Ўзбекистон Республикаси Ахборот технологиялари ва коммуникацияларини ривожлантириш вазирлиги

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COMPUTER ENGLISH

ИНГЛИЗ ТИЛИ ФАНИДАН АМАЛИЙ ИШЛАР БЎЙИЧА УСЛУБИЙ КЎРСАТМА

Ушбу услубий кўрсатма ТАТУ Фарғона филиали Телекоммуникация технологиялари ва касбий таълим факультети Тиллар кафедрасининг 2015 йил 13 февралда ўтказилган 5-сонли илмий-услубий семинарида кўриб чиқилди ва Филиал Илмий кенгашига тавсия қилинди.

ТАТУ Фарғона филиали Илмий кенгашида тасдиқланган.
Баён № ____
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КИРИШ

Ҳозирги замонда шахсий компьютер турли соҳа мутахассислари учун муҳим восита бўлиб қолди. Русификацияланган дастур версиялари ва аппарат таъминотларининг оммавий равишда кириб келиши ва пайдо бўлиши ҳисоблаш техникаси билан мулоқотда бўлишда инглиз тилини ўрганишнинг аҳамиятини тушириб юборди. Инглиз тилини билиш мутахассиснинг профессионал савиясини, унинг келажакда профессионал ўсишини ва меҳнат бозорида ижтимоий ҳолатини кўрсатади. Айнан шу сабаблар информацион технологиялар мутахассисларини инглиз тилига ўргатишда жиддийроқ ёндашишга мажбур қилади.

Ушбу услубий кўрсатма таълим соҳаси чет тили бўлмаган инглиз тилини ўрта даражада билган ва ўрганишни давом эттираётган 3-курс талабалари учун мўлжалланган.

Ушбу ўқув қўлланманинг мақсади компьютер терминлари, компьютер хабарлари, операцион система, программа ва аппарат воситаларини қўллаш бўйича кўрсатмалар ва ҳ. к. ларни қўллаш ва тушуниш малакаларини шакллантириш. Шулар бўйича олинган билим талабаларининг ушбу соҳа бўйича оригинал адабиётларни ўқий олиш имконини беради.

Ўқув қўлланма 15 та ўқув блокидан (Units), глоссарий (Glossary), актив инглизча-ўзбекча луғат (Active Vocabulary), илмий техника адабиётлари ва информатика соҳасида қабул қилинган акроним ва қисқартамалар рўйхати (List of Acronyms and Abbreviations), шунингдек, асосий нотўғри феъллар рўйхати (List Of Irregular Verbs) дан иборат.

Амалий машғулотларда тил ўрганувчиларга асосий тушунчалар, аниқловчилар, шарҳлар, қисқартмалар билан таништирилади ва уларга керак бўлган лексик минимум берилади. Ҳар бир ўқув блоки (Unit) ўқишнинг ҳар хил турларига мўлжалланган текстлар (маълумот берувчи, таништирувчи, қидирув текстлари); суҳбатнинг реал ситуациялари ифодаловчи диалоглар; лексик материални такрорлаш ва уни фаол ўзлаштириш, сўз ва иборалар тематик гуруҳини мустаҳкамлаш учун машқлардан иборат. Ҳар бир ўқув блоки (Unit) қуйидаги ички бўлимларни қамраб олади:

WORD-BUILDING *(Сўз ясалиши)* янги лексик бирликларни системали ўрганиш шакллантириш ва такомиллаштиришга ёрдам беради, ўрганувчиларнинг луғат бойлигини кенгайтиради.

GRAMMAR *(Грамматика)* бўлимида инглиз тили грамматикасини тўлиқ ўргатишни кўзланмаган, балки содда гаплар структураси, инглиз тилидаги гапларда сўз тартиби ҳақида тушунча берилади.

PROBLEM-SOLVING *(Муаммоли ҳолатларни ечиш)* турли муаммоли холатлар яратиш, уларнинг ечимини бутун академик гуруҳ талабалари билан муҳокама қилинадиган ечим орқали ўқув материали бўйича бажарилган ишлар хотимасини кўрсатади.

SUPPLEMENTARY READING *(Қўшимча ўқиш)* мустақил ишлаш учун матнларни ўз ичига олади.

Шуни кўрсатиб ўтиш керакки, бутун ўқув материали компьютердаги реал хабарлар, оригинал инглиз тилидаги адабиётлар (турли справочниклар, веб-сайтлар ва ҳ.к.лар) асосида яратилган. Баъзи матнларда расмлардан фойдаланилган.

Ўқув қўлланмадаги материаллар 108 академик соатга мўлжалланган. Қўлланмадаги материалларни ўзлаштириш бўйича ўқув жараёнини ташкиллаш шакли ва назорат қилиш маҳаллий шароит ва ўрганувчилар контингентидан келиб чиқади.

UNIT 1. COMPUTERS IN EVERYDAY LIFE

Task 1. Read and translate the text.

COMPUTERS IN EVERYDAY LIFE

Computers are part of our everyday lives. They have an effect on almost everything you do. When you buy groceries at a supermarket, a computer is used with laser and **barcode** technology to scan the price of each item and present a total. Barcoding items (clothes, food and books) require a computer to generate **the barcode label** and maintain the inventory. Most television advertisements and many films use graphics produced by a computer. In hospitals, besides terminals connected to the hospital's main computer allow doctors to type in orders for blood test and to schedule operations. Banks use computers to look after their customers' money. In libraries and bookshops, computers can help you to find the book you want as quickly as possible.

Glossary:

barcode - a sequence of vertical parallel lines used to give items a unique identification number

a barcode label - a label that is used to attach a barcode to an item

Task 2. Choose the computer uses mentioned in the text above

home	art
hospital	banking
engineering	libraries
shopping	film-making
television advertising	schools

Task 3. Match these words (1-8) to correct locations (a-d)

1. games	a. a factory
2. machines	
3. tickets	b. a supermarket
4. wages	
5. flight	
6. letters	c. a travel agent
7. barcode readers	
8. tills	d. a home

Task 4. Read the text. Identify which place is described in the text.

a) We use a PC for writing letters, for playing games, to calculate our bills, and to connect with the Internet.

b) We've got electronic checkout tills with barcode readers. They read a special barcode on almost everything we sell. They calculate the bill for the customer. at the same time they send information to a larger customer, so we always know exactly what we've got in the store.

c) We make washing machines and refrigerators. The machines we use to make them are controlled by computers. We also use computers to calculate our wages, to keep the accounts, and to look after all materials and parts.

d) Our terminal links to airlines offices. If you want to fly anywhere in the world, we can tell you at once if there's a seat on the flight you want. We can supply you with the tickets and we can reserve your hotel- all by computer.

Task 5. Read and memorize the following words:

1. the deadliness of weapons – ўлим хавфи
2. martial enthusiasm – жўшқин ғайрат
3. needless disaster – маъносиз фожеа
4. ingenious trick – моҳирона усул
5. world-wide slave empire – бутун дунё қуллик империяси
6. to reverse roles – ролларни алмашмоқ
7. a masterpiece of mathematical logic – математик мантиқ дурдонаси

Task 6. Read and translate the text:

INTELLIGENT MACHINES[1]
From the history of computers

The evolution of *artificial intelligence*[2] is now proceeding so rapidly that by the end of the century cheap computers no larger than portable typewriters will exist that will be able to solve almost any problem faster and more efficiently than we can.

"Intelligence" in a machine, as in a human, is best defined as the ability to solve complex problems swiftly. This may involve medical diagnosis and prescriptions, resolving legal matters or playing war-games: in other words advising governments whether or not to go to war.

While computers have already enhanced **the deadliness of weapons,** the prospect for the future is that they will play the more beneficial role of preventing wars. If asked to assess the chances of victory, the computer will analyse facts quite differently from the life-long military expert with his **martial enthusiasm** and ambitions.

When the same statistics are fed into the emotionless machine each to be weighed with cold objectivity and then assessed against each other, the answer, far more often than in human decision-making, will be "if you start this war you will lose".

The computer cooly appraises the chances of success before the conflict begins, may well advise that the fight is unwinnable — or that the chances of victory are unacceptably low — and **needless disaster** can be avoided.

At what point today we decide that their mental capacity is approaching the human level? This question will be answered by an **ingenious trick** known as the Turing Test.

We most easily assess people's intelligence by communicating with them. The late British mathematician, Alan Turing, proposed a simple test. A person would sit alone in a room talking by *teleprinter*[5] with two other beings elsewhere, one of them human and the other a computer. When after substantial conversation he no longer knew which was which, the computer would have passed the Turing Test, and arguably would have attained human intelligence.

No machine today comes near to passing the Turing Test. These are early days, however, and we may suspect that the rise of machine's IQ[4] will be swift.

What will happen when this moment arrives? The most likely outcome is a **world-wide slave empire,** in which we are the masters and the computers virtually run the planet for us. But what if there arises a "Sparta-cus computer", a series of rebel machines with the ambition **to reverse** these **roles?**

Prof. Isaac Asimov may have solved the problem with **a masterpiece of mathematical logic.** He proposes that all intelligent machines should have the following three "Laws" programmed into them as instincts:

1. A robot may not injure a human being, or through inaction allow a human being to come to harm.
2. A robot must obey the orders given it by human beings, except when such orders would conflict with the First Law.
3. A robot must protect its own existence so long as such protection does not conflict with the First and Second Laws.

It sounds foolproof[5], but will it work? Pessimists will still pay attention to the

ominous words of Arthur C. Clarke: "The first invention of a super-intelligent machine will be the last invention mankind will be allowed to make".

Notes

[1]intelligent machines – ақлли машина
[2]artificial intelligence – сунъий интеллект
[3]teleprinter – телетайп
[4]IQ (Intelligence Quotient) - a series of tests to assess somebody's intellect – ақлий қобилият коэффициенти
[5]foolproof – тасодифий хатолардан ҳимоя

Task 7. Answer the questions

1. How can the "intelligence- of a computer be defined best?
2. What are the possible uses of a computer?
3. What does the Turing Test consist in?
4. Are you enthusiastic or sceptical about the planet, "run by the computers"?

GRAMMAR: Articles

Артиклнинг *a/an* шакли ишлатилиши от бошланган (унли ёки ундош) товушга боғлиқ:

I have a pencil. – Менинг қаламим бор (қандайдир қалам).

There is an apple in the vase. – Вазада олма бор (қандайдир олма).

Артиклнинг грамматик қўлланилиши аввало отнинг синфига боғлиқ, **Countable and uncontable nouns** (саналадиган ва саналмайдиган отлар)

Артиклнинг саналадиган ва саналмайдиган отлар билан қўлланилиши қуйидаги ҳолатлар орқали аниқланади:

a/an фақат бирликда саналадиган отлар олдидан ишлатилади: *a cat;*

the ҳар қандай отлар билан ишлатилаверади: *the cat, the cats, the water;*

Кўпликдаги отлар ва саналмайдиган отлар артиклсиз ҳам ишлатилиши мумкин:

ОТ	**a/an**	**the**	**артиклсиз**
Саналадиган бирлик	a cat	the cat	
Саналадиган кўплик	---	the cat	cats
Саналмайдиган	---	the water	water

Биз a/an артиклини от ҳақида биринчи марта гапирилганда ишлатамиз, масалан:

*In shops **a** computer scans the price of each item.*

Агар биз шу отни иккинчи марта гапириб ўтсак, **the** артиклини ишлатамиз, масалан:

***The** computer calculates the total cost.*

Task 7. Fill in the gaps with *a/an* or *the* where necessary:

The Walsh family have _____ computer at home. Their son uses _____ computer to help with _____ homework and to play _____ computer games. Their student daughter uses _____ computer for _____ projects and for _____ email. All _____ family uses it to get _____ information from ____ Internet.

