I don't know Peter's girlfriend. Do you know _____? 7. Where are the tickets? I can't find _____. 8. We are going to the disco. Can you come with _____? 9. I don't like dogs. I'm afraid of _____. 10. Where is she? I want to talk to _____. 11. Those apples are bad. Don't eat _____. 12. I don't know this girl. Do you know _____? 13. Alan never drinks milk. He doesn't like _____. 14. Where are the children? Have you seen _____? 15. I can't find my pencil. Can you give one to _____?

3. Circle the correct word.

1. *He/Him* didn't want to tell *we/us* about his problem. 2. *I/Me* was very grateful for what *she/her* had done for *I/me*. 3. *She/Her* saw *they/them* as *they/them* were crossing the street. 4. I can't see my sunglasses. Where are *they/them*? - I've put *they/them* on the shelf. 5. I'd like to speak to *he/him*, but I don't know if *he/him* is in the office. 6. This letter isn't for *I/me*, it's for *she/her*. 7. Are those flowers for *I/me*? 8. He reported *we/us* about the results of the conference. 9. Can you pass *they/them* the salt, please? 10. I couldn't visit *she/her* yesterday but I phoned *she/her*.

4. Complete the sentences with the correct pronouns.

1. I don't know her phone number. Can you tell _____ to _____, please? 2. Your grandparents are so kind! I always enjoy my visits to _____. 3. Is Helen in the gym? We can't see _____ anywhere. 4. Excuse us, can you help _____? We don't know the way to the station. 5. I didn't answer the teacher's question and he gave _____ a bad mark. 6. She asked Den to phone _____ as she wanted to tell _____ some news. 7. Where is your father? I need to help _____. 8. The secretary told _____ that we had to wait for some minutes. 9. John is a hardworking employee. She often sees _____ in the office. 10. We like this teacher. He explains the rule to _____ very often.

5. Use the correct pronouns to complete the sentences.

1. Josh lost the purse. _____ doesn't know when it happened. 2. We met girls in the café, but Bob hadn't met _____ before. 3. Kate was there too. I talked to _____ for twenty minutes. 4. Carol bought a new car. _____ is a Mercedes. 5. I need some help. Please, help _____. 6. My friend and I sold all the trees. _____ need some new flowers now. 7. He looked at me. _____ couldn't help him. 8. They invited us. _____ agreed to come. 9. I want to send _____ this present. They will be glad. 10. We locked his documents. _____ was very angry.

6. Use the correct personal pronouns (subject and object).

1. _____ is dreaming. (*George*) 2. The teacher always gives _____ homework. (*The students*) 3. _____ is green. (*The book*) 4. _____ are on the wall. (*The posters*) 5. I am reading the book to _____. (*My sister*) 6. Open _____, please. (*The window*) 7. _____ are watching TV. (*My mother and I*) 8. _____ are in the garden. (*The flowers*) 9. _____ has got a brother. (*Diana*) 10. Can you help _____, please? (*My sister and I*)

POSSESSIVE PRONOUNS

Possessive Pronouns	Absolute Form of Possessive Pronouns
my	mine
your	yours
his	his
her	hers
its	-
our	ours
their	theirs

Possessive pronouns are used with corresponding nouns. Absolute Form of Possessive Pronouns doesn't require the use of the noun, it is clear from the context.

Study the examples:

This is his car. – The car is his. I told her my story and she told me hers.

7. Circle the correct word.

1. I'm sure *her/hers* brother is at home. 2. This disc is *my/mine*. It isn't *your/yours*. 3. She put *her/hers* report on the table and started to read *my/mine*. 4. Let's leave *my/mine* car at the car park and take *your/yours*. 5. This is *her/hers* house and *their/theirs* is near

the river. 6. Mary gave Peter *her/hers* address and wrote down *him/his*. 7. Grilled chicken is *their/theirs* favourite dish. 8. This phone number is *our/ours*. 9. They bought a new house. Now it's *their/theirs*. 10. I don't need this eraser. I have *my/mine*.

8. Use the correct possessive pronoun.

1. The bus stop is near _____ house. (*We*) 2. How is _____ new school? (*You*) 3. This is my bag and that is _____. (*He*) 4. Sophia's hair is longer than _____. (*I*) 5. It's _____ turn now. (*I*) 6. The bike on the right is _____. (*You*) 7. Which desk is _____? (*We*) 8. Here are _____ tickets. (*She*) 9. The children brushed _____ teeth. (*They*) 10. Our school is much nicer than _____. (*They*)

9. Complete the sentences with the correct form of possessive pronouns in brackets.

1. Frank showed me photos of _____ family and I showed _____ (*mine, his*). 2. I spent _____ day doing shopping and Jane spent _____ in the swimming-pool (*my, hers*). 3. We described _____ adventures to Mr. Harris and he told about _____ (*his, our*). 4. They didn't know that was _____ car. They were surprised to know that it's _____ (*your, yours*). 5. I returned them _____ key. _____ Granny told the key was _____ (*my, their, theirs*). 6. Has she found _____ pen? If not, you can use _____ then (*mine, your*). 7. We don't need _____ help because he didn't accept _____ (*his, ours*). 8. Dogs are _____ favorite animals and what are _____? (*my, yours*) 9. She took _____ hands into _____ and smiled at me (*my, hers*). 10. We gave _____ passes to the guard. He gave me _____ pass back but didn't return Bob _____ (*my, his, our*).

10. Circle the correct item.

1. Could you tell _____ the time, please?
a) I b) my c) me
2. This dog is _____.
a) she b) her c) hers
3. We left _____ things in the room of the hotel.

a) us b) ourc) ours

3. Thomas often phones _____.

a) they b) their c) them

4. Ann didn't see _____ at school yesterday.

a) you b) your c) yours

5. Pass me _____ phone, please.

a) I b) my c) mine

6. John always has the driven license with _____.

a) he b) his c) him

7. The ring is really beautiful, but _____ price is too high for me.

a) it b) its c) my

11. Translate into English.

1. Він учора розповів нам про свої плани. 2. Я хочу повернути тобі твою книгу. 3. Ми зустріли їх вчора біля метро. 4. Вона бачила вас у лікарні минулого тижня. 5. Вчитель виправив наші помилки та повернув нам зошити. 6. Де мої черевики? — Вони під стільцем. 7. Ми щойно показали їй наше чудове місто. 8. Я не зрозумів його слів та попросив його повторити запитання. 9. Вона не могла зателефонувати вам, бо загубила ваш номер. 10. Я щойно поклав олівець на стіл, але не можу його зараз знайти.

DEMONSTRATIVE PRONOUNS

A demonstrative pronoun represents a thing or things:

- near in distance or time (**this, these**)
- far in distance or time (**that, those**)

	near •	far ⇒
singular ▣	this	that
plural ▣ ▣ ▣	these	those

12. Complete the sentences with the demonstrative pronouns.

1. Can you see _____ building in the distance? 2. _____ pen doesn't

write. Give me another one, please. 3. I don't recognize _____ people. They are too far from us. 4. Here you are! Take _____ flowers. I've bought them for you. 5. _____ castle far away looks mysterious. 6. I'm really enjoying _____ (experience that's happening now). 7. _____ painting (that we saw yesterday) was really beautiful. 8. I really liked _____ cakes. (I'm talking about the cakes we ate last week.) 9. _____'s a great idea! (the idea you explained to me.) 10. David, _____ is Lukas. 11. Who is _____ woman by the door? 12. _____ are fabulous trousers! (That you're wearing.) 13. I really like _____ chocolates (that I'm eating now). 14. _____ people we met last night were really nice. 15. Could I please try on _____ t-shirts? (I'm holding the t-shirts).

REFLEXIVE PRONOUNS

Reflexive pronouns are words ending in *-self* or *-selves* that are used when the subject and the object of a sentence are the same (e.g., *I believe in myself*). They can act as either objects or indirect objects. The nine English reflexive pronouns are *myself, yourself, himself, herself, oneself, itself, ourselves, yourselves, and themselves*.

13. Circle the correct item.

1. She calls *yourself/herself* the smartest girl in the class. 2. We have organized the festival *ourselves/myself*. 3. I *herself/myself* wanted to check all the details of the plan. 4. My parents grow these wonderful tomatoes *yourselves/themselves*. 5. He couldn't see it, but I saw it *himself/myself*. 6. Our mother needs help, she can't do all the housework *herself/ourselves*. 7. Sam couldn't phone *herself/himself* and asked me to phone you. 8. I'm awfully sorry to tell this, but the computer destroyed the programme *itself/himself*. 9. The children made the New Year toys *yourselves/themselves*. 10. Bob and Ron will make the project *themselves/ourselves*.

14. Complete the sentences with the reflexive pronouns.

1. Ted solved the problem _____. 2. Vicky and Albert are going to paint the car _____. 3. I _____ have given you the promise. 4. Did Patricia write the letter _____? 5. You, children, must tidy this room _____. 6. I won't be able to come _____, but my wife will. 7. This programme has to check the mistakes _____. 8. Have you, Nancy, cooked this meat

_____? 9. Hilda _____ doesn't understand the meaning of that word.
10. The room _____ was very comfortable, and the service was excellent.

15. Translate into English.

1. Ті книги ваші чи їхні? — Вони — наші. 2. Де ваша кішка? — Наша — на вікні. 3. Яблука її чи твої? — Вони наші. 4. Цей сік його чи Тома? — Його. 5. Той сад — малий. Наш більший. А ваш? — Наш — такий самий. 6. Ті квіти ваші чи її? — Вони — наші. 7. Це авто Теда чи ваше? — Воно — його. 8. Сумка твоя чи Анни? — Її. — А де твоя? 9. Персики їхні чи твої? — Вони її. 10. Книги студентів чи ваші? — Вони їхні. 11. Цуценя ваше чи сусідів? — Ні, воно їхнє. 12. Де твій кашкет? — Мій — на полиці, а його — на столі. 13. Де ваші зошити? — Наші — у школі, а його — вдома. 14. Бутерброд мій чи її? — Твій — на тарілці, а її — у портфелі. 15. Квіти ваші чи її? — Її. Наші — у вазі.