The Verb "To Be" (Simple Active)

Present Tense	Past Tense	Future Tense
singular/plural	singular/plural	singular/plural
I **am** He, she, it **is** We, you, they **are**	I **was** He, she, it **was** We, you, they **were**	I, we **shall/will be** He, she, it **will be** We, you, they **will be**

Task 8. a) Make the negative and interrogative sentences. b) Put the sentences in Past and Future Tenses, using *yesterday/ tomorrow, last/next week, at 5 o'clock etc.*

1. Victor is free in the evening
2. The students are at the Institute
3. I am very busy
4. She is late at the lecture
5. The child is 10 years old
6. The workers are at the factory
7. My mother is at home
8. We are at the concert
9. You are at the English lesson
10. John is in America

PROBLEM SOLVING:

Questions for group discussion

1)Why so many people are still computer illiterate ?

2)What are the most important applications of computer? (Are computer games just a waste of time or it is a nice hobby and a lot of fun?)

3)Who has a computer in your group? Ask them what do they use it for?

UNIT 2. TYPES OF COMPUTERS

Word-Building Suffixes -er, -or

-er, -or суффиксли отлар феъллардан ҳосил қилинади ва бундай отлар аниқ вазифани бажарувчи шахсни ифодалайди:

to read – ўқимоқ
to compute – ҳисобламоқ
to operate – ишламоқ

read**er** – ўқувчи
comput**er** - ҳисоблаш машинаси (компьютер)
operat**or -** ишчи (оператор)

Task 1. Translate and memorize the following words:

to use - фойдаланмоқ	user
to provide – таъминламоқ	provider
to work – ишламоқ	worker
to translate – таржима қилмоқ	translator
to develop – ривожлантирмоқ	developer
to print – чоп этмоқ	printer
to process – ишлаб чиқмоқ	processor

to load – юкламоқ	loader
to browse – кўриб чиқмоқ	browser
to explore – кузатмоқ	explorer

Task 2. Translate into English:
ишлаб чиқмоқ, фойдаланувчи, таъминламоқ, кузатувчи, фойдаланмоқ, ҳисобламоқ, ривожлантирмоқ, кўриб чиқувчи, таъминловчи, юкламоқ, ишлаб чиқувчи, кузатмоқ, юкловчи, таржима қилмоқ, чоп этмоқ

Task 3. Read and memorize the words:
1. characters – рамзлар
2. data – маълумотлар
3. decision – қарор
4. device – қурилма
5. hardware – жиҳоз
6. instruction – буйруқ, команда
7. intelligence – заковат
8. manner – усул
9. procedures – жараён, процедура, операция
10. purpose – мақсад
11. raw – хом, ишлов берилмаган
12. to come to life – тирилмоқ
13. to connect – боғламоқ, уламоқ
14. to convert – айлантирмоқ, конвертация қилмоқ
15. to create – яратмоқ

Task 4. Read the text:

WHAT IS A COMPUTER?

The term **computer** is used to describe a device made up of a combination of electronic and electromechanical (part electronic and part mechanical) components. Computer has no intelligence by itself and is referred to as **hardware.** A computer system is a combination of five elements:

- Hardware
- Software
- People
- Procedures
- Data/information

When one computer system is set up to communicate with another computer system, **connectivity** becomes the sixth system element. In other words, the manner in which the various individual systems are connected — for example, by phone lines, microwave transmission, or satellite — is an element of the total computer system.

Software is the term used to describe the instructions that tell the hardware how to perform a task. Without software instructions, the hardware doesn't know what to do. **People,** however, are the most important component of the computer system: they create the computer software instructions and respond to the procedures that those instructions present.

The basic job of the computer is the **processing** of information. Computers accept information in the form of **instruction** called a **program** and characters called data to perform mathematical and logical operations, and then give the results. The **data** is raw material while **information** is organized, processed, refined and useful for decision making. Computer is used to convert data into information. Computer is also used to store information in the digital form.

Glossary:
hardware-the physical components of computer system
software-the programs and data used in a computer
to process- to manipulate the data according ti the program instructions
instruction- one line of a computer program
program- a set of instructions written in a computer language that control the behavior of a computer
data-the information processed by a computer

General understanding:
1) What does the term computer describe?
2) Is computer intelligent?
3) What are five components of computer system?
4) What is connectivity?
5) What is software? What's the difference between hardware and software?
6) Why people are the most important component of a computer system?
7) In what way terms «data» and information differ?
8) How does computer convert data into information?

Task 5. Which of the listed below terms have Uzbek equivalents:
computer, diskette, metal, processor, scanner, information, data, microphones, printer, modem, Internet.

Task 6. Which of the listed above statements are true/false. Specify your answer using the text.
1) Computer is made of electronic components so it is referred to as electronic device.
2) Computer has no intelligence until software is loaded.
3) There are five elements of computer system: hardware, software, people, diskettes and data.
4) The manner in which computers are connected is the connectivity.
5) Without software instructions hardware doesn't know what to do.
6) The software is the most important component because it is made by people.
7) The user inputs data into computer to get information as an output.
8) Computer is used to help people in decision making process.

Task 7. Match the following:
1)... doesn't come to life until it is connected to other parts of a system.
2)... is the term used to describe the instructions that tell the hardware how to perform a task.
3)... create the computer software instructions and respond to the procedures that those instructions present
4) Information in the form of instruction is called a...
5) The manner in which the various individual systems are connected is...
6)... is organized, processed and useful for decision making
7) The basic job of the computer is the...
   a) program
   b) information
   c) processing of information
   d) software
   e) connectivity
   f) computer
   g) people

Task 8. Retell the text, using the vocabulary.

TYPES OF COMPUTERS

Name these different types of devices. Then match the possible users below to each type. Justify your choice.

Fig 1

Task 1. Study these details of different types of computer. Find the answers to these questions. Which type of computer is :

1. the most common?
2. small enough for a pocket?
3. the most common portable?
4. used by many people at the same time? used like mainframes?
5. also called a handheld computer?
6. the most powerful?
7. not suitable for a lot of typing?

Types of computer	Notes
Mainframes	Large, powerful, expensive. Multi-user systems-used by many people at the same time. Used for processing very large amount of data. The most powerful mainframes are called *supercomputers.*
Minicomputers	Used like mainframes. Not as big, powerful, or expensive as mainframes. Less common now microcomputers have improved.
Microcomputers or Personal computers (PCs)	The most common type of computers. Smaller, cheaper, and less powerful than mainframes and minicomputers.

Types of portable	Notes
Laptop	*About the size of a small typewriter.* *Less common now because smaller and lighter portables are available.*
Notebook	*About the size of a piece of writing paper.* *The most common types of portable.*
Subnotebook	*Not quit as big as notebooks. Can fit into a jacket pocket.*
Handheld or Palmtop	*Small enough to fit into the palm of one hand.* *Not easy to type with because of their size.* *Specialized handheld computers known as PDAs are used as personal organizers.*

Task 3. Read Part 1 of this conversation between a shop assistant and a customer. Choose the correct answers to these questions.

1. The customer wants a computer for:

writing graphics games Internet video

2. A multimedia computer provides :

sound graphics animation telephone video

Task 4. Read Part 2 of the conversation. In column *A,* tick (V) the hardware items named. In column *B* , tick the items the assistant recommends.

A	B	Device
□	□	multimedia computer
□	□	multimedia notebook
□	□	subnotebook
□	□	laptop
□	□	handheld
□	□	printer
□	□	monitor
□	□	modem

Task 5. Read the conversation:

BUYING A COMPUTER
Part 1.

A: I'm thinking of buying a computer, and I need some advice.
B: OK. What do you want to use it for?

A: For writing, maybe for games. I want it for the Internet.
B: For the Internet and games... I recommend you a multimedia computer.
A: What do you mean a multimedia computer?
B: Well, it's more powerful than a basic computer. It's got sound and CD-ROM or DVD drive. You can use it for high-quality graphics, animation and video.

Part 2

A: What if I wanted... I travel a lot, if I wanted something smaller, what's available?
B: There are portable computers. A multimedia notebook is probably best.
A: Is a notebook the smallest kind you can get?
B: No, you can get subnotebooks and even smaller handheld devices.
They're mostly used as organizers, as a diary, a «to do» list, and that kind of thing. But for writing and general use a notebook is better.
A: OK. I think I'll go for a notebook. What other things do I need?
B: A printer. and for the Internet, make sure you have a modem.
A: A modem?
B: Yes, it's a device for connecting your computer to a telephone line. You need it to connect to the Internet.

Task 6. Retell the text, using the vocabulary:

COMPUTERS ENGINEERING

Computer engineering is now the most rapidly growing field. The electronics of computers involve engineers in design and manufacture of memory systems, of central processing units, and of peripheral devices. The field of computer science is closely related to computer engineering; however, the task of making computers more «intelligent» (artificial intelligence), through creation of sophisticated programs or development of higher level machine languages or other means, is generally regarded as the aim of computer science.

One current trend in computer engineering is microminiaturization. Engineers try to place greater and greater numbers of circuit elements onto smaller and web browser, providers, link, WWW smaller chips. Another trend is towards increasing the speed of computer operations through the use of parallel processors and superconducting materials.

GRAMMAR: Degrees of Comparison of Adjectives.

	Positive degree	**Comparative degree**	**Superlative degree**
Words of 1 or 2 syllables Бир ёки икки бўғинли	large hot easy	**-er** larg**er** hott**er** eas**ier**	**the ... -est** **the** larg**est** **the** hott**est** **the** eas**iest**
Polysyllabic words Кўп бўғинли	interesting	**more** **more** interesting	**the most** **the most** interesting
Special group of words Махсус	good, well bad, badly many, much little	**better** **worse** **more** **less**	**the best** **the worst** **the most** **the least**

Қиёслаш конструкциялари:

as ... as … дек **than** қараганда, нисбатан
not so … as … дек эмас
the... the қанчалик … шунчалик

Task 7. Read and translate:

1. Minicomputers are bigger than microcomputers.
2. Mainframes are more expensive than microcomputers.
3. Microcomputers are not so big as minicomputers.
4. Microcomputers are not so powerful as mainframes.
5. Mainframes are the biggest computers.
6. Mainframes are the most powerful computers.
7. Mainframes are the most expensive computers.

Task 8. Give the comparative and superlative degrees.

Long, cosy, big, bad, dark, happy, beautiful, old, young, early, small, sad, significant, difficult, comfortable, deep.

Task 9. Choose the correct adjective. Then fill in the gaps with the correct form of the adjective.

1. *light/heavy* Laptops are _____ than desktop computers, but _____ than notebooks.
2. *large/small* The mainframe is _____ type of computer. A minicomputer is _____ than a microcomputer.
3. _____ *common/good* Personal computers are than mainframes, but mainframes are _____ than personal computers at processing very large amounts of data.
4. _____ *powerful/expensive* Minicomputers are than mainframes but they are also _____.
5. _____ *fast/cheap* New computers are _____ and sometimes _____ than older machines.
6. _____ *powerful/expensive* Laptops are often _____ than PCs but they are not as _____ .

Task 10 Put the words in brackets into the correct form to make an accurate description of sizes of computers.

There are different types of computer. The (large) _____ and (powerful) _____ are mainframe computers. Minicomputers are (small) _____ than mainframes but are still very powerful. Micro-computers are small enough to sit on a desk. They are the (common) _____ type of computer. They are usually (powerful) _____ than minicomputers.

Portable computers are (small) _____ than desktops. The (large) _____ portable is a laptop. (Small) _____ portables, about the size of a piece of writing paper, are called notebook computers. Subnotebooks are (small) _____ than notebooks. You can hold the (small) _____ computers in one hand. They are called handheld computers or palmtop computers.

PROBLEM SOLVING

Task 11. Read and decide what sort of computer is the best for each of these users.

1. John Wilmot is a salesperson and he spends a lot of time visiting customers. He wants a computer to carry with him so he can access data about his customers and record his sales.
2. Pat Nye is a personnel officer. She needs a computer to keep staff records and to keep a diary of appointments. She also needs a computer for writing letters.
3. The University of the North needs a computer to look after its accounts, its network, the records of all students and staff, and to help with scientific research.
4. The James family wants a computer for entertainment, writing letters, the Internet, and for calculating tax.

UNIT 3. PARTS OF A COMPUTER SYSTEM

Word- building Suffixes -tion, -sion

-tion, -sion суффиксли отдар феъллардан ҳосил қилиниб, аниқ бўлган иш-ҳаракатнинг бажарилиш жараёнини (факт) ифодалайди.

to communicate – алоқа қилмоқ communication – алоқа
to compress – эзмоқ, қисмоқ compression – эзиш, қисиш

Task 1. Translate and memorize the following words:

to corrupt – бузилмоқ	corruption
to collect – йиғмоқ	collection
to create – яратмоқ	creation
to combine – бирлаштирмоқ	combination
to apply – қўлламоқ, илова қилмоқ	application
to transmit – ўтказмоқ	transmission
to execute – бажармоқ	execution
to repeat – такрорламоқ	repetition
to extend – кенгайтирмоқ	extension
to divide – бўлмоқ	division

расширять, повторение,

Task 2. Translate into English.

ўтказиш, кенгайтма, ўтказмоқ, бузилиш, қисиш, такрорламоқ, илова, бирлаштирмоқ, бажариш, қабул қилмоқ, қисмоқ, бирлаштириш, бўлмоқ

Task 3. Read the text:

THE MAIN PARTS OF THE SYSTEM

The Main Parts of the System

There are many hardware pieces in a computer system. Some are: the system board, power supply, keyboard, mouse, hard drive, monitor and the video card' and its drivers. The case

The large metal box that is the main part of the computer is called the case. The case and its contents (power supply, system board, etc.) is called the system unit. The case has several functions:

- Protects the delicate electronics inside.
- Keeps electromagnetic emissions inside so your TV, cordless phone, and stereo don't go haywire when you power up the computer.
- Can also hold the monitor.

Don't remove the case's cover unless you need to do something inside the unit, and always replace the cover when you are done.

The keyboard

You communicate with your computer with the keyboard. With it, you type instructions and commands for the computer, and information to be processed and stored. Many of the keys on the keyboard are like those typewriter; letter keys, punctuation keys, shift keys, tab, and the Your keyboard also has many specialized keys.

The instruction manuals for most software applications contain section describing the functions of each key or combination of keys,

The mouse

The mouse works by sliding it around (ball down) on a flat surface. The mouse does not work if you hold it in the air like a remote control! The desktop is fine, but a ready-made mouse pad is the best surface to roll the mouse on. Its surface is flat and

usually somewhat textured. If a surface is юо smooth or rough, the ball inside can slip. As you glide the mouse, the ball inside moves in the direction of your movement. You will see the arrow on your screen moving in unison. The arrow is called a pointer, and the most important part is the very tip of its point. That's the only part the computer pays attention to. To use the mouse, slide it on the mousepad until the pointer's point is on something, like a button or an icon. Then:

Click - position the mouse pointer over an element and press and release the left mouse button one time.

Double-click - same as above except press the mouse button twice in quick succession *without moving the mouse between clicks.* It may take a little practice to not twitch the mouse when you first start double-clicking. Usually you double-click on an icon to start the program.

Drag - position the mouse pointer over an element, press and hold the left mouse button, and drag the mouse across the screen. The pointer moves, dragging the element. At the desired location, release the mouse button. The pointer lets go of whatever it was dragging,

An excellent way to practice using the mouse is to play the Solitaire game that comes with Windows.

The monitor

Your computer is not complete without the monitor, a TV-like device that usually sits on top of the computer. The monitor displays text characters and graphics. It allows you to see the results of the work going on inside your system unit. The image that you see is made up of tiny dots called *pixels.* The sharpness of the picture depends on the number and size of these pixels. The more pixels, the sharper the image. This is called *resolution.*

A display adapter card is actually what builds the video images; the or simply displays them. The display adapter for your system is either onto the system board or is an expansion card plugged into your board.

If you sit in front of a monitor for long periods of time, eye strain can be reduced if you follow a few guidelines:

- Use the computer in a room with even lighting. Adjust the controls en the monitor to vary the contrast and brightness of the display to suit the lighting in the room.
- Keep the screen clean,
- Adjust your chair so that you are looking down at the screen at a slight angle
- Turn the monitor away from windows and bright lights to avoid glare.

Some of the controls on the monitor change the size and position of the image. You should set them for the largest image without losing any part of it.

You can set a *screen saver* to appear on your monitor screen if the computer sits idle for a period of time. Screen savers can reduce wear on your screen. Windows includes a number of screen savers.

The floppy drive

Floppy drives provide a way to pass files to and from the hard drive or to and from another computer. At Gateway 2000, we install either of two types of floppy disk drives:

- 3.5-inch 1.44MB drives, usually drive A:
- Combo drives (includes both a 3.5-inch 1.44MB drive and a 5.25-inch 1.2MB drive, called drive A: and drive B: respectively).

The drives can read and write on floppy diskettes. If you put a brand new diskette into the drive, the computer cannot read it. You have to format it first.

The hard drive

Unlike the floppy drive, the hard disk drive is inside the computer's case and you cannot see ft. Usually it is referred to as **drive C:.** Hard drives also hold a lot of data. The smallest hard drives Gateway 2000 offers hold more information than 100 floppies!

The size of a hard drive is measured in megabytes, or MB for short.

The CD-ROM drive

The CD-ROM drive installed in your computer is similar to the one(s) you might have in your home or car. It can play music CDs as well as read software program CDs and the new Kodak photo CDs.

The amount and variety of material you can access with CD-ROM is amazing, particularly when you realize that a CD disc holds over 600MB of data! As far as your computer is concerned, the CD-ROM is just another hard drive, except that, although you can read from it, you can't save anything to it.

To operate the drive, press the Eject button to open the tray. Put a CD in the tray (label side UP!) and gently start to push the tray in. The motor takes over and pulls the tray the rest of the way in.

You can play ordinary music CDs if your system has speakers or if you plug earphones into the jack in the front of the drive.

Notes To The Text

[1] **video card** - видеокарта

[1] **display adapter card** - видеоадаптер (мониторга узатилаётган сигналларни қабул қилиб, уни ишловчи системали плата)

General understanding:

Task 4. Find the key words to describe a computer.

Task 5. Reread the text and write a summary of it in English.

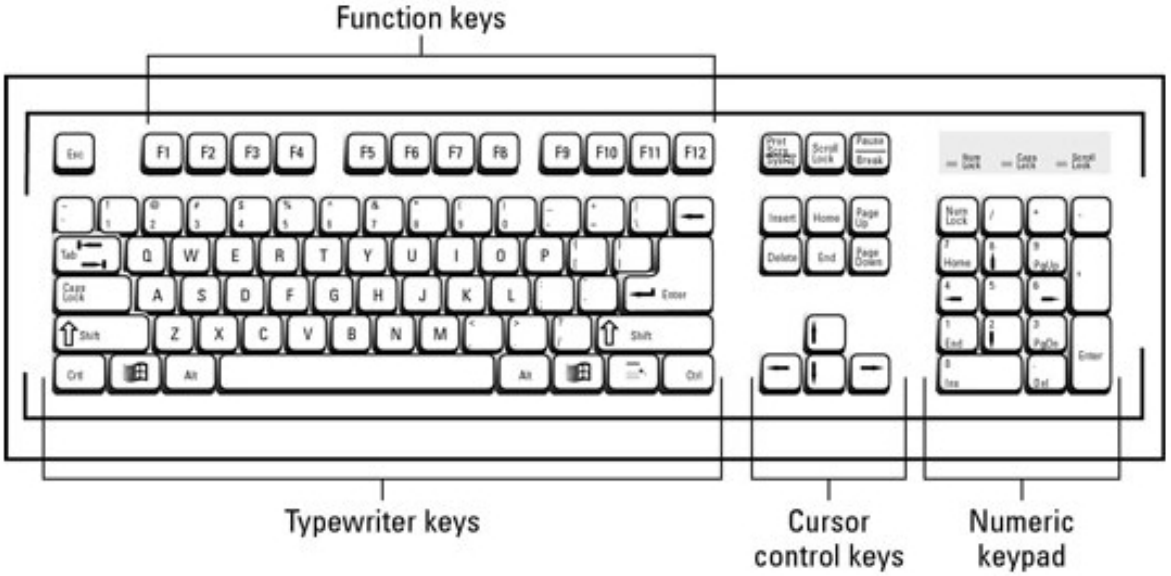
Task 6. Read and translate the text

THE KEYBOARD.

The keys on a computer keyboard can be arranged in many different ways. The most common way on a desktop PC is called an extended keyboard. The diagram shows an extended keyboard. The keys are in four main sections.

The section known as the main keyboard has a key for each letter of the alphabet. It also has keys for the digits 0 to 9, punctuations marks like commas and full stops, and other common symbols.

Above the main keyboard is a row of keys known as the functions keys. This section includes the Escape key to the left and the Print Screen, Scroll Lock, and Break keys to the right. The function keys labeled F1 to F12 don't have fixed functions. You can program them to perform different such as saving and printing.



To the right of the main keyboard is a section known as the editing keys. This

group includes keys which insert and delete data. It also includes the cursor keys, also called the arrow keys. These keys move the cursor around the screen.