NOTE! We do not use reflexive pronouns with the verbs: *concentrate, feel, relax and meet.*

16. Insert reflexive pronouns where it is possible.

1. Tom cut _____ while he was shaving this morning. 2. We really enjoyed _____ very much. 3. I repaired my bike _____. 5. He felt _____ tired. 6. Why don't you clean the windows _____? 7. Jack and I introduced _____ to our new neighbor. 8. They are relaxing _____ at the SPA center. 9. Let's paint the house _____. 10. The children cleaned their room _____. 11. John used to concentrate _____ on different affairs. 12. The cat caught the mouse _____. 13. Tell me a little about _____. 14. We met _____ at the train station. 15. She did all the work by _____.

INDEFINITE PRONOUNS

Indefinite pronouns do not refer to a specific person, place, or thing. In English, there is a particular group of indefinite pronouns formed with a quantifier or distributive proceeded by *any, some, every* and *no*.

	Person	Place	Thing
All	Everyone / everybody	everywhere	everything
Part (positive)	Someone / somebody	somewhere	something
Part (negative)	Anyone / anybody	anywhere	anything
None	no one / nobody	nowhere	nothing

17. Choose the appropriate pronoun from the box.

Any, anybody, anything, every, everybody, everything

1. She does morning exercises _____ day. 2. You can meet her _____ time between 1 and 2. 3. This is a small town where _____ knows _____ about _____. 4. He will do _____ to save her. 5. There are a lot of carpets here. You can choose _____ colour you need. 6. They told us _____ they wanted and there isn't _____ else to say. 7. He seemed to know _____ about music. 8. She doesn't know _____ about this gossip. 9. We know _____ person in this club. 10. _____ knows him as a very talented writer.

18. Translate the following sentences into English.

1. Чи бачив хто-небудь дітей? 2. Ми не можемо ніде знайти цю книгу. 3. Там хтось ходить на горі. 4. Є що-небудь поїсти в холодильнику? 5. Щось велике лежало на столі. 6. Я десь поклала олівець і не можу знайти. 7. Хтось ходив по садку і співав пісеньку. 8. Ви бачили що-небудь цікаве на виставці? 9. Покличте кого-небудь, щоб допоміг нам. 10. Чи є у тебе щось цікаве почитати?

19. Fill in the gaps with *none, nobody, and nothing*.

1. _____ of us will go there. It's not the place we should go. 2. _____ has happened. Don't worry. 3. It was too dark outside and we could see _____. 4. He found two copies but _____ of them was correct. 5. Kate had watched _____ of the two films I told her to watch. 6. There was _____ in the hall when

we entered. 7. He will buy _____ today because it is Sunday and the shops are closed. 8. There was _____ at the counter. 9. You can see _____ out of the window. It is snowing heavily. 10. _____ of them is rigid.

20. Supply necessary indefinite pronouns.

1. There is _____ in the clothes basket. It is empty. 2. I've tried phoning but every time I tried there was _____ in. 3. I have prepared _____ for dinner which you will like very much. 4. Would you like _____ to start with before the main meal? 5. He sat at the table but didn't have _____ to eat. 6. You can do _____. I don't really care. 7. I met _____ you know last night. She told me she had missed you very much. 8. That's a very easy job. _____ can do it. 9. Did you turn the oven off? I think I can smell _____ burning. 10. _____ offered help. They probably didn't have time. 11. _____ arrived in good time and the meeting started promptly at 3:30. 12. When the show finished there was complete silence. _____ clapped. 13. _____ likes being poor

The Past Continuous

positive sentences: I/he/she/it was + Ving (reading) we/you/they were + Ving (reading) negative sentences: I/he/she/it was not + Ving (reading) we/you/they were not + Ving (reading) questions: Was I/he/she/it + Ving (reading) Were we/you/they + Ving (reading)	
Meaning	Example
1. an action in the middle of happening at a stated past time	He was playing tennis at 4.30 yesterday.
2. past action in progress interrupted by another past action expressed by the Past Simple.	While I was getting dressed the bell rang .
3. two or more simultaneous past actions	While I was sunbathing , Tim was swimming .
4. background description to events in a story.	She was flying to Paris.

21. Make the Past Continuous (choose positive, negative or question):

1. (they / take the exam?) _____

2. (when / he / work there?) _____
3. (you / make dinner?) _____
4. (they / drink coffee when you arrived?) _____
- _____
5. (when / we / sleep?) _____
6. (they / study last night) _____
7. (we / talk when the accident happened) _____
- _____
8. (he / not / exercise enough) _____
- _____
9. (I / talk too much?) _____
10. (it / not / snow) _____

22. Complete the sentences with the Past Continuous form.

1. I _____ (run) when you saw me because I was late.
2. They _____ (wait) for a bus when the car crashed.
3. Gabi and Laura _____ (dance) at 8pm.
4. Tomek _____ (not / eat) a sandwich when Ben fell into the river.
5. What _____ Carol and Jack _____ (do) when Pedro phoned?
6. _____ Sally _____ (take) a photo when I phoned?
7. Pedro and Tomek _____ (not / laugh) when Ben fell in the river.
8. We _____ (to go) to the mall last night at 8 o'clock.
9. She _____ (to talk) to the police officer last week when I met her.
10. I _____ (to buy) a new bicycle when you called me.

23. Fill in the correct form of the past tense.

1. My friend Harry _____ off the ladder while he _____ the ceiling of his room. (fall, paint)
2. We _____ the house in 2003. At that time, it _____ £ 150,000. (buy, cost)
3. Dad _____ interested in buying a new car. (not be)
4. My

sister _____ for me at the airport terminal when I _____. (wait, arrive) 5. A few nights ago, I _____ a book when suddenly I _____ a noise outside. A few teenagers _____ loud music. (read, hear, play) 6. The fire _____ when the first firefighters _____ at the scene. (still burn, arrive) 7. My brother _____ for a job when he _____ across an interesting ad in the newspaper. (look, come) 8. I _____ someone call my name. I _____ around and _____ my dad standing at the back of the queue. I _____ so surprised. (hear, turn, saw, be) 9. My sister _____ a bright summer dress when I _____ her at the performance. (wear, see) 10. I _____ preparing dinner at 4.p.m and I _____ still at it when my wife _____ home. (start, be, come) 11. Our housekeeper _____ the vase. As she _____ up the pieces, she _____ her middle finger. (break, pick, cut) 12. We suddenly _____ that we _____ in the wrong direction. (realize, drive) 13. She _____ a great skier when she was young. (be) 14. I _____ an old friend in town while I _____ the shopping. (meet, do) 15. While the children _____ with others my husband and I _____ to have a cup of coffee. (play, decide) 16. Magellan _____ around the world for the first time 500 years ago. (sail) 17. I _____ my dog for a walk in the park when suddenly another dog _____ him. (take, attack) 18. When I _____ back from town everyone was at home. Mum _____ homework. Dad _____ the car and my sister Julia _____ on her school project. (come, correct, wash, work) 19. We _____ (choose) the flowers when we _____ (see) Nick. He _____ (speak) to somebody near the metro. 20. While Maria _____ (dust) the furniture her brother _____ (vacuum) the carpets.

24. Put the verbs in brackets into the correct form.

1. _____ you _____ (to wash) the clothes at 4 o'clock yesterday? – No, I _____. I _____ (to tidy) my room at that time. 2. _____ Lucy _____ (to do) the shopping when you met her? – Yes, she _____. 3. _____ they _____ (to translate) the text in the afternoon? – No, they _____. They

_____ (to prepare) for the Math test. 4. _____ Alison and Rita _____ (to sit) in a café at three o'clock? – Yes, they _____. They _____ (to eat) ice cream. 5. _____ Steve _____ (to play) computer games all the evening? – No, he _____. He _____ (to do) his homework. 6. _____ Barbara _____ (to sunbathe) in the morning yesterday? – Yes, she _____. 7. _____ the children _____ (to help) their grandparents yesterday? – Yes, they _____. They _____ (to gather) fruit in the garden. 8. _____ you _____ (to sleep) at four o'clock yesterday? – Yes, I _____. 9. _____ Phil _____ (to speak) to the receptionist when you came into the hall of the hotel? – No, he _____. He _____ (to have) breakfast in the café. 10. _____ you (to pack) your luggage when the taxi arrived? – No, I _____.

The Past Perfect

positive sentences: I/We/You/He/She/It/They + had + Ved (translated) negative sentences: I/we/you/He/She/It/They had not + Ved (translated) questions: Had I/we/you/he/she/it/they + Ved (translated) ?	
Meaning	Example
1. past actions which happened before another action or before a stated past time	She had left by the time I got there.
2. completed past action which had visible results in the past	She was sad because she had failed the test.
3. The Past Perfect is the past equivalent of the Present Perfect.	(He can't find his watch. He has lost it.) He couldn't find his watch. He had lost it.

25. Change the following sentences according to the model.

Model: The bus **came** at 9. We left at 9.15.

We **left** after the bus **had come**.

The bus **had come** before we **left**.

1. We finished dinner. Then mother came. 2. Judy wrote a letter. Then she went to bed. 3. Taras cooked soup. Then he called Oleh. 4. I rang him up. Then he came. 5. They received a parcel. Then father came. 6. It stopped snowing. Then the wind started blowing. 7. Alex finished his dinner. Then he went to play football. 8. Irene fell asleep. Then the telephone rang. 9. The students wrote the task. Then the dean came. 10. You tried on new shoes. Then you bought them. 11. The concert started at 7. We came at

7.30. 12. They ate dinner at 6. Father came at 8. 13. Mother gave me money. Then I bought a new dress. 14. The train left at 5. We came to the station at 6. 15. Bob polished the floor. Mother came later.

26. Make the sentences negative and interrogative.

1. The boys had lost the game by 2 o'clock. 2. Nell had cleaned the flat before mother came. 3. We had stopped the taxi before he came out. 4. We had missed 10 lessons. 5. When Tom came to the station the train had already left. 6. I had washed the linen by 6 o'clock. 7. Terry had planted tomatoes. 8. We had eaten strawberries by 2 o'clock. 9. He had given up smoking by that time. 10. They had closed the door by that time.

27. Put all the types of question to the following sentences.

1. Judy had learnt the poem by the evening. 2. Pat had studied English before he studied French. 3. John had lost the match by the end of the day. 4. Children had visited the zoo before mother came. 5. Jolly had got home before it started to rain. 6. Kitty had lived in Africa before they moved to Canada. 7. My sister had ironed the linen by 5 o'clock. 8. The farmer had fed the chickens by 6 o'clock. 9. We had visited a puppet show before we returned home. 10. The bank had given the loans before it went bankrupt. 11. By 1960 most of Britain's old colonies had become independent. 12. I had seen him somewhere before.

28. Make one sentence of two given ones. Use the Past Perfect Tense.

Model: Jane **left** her pen at home. She **was** sorry about it.

Jane **was** sorry that she **had left** her pen at home.

1. I forgot to ring him up. I was sorry about it. 2. Maurice hid the note. Then he said about it. 3. Olga signed the document. Then the new rules appeared. 4. The banker earned the money. Then he bought new shares. 5. The thief broke into the house. Then the dog barked. 6. We slept for an hour. Then we got up. 7. They lived in Kyiv. Then they came to Poltava. 8. Sherlock killed a deer. Then he ran away to the mountains. 9. Dasha saw the film. Then she told us about it. 10. Monica waited for a long time. Then she went home. 11. Joseph ate lunch. Then his cousin came. 12. Tom washed his hands. Then he started to eat. 13. Sam worked in the field. Then he felt tired. 14. Sarah

read the story. Then she told us this story. 15. Some of us came home at 2. The others returned at 3. 16. I washed the linen. Then I ironed it. 17. Alex knocked at the door. Then he entered the room. 18. The pupils wrote the compositions. Then they checked them. 19. Ann cooked dinner at 2. Her mother came home at five. 20. Laura fell asleep. Then her mother came home.

29. Finish the following sentences.

1. When we came to the university _____.
2. By the moment Mona returned home _____.
3. By the time they reached the hill _____.
4. When Alice got up _____.
5. By that autumn Rob _____.
6. When Tom woke up _____.
7. When the dean entered the room _____.
8. By the time the concert started _____.
9. Tracy didn't know that _____.
10. Mother was glad that _____.
11. They were sorry that _____.
12. We were tired after _____.
13. He said _____.
14. She thought she _____.
15. Natalia came home after _____.
16. Jun read the book after _____.
17. Before Ted came we _____.
18. By the end of the day Anna _____.
19. The children did it after they _____.
20. I did it after I _____.

30. Fill in the blanks with the Past Simple or the Past Perfect of the verbs in brackets:

1. Dave finally _____ (reject) the promotion that his manager _____ (offer) him due to his hard work. 2. I _____ (never/ travel) abroad until I _____ (move) to Germany. 3. As soon as Patrick _____ (get) the telegram, he _____ (know) what _____ (happen). 4. Once the party _____ (finish) everybody _____ (leave) except for Sue that _____ (help) us to tidy the house. 5. Carl _____ (not/ tell) me about our economic problems until everything _____ (be settled). 6. Alice finally _____ (buy) her wedding dress after she _____ (try on) at least twenty of them. What a bore! 7. Carol _____ (reset) her exam in September since she _____ (fail) it in June. 8. Lewis _____ (not/ change) as much as his wife! I _____ (not/ see) them for five years. 9. When Tina's mother _____ (die), she _____ (inherit) a fortune and a fabulous mansion in Los Angeles. 10. Kim _____ (not/ get) the job because she _____ (not/ prepare) herself for the interview. 11. When I _____ (wake up) this morning, everything _____ (be) white. Definitely, it _____ (snow) during the night. 12. Pam _____ (never/ forget) that they _____ (not/ invite) her to their wedding reception. 13. Our daughter _____ (send) an e-mail as soon as she _____ (arrive) in London. She _____ (promise) to phone us, but she _____ (not). 14. Dick _____ (recognise) that he _____ (expect). 15. Brian _____ (understand) that he _____ (make) some mistakes in her test paper.

31. Put the verbs in the brackets into the Past Simple, Past Continuous or Past Perfect tense.

1. When the manager _____ (to come up) to the boss, he _____ (to speak) to somebody on the phone. 2. Jane _____ (to pay) for the dress she _____ (to choose) some minutes before. 3. Jim _____ (to read) the article and _____ (to return) me the magazine. 4. It _____ (still to rain) when we _____ (to get) home yesterday. 5. Dave _____ (to check) the mail before he _____ (to turn off) his computer. 6. While the professor _____ (to give) a lecture he _____ (to realize) that his wife _____ (not to remind) him about one important appointment. 7. While Mrs. Simpson _____

(to cook) dinner she _____ (to understand) that she _____ (not to buy) potatoes. 8. When Laura _____ (to come) to the hospital, all the doctors _____ (to discuss) the medicine for cancer which the scientists _____ (to invent) some days before. 9. Sam _____ (to get) to the airport after the plane _____ (to fly up). 10. When little Betty _____ (to play) with her toys yesterday evening she _____ (to find) the key her mother _____ (to lose) a week before.

32. Translate into English.

1) Учора до шостої хлопці зіграли дві партії в шахи. 2) Вона не переглянула всі документи до кінця робочого дня вчора. 3) Скільки повідомлень ви отримали до минулого понеділка? — Я отримав сім повідомлень. 4) Перед тим як вона вийшла з дому, вона написала записку братові. 5) Коли ми приїхали до дідуся та бабусі, вони збирали яблука в саду. 6) Після того як закінчились заняття, вони пішли до парку. 7) Коли Бен ішов додому, він пригадав, що не купив молока. 8) Коли ми слухали його розповідь, я пригадав, що вже чув щось подібне. 9) Олена побачила свою подругу після того, як потяг зупинився. 10) Том сказав, що він уже відремонтував свій комп'ютер.

33. Change the sentences to passive voice.

1. The Browns have built the large house. 2. A jellyfish stung her while she was swimming. 3. They gave her a nice present. 4. Jane is singing the new song. 5. The storm destroyed the house. 6. People spent a lot of money on the first shopping Saturday. 7. How do you write that word? 8. She watered the flowers every day. 9. The headmaster called his parents to the office. 10. The dog has broken the window pane. 11. They were interviewing her for the job. 12. The professor told him not to talk in class. 13. Do not leave your bicycle in the hall. 14. Your impolite tone surprises me. 15. An unknown author wrote the book. 16. They forced him to steal the money out of his dad's room. 17. Our neighbors have invited us to dinner. 18. Why are they tearing down the old theatre? 19. Nobody has given out the news yet. 20. Edison invented the gramophone.

34. Rewrite the following passage in the Passive.

Some people saw a UFO in the sky above London last night. They reported it to the police. The army sent a helicopter to look at it more closer. The UFO shot the helicopter down and killed both men in it. People have given photographs of the UFO to the police. Experts are looking at them now.

35. Rewrite the following passage in the Passive.

Someone broke into a local jewellery shop yesterday. The owner locked up the shop when a robber with a gun threatened him. The robber told him to unlock the shop and give him all the diamonds in the safe. Then the robber tied him up. The police have organized a search for the robber. Doctors are treating the owner of the shop for shock.

MODULE 4

VIRTUAL REALITY

Text 1. WHAT IS VIRTUAL REALITY?

Basic Vocabulary

simulated [ˈsɪmjuleɪtɪd] підроблений, модельований, умовний	accurate [ˈækjʊrət] точний
immerse [ɪˈmɜːs] поглинати; займати (думки, увагу)	spatial [ˈspeɪʃ(ə)l] просторовий, космічний
immersion [ɪˈmɜːʃ(ə)n] занурення	must (n) – необхідність, насущна потреба
multiplicity – розмаїтість; численність	binaural [baɪˈnɔːrəl] стереофонічний
unfolding – розгортання	tinker (with) – лагодити, підправити
wearables [ˈwe(ə)rəb(ə)lz] предмети одягу	replicate – копіювати
usability – зручність використання	omnidirectional – всепрямований
convincing – переконливий	experience – випадок
cue [kjuː] сигнал	

Virtual Reality (VR) is the use of computer technology to create a simulated environment. Unlike traditional user interfaces, VR places the user inside an experience. Instead of viewing a screen in front of them, users are immersed and able to interact with 3D worlds. By simulating as many senses as possible, such as vision, hearing, touch, even smell, the computer is transformed into a gatekeeper to this artificial world. The only limits to near-real VR experiences are the availability of content and cheap computing power.

Virtual Reality technology

Virtual Reality's most immediately-recognizable component is the head-mounted display (HMD). Human beings are visual creatures, and display technology is often the single biggest difference between immersive Virtual Reality systems and traditional user interfaces. For instance, CAVE automatic virtual environments actively display virtual content onto room-sized screens. While they are fun for people in universities and big labs, consumer and industrial wearables are the wild west.

With a multiplicity of emerging hardware and software options, the future of wearables is unfolding but yet unknown. Concepts such as the HTC Vive Pro Eye, Oculus Quest and PlayStation VR are leading the way, but there are also players like Google, Apple, Samsung, Lenovo and others who may surprise the industry with new levels of immersion and usability. Whomever comes out ahead, the simplicity of buying a helmet-sized device that can work in a living-room, office, or factory floor has made HMDs center stage when it comes to Virtual Reality technologies.

Virtual Reality and the importance of audio

Convincing Virtual Reality applications require more than just graphics. Both hearing and vision are central to a person's sense of space. In fact, human beings react more quickly to audio cues than to visual cues. In order to create truly immersive Virtual Reality experiences, accurate environmental sounds and spatial characteristics are a must. These lend a powerful sense of presence to a virtual world. To experience the binaural audio details that go into a Virtual Reality experience, put on some headphones and tinker with this audio infographic published by The Verge.

While audio-visual information is most easily replicated in Virtual Reality, active research and development efforts are still being conducted into the other senses. Tactile inputs such as omnidirectional treadmills allow users to feel as though they're actually walking through a simulation, rather than sitting in a chair or on a couch. Haptic technologies, also known as kinesthetic or touch feedback tech, have progressed from simple spinning-weight "rumble" motors to futuristic ultrasound technology. It is now possible to hear and feel true-to-life sensations along with visual VR experiences.