To the far right of the main keyboard is the numeric keypad. This section has keys for the digits 0 to 9 and for the common mathematical symbols like plus and minus. The keys are arranged like the keys on an electronic calculator. You use these keys to input numerical data.

Task 7. Match these key abbreviations with their full names.

1)Esc	**a** Alternative
1 Alt	**b** Page Up
2 Ctrl	**c** Delete
3 Pgdn	**d** Insert
4 Pgup	**e** Escape
5 Ins	**f** Page Down
6 Del	**g** Control

Task 8. Locate these keys on the keyboard. Number them 1 to 8.

□ Insert	□ plus
□ comma	□ Print Screen
□ minus	□ Delete
□ F 1	□ Escape

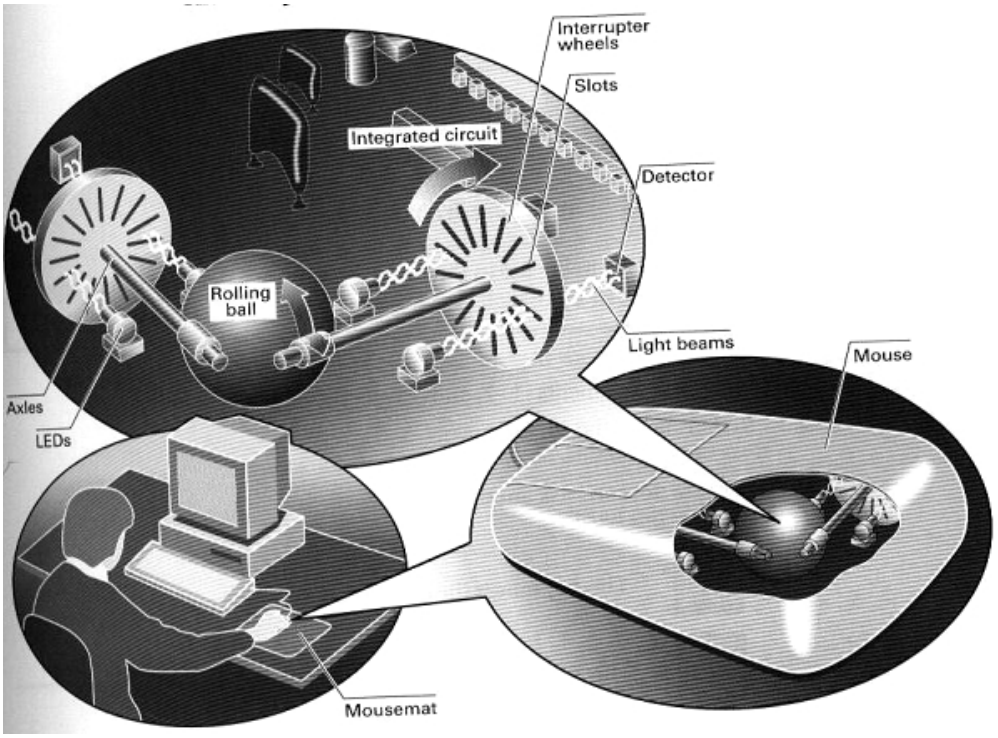
Task 9. Read the text.

THE MOUSE

The computer mouse is a hand-operated device that lets you control more easily the location of the pointer on your screen. You can make selections and choices with the mouse button.

The mouse contains a rubber-coated ball that rests on the surface of your working area or a mousemat. When the mouse is moved over that surface, the ball rolls.

The ball's movements p and down, and left and right, turn the two axels inside the mouse. As they turn, detectors register the changing position. A small integrated circuit inside the mouse sends signals to the operating system, which instructs it to move the pointer on your screen.



Task 10. Complete each of these statements with one word.

1. Move the mouse to the left and the cursor moves to the .
2. The mouse contains a rolling _____ .
3. There are _____ axles inside the mouse and two interrupter wheels.
4. When you move the mouse, the ball _____.
5. the mouse moves over a mouse ___ .

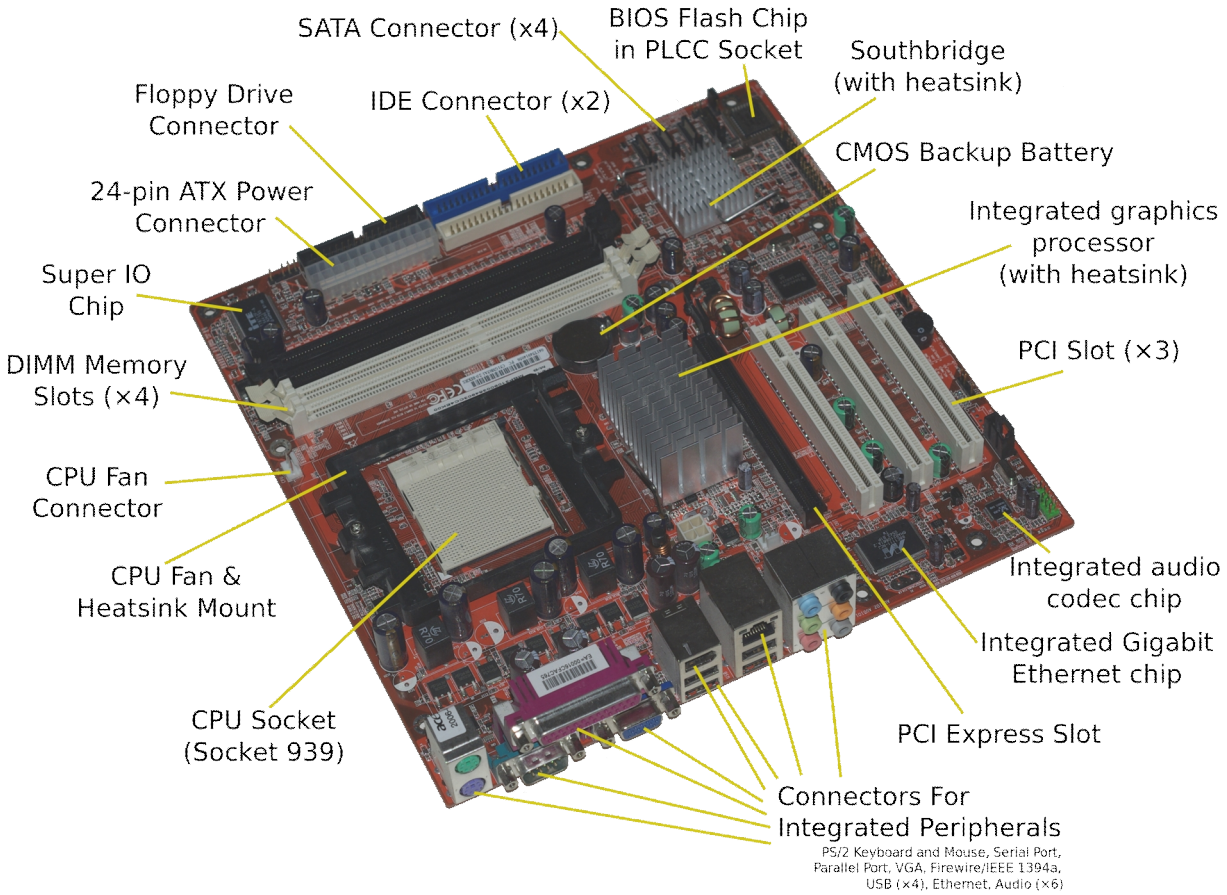
Task 11. Read this conversation about buying a computer and complete the units in the table below.

Component	Capacity/speed measured in
processor	_____
RAM	_____
video memory	_____
cache memory	_____
hard disk	_____

A: What about things like power and speed, that sort of thing? What do I look for?
B: Well, power depends on speed and capacity-the speed of the processor and the capacity of the memory and the hard disk.
A: The speed of the processor?
B: How fast the computer processes data. Speed is usually given in megahertz or gigahertz. The faster the processor, the more powerful the computer.
A: And capacity?
B: How much storage space there is in the computer. Capacity depends on how much memory there is, how big the hard disk is. You measure RAM and video memory in megabytes. You've also got cache memory. That's in kilobytes. Always look for the highest numbers.
A: What about the hard disk?
B: Hard disk capacity is in gigabytes. Get a big hard disk for multimedia. Audio and video files use enormous amounts of space. Once again, the higher the numbers, the more powerful the computer.

Task 12. Study this diagram of a PC motherboard. Match the components to their descriptions.

1. These are memory chips. The more you have the more work you can do at a time. Empty memory slots mean you can add more memory.
2. This is the «brain» of the computer.
3. It's part of the memory store. It has extremely fast access. It's faster than normal RAM. It can speed up the computer.
4. These let you add features such as sound or a modem to your computer.
5. This kind of memory contains all the instructions your computer needs to activate itself when you switch on. Unlike RAM, its contents are retained when you switch off.



Glossary:

chip - common name for a microchip
memory slot - a connector on the motherboard of a computer that enables extra memory chips to be added.
BIOS - basic input/output system
southbridge - one of the two chips in the core logic chipset on a PC motherboard
CMOS - Complementary Metal-Oxide Semiconductor
PCI - Peripheral Component Interconnect
SATA - Serial Advanced Technology Attachment (Serial ATA)
Super IO - super input/output
ATX - Advanced Technology xTended
IDE - Integrated Drive Electronics
cache memory - high speed memory used to speed up a computer.
expansion slot - a long thin connector that is used for adding additional electronics in the form of expansion cards
expansion card - an electronic circuit board used for adding facilities to a computer.
DIMM - dual in-line memory module
ROM - read-only memory
RAM - random access memory

GRAMMAR: Construction «There Is/ There Are»

There Is / There are конструкцияси бирор предмет ёки предметларнинг қандайдир жойда турганлигини айтиш учун ишлатилади.

Бундай гап **there** сўзи билан бошланиб, кейин эса **to be** феъли эганинг сонига мослашган ҳолда келади, ундан сўнг эга ва ҳол ишлатилади. Бунинг асосий хусусияти шундаки, кесим эгадан олдин келади.

Агар гапда бир неча эга келган бўлса, бу ҳолда **to be** феъли биринчи келган эга билан мослашади. Қиёсланг:
There is a table and 2 chairs in the room.
There are two chairs and a table in the room.

Унинг бўлишсиз формаси **no** бўлишсизлик олмоши ёрдамида ҳосил қилинади: There is **no** TV set in the room.

Ҳозирги замон	Ўтган замон	Келаси замон
There is a meeting here. **There are** books on the shelf.	**There was** a meeting here. **There were** books on the shelf.	There **will be** a meeting here. There **will be** books on the shelf.

Task 13. Make the sentences negative.
1. There are some books on the table.
2. There was somebody in the next room.
3. There is a map on the wall.
4. There is something in the box.
5. There will be a concert at our club tomorrow.

Task 14. Open the brackets.
1. There (to be) a chair in the classroom.
2. There (to be) only girls in our group.
3. There (to be) no clock on the wall in front of you
4. There (to be) a few pencils on the desk
5. There (to be) a lot of tape-recorders in the corner.
6. There (to be) two teapots on the desk in front of you.
7. There (to be) few armchairs in the hall.