<https://www.marxentlabs.com/what-is-virtual-reality/>

EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or False. Correct any False statements.

1. Virtual Reality (VR) is the use of computer technology to create a simulated environment. _____ 2. Virtual Reality applications do not require graphics. _____ 3.

Only hearing is central to a person's sense of space. _____ 4. Human beings react more quickly to visual cues than to audio cues. _____ 5. Audio-visual information is most easily replicated in Virtual Reality. _____ 6. It is impossible to hear and feel true-to-life sensations along with visual VR experiences. _____

3. Give synonyms for the following words.

View (v), between (prep.), for example, environment (n), display (v), consumer (n), concept (n), cue (n), presence (n), haptic technologies, progress (v).

4. Give antonyms for the following words.

Expensive (adj.), availability (n), biggest (adj.), automatic (adj.), actively (adv.), unknown (adj.), central (adj.), presence (n), regress (v).

5. Give Ukrainian equivalents for the following phrases.

Simulated environment, traditional user interfaces, to interact with 3D worlds, the only limits to near-real VR experiences, most immediately-recognizable component, traditional user interfaces, to display virtual content onto room-sized screens, consumer and industrial wearables, immersion and usability, convincing Virtual Reality applications, accurate environmental sounds and spatial characteristics, binaural audio details, research and development efforts, most easily replicated audio-visual information, simple spinning-weight "rumble" motors, omnidirectional treadmills.

6. Match the words and phrases to form word combinations.

- | | |
|-------------------------------|--|
| 1. be transformed into | a) hardware and software options |
| 2. immersive Virtual | b) the binaural audio details |
| 3. a multiplicity of emerging | c) immersive Virtual Reality experiences |
| 4. new levels | d) touch feedback tech |
| 5. to create truly | e) a gatekeeper to this artificial world |
| 6. To experience | f) of immersion and usability |
| 7. kinesthetic or | g) true-to-life sensations |
| 8. to hear and feel | h) Reality systems |

7. Answer the following questions on the text.

1. What is virtual reality? 2. What senses can be simulated? 3. What component is Virtual Reality's most recognizable? 4. Where can a helmet-sized device work? 5. Is only vision central to a person's sense of space? 6. What is a must to create truly immersive Virtual Reality experiences? 7. What information is most easily replicated in Virtual Reality? 8. What are the other terms for haptic technologies?

8. Translate into English:

1. Віртуальна реальність — це симуляція, яка може статися в будь-якій точці світу. 2. Найбільш впізнаваним компонентом віртуальної реальності є шолом віртуальної реальності. 3. У віртуальній реальності комп'ютер використовує подібні датчики та математику. 4. Технологія віртуальної реальності створює для користувача переконливий інтерактивний світ. 5. Аудіовізуальна інформація найлегше відтворюється у віртуальній реальності. 6. Для створення справді захоплюючих вражень від віртуальної реальності, необхідні точні звуки навколишнього середовища та просторові характеристики.

9. Retell the text using your active vocabulary.

Text 2. IS IT POSSIBLE TO CREATE PERFECT VIRTUAL REALITY?

Basic Vocabulary

imperfection – недосконалість

turn – змінювати (тему)

be similar to – бути схожим / подібним

cyberspace [ˈsaɪbəspeɪs] кіберпростір

approximate [əˈprɒksɪmeɪt] приблизний

step over – переступити

bunch [bʌntʃ] – пучок

let alone – не кажучи вже про...;

не беручи до уваги

fractal algorithms – фрактальні

алгоритми

cortex [ˈkɔːteks] кора головного

мозку

Human beings have always been seeking for a better place to live, better food to eat, better people to meet. The wise have concluded that there's no perfection itself. Human's brain identifies reality by its imperfection. And thus, the attempts to create ideal world turned to creating the world alike reality — virtual reality.

On the first stage, when technology wasn't so developed, virtual reality models just presented the essence of the current processes. But along with the development of technology and science a real-world model is quite similar to our life. It's still something alike, a copy but not perfect. Copying itself isn't an example to follow, but this way we may explore the universe more carefully. So what are the problems of creating perfect virtual reality — cyberspace where you can't say whether it's cyberspace or not?

One of the difficulties is that it doesn't look like reality. We can't present the needed number of colours, the full palette our eye can catch. We can't introduce shades that really look like shades because the rendering algorithms we have are huge and approximate. And it's still not possible to show such a movie in real time.

If we'd like just to imitate the movements of molecules, which are easy to be programmed, and this way to model the reality, again, we have a great wall to be stepped over. Our knowledge of micro world is poor and even though Einstein himself worked at the Uniform Field Theory, it is still uncompleted. On the other hand, the molecules are so many that program-ming a single cell, let alone even an insect, is the work of life for hundreds of programmers. Nobody can imagine the difficulty of virtualization of a human being. To model the universe, we should create another one.

There are tasks to be solved before we can create 99% acceptable virtual reality: e.g. the speed of processing, fractal algorithms for render-ing, quark mechanics and so on. But has anybody thought of connecting a computer to human's brain and clipping the images you and your ances-tors have seen to present for someone else, or maybe using the calculating and data processing capabilities of the cortex? By the way, the process of seeing, hearing, smelling, and feeling the world is just a bunch of electric signals entering the brain. Maybe, the answer is here, and the distance is not the unaccomplished technical achievements, but ideas, strategic deci-sions, some crazy projects like the Head of Professor Dowel. Will there be the final step to create perfect virtual reality? Let's see.

<https://studfile.net/preview/2359319/page:11/>

EXERCISES

1. Read and translate the text. Learn the words from *Basic Vocabulary*.

2. Are the statements True or False. Correct any False statements.

1. Human's brain identifies reality by its perfection. _____ 2. Along with the development of technology and science a real-world model is quite similar to our life. _____ 3. Our knowledge of micro world is rich. _____ 4. To model the universe, we should create another one. _____ 5. The process of seeing, hearing, smelling, and feeling the world is a bunch of magnetic signals entering the brain. _____

3. Give synonyms for the following words.

seek (v), wise (adj.), essence (n), current (adj.), development (n), perfect (adj.), explore (v), carefully (adv), algorithm (n), unaccomplished (adj.).

4. Give antonyms for the following words.

Worse (adj.), die (v), stupid (adj.), perfection (n), imperfect (adj.), fantasy (n), different (adj.), tiny (adj.), difficult (adj.), rich (adj.), leave (v), first (adj.).

5. Give Ukrainian equivalents for the following words and expressions.

To seek for, perfection, identify, a real-world model, follow, cyberspace, palette, rendering, approximate, step over, virtualization, acceptable, clip, cortex, bunch.

6. Match the words and phrases to form word combinations.

- | | |
|--------------------------------|---------------------------------------|
| 1. to seek for | a) number of colours |
| 2. to identify reality | b) a great wall |
| 3. to create | c) a better place to live |
| 4. to present the needed | d) rendering algorithms |
| 5. huge and approximate | e) to human's brain |
| 6. to step over | f) perfect virtual reality |
| 7. to imagine the difficulty | g) technical achievements |
| 8. to connect a computer | h) entering the brain |
| 9. a bunch of electric signals | i) by its imperfection |
| 10. unaccomplished | g) of virtualization of a human being |

7. Answer the following questions on the text.

1. Why did people begin to create virtual reality? 2. What did virtual reality present on different stages of its development? 3. What difficulties do we face with creating virtual reality? 4. What tasks do we have to solve creating acceptable virtual reality?

8. Read the text and fill in the missing words from the box.

sensors	Virtual Reality	Augmented Reality	technology	graphics
simulated	virtual objects	computer-generated	interactive	physical

What's the difference Between Virtual Reality and Augmented Reality?

Virtual Reality and Augmented Reality are two sides of the same coin. You could think of Augmented Reality as VR with one foot in the real world: (1) _____ simulates artificial objects in the real environment; Virtual Reality creates an artificial environment to inhabit.

In Augmented Reality, the computer uses (2) _____ and algorithms to determine the position and orientation of a camera. AR (3) _____ then renders the 3D (4) _____ as they would appear from the viewpoint of the camera, superimposing the (5) _____ images over a user's view of the real world.

In (6) _____, the computer uses similar sensors and math. However, rather than locating a real camera within a (7) _____ environment, the position of the user's eyes are located within the (8) _____ environment. If the user's head turns, the graphics react accordingly. Rather than compositing (9) _____ and a real scene, VR technology creates a convincing, (10) _____ world for the user.

9. Translate into English:

1. Людський мозок розпізнає реальність за її недосконалістю. 2. Коли технології були нерозвиненими, моделі віртуальної реальності представляли суть поточних процесів. 3. Які проблеми створення ідеального кіберпростору? 4. Програмування однієї клітини є справою життя сотень програмістів. 5. Ніхто не

може уявити собі труднощі віртуалізації людини. 6. Щоб змоделювати Всесвіт, ми повинні створити ще один. 7. Щоб створити прийнятну віртуальну реальність потрібно вирішити такі завдання як швидкість обробки, алгоритми візуалізації тощо.

11. Retell the text using your active vocabulary.

Text 3. SOME APPLICATIONS OF VIRTUAL REALITY

Basic Vocabulary

expand, <i>v</i>	розширювати, розвивати, поширювати	respond	відповідати, робити що-небудь у відповідь
surgical, <i>adj.</i> ['sɜ:dʒɪk(ə)l]	хірургічний	remote, <i>adj.</i>	віддалений, далекий;
phobia ['fəʊbiə]	страх, фобія	beneficial, <i>adj.</i>	корисний, вигідний
incorporate, <i>v</i>	з'єднувати, об'єднувати	obstacle, <i>n</i>	перешкода
remain, <i>v</i>	залишатися	undisturbed, <i>adj.</i>	непорушений
scenario, <i>n</i> [sɪ'nɑ:riəʊ]	сценарій, план дій	comprehension, <i>n</i>	розуміння; осягання
hazard, <i>n</i> ['hæzəd]	ризик, небезпека	intuitive, <i>adj.</i>	інтуїтивний
		provided, <i>conj.</i>	за умови (що), якщо тільки, у тому випад- ку якщо
		domain, <i>n</i>	галузь, сфера

One of the most arising technologies in this decade is the virtual reality (VR) technology that is not limited anymore to games specifically or the entertainment field in general as the VR applications are **expanding** to many other fields and businesses including:

Medicine

Within this area VR is used for training, education and **surgical** simulations for diagnoses, pre-operative planning and treatment.

The technology is also being used in cognitive behaviour therapy where patients with **phobias** (acrophobia, agoraphobia, arachnophobia, public speaking anxiety) work

through their problems in a controlled environment. It can be also used as a tool of cognitive behavioural therapy (alcohol and nicotine addictions, eating disorders).

Entertainment

The entertainment industry was one of the first to **incorporate** VR and still **remains** one of the strongest examples of how it can be applied. If you look at online and/or console gaming, you will see that VR has a strong presence in this industry.

Similarly, VR is being introduced to cinemas and theme parks to simulate movie-like adventures and let people experience their favourite cinematographic masterpieces.

Automotive

VR helps car manufacturers in analysing road **scenarios** and the behaviour of cars. The simulated situations allow them to analyse and make changes to the prototypes before developing a new model.

Virtual reality is widely used in the development of smart cars that will flood the market in the future. Cars learn how to drive, turn, and stop using artificial intelligence (AI) and virtual reality.

Military

Virtual simulations of flight and conflict scenario are used to teach soldiers how to make immediate and right decisions under stressful circumstances which makes their training safer and less costly.

Digital Marketing

While most people don't like commercials, experiencing the use of a product close-up can actually be an entertaining and enlightening experience. There are a variety of applications of VR in digital marketing. For example, retailers can show potential customers how a product will look in their home.

Occupational Safety

Occupational safety and health (OSH) is a concern for workplaces with machinery or natural **hazards**. These workplace dangers can be addressed in a simulated environment so workers can learn how to **respond** to them effectively without being hurt.

Communication and Collaboration

Remote jobs are increasing day by day which is **beneficial** as that save time and efforts. Hence, the productivity is increased but the main **obstacle** for remote employees is that they need effective methods for communication and collaboration better than regular voice or video communication methods available.

With the help of virtual reality, Teams can attend meetings to communicate and collaborate efficiently in a virtual environment with the need for the physical effort of commuting and away from any kind of distractions.

The isolated virtual work environment will improve productivity for meetings and training sessions while reducing costs of physical workplaces for employees and conferences.

Education Virtual Reality Applications

Enriching the learning experience for teachers and students has been successfully achieved with virtual reality application as educational organizations can create virtual **undisturbed** reality to a group of students and their instructors from different locations all over the world to add more productivity to existing e-learning solutions.

If students are learning about history, astronomy, engineering, physics or any other fields, a virtual world can create to experience what they learn about closely in details with symbols, colours, objects and characters created in the virtual learning environment to reach the most possible **comprehension** level.

The user of virtual world can move inside this world and transform it by his actions. His behaviour should be **intuitive** as much as possible and his feeling inside the synthetically generated environment natural as much as possible. **Provided** that the virtual world is designed in agreement with all its attributes it could be an effective tool for systems optimization, learning and promotion. This broad issue covers a large number of **domains** and it is still an object of research as there is still a lot to improve.

<https://trio.dev/blog/virtual-reality-applications>

EXERCISES

- 1. Read and translate the text. Learn the words from *Basic Vocabulary*.**
- 2. Are the statements True or False. Correct any False statements.**

1. The virtual reality (VR) technology is limited to games specifically or the entertainment field in general. _____ 2. Within medicine the technology is being used in cognitive behaviour therapy. _____ 3. The entertainment industry was one of the first to incorporate VR and now remains one of the weakest examples of how it can be applied. _____ 4. VR helps car manufacturers in analysing road scenarios and the behaviour of cars. _____ 5. Virtual simulations of flight and conflict scenario cannot teach soldiers how to make immediate and right decisions under stressful circumstances. _____ 6. VR cannot be applied in digital marketing. _____ 7. With the help of virtual reality, Teams can attend meetings to communicate. _____ 8. The virtual world is designed in agreement with all its attributes. _____

3. Give synonyms for the following words.

Technology (n), limited (adj.), field (n), treatment (n), cognitive (adj.), remain (v), console (v), favourite (adj.), smart (adj.), circumstances (n), attend (v), synthetically (adv.), change (v).

4. Give antonyms for the following words.

Specifically (adv.), expand (v), controlled (adj.), incorporate (v), absence (n), smart (adj.), teach (v), stressful (adj.), remote (adj.), decrease (v), reduce (v).

5. Give Ukrainian equivalents for the following phrases.

the most arising technologies in this decade, cognitive behaviour therapy, in a controlled environment, online and/or console gaming, to simulate movie-like adventures, make changes to the prototypes, under stressful circumstances, digital marketing, machinery or natural hazards, reduce costs, create virtual undisturbed reality, existing e-learning solutions, comprehension level, synthetically generated environment, in agreement with.

6. Match the words and phrases to form word combinations.

- | | |
|-----------------------------------|--------------------------|
| 1. To expand to many | a) behavioural therapy |
| 2. To work through their problems | b) movie-like adventures |

- | | |
|--------------------------------------|--|
| 3. a tool of cognitive | c) decisions under stressful circumstances |
| 4. to simulate | d) in a controlled environment |
| 5. Virtual simulations | e) safety and health |
| 6. to make immediate and right | f) with all its attributes |
| 7. Occupational | g) other fields and businesses |
| 8. the main obstacle | h) for teachers and students |
| 9. Enriching the learning experience | i) of flight and conflict scenario |
| 10. in agreement | j) for remote employees |

7. Answer the following questions on the text.

1. In what fields does the virtual reality technology used nowadays? 2. What industry was one of the first to incorporate VR? 3. Why is VR beneficial in the development of smart cars? 4. Can you give an example of VR applications in digital marketing? 5. Why are remote jobs beneficial? 6. What are education VR applications? 7. Why could virtual world be an effective tool of systems optimization, learning and promotion?

8. Translate into English:

1. Сьогодні віртуальна реальність є однією з найбільш поширених технологій. 2. Раніше технологія віртуальної реальності обмежувалась лише іграми або сферою розваг загалом. 3. У медицині технології віртуальної реальності використовується для навчання, хірургічного моделювання, передопераційного планування та лікування. 4. Технології віртуальної реальності впроваджують у кінотеатри та тематичні парки. 5. Віртуальна реальність широко використовується при розробці розумних автомобілів. 6. Цифровий маркетинг має безліч застосувань VR. 7. Небезпеки на робочому місці можна подолати в імітованому середовищі. 8. Віддалені робочі місця є вигідними, оскільки економлять час і зусилля. 9. Ізольоване віртуальне робоче середовище знижує витрати на фізичні робочі місця для співробітників.

10. Користувач віртуального світу може переміщатися всередині цього світу і своїми діями перетворювати його.

9. Retell the text using your active vocabulary.

GRAMMAR

1. Choose the correct form – adjective or adverb.

1. He looked at me _____ when I interrupted him (angry). 2. Alice and Stan are very _____ married (happy). 3. I lost the match because I was playing very _____ (bad). It was even _____ than the last game (bad). 4. Nobody knew he was coming. He arrived so _____ (unexpected). 5. My French isn't very _____ but I can understand him _____ if he speaks _____. (good, perfect, slow) 6. Sue is _____ upset about losing her job (terrible). 7. The children behaved very _____ (good). 8. Most people have heard about him. They are very _____ informed. (good). 9. Expensive hotels are often _____ than _____ ones (comfortable, cheap). 10. It's the _____ painting in his whole collection. (valuable) 11. The cook prepared an _____ lunch (excellent). 12. The couple had to work _____ for a living (hard). But if you look at other people, they _____ work at all (hard). 13. The dinner tasted _____ (great). 14. She has _____ money to spend than she had last year (little) 15. Did they go together or _____ (separate).

2. Complete the sentences using the correct forms.

1. The president hopes that people of all races will live together _____. (peaceful) 2. She told us that the streets in the capital city were _____ and _____. (dirty, ugly) 3. Do you think nuclear energy is _____? (safe) 4. I get all the food _____ from the farmers. (direct) 5. The minister was _____ worried that the deal would not pass parliament. (deep) 6. Marty drove home from the party as _____ as he could and got there _____. (fast, safe) 7. When the director found out about the scandal he

shouted _____ at his employees (angry). 8. The old woman walked across the street very _____. (careful) 9. She didn't see me. She _____ knocked me down with her brand-new car! (near) 10. After a few weeks people forgot about him _____. (complete) 11. He _____ works anymore, because he already has enough money. (hard) 12. She _____ climbed down from the tree as soon as the bear had disappeared. (slow) 13. He is a very _____ volleyball player. (good) 14. Bob excused himself _____ and went home. (polite) 15. English is an _____ language to learn, however he couldn't learn grammar rules so _____. (easy, easy)

3. Choose the correct word in the parentheses. Translate into Ukrainian.

1. George is a (careless / carelessly) writer. He writes (careless / carelessly). 2. Frank asked me an (easy / easily) question. I answered it (easy / easily). 3. Sally speaks (soft / softly). She has a (soft / softly) voice. 4. I entered the classroom (quiet / quietly) because I was late. 5. Ali speaks English very (good / well). He has very (good / well) pronunciation. 6. This math problem looks (easy / easily). I'm sure I can do it (easy / easily). 7. That chair looks (comfortable / comfortably). 8. I looked at the problem (careful / carefully) and then solved it. 9. I felt (sad / sadly) when I heard the news. 10. Susan smiled (cheerful / cheerfully). She seemed (cheerful / cheerfully). 11. I tasted the soup (careful / carefully) because it was hot. The soup tasted (good / well). 12. The room got (quiet / quietly) when the professor entered. The students sat (quiet / quietly) at their desks. 13. The sky grew (dark / darkly) as the storm approached.