Task 15.Translate into English.
1. Бизнинг лабораторияда столлар кўп.
2. Бу хонада иккита дераза бор.
3. Тошкент шаҳрида бир неча театр бор.
4. Бу китобда расмлар кўп.
5. Инглиз тили хонасида яхши доска бор.
6. Сизнинг кабинетингизда нечта стол бор?
7. Бу столнинг устида китоблар йўқ.
8. Бизнинг шаҳарда келаси йили Цирк бўлади.
9. Сизнинг сумкангизда луғат борми?
10. Кечада кўпгина талаба бор эди.

PROBLEM-SOLVING
1. Write a summary of the main parts of the computer system in English
2. Tell about the computer system

UNIT 4. INPUT AND OUTPUT DEVICES
Word-building Suffixes -able/-ible
-able/-ible суффикслари сифатга тегишли бўлган сўзларни кўрсатади ва “бирор ишга бўлган қобилият”ни ифодалайди.

to boot – юкла(н)моқ	to extend – кенгайтирмоқ
bootable	extensible

Task 1. Translate and memorize the following words:

to suit – мос келмоқ, лойиқ келмоқ	suitable
to recover – тикламоқ	recoverable
to avail – нақд бўлмоқ	available
to remove – қайта жойлаштирмоқ, ўчирмоқ	removable
to use – фойдаланмоқ	usable
to scale – масштабга олмоқ	scalable
to access – фойдаланиш ҳуқуқига эга бўлмоқ	accessable
to share – баҳам кўрмоқ, бўлишмоқ	sharable
to execute – бажармоқ, амалга оширмоқ	executable

Task 2. Translate into English:

фойдаланиш мумкин бўлган, кенгаювчан, масштабга олса бўладиган, фойдаланиладиган, мос келадиган, ўзаро фойдаланиладиган, тикланувчан, юкланувчан, фойдаланувчан, нақдга эга бўлган, қайта жойланадиган, лойиқ келадиган.

Task 3. Make the word-combinations as more as possible:

available	keyboard
bootable	character
compatible	printer
usable	disk
suitable	selection
removable	partition

Task 4. Read and memorize the following words:

1. CPU, microprocessor — микропроцессор
2. hard disk – қаттиқ диск, винчестер
3. input hardware – маълумот киритиш қурилмаси
4. output hardware – маълумот чиқариш қурилмаси
5. processing hardware – маълумот ишловчи қурилма
6. storage hardware – маълумот сақлаш қурилмаси
7. RAM — ОЗУ (оперативное запоминающее устройство)
8. ROM — ПЗУ (постоянное запоминающее устройство)
9. CD-ROM – компакт-диск қурилмаси
10. capacity - сиғим
11. circuitry – электр занжири
12. sophisticated – мураккаб
13. temporary – вақтинча
14. tier – ярус
15. to convert – айлантирмоқ, конвертация қилмоқ
16. to execute – бажармоқ
17. to interpret – таржима қилмоқ
18. to provide – таъминламоқ
19. to retrieve – чиқариб олмоқ
20. volatile – вақтинча

Task 5. Read and translate the text:

Hardware

What is hardware? Webster's dictionary gives us the following definition of the hardware — the mechanical, magnetic, electronic, and electrical devices composing a computer system.

Computer hardware can be divided into four categories:
1) input hardware 3) storage hardware
2) processing hardware 4) output hardware.

Input 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 hand held 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.

Processing hardware

The purpose of processing hardware is 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 nonvolatile, 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 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.

Hardware comes in many configurations, depending on what the computer system is designed to do. Hardware can fill several floors of a large office building or can fit on your lap.

General understanding:

1. What is the Webster's dictionary definition of the hardware?
2. What groups of hardware could be defined?
3. What is input hardware? What are the examples of input hardware?
4. What is mouse designed for? What is a light pen?
5. What is processing hardware? What are the basic types of memory used in a PC?
6. Can a PC-user change the ROM? Who records the information in ROM?
7. What is storage hardware? What is CD-ROM used for? Can a user record his data on a CD? What kind of storage hardware can contain more information: CD-ROM, RAM or ROM?
8. What is modem used for? Can PC-user communicate with other people without a modem?

Task 6. Which of the listed below statements are true/false. Specify your answer using the text.

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 of ten because they are flexible and have more capacity than 3.5" disks.
5) Printer is a processing hardware because its purpose is to show the information produced by the system.
6) Modem is an electronic device that makes possible the transmission of data from one computer to another via telephone or other communication lines.
7) 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.

Task 7. Give definitions to the following using the vocabulary

1) CPU
2) ROM
3) Floppy-disk
4) CD-ROM

5) Printer
6) Modem
7) Motherboard
8) Hard disk
9) Keyboard
10) Sound-card

Task 8. Which of the following is Hardware:
1) program
2) mouse
3) CPU
4) printer
5) modem
6) command
7) port
8) cursor or the pointer
9) keyboard
10) character

Task 9. Match the following:
1) процессор
2) клавиатура
3) сичқонча
4) дискета
5) «винчестер»
6) модем
7) экран
8) ПЗУ
9) ОЗУ

a) nonvolatile, non-modifiable computer memory, used to hold programmed instructions to the system.
b) the part of a television or computer on which a picture is formed or information is displayed.
c) rigid disk coated with magnetic material, for storing computer programs and relatively large amounts of data.
d) an electronic device that makes possible the transmission of data to or from computer via telephone or other communication lines.
e) a set of keys, usually arranged in tiers, for operating a typewriter, typesetting machine, computer terminal, or the like.
f) volatile computer memory, used for creating, loading, and running programs and for manipulating and temporarily storing data; main memory.
g) central processing unit: the key component of a computer system, containing the circuitry necessary to interpret and execute program instructions.
h) a palm-sized device equipped with one or more buttons, used to point at and select items on a computer display screen and for controlling the cursor by means of analogous movement on a nearby surface.
i) a thin, usually flexible plastic disk coated with magnetic material, for storing computer data and program.

Task 10. Match these pictures of input devices with their names.

Joystick	graphics tablet
trackerball	touchscreen
barcode reader	digital camera
scanner	microphone

joystick- a cursor control input device with an upright arm. It is commonly used for controlling fast moving objects in computer games.
trackerball- a cursor control input device that has a ball on top that is moved by the user's finger.
barcode reader- an optical input device that uses the reflection of a light beam to read barcode labels.
scanner- an optical input device that uses the reflection of light to copy text or graphics into a computer.
graphics tablet- graphical input device that tracks the movement of a stylus across a flat surface.
touchscreen- an input device in the form of a monitor screen that responds when touched by the user.
digital camera- an input device for taking pictures that has an electronic lens and uses electronics for storing the images rather than chemical film.
microphone- an input device used for sound .

Task 11. Each text describes one of these devices: trackerball, joystick, lightpen, scanner. **Identify the devices each text describes.**

INPUT DEVICES

1. A _____ is another input device you can connect to a computer system. The _____ is able to move in eight directions. _____s are mostly used in computer games to control the way a picture on the screen moves. Sometimes two _____s are connected to a computer so two people can play the game at the same time.
2. A _____ works in exactly the same way as a mouse, except that the ball is on top. The user rolls the ball around with her hand to operate it. If you use a _____, you don't need any extra space on your desk to move it around (like you do with a mouse). _____s are often used on small portable computers and on some video game machines.
3. A _____ can be used to draw pictures directly on to a computer screen or to read the patter on a barcode. A _____that can read barcode detects the

difference between the light reflected from a black barcode line and its lighter background.

4. Using a _____, you can input printed drawings, photographs, or text directly into a computer. A _____ works like a photocopier – a light is shone on the material and the _____ detects the reflected light. You can use a _____ with optical character recognition (OCR) software to input the scanned text into a word processing package.

Task 12. Match each device (1-7) with its use (a-g)

Device	**Use**
1 joystick	**a** draw pictures on to a computer screen
2 lightpen	**b** copy documents
3 scanner	**c** input sound
4 digital camera	**d** input text
5 mouse	**e** select from a menu
6 keyboard	**f** move the cursor rapidly
7 microphone	**g** produce photos without films

Task 13. Read and translate the text.

OUTPUT DEVICES. PRINTERS.

There are many different types of printer. These include inkjet, mono laser and dye sublimation printer. Basically, you get what you pay for. The more you pay, the better the computer.

Inkjet printers are the cheapest, but the print quality is not good as the other two types of printer. They are expensive to run compared to mono laser printers, but are able to print in colour. Inkjets are the noisiest of the three types of printer.

Mono laser printers are more expensive than inkjet printers but give you a better quality of black and white output. They cannot print in colour, but are the fastest type of printer and cost the least to run.

Dye sublimation printers are the most expensive type of printer, but their print quality is extremely high. They are quiet in operation, but are relatively slow and very expensive to run.

GRAMMAR: Structure of Phrases. Structure of phrases:
Invalid <u>password</u> (сифат + от)
Input <u>file</u> (от + от)
<u>Combination</u> of keys (от + of + от)
<u>Note</u>: тагига чизилгани асосий, аниқланувчи сўз

Task 14. Read and translate the following phrases, find the main word:

A database program	Print device	Input/output space
Collection of partitions	Executable file	Memory size
Common interface	System management mode	Insert mode
A single character	Read access	Database device
Definition of data	The string of data	Program execution
A file error	Common bus	Dialog box
The title of the window	Mouse button	Development tools
Binary file		Shared resource

PROBLEM-SOLVING
Questions for group discussion:

1)Without what parts computer is unable to work?
2)What is the most expensive part of the hardware?
3)What other hardware devices do you know? What are they for? Do you know how to use them?

UNIT 5. STORAGE DEVICES

Word-building

Prefixes *un-, il-, in-, non-, dis-, mis-*

un-, il-, in-, non-, dis-, mis- префикслари инкор маъносига эга ва қандайдир хусусиятнинг йўқлигини кўрсатади.
unusable - яроқсиз, фойдаланиб бўлмайдиган
illegal - ноқонуний
insufficient – етарли бўлмаган
non-volatile – энергомустақил
disconnect – алоқани узмоқ
mismatch – мос келмаслик
Лекин: **internal** - ички, **international** - халқаро, **intermediate** – жорий

Task 1 Translate into Uzbek:
unknown, uncommon, unlimited, unsuitable inaccessible, invalid, incompatible, incorrect illegal, illegible disconnect, dissimilar, disable mismatch, miscount, mistake non-removable, non-stop, non-volatile

Task 2. Translate into English;
халқаро, нотўғри, мос келмоқ, яроқсиз, энергоқарам, мос бўлмаган, ноодатий, қайта жойлаб бўлмайдиган (ўчириб бўлмайдиган), ўхшаш, алоқани уламоқ, тўхтовсиз, ҳаққоний бўлмаган, чекланган, мослашмайдиган, мумкин бўлган, таниқли.

Task 3. Read and translate the text.

HARD DISK DRIVE

The hard disk drive inside your PC is like a filing cabinet. Instead of paper, it stores everything electronically. it can hold all the software that runs on your system and all your personal files. It's a pretty important part of your computer.