4. Fill the gaps using the words in brackets.

1. She finished the day _____ exhausted. (bit / totally) 2. Tammy Payne isn't a good singer. She's _____ fantastic. (absolutely / very) 3. The Serrano Towers in Valencia are _____ high. (absolutely / pretty) 4. Jerez de la Frontera is a _____ interesting place. (quite / rather) 5. That boy of yours is _____ lazy. (absolutely/extremely) 6. It was _____ freezing this morning. (a

bit/absolutely) 7. Victoria, in my opinion, is _____ mad.
 (completely / highly) 8. Scarlett Johansson looked _____ gorgeous
 at the Golden Globe Awards ceremony. (absolutely/totally) 9. María is
 _____ nice. (absolutely/really) 10. Godella is a _____ pretty
 town. (quite/rather) 11. Ecuador is a _____ great country. (really/very)
 12. It was a _____ simple invention. (quite/remarkably) 13.
 Samantha is a _____ skilled computer technician. (completely/highly) 14. Sean
 lives a _____ stressful life. (quite/very) 15. Gerard cooks _____
 well. (absolutely/fairly) 16. The concert was _____ wonderful.
 (absolutely/extremely) 17. Rodin's sculptures are _____ well-known.
 (absolutely/very)

5. Combine the following pairs of sentences. Use a subordinating conjunction to create an adverbial clause. Punctuate carefully.

After; although; as; because; before;
if since; when; whenever; while

1. Paola lost her purse. Paola needs to cancel her credit cards. 2. The student was writing a paper on her computer. The power went out. 3. Mr. Kellar recently sold his car. He needs to cancel his auto insurance policy. 4. Jose was playing soccer last weekend. Jose injured his left knee. 5. Karen took her parents to go out to dinner. Karen forgot her credit card. 6. Three trucks collided on the Ventura Freeway. Two of the drivers were badly injured. 7. The Lopezes often go out to a Thai restaurant. Sometimes the Lopezes prefer Italian food. 8. Madson enjoys going to the theater. He rarely has the time or money. 9. Lee has recently moved to Florida. He would rather live in California. 10. Michael leaves early. His supervisor gets annoyed. 11. Terrence was having trouble with his English 101 paper. Terrence went to see a tutor in the Learning Center. 12. Maria's son was very ill last week. Maria took her son to the pediatrician.

6. Combine each set of simple sentences into one complex sentence containing an adverb clause.

1. I waited for my friend _____ he arrived. (*until; up to; unless*) 2. He hid _____ his pursuers could not find him. (*there; where; when*) 3. I am as intelligent _____ you are. (*as; so; than*) 4. _____ he was not there, I left a message with his mother. (*As; So; Therefore*) 5. We eat _____ we may live. (*that; so; as*) 6. She was _____ tired that she could barely stand. (*so; such; as*) 7. _____ you eat too much, you may fall ill. (*If; Whether; Unless*) 8. _____ he started early, he finished late. (*As; Though; So*) 9. _____ you do not tell me everything, I will not be able to help you. (*If; Unless; Whether*) 10. Do not go _____ I get ready. (*until; unless; up to*)

7. Fill in TOO or ENOUGH.

1. I can't carry this suitcase. It's _____ heavy. 2. This bag isn't big _____. I can't put all my possessions in it. 3. Is your meal warm _____? If not, I'll put it in the microwave. 4. Mom was _____ worried to go to sleep, so she stayed up all night. 5. I don't like this fizzy drink. It's much _____ sweet. 6. I'll ring you up later. I haven't got _____ time at the moment. 7. She's _____ young to drink alcohol. She's not even 15 yet. 8. We weren't able to buy tickets for both games because we didn't have _____ money. 9. I couldn't see her anywhere because it was getting _____ foggy. 10. You can't play in our first team. You're not good _____. 11. You still make _____ many mistakes. You have to practice harder. 12. If you don't get _____ sleep your overall health will suffer. 13. I can't tell you what the situation is at the moment because I haven't got _____ information. 14. He can't be a good basketball player. He isn't tall _____. 15. This is _____ good to be true!

The Present Perfect Continuous

positive sentences: I/we/you/they **have been translating**
 he/she/it **has been translating**

negative sentences: I/we/you/they **have not been translating**
 he/she/it **has not been translating**

questions: **Have** I/we/you/they **been translating**
Has he/she/it **been translating**

Meaning	Example
1. actions started in the past and continuing up to the present	He has been writing a letter for two hours.
2. past action of certain duration having visible results or effects in the present.	Her eyes are red. She has been crying .
3. actions expressing anger, irritation or criticism	Who has been using my toothbrush?
4. emphasis on duration (usually with for, since or how long)	She <i>has been calling</i> on clients since this morning.
Time expressions	<i>How long, since, recently, lately</i>

8. Put the verbs in brackets into the Present Perfect Continuous form:

1. She (work) _____ here for five years.
2. I (study) _____ all day.
3. You (eat) _____ a lot recently.
4. We (live) _____ in London for six months.
5. He (play) _____ football, so he's tired.
6. They (learn) _____ English for two years.
7. I (cook) _____ so I'm really hot.
8. She (go) _____ to the cinema every weekend for years.
9. Look, the pavement is wet. It (rain) _____.
10. You (sleep) _____ for twelve hours.
11. I (not/work) _____ today.
12. You (not/eat) _____ well recently.
13. We (not/exercise) _____ enough.
14. She (not/study) _____.
15. They (not/live) _____ here for very long.
16. It (not/snow) _____.
17. He (not/play) _____ football for five years.
18. We (not/drink) _____ enough water – that's why we feel tired.
19. I (not/sleep) _____ I was reading.
20. They (not/watch) _____ TV much recently.

9. Make Present Perfect Continuous questions.

1. How long _____ for me? (you | wait)
2. What _____ since he returned? (John | do)
3. Why _____ meat lately? (you | not eat)
4. There's so much snow on the road. _____ all night? (it | snow)
5. Why _____ for such a long time? (Sam and Mary | argue)

6. _____ my shampoo? There's not much left. (you | use)
7. How long _____ glasses? (Jill | not wear)
8. _____ since you decided to take the exam? (you | revise)
9. Where _____ lately? (your dad | work)
10. Your hands are covered with chocolate. _____ a cake? (you | make)

10. Make the Present perfect Continuous sentences. Use *for* or *since*.

1. Olga started learning the piano in February. Now its May. (*for*) _____

2. It started snowing on Monday. It's still snowing. (*since*) _____
3. We started travelling at six o'clock Now it's ten o'clock. (*for*) _____

4. Prices started going up last year. (*since*) _____

5. I started writing my great novel in January. (*since*) _____
6. The water started rising at midnight. Now it's 8.00 a.m. (*for*) _____

7. The dog started barking at six o'clock. (*since*) _____
8. We started waiting for the bus at 7.30. (*since*) _____

11. Use the Present Perfect or the Present Perfect Continuous instead of the infinitives in brackets:

1. You (to pass) _____ your exam in English? 2. I (to try) _____
 _____ to learn English for years but I (not to make) _____
 _____ good progress yet. 3. That book (to lie) _____
 _____ on the table for weeks. You (not to read) _____
 _____ it yet? 4. I (to wait) _____ here for her since 7 o'clock
 and she (not to come) _____ yet. 5. I (to read) _____
 _____ "War and Peace" for the last three months. 6. I (to think) _____

_____ about you all day. 7. He (never to be) _____ here before. 8. I can't help being angry with you; you (to sit) _____ here all the time and doing nothing. 9. There's nothing to be proud of; you (not to get) _____ a single excellent mark as yet. 10 I (to work) _____ so hard this week that I (not to have) _____ time to go to the cinema.

12. Respond to the following situations using the Present Perfect Continuous.

1. Why are you so tired? Because I _____ the wheels on my car. (replace) 2. Your French is perfect. Really? I _____ French for ten years. (learn) 3. Look at Jane. She's so nervous. No wonder. She _____ for her boyfriend for ages. (wait) 4. Bill is sunburnt. Yes, he really is. He _____ since the morning. (sunbathe) 5. Your parents look relaxed. They _____ all the weekend. (relax) 6. All the footballers are so wet. They _____ in the rain since the match started. (play) 7. Have you talked to Richard yet? Not yet. But I _____ to phone him since you told me. (try) 8. Is Grace your neighbour? Yes, she is. She _____ next door for six years now. (live) 9. Why are Pat and Matt so dirty? They _____ their bedroom. (paint) 10. Shall I wake Doris up? Yes, please. She _____ all day long. (sleep)

13. Complete the sentences with the correct form of the verbs in brackets (the Present Perfect or Present Perfect Continuous).

1. At last! I _____ (solve) the problem. 2. What _____ recently? (you / do) Anything interesting? 3. My brother _____ (buy) a new motorbike. It looks great. 4. _____ (you / swim)? Your hair looks wet. 5. Oh, there you are! I _____ (look) for you everywhere. 6. Sorry we are late. How long _____ (you / wait)? 7. I _____ (know) Peter for a long time. 8. My friends _____ (run) for two hours already. 9. I _____ (never / understand) Math and Physics. 10. The children are tired because they _____ (play) all day. 11. Susan _____ (never / believe) in ghosts and fairies. 12. I

_____ (write) emails all day. 13. John _____ (never / see) this film before. 14. What on earth _____ (you / do)? You're covered in mud. 15. _____ (you / ever / see) Altamira Cave? I hear it's incredibly beautiful. 16. How long _____ (he / learn) English? 17. I _____ (just / speak) to my cousins. They told me the news. 18. I'm sorry. Monica is not here. She _____ (go) out. 19. We're really tired because we _____ (train) for the marathon since eight o'clock. 20. _____ (you / finish) doing your homework yet? 21. The students _____ (revise) for their Spanish exam for two hours. 22. Peter, why are you sweating? Because I _____ (hoover) the carpets. 23. Is the lawn finished? Yes, Gonzalo _____ (cut) the grass. 24. It's still raining. It _____ (rain) for hours. 25. How much money _____ (you / spend) this week.