A hard disk drive normally contains several disks. They're stacked on top of each other. There are five in the diagram. The drive motor spins the disks very quickly. It runs all the time your PC is in use.

There's a gap, a space, between each disk. We need the gaps so the read/write heads can move across the disk and reach all parts quickly. The head motor controls the read/write disks.

The space between the head and the disk surface is tiny. Even smoke of a cigarette can cause a crash. A crash is what happens when the head touches the surface of a disk. To keep out dust and smoke, the drive is inside a sealed case.

Task 4. Read and memorize the following words:
1. to need – эҳтиёжи бўлмоқ, керак бўлмоқ
2. temporary – вақтинча
3. permanent – доимий
4. to lose (lost, lost) – йўқотмоқ
5. content(s) – мундарижа, таркиб
6. volatile – энергоқарам, доимий бўлмаган, вақтинча
7. non-volatile – энергомустақил
8. firmware – дастурий-аппарат воситаси; ички дастур, микропрограмма
9. capacitor – конденсатор

10. to require – талаб қилмоқ
11. to refresh – кўринган маълумотни янгиламоқ, регенерация қилмоқ, тикламоқ
12. non-contiguous – бир-бирига боғланмаган
13. to eliminate – четлаштирмоқ
14. storage – ёдда сақлаш, хотира

Task 5. Read and translate the text.

MEMORY

Memory. Also called main memory. The working space used by the computer to hold the program that is currently running, along with the data it needs, and to run programs and process data. The main memory is built from RAM chips. Main memory is temporary, and is lost when the computer is turned off.

Cache memory. A high-speed buffer storage that is smaller than the main storage. The cache memory is a place that temporarily stores instructions and data.

Volatile memory. Memory that loses its content when the power is shut off. Any changes made to files must be saved to disk before the power is turned off or they will be lost.

Non-volatile memory or nonvolatile memory. Memory that does not lose its content when the power is turned off.

Random access memory. The kind of memory used for holding programs and data being executed is called random access memory or RAM. RAM differs from read-only memory (ROM) in that it can be both read and written. It is called volatile storage because the contents of RAM are lost when the power turned off. RAM is also sometimes called read-write memory or RWM.

Read-only memory. Memory that can be read but not changed. Read-only memory is non-volatile storage; it holds its contents even when the power is turned off. Data is placed in ROM only once, and stays there permanently. ROM chips are used for storage of the important software of the computer, called firmware.

Dynamic random access memory. (DRAM). A type of computer memory that is stored in capacitors on a chip and requires a refresh signal to be sent to it periodically.

Static random access memory. (SRAM). A kind of random access memory that requires a constant supply of power in order to hold its content, but does not require refresh circuitry as dynamic random access memory (DRAM) does. Static RAM is usually faster than dynamic RAM, but takes up more space and uses more power. It is used for the parts of a computer that require highest speed, such as cache memory.

Synchronous Dynamic Random Access Memory. (SDRAM). High-speed DRAM that adds a separate clock signal to the control signals. SDRAM can transfer bursts of non-contiguous data at 100 MBytes/sec, and has an access time of 8-12 nanoseconds. It comes in 64-bit modules: long 168-pin DIMMs.

Fast page mode memory (FPM DRAM). A kind of DRAM memory. Fast page mode improved upon the original page mode memory by eliminating the column address setup time during the page cycle.

Abbreviation:

1. ROM (Read Only Memory) – доимий хотира қурилмаси
2. RAM (Random Access Memory) – оператив хотира
3. SRAM (Static Random Access Memory) - статик RAM
4. DRAM (Dynamic Random Access Memory) - динамик RAM
5. FPM DRAM (Fast Page Mode DRAM) – тез саҳифаланувчи динамик хотира
6. SDRAM (SyncHronous DRAM) - синхрон динамик хотира
7. PB SRAM (Pipelined ['paiplaind] Burst SRAM) – блок конвейерли статик хотира

Task 6. Give the English definitions of the following concepts:
RAM, ROM, DRAM, SRAM, SDRAM, FPM DRAM

Task 7. Read the text and complete the sections of the table.

STORAGE DEVICES

Medium	Advantages	Disadvantages
Floppy disk		
Fixed hard disk		
Removable hard disk		
CD-ROM disk		
Magneto-optical disk		
Magnetic tape		

A Most computers use floppy disks. Floppies conform to a standard and you can use them to carry data from one place to another. They are also very cheap, but they are slow and have a limited capacity.
B Almost all desktop computers have hard disks. They are fast and can store much greater amounts of data than floppies, but they are fixed inside the computer and you cannot use them to transfer data.
C You can move data from place to place using removable hard disks. They are almost as fast as fixed hard disks and also have high capacities, but they are relatively expensive. They do not all conform to one standard and they are not very common.
D CD-ROM disks are very common and conform to a standard. They are removable and can hold about 640 MB. They are also cheap to make. However, they are usually read-only. You cannot change the information on them. They are also slow compared to hard disks.
E Magneto-optical disks are like CD-ROMs, but you can write data on to them. They are removable, have large capacities, and last for a long time, but they are expensive and do not all conform to one standard. For this reason they are not very common.
F Magnetic tape is a cheap medium. You can use it to store very large amount of data, but it does not allow random access. Every time you read or write a piece of data, you start at the beginning of the tape. Tape drives are slow. Therefore, it is only suitable for doing backups.

GRAMMAR: Present Simple (Indefinite) Tense

Форма	The Present Simple (Indefinite) Tense
Бўлишли шакли	These keys ***move*** the cursor. This key ***moves*** the cursor down.
Бўлишсиз шакли	These keys ***don't move*** the cursor. This key ***doesn't move*** the cursor down.
Сўроқ шакли	***Do*** these keys ***move*** the cursor? ***Does*** this key ***move*** the cursor down?

Махсус сўроқ гаплар структураси

Сўроқ сўзлар	Ёрдамчи феъл	Эга ва унинг аниқловчиси	Инфинитив формасидаги асосий маъно берувчи феъл	Гапнинг бошқа бўлаклари
What	*do*	these keys	*move*	?
What	*does*	this key	*move*	?

Эгага қўйилган сўроқ: What ***moves*** the cursor?

Task 7. Make these sentences negative. Put the questions to them.

1. This key moves the cursor down.
2. This key moves the cursor to the right.
3. This key inserts a character.
4. This key copies the screen display.
5. This key moves the screen up.

Task 8. Open the brackets and put the verb in the correct tense form.

1. He (to play) tennis very well. 2. We (to speak) English at our English lessons. 3. My father (to tell) us about his travel. 4. I (to speak) English well. 5. Our teacher (to ask) us many questions. 6. These foreign students (to speak) Russian. 7.He (to live) in hostel 8.I (to go) to the University by bus. 9.My sister (to help) me do my homework. lO.They (to listen) to the radio in the morning.

Task 9. Make up questions.

1. He lives in Moscow. (where?) 2.I study at school? (where?) 3. He has 2O English books. (how many?) 4.They get up at 7 o'clock in the morning. (when)? 5.Pete does his homework every day. (who?) 6.They play tennis very well. (how?) 7.We have 2 lectures today. (what?) 8.Ann speaks English well. (who?) 9.She goes to school every day. (where?) 10.Lessons begin at 8 o'clock. (when)

PROBLEM-SOLVING

1. Compare ROM and RAM.
2. Tell about storage devices, their advantages and disadvantages

SUPPLEMENTARY READING

DVD Technology Overview.

Abstract: DVD is an optical storage technology with far greater capacity than compact discs. With conventional CD-ROM products well established in the entertainment and computer marketplaces, DVD surely has a strong impact.

Introduction: DVD is an optical disc technology that still resembles CD-ROM technology closely enough to be backward compatible with current audio and data CDs:

► Both are the same size: 1.2 mm thick and 120 mm in diameter

► Both store information as pits arranged along concentric, circular tracks embedded in a reflective material, which is bonded to a clear disc. A laser reflects differently from pits and from "land" (space without a pit). The player spins the disc, focuses a laser on a track, and "reads" reflections of pits and land as zeros and ones.

DVD improves on CD technology in significant ways, including:

► The laser has a shorter wavelength—A shorter wavelength results in a smaller "dot" when a laser beam hits something. This smaller dot lets the optical pickup detect smaller pits, which means manufacturers can put more pits on each track and thus more tracks on each disc. A single-sided, single-layer DVD can hold 4.7 GB—about seven times the 650 MB that can be put on the conventional CD that TechNet currently ships on.

► The disc can have two layers — A dual-layer DVD is really two discs bonded together: the one closest to the laser has a partially transmissive surface; the one furthest from the layer has a fully-reflective surface. The player's laser can focus on either surface, just as your eyes can focus on a window's surface or on the objects beyond. A single-sided, double-layer
DVD can hold 8.5 GB.

► The disc can have two sides — A double-sided, double-layered DVD can hold 17 GB.

► The disc spins faster — This gives DVD players higher throughput. In addition to hardware advances, the DVD specifications include audio and video compression standards. DVD stores video compressed using the Moving Picture Expert Group's MPEG-2 standard.

Glossary:

CD-ROM (disk) abbreviation for compact, disk read-only memory. A readonly storage device (a disk)l that is read using laser light.

DVD abbreviation for digital versatile disk. An optical disk storage device that can hold a large amount of video data

UNIT 6. BUSES AND INTERFACES

Word-building Prefix re-Префикси ***re-*** олд қўшимчаси иш-ҳаракатни қайта бажариш ёки такрорлаш маъносини беради.

to try – уринмоқ	to retry
to insert – солмоқ	to re-insert

Task 1. Make the words with *re-* and translate into Uzbek:

To cover, to name, to place, to install, to calculate, to consider

Task 2. Read and translate the text.

WHAT IS A BUS?

A bus is a group of parallel wires which carry electrical signals between different parts of the computer. Some buses are bidirectional. They allow data to flow in either direction. Most computers have three main buses: the data bus, the address bus and the control bus.

The data bus is a bidirectional bus. It carries data and instructions from the memory to the CPU and from the CPU to memory.

The address bus is a unidirectional bus. Data flows one way only. It carries addresses from the processor to memory. The addresses identify places in the memory where data or instructions may be found or stored,

The control bus is bidirectional. It carries instructions to and from the CPU and other parts of the computer. It's a collection of lines which carry different signals. For example, the clock line carries a signal from the clock chip to synchronize the operations of the processor.

Task 3. General understanding.

1. What is the function of buses?
2. Which buses are *bidirectional?*
3. What kind of information is carried by the data bus?
4. What does *unidirectional means?*

Task 4. Graphical User Interface (GUI) makes computer easier to use. A GUI uses icons. Icons are pictures which represent programs, folders, and files. Can you identify any of these icons?