14. Fill in the correct form of the Present Perfect tense.

1. I'm so tired because I _____ so hard lately. (work) 2. The new midfielder _____ 5 goals so far this season, and we're only halfway through it. (score) 3. There's no wine left I the fridge. I _____ both bottles. (drink) 4. Jenifer is getting fatter and fatter all the time. She _____ too much. (probably eat) 5. I _____ a new pair of shoes. How do you like them? (just buy) 6. _____ reading the newspaper? Could you give it to me then? (you finish) 7. I'm writing a new novel at the moment. So far, I _____ the introduction. (only write) 8. Look at how she's sweating. She _____ for hours. (probably run) 9. How long _____ Russian? (you learn) 10. I am not surprised your eyes are hurting. You _____ computer games ever since you got up. (play) 11. My sister _____ with her roommate for 5 years. (live) 12. Where is my new watch? I _____ for it for hours and _____ it yet. (look, not find) 13. There's nothing on your exam paper. You started an hour ago. What _____

up to now? (you do) 14. I _____ a new job and I can start next Wednesday. (find) 15. I _____ Patricia since we were in kindergarten together. What _____ all these years? (not see, she do)

15. Fill in the spaces with the correct form of the verb in Simple Present Perfect Tense or Present Perfect Continuous tense.

1. We (already, bake) _____ the cake. Now, we just have to decorate it with icing. Would you like to help? 2. Have you ever been to Italy? I (see) _____ pictures of the town of Assisi. Some day, I would like to travel there to see its beautiful churches. 3. The voters (elect) _____ a new governor. She (make) _____ her acceptance speech for the past thirty minutes. I hope she will finish soon! 4. The package I sent to Pablo (not, arrive) _____ yet. He (call) _____ the Post Office every day. I don't know what happened to it. 5. The fishermen (not, catch) _____ many fish today. A strong wind (blow) _____ all day, and they are having trouble with their nets. 6. (Edward, receive) _____ the money yet? I sent it to him last week. 7. Mahmoud and Rickie are dirty. They (play) _____ outside all day. It is time for them to come in and take a bath. 8. (You, hear) _____ the news? There was a terrible earthquake in Haiti! The residents need a lot of help. 9. Igor (want) _____ to visit Paris for years. He (save) _____ his money for a plane ticket. He (almost, save) _____ enough. 10. The roses (not, bloom) _____ much lately. We (not, water) _____ them enough. The soil is getting dry.

16. Fill in the spaces with the correct form of the verb in Simple Present Perfect Tense or Present Perfect Continuous tense.

1. _____ (you / buy) your train ticket yet? 2. The kitchen is a complete mess! What _____ (the children / do)? 3. Julie _____ (learn) to drive for six years! 4. Amanda

_____ (already / have) lunch, so she'll meet us later. 5. How much coffee _____ (she / drink) this morning? 6. Simon _____ (write) three books. 7. I _____ (do) everything I needed to do today! Hurray! 8. It _____ (not / rain) all summer, so the garden is dead. 9. I _____ (read) your book. Here it is, thank you. 10. She _____ (forget) how to get to my house. 11. I _____ (work) in the garden all day and I need a rest. 12. She _____ (make) three cakes. They look delicious! 13. David feels great these days. He _____ (get) up early lately. 14. We _____ (always / hate) rush hour traffic. 15. Recently, I _____ (study) a lot. My exams are in a few weeks. 16. We _____ (write) this book for months and months. 17. I _____ (always / love) chocolate. 18. I _____ (want) to go back to university for a long time. 19. What's that delicious smell? _____ (you / cook)? 20. I _____ (watch) seven films this week!

17. Translate the following sentences into English.

1. Я прибирала квартиру весь ранок. Я дуже втомилася. 2. Я прибрала квартиру. 3. Мері дуже старанна. Вона виконує домашнє завдання весь вечір. 4. Вона може йти на прогулянку, тому що вже зробила домашнє завдання. 5. Вони подорожують автостопом (to hitchhike) вже сім років. 6. Я ніколи в житті не подорожувала автостопом. 7. Аборигени живуть тут вже тисячі років. 8. Вона вивчає комп'ютерні науки вже п'ять років. 9. Я почуваюся дуже нещасною останнім часом. 10. Він грає у волейбол з дитинства. Він справжній професіонал. 11. Я щойно бачила його у бібліотеці. 12. Мені сняться дивні сни вже біля двох тижнів. 13. Я мав таку ж проблему раніше. 14. Я дивився цей фільм тричі. 15. Вона вивчає англійську мову протягом року і вже вивчила багато нових слів та виразів. 16. Де ви були весь цей час? 17. Я перекладаю цю статтю більше години і переклав тільки п'ять рядків.

Appendix 1

COMPUTERS IN EDUCATION

Basic Vocabulary

to deny, <i>v</i>	заперечувати; не визнавати	inevitable, <i>adj.</i>	невідворотний; неминучий
prominent, <i>adj.</i>	відомий	to be exposed to attendance, <i>n</i>	піддаватися відвідуваність
smart device appliance, <i>n</i>	розумний пристрій прилад	to teach citizens digital skills	навчити громадян цифровим навичкам
ongoing use	постійне використання	to maximize, <i>v</i>	максимально збільшувати
to facilitate, <i>v</i>	полегшувати, сприяти	to record grades	записувати оцінки
to assess, <i>v</i>	оцінювати, давати оцінку	calculate averages	обчислювати середні показники наявний
interactive, <i>adj.</i>	інтерактивний, діалоговий (режим доступу до комп'ютера)	at hand	удатися (до чого-небудь)
technological advancements	технологічний прогрес	set restrictions	встановити обмеження
distracting, <i>adj.</i>	відволікаючий	enhance, <i>v</i>	поліпшувати
over-reliance, <i>n</i>	надмірна залежність	to accompany, <i>v</i>	супроводжувати
spell check, <i>n</i>	перевірка орфографії		
to outweigh, <i>v</i>	переважувати; бути більш значним		

It's hard to **deny** that computers have taken a **prominent** role in modern society. From the smartphones in our pockets to the **smart devices** controlling our **appliances** at home and everything in between, computer technology is everywhere. It should come as no surprise that the use of computers in education has been **steadily** increasing and, in many ways, has revolutionized traditional education. Computers in the classroom have **multiple benefits** for both students and their teachers.

Purpose of Computers in Education

Computers are one of the most valuable resources in a classroom because they serve so many useful functions. With computers and the internet, students today have **a wealth of information** at their fingertips that can help them develop their research and communication skills while preparing them for a future career in a **workforce** that is increasingly **reliant on** computer technology.

One of the most common applications of computers in education today involves the **ongoing use** of educational software and programs that **facilitate** personalized online instruction for students. Programs like iReady use computers **to assess** students in reading and math. Students then work on **interactive** reading and math lessons that are designed **to target the specific academic needs** identified during diagnostic testing. Educational software like this makes it easier **to differentiate instruction** so that lessons **meet each student's unique learning needs**. These tools also provide a wealth of useful data and resources that teachers can use to work with their students in the classroom and maximize learning. Online assessments are more **efficient** than traditional paper testing because it allows for more **immediate feedback** and data.

Computers also have an important role **beyond** primary and secondary education classrooms. Thanks to computers and **technological advancements**, higher education is now more **accessible** than ever. Many colleges and universities **offer online classes**, and some even **offer degree programs** that can be completed exclusively online. Online classes and online degree programs make it easier for single parents or students with **heavy workloads** to continue their education from the comfort of their own home and at their own pace.

Benefits of Computers in the Classroom

The benefits of using computers in the classroom goes beyond more efficient assessment and opportunities for online learning. Mobile devices and technologies are an inevitable part of society, but that does not mean that students naturally understand how to use those technologies appropriately. Using computers in the classroom gives teachers an opportunity to teach citizens digital skills that demonstrate ways to use technology correctly and responsibly.

Computers also help **maximize student engagement**. Modern students **are** regularly **exposed** to technology outside of the classroom. Most use and enjoy smartphones and other mobile devices, which is why they are more likely to engage in the learning process if it involves something to which they are already accustomed and enjoy.

Teacher Use of Computers in the Classroom

Computers have **revolutionized the teaching profession** in multiple ways. Teachers use computers to record grades, **calculate averages, manage attendance** and access data on student performance in online programs and assessments. Computers have also made it easier for teachers to vary their **instructional delivery**. Instead of lecturing at the front of the room for an entire class period, teachers can **incorporate technology into their lessons** to keep students engaged while **appealing to a variety of learning styles**. From using computers **to create presentations** on a topic to showing video clips that **complement the lesson at hand**, technology helps teachers make the content easier for students to understand.

Disadvantages of Computers in the Education Field

While the benefits of using computers in education are **plentiful**, it also has some disadvantages. Some worry that computers are **distracting** because they provide students with **temptations** like games, videos or chats that can take them off task. It's true that some students might **be lured off task** by these tempting features, but luckily there are settings available that can help teachers and parents **set restrictions** to help **minimize distractions**.

Another disadvantage of computers in the classroom is **over-reliance on technology**. Critics argue that **spell check** and other computer features that automatically **correct errors** in spelling and punctuation make students too lazy to learn and apply the rules themselves. These features, however, help **point out** where students went wrong and offer valuable learning opportunities that can help students **enhance their understanding** of appropriate spelling and punctuation. The benefits of using computers in the classroom **outweigh** any disadvantages that may accompany it.

TASKS

1. Find in the text English equivalents for the following Ukrainian word combinations:

безліч переваг; виконувати багато корисних функцій; мати багатство інформації під рукою; націлювати на конкретні академічні потреби; отримати негайний зворотній зв'язок та дані; за межами; пропонувати онлайн-заняття; продовжувати освіту, не виходячи з власного будинку; програми, які можна виконати виключно онлайн; якщо це стосується чогось, до чого вони вже звикли; ефективність учнів в онлайн-програмах.

2. Match the words or phrases in two columns to form word combinations from the text:

- | | |
|--|---|
| 1. from the smartphones in our pockets | a) at their fingertips |
| 2. to have multiple benefits | b) on computer technology |
| 3. have a wealth of information | c) student engagement |
| 4. to help develop research | d) unique learning needs |
| 5. to be reliant | e) and communication skills |
| 6. to involve the ongoing use | f) for both students and their teachers |
| 7. to be designed to target | g) to the smart devices |
| 8. to meet each student's | h) of educational software |
| 9. to help maximize | i) the specific academic needs |
| 10. to incorporate technology | j) where students go wrong |
| 11. to create presentations | k) off task by tempting features |
| 12. to make the content | l) on a topic |
| 13. to be lured | m) easier for students to understand |
| 14. to point out | n) into their lessons |

3. Match the words with their definitions:

- | | |
|--------------|--|
| 1. appliance | a) to make it easier for a process or activity to happen |
| 2. device | b) easy to reach or understand |
| 3. benefit | c) having qualities that are seen as typical of a particular person, group, or thing |

4. ongoing d) show the difference between things or people
5. facilitate e) a device designed to perform a specific task
6. differentiate f) still in progress
7. feedback g) use a special program to check whether you have made any spelling mistakes.
8. accessible h) an object that has been invented for a particular purpose
9. workloads i) to improve something
10. average j) the advantage that results from something
11. temptation k) to be more important or valuable than something else
12. spell check l) information about reactions to a product, a person's performance of a task, etc. which is used as a basis for improvement
13. enhance m) the amount of work that a person or organization has to do
14. outweigh n) the desire to do something, esp. something wrong or unwise

4. In groups A and B, match the pairs of synonyms:

A: reliant on; feedback; unique; efficient; prominent; improve; appliance; ongoing; benefit; differentiate; assessment.

B: exclusive; continuing; evaluation; dependent; enhance; reaction, response; device; advantage; well-known; distinguish; well-organized.

5. Fill in the blanks with the proper words from the table:

workload	distract	outweigh	feedback	ongoing	facilitate
differentiate	enhance	accessible	benefits		prominent

1. You could create an _____ system by continually updating the network and removing old data. 2. Every Friday, Mr James would hand out the students' essays and give them some _____. 3. Don't _____ me while I'm driving! 4. The Internet makes almost any kind of information readily _____ to everyone. 5. What are the _____ for Poland of belonging to the European Union? 6. We must also understand how to _____ between what should be remembered and what should be forgotten. 7. The benefits of the scheme _____ the

disadvantages. 8. The conference was attended by both government officials and _____ academics. 9. We're using technology to _____ our levels of service. 10. The manager predicts variations in _____ for the off-duty period. 11. Dividing students into small groups usually helps _____ discussion.

6. Say whether the following sentences are true or false. If you believe they are false, say why.

1. The use of computers in education has been steadily decreasing. 2. Computers in the classroom have multiple benefits for students only. 3. Computers are one of the most valuable resources in a classroom. 4. One of the most common applications of computers in education today involves the ongoing use of educational hardware. 5. Online assessments are less efficient than traditional paper testing. 6. Thanks to computers and technological advancements, higher education is now more accessible than ever. 7. Computers also help minimize student engagement. 8. Computers are not distracting. 9. The disadvantages of using computers in the classroom outweigh any benefits that may accompany it. 10. Computer features that automatically correct errors in spelling and punctuation make students learn and apply the rules themselves.

7. Choose the correct word to complete each sentence. You may have to change some words slightly.

1. generate, generated, generative, generation

- a) Exercises can be quickly _____ using this program.
- b) Our company is working on a new _____ of software products.
- c) This development is sure to _____ great interest.

2. access, accessed, accessible, accessibility

- a) All user requests to _____ a database are handled by the database management system.
- b) _____ to the computer room is restricted to authorized personnel.
- c) Those files are not _____ unless you know the password.

3. analyse, analysed, analysis, analyst

- a) When a text is _____, all pronouns, prepositions, conjunctions and verb forms are automatically identified.

- b) This _____ shows that most PC users are not aware of the full potential of the software products they buy.
- c) The DBMS first receives the request and _____ it for syntax errors.

8. Translate into English using your active vocabulary:

1. Комп'ютер та інтернет допомагають студентам розвивати дослідницькі та комунікативні навички. 2. Вчителі використовують безліч корисних даних та ресурсів у роботі зі своїми учнями в класі. 3. Онлайн оцінювання є більш ефективним, ніж традиційні тестування. 4. Комп'ютери також відіграють важливу роль поза межами аудиторій початкової та середньої освіти. 5. Більшість студентів використовують смартфони та інші мобільні пристрої. 6. Сучасні студенти регулярно піддаються впливу технологій поза аудиторією. 7. Комп'ютери призвели до революції в професії вчителя. 8. Одним із недоліків комп'ютерів у класі є надмірна залежність від технологій. 9. Комп'ютер має функції, які автоматично виправляють орфографічні та пунктуаційні помилки.

Appendix 2

Table of Irregular Verbs

Base Form	Simple Past Tense	Past Participle	Present Participle
awake	awoke	awoken	awaking
be	was, were	been	being
bear	bore	born	bearing
beat	beat	beat	beating
become	became	become	becoming
begin	began	begun	beginning
bend	bent	bent	bending
beset	beset	beset	besetting
bet	bet	bet	betting
bid	bid/bade	bid/bidden	bidding
bind	bound	bound	binding
bite	bit	bitten	biting
bleed	bled	bled	bleeding
blow	blew	blown	blowing
break	broke	broken	breaking
breed	bred	bred	breeding
bring	brought	brought	bringing
broadcast	broadcast	broadcast	broadcasting
build	built	built	building
burn	burned	burned	burning
burst	burst	burst	bursting
buy	bought	bought	buying
cast	cast	cast	casting
catch	caught	caught	catching
choose	chose	chosen	choosing
cling	clung	clung	clinging
come	came	come	coming
cost	cost	cost	costing
creep	crept	crept	creeping
cut	cut	cut	cutting
deal	dealt	dealt	dealing
dig	dug	dug	digging
dive	dived/dove	dived	diving
do	did	done	doing

draw	drew	drawn	drawing
dream	dreamed/dreamt	dreamed/dreamt	dreaming
drive	drove	driven	driving
drink	drank	drunk	drinking
eat	ate	eaten	eating
fall	fell	fallen	falling
feed	fed	fed	feeding
feel	felt	felt	feeling
fight	fought	fought	fighting
find	found	found	finding
fit	fit	fit	fitting
flee	fled	fled	fleeing
fling	flung	flung	flinging
fly	flew	flown	flying
forbid	forbade	forbidden	forbidding
forget	forgot	forgotten	forgetting
forego (forgo)	foregone	foregone	for(e)going
forgive	forgave	forgiven	forgiving
forsake	forsook	forsaken	forsaking
freeze	froze	frozen	freezing
get	got	gotten	getting
give	gave	given	giving
go	went	gone	going
grind	ground	ground	grinding
grow	grew	grown	growing
hang	hung	hung	hanging
hear	heard	heard	hearing
hide	hid	hidden	hiding
hit	hit	hit	hitting
hold	held	held	holding
hurt	hurt	hurt	hurting
keep	kept	kept	keeping
kneel	knelt	knelt	kneeling
knit	knit	knit	knitting
know	knew	know	knowing
lay	laid	laid	laying
lead	led	led	leading

leap	leaped/leapt	leaped/leapt	leaping
learn	learned	learned	learning
leave	left	left	leaving
lend	lent	lent	lending
let	let	let	letting
lie	lay	lain	lying
light	lighted/lit	lighted	lighting
lose	lost	lost	losing
make	made	made	making
mean	meant	meant	meaning
meet	met	met	meeting
misspell	misspelled	misspelled	misspelling
mistake	mistook	mistaken	mistaking
mow	mowed	mowed/mown	mowing
overcome	overcame	overcome	overcoming
overdo	overdid	overdone	overdoing
overtake	overtook	overtaken	overtaking
overthrow	overthrew	overthrown	overthrowing
pay	paid	paid	paying
plead	pled	pled	pleading
prove	proved	proved/proven	proving
put	put	put	putting
quit	quit	quit	quitting
read	read	read	reading
rid	rid	rid	ridding
ride	rode	ridden	riding
ring	rang	rung	ringing
rise	rose	risen	rising
run	ran	run	running
saw	sawed	sawed/sawn	sawing
say	said	said	saying
see	saw	seen	seeing
seek	sought	sought	seeking
sell	sold	sold	selling
send	sent	sent	sending
set	set	set	setting
sew	sewed	sewed/sewn	sewing

shake	shook	shaken	shaking
shave	shaved	shaved/shaven	shaving
shear	shore	shorn	shearing
shed	shed	shed	shedding
shine	shone	shone	shining
shoe	shoed	shoed/shod	shoeing
shoot	shot	shot	shooting
show	showed	showed/shown	showing
shrink	shrank	shrunk	shrinking
shut	shut	shut	shutting
sing	sang	sung	singing
sink	sank	sunk	sinking
sit	sat	sat	sitting
sleep	slept	slept	sleeping
slay	slew	slain	slaying
slide	slid	slid	sliding
sling	slung	slung	slinging
slit	slit	slit	slitting
smite	smote	smitten	smiting
sow	sowed	sowed/sown	sowing
speak	spoke	spoken	speaking
speed	sped	sped	speeding
spend	spent	spent	spending
spill	spilled/spilt	spilled/spilt	spilling
spin	spun	spun	spinning
spit	spit/spat	spit	spitting
split	split	split	splitting
spread	spread	spread	spreading
spring	sprang/sprung	sprung	springing
stand	stood	stood	standing
steal	stole	stolen	stealing
stick	stuck	stuck	sticking
sting	stung	stung	stinging
stink	stank	stunk	stinking
stride	strode	stridden	striding
strike	struck	struck	striking
string	strung	strung	stringing

strive	strove	striven	striving
swear	swore	sworn	swearing
sweep	swept	swept	sweeping
swell	swelled	swelled/swollen	swelling
swim	swam	swum	swimming
swing	swung	swung	swinging
take	took	taken	taking
teach	taught	taught	teaching
tear	tore	torn	tearing
tell	told	told	telling
think	thought	thought	thinking
thrive	thrived/throve	thrived	thriving
throw	threw	thrown	throwing
thrust	thrust	thrust	thrusting
tread	trod	trodden	treading
understand	understood	understood	understanding
uphold	upheld	upheld	upholding
upset	upset	upset	upsetting
wake	woke	woken	waking
wear	wore	worn	wearing
weave	weaved/wove	weaved/woven	weaving
wed	wed	wed	wedding
weep	wept	wept	weeping
wind	wound	wound	winding
win	won	won	winning
withhold	withheld	withheld	withholding
withstand	withstood	withstood	withstanding
wring	wrung	wrung	wringing
write	wrote	written	writing

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Гончар Катерина Леонідівна
Троцюк Аїда Миколаївна
Ясінська Оксана Володимирівна

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