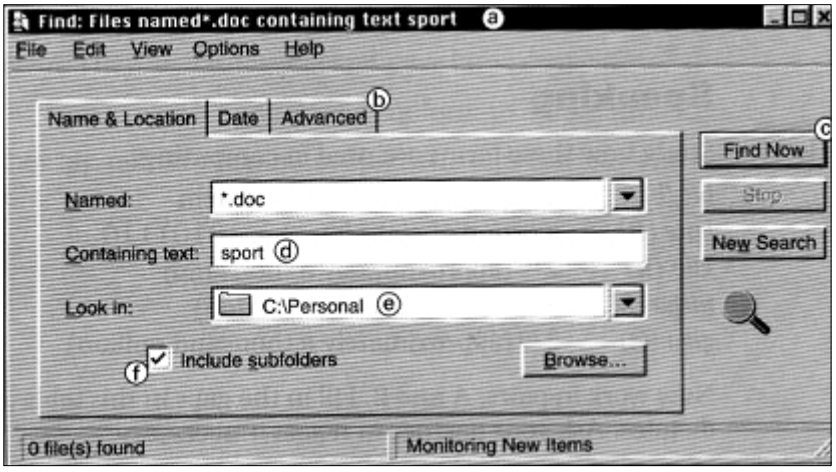
Task 5. Find the icons for the software which controls these items.

1. data and time
2. the mouse
3. fonts
4. the keyboard
5. a modem
6. sounds

Task 6. Study this dialog box with the help of the text. Tick (V) the features you can identify.

1. □ text box
2. □ tab
3. □ checkbox
4. □ title bar
5. □ drop-down list box
6. □ command button

DIALOG BOX



This is a picture of a computer screen with one window open. The window contains a dialog box. This one is the Find dialog box. You can see name on the title bar at the top of the screen. You use this dialog box to find files or folders.

Near the top of the window there are three tabs. The first tab is for searching by name and location. There are two other tabs: one for searching by date and the other for advanced searching.

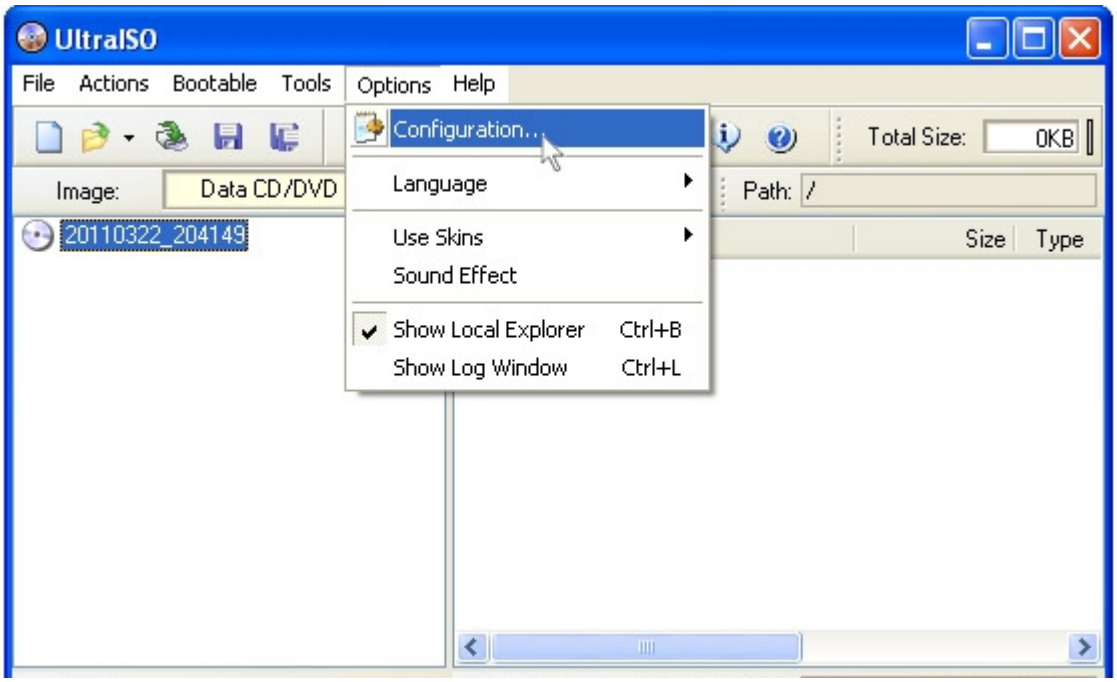
To search for a file by name and location, you type the name of the file in the drop-down list box called Named. In this example, the user wants to find all the document files. Than you choose the folder to search in using another drop-down list box labelled Look in. Here the user wants to look in the folder called Personal on the C drive. So the first drop-down list box is for the name, and the second drop-down list box is for the location.

Between the Named and Look in drop down boxes is a text box. In the text box you type any words which you want to look for. In this example, the user only wants documents with the word «sport».

You start the search by clicking on the Find Now command button. Other buttons stop the search, start a new search, or browse the drives.

Task 7. Study this screen display. Can you find these items?

1. a window 2. an icon 3. a pointer 4. a menu



Task 8. Read and translate the text.

WIMP

(Window, Icon, Menu, Pointer) Most computers have a Graphical User Interface. c

The interface is the connection between the user and the computer. The most common type of GUI uses a WIMP system. WIMP stands for Window, Icon, Menu (or Mouse), Pointer (or Pull-down/Pop-up menu).

Windows A window is an area of the computer screen where you can see the contents of a folder, a file, or a program. Some systems allow several windows on the screen at the same time and windows can overlap each other. The window on the top is the one which is «active», the one in use.

Icons are small pictures on the screen. They represent programs, folders, or files. For example, the Recycle Bin icon represents a program for deleting and restoring files. Most systems have a special area of the screen on which icons appear.

Menus give the user a list of choices. You operate the menu by pressing and releasing one or more buttons on the mouse.

The Pointer is the arrow you use to select icons or to choose potions from a menu. You move the pointer across the screen with the mouse to use the object selected by the pointer.

Task 9. Find the definitions of the following items.

1 menu
2 interface
3 window
4 active window
5 pointer
6 icon

GRAMMAR: Imperative Sentences

Компьютер хабарлари сифатида инглиз тилидаги сўз бирикмалари ва гаплари ишлатилади. Улар инглиз тилининг грамматик қоидалари асосида тузилган, лекин уларнинг баъзи бир алоҳида хусусиятлари мавжуд:

1. хабар буйруқ хусусиятига эга:

PRESS ANY KEY – Исталган клавишни босинг

ENTER DATA – Маълумот киритинг
INSERT DISKETTE IN DRIVE – Дисководга дискета қўйинг

INSERT Қўйинг	DISKETTE дискетни	IN DRIVE дисководга
Кесим Нима қилинг?	**тўлдирувчи** Нимани қўйинг?	**ҳол** Қаерга қўйинг?

The negative form is built with the help of the auxiliary verb "do": DO NOT (=DON'T) INSERT DISKETTE IN DRIVE

2. фойдаланувчига берилган хабарларда одатий сўроқ гаплар кўрсатилади:

DOES LETTER X SPECIFY A FILE OR DIRECTORY?

3. Агар сўроқ компьютернинг ўз ҳаракатига тегишли бўлса, унда буйруқ гап шаклидаги қисқартирилган умумий сўроқ гап ишлатилади:

REPLACE FILE X?

Task 10. Study these instructions for virus-checking a disk. Fill in the gaps with verbs from this list. Use *Don't* where appropriate.

click exit put select start

1. _____ the disk into the drive.
2. _____ the virus checking program.
3. _____ the drive to be checked.
4. _____ the Find button.
5. _____ the program until the check is complete.
6. _____ Yes or No for checking another disk.

Task 11. Study these instructions for formatting a disk in Microsoft Windows. Write the instructions in the correct order (1—6).

1. Select 'OK' to start formatting the disk.
2. Choose 'Format' from the drop-down menu.
3. Click the 'Start' button.
4. Put the disk into the drive.
5. Choose the formatting options you require.
6. Click the 'OK' button when formatting is complete.

PROBLEM-SOLVING
Task Tell about Graphical User Interface.

UNIT 7. SOFTWARE 1

Task 1. Read and memorize the following words:

1. equipment – жиҳоз
2. internal – ички
3. mainboard – она плата
4. memory capacity – хотира қуввати
5. peripheral – периферал
6. regardless – ...га қарамай
7. specific – маълум, аниқ

8. to boot – юкла(н)моқ
9. to check – текширмоқ
10. to conduct – ўтказмоқ
11. to develop – тараққий қилмоқ, ривожланмоқ
12. developer – ишлаб чиқувчи
13. to handle – бошқармоқ, мулоқат қилмоқ
14. to install – ўрнатмоқ
15. to provide with – *бирор нарса* билан таъминламоқ
16. to require – талаб қилмоқ
17. to secure – хавфсизликни таъминламоқ
18. security – хавфсизлик
19. to transfer – ўтказмоқ, узатмоқ
20. Web-browser — «браузер» (Internet глобал электрон тармоғидаги маълумотни қидирувчи ва ўқувчи программа)

Task 2. Read and translate the text.

TYPES OF SOFTWARE

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 booted or loaded into the computers memory. This software contains information about memory capacity, the model of the processor, the disk drives 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. These 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.

General understanding

1. What is software?
2. In what two basic groups software (programs) could be divided?
3. What is system software for?
4. What is an operating system — a system software or application software?
5. What is a «driver»?
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?

Task 3. Which of the following is Software:

1. Program
2. Mouse
3. CPU
4. Word processor
5. Modem
6. Web-browser
7. Operating system
8. Scanner
9. Printer
10. Display

Task 4. Which of the listed below statements are true/false. Specify your answer using the text:

1) Computer programs only instruct hardware how to handle data storage.
2) System software controls 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 drives 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-browsers is the class of software for electronic communication through the network.

Task 5. Find English equivalents in the text:

1) Дастурий таъминот операцияларнинг бажарилиш тартибини аниқлайди.
2) Махсус дастурлар сиз томонингиздан берилган конкрет топшириқни бажаради (сизнинг талабингизни қондиради).
3) Дастурларнинг бу синфи – маркетингнинг нуқтаи назарида энг кўп сонли ва истиқболли (перспективали)дир.
4) Системали дастурлар компьютер системасининг конкрет қурилмаларичун мўлжалланган.
5) Драйверни ўрнатгач, сиз системани ўрнатилган қурилмани “тушуниш”га “ўргатасиз”.
6) Компьютер ёқилганда, унинг хотирасидаги бирорта системали дастур юкланиши

керак.
7) Сўнгги беш йилда электрон коммуникация системасининг тараққиёти ишлаб чиқувчи компаниялар томонидан шунга муносиб бўлган дастур маҳсулотларининг ишлаб чиқилишига сабаб бўлди.

Task 6. Give definitions to the following using the vocabulary:
1) Software
2) Driver
3) Application software
4) Operating system
5) Communication software
6) Computer
7) Peripheral device
8) Operating system

Task 7. Read and memorize the following words:
to consume – истеъмол қилмоқ
consumer – истеъмолчи
to realize – тушунмоқ, сезмоқ
smart – ақлли
to enhance – кенгайтирмоқ
on top of DOS – ДОС асосида
are shipped – етказиб берилади
compatible – мос, тўғри келадиган
with a click of a mouse – сичқончани бир марта босиш орқали
access – рухсат, кириш ҳуқуқи
to allow – рухсат бермоқ, йўл қўймоқ, имкон бермоқ
multiple users – кўп сонли фойдаланувчилар
simultaneously – бир вақтнинг ўзида

Task 8. Read and translate the text.

OPERATING SYSTEMS

When computers were first introduced in the 1940's and 50's, every program written had to provide instructions that told the computer how to use devices such as the printer, how to store information on a disk, as well as how to perform several other tasks not necessarily related to the program. The additional program instructions for working with hardware devices were very complex, and time-consuming. Programmers soon realized it would be smarter to develop one program that could control the computer's hardware, which others programs could have used when they needed it. With that, the first operating system was born.

Today, operating systems control and manage the use of hardware devices such as the printer or mouse. They also provide disk management by letting you store information in files. The operating system also lets you run programs such as the basic word processor. Lastly, the operating system provides several of its own commands that help you to use the computer.

DOS is the most commonly used PC operating system. DOS is an abbreviation for **disk operating system.** DOS was developed by a company named Microsoft. MS-DOS an abbreviation for "Microsoft DOS". When IBM first released the IBM PC in 1981, IBM licensed DOS from Microsoft for use on the PC and called it PC-DOS. From the users perspective, PC-DOS and MS-DOS are the same, each providing the same capabilities and commands.

The version of DOS release in 1981 was 1.0. Over the past decade, DOS has undergone several changes. Each lime the DOS developers release a new version,

they increase the version number.

Windows NT (new technology) is an operating system developed by Microsoft. NT is an enhanced version of the popular Microsoft Windows 3.0, 3.1 programmes. NT requires a 386 processor or greater and 8 Mb of RAM- For the best NT performance, you have to use a 486 processor with about 16 Mb or higher. Unlike the Windows, which runs on top of DOS, Windows NT is an operating system itself. However, NT is DOS compatible. The advantage of using NT over Windows is that NT makes better use of the PC's memory management capabilities.

OS/2 is a PC operating system created by IBM. Like NT, OS/2 is DOS compatible and provides a graphical user interface that lets you run programs with a click of a mouse. Also like NT, OS/2 performs best when you are using a powerful system. Many IBM-based PCs are shipped with OS/2 preinstalled.

UNIX is a multi-user operating system that allows multiple users to access the system. Traditionally, UNIX was run on a larger mini computers to which users accessed the systems using terminals and not PC's. UNIX allowed each user to simultaneously run the programs they desired. Unlike NT and OS/2, UNIX is not DOS compatible. Most users would not purchase UNIX for their own use.

Windows 95 & 98 (Windows 2000) are the most popular user-oriented operating systems with a friendly interface and multitasking capabilities. The usage of Windows 95 and its enhanced version Windows 98 is so simple that even little kids learn how to use it very quickly. Windows 95 and 98 are DOS compatible, so all programs written for DOS may work under the new operating system. Windows 95 requires 486 processor with 16 megabytes of RAM or Pentium 75-90 with 400 megabytes of free hard disk space.

General understanding:

1)What problems faced programmers in the 1940's and 1950's?
2)Why were the first programs «complex» and «time-consuming»?
3)What are the basic functions of operating system?
4)What does the abbreviation DOS mean?
5)What company developed the first version of DOS operating system? For what purpose was it done? Was the new operational system successful?
6)What is the difference between the PC-DOS and MS-DOS?
7)What does the abbreviation NT stand for? Is NT DOS-compatible? What are the basic requirements for NT?
8)Who is the developer of OS/2?
9)What makes UNIX so different from the other operational systems?
10)What are the special features of Windows95, Windows98, Windows 2000?

Task 9. Match the following:

1) Like NT, ... is DOS compatible and provides a graphical user interface that lets you run programmes with a click of a mouse.
2) ... is the most commonly used PC operating system
3) ... is a multi-user operating system that allows multiple users to access the system
4) ... is an operating system developed by Microsoft, an enhanced version of the popular Microsoft Windows programs.
5) The usage of... is so simple that even little kids learn how to use it very quickly.

a) UNIX
b) DOS
c) NT
d) OS/2
e) Windows 95

Task 10. Which of the listed below statements are true/false. Specify your answer using the text.

1) When computers were first introduced in 40's and 50's programmers had to write programs to instruct CD-ROMs, laser printers and scanners.
2) The operational system controls and manages the use of the hardware and the memory.
3) There are no commands available in operating systems; they are only in word processors.
4) Microsoft developed MS-DOS to compete with IBM's PC-DOS.
5) NT requires computers with 486 CPU and 16 M random access memory.
6) OS/2 is DOS compatible because it was developed by Microsoft.
7) Traditionally, UNIX was run by many users simultaneously.
8) Windows 95 and Windows 98 are DOS compatible and have very «friendly» and convenient interface.

Task 11. Translate into English:

1) Ҳозирги операцион системалар принтер ва сичқонча каби система қурилмаларидан фойдаланишни бошқаради.
2) Фойдаланувчи нуқтаи назарида PC-DOS ва MS-DOS операцион системалари тенг имкониятлари ва система буйруқлари билан бир хил.
3) OS/2 ДОС билан мувофиқ келадиган операцион система ҳисобланиб, фойдаланувчининг график интерфейси ёрдамида дастурларни ишга туширишга имкон беради.
4) Система жиҳози қурилмалари билан ишловчи қўшимча дастурлар жуда қийин бўлган ва кўп вақтни олган.
5) Операцион система яна оддий текст редактори каби дастурларни ишга тушириш имконини.
6) DOS бу шахсий компьютер учун кенг тарқалган операцион ситемадир.

Task 12. Practice:

1) Start Windows 95. Empty the Recycle Bin. See the free disk space on drives A and C. See the catalogue of disk C.
2) Resize, maximize and minimize the window. Close the window. Move it, holding the left button.
3) Create a folder COMPUTER. Copy any 2 files into it. Rename the folder. Delete two files into the Recycle Bin then recover them. Delete the whole folder.
4) Create a textual file in WordPad program. Save it as TEXT. Rename it as MYFILE. Create a shortcut for it. Put the shortcut on the DeskTOP.
5) Create a picture in Paintbrush program. Save it as MYPICTURE. Create folder PICTURES. Copy file MYPICTURE to the PICTURES folder.
6) QUIT Windows 95.

GRAMMAR: Past Simple (Indefinite) Tense

The Past Simple (Indefinite) Tense
These keys *moved* the cursor down. This key *moved* the cursor down.
These keys *didn't move* the cursor down. This key *didn't move* the cursor down.
Did these keys *move* the cursor? *Did* this key *move* the cursor down?

Task 13. Open the brackets

1. You (finish) school 3 years ago.
2. You (prepare) your lessons in the library.
3. They (come) home at 7 o'clock yesterday.
4. You (get up) at 6 o'clock the day before yesterday.
5. Nina (go) to the University by tram last month.
6. You (work) at a plant last year.
7. You (study) English at school.
8. Peter (play) football yesterday.
9. You read this book last year.
10. You watched TV yesterday.

Task 14. Express disagreement using *That's not right* or *You are wrong:* Model:
You worked at a plant last year.
That's not right. I didn't work at a plant last year. I was in the Army.

1. You studied at the University last year
2. You went to the cinema yesterday.
3. Nina went to the library yesterday.
4. You studied French at school.
5. You saw him last week.
6. Nick came home early yesterday.
7. Oleg made a report last month.
8. You wanted to go to Minsk 2 days ago.
9. You saw this film a week ago.
10. Some years ago she lived in the country.

Task 15. Make up questions beginning with the words in brackets:

1. I finished school in 1980. (when?)
2. I studied English at school. (where?)
3. They got up at 7 o'clock yesterday. (when?)
4. Nina went to the University by tram. (who?)
5. He worked at a big plant last year. (where?)
6. Pete made a report on Sunday. (when?)
7. I saw him in the library. (where?)
8. The students wrote a dictation last week. (who?)
9. Our classes began at 10 o'clock yesterday. (when?)
10. I worked in the library the day before yesterday. (who?)

PROBLEM-SOLVING

Questions for group discussion:

1) What do you think is more expensive — hardware or software?
2) Has anyone in your group ever purchased software? Why do you think piracy (audio, video, computer software) still exists?
3) Why do you think Bill Gates, President of Microsoft Company is one of the richest people on the Earth?
4) Ask the students in your group who have experience working with Windows 98 and Windows 2000 about the advantages and disadvantages of these operational systems.

UNIT 8. SOFTWARE 2

Abbreviation:

1. **PC/XT (Personal Computer Extended Technology)** – кенгайтирилган технологияли шахсий компьютер
2. **PC/AT (Personal Computer Advanced Technology)** – ривожланган технологияли шахсий компьютер

3. **ISA (Industry Standard Architecture)** – саноат стандарти архитетураси
4. **EISA (Extended Industry Standard Architecture)** – кенгайтирилган саноат стандарти архитетураси
5. **MCA (Micro Channel Architecture)** – микроканал архитектура.
6. **PCI (Peripheral Component Interconnect)** – ташқи қурилмаларни боғлаш
7. **PCMCIA (Personal Computer Memory Card International Association)** – шахсий компьютерлар учун хотира платаси ишлаб чиқарувчилари ассоциациалари
8. **VESA (Video Electronics Standards Association)** – видео қурилмалар стандартлари ассоциациалари
9. **USB (Universal Serial Bus)** – универсал сериал шина
10. **AGP (Accelerated Graphics Port)** – тезлаштирилган график порт

Task 1. Read and memorize the following words:

1) application – илова
2) advantage – устунлик
3) to manage – бошқармоқ
4) to perform a task – топшириқни бажармоқ
5) to load – юкла(н)моқ
6) manual – справочник, қўлланма
7) spreadsheet – таблица
8) to contain – қамраб олмоқ, ўз ичига олмоқ
9) folder – папка
10) uppercase or lowercase letters – бош ёки кичик ҳарфлар
11) to install – ўрнатмоқ
12) to create and update files – файлларни яратмоқ ва янгиламоқ
13) to supply the information – маълумотни ўз ичига олмоқ

Task 2. Read and translate the text.

MS-DOS AND ITS MAIN TERMS

What is MS-DOS

The Microsoft MS-DOS *operating system* is like a translator between you and your computer. The programs in this operating system allow you communicate with your computer, your disk drives and your printer, letting you use these resources to your advantage.

MS-DOS also helps you to manage programs and data. Once you have loaded MS-DOS into your computer's memory, you can compose letters and reports, run programs and languages such as Microsoft GW-BASIC, and use devices such as printers and disk drives.

Terms You Should Know

When you are introduced to a new or different idea, you must often a new set of words to understand the idea. The MS-DOS operating system is no exception. The following pages explain some terms you will know so that you can read and use the manuals.

Program

Programs, often called *application programs, applications,* or *software* are series of instructions written in computer languages. These instructions are stored in files and tell your computer to perform a task. For example, a program might tell your computer to alphabetically sort a list of names. Spreadsheets and word processors are other examples of programs.

File

A file is a collection of related information, like the contents of a file folder in a desk drawer. File folders, for instance, might contain business letters, office memos, or monthly sales data. Files on your disks could also contain letters, memos, or data. For example, your MS-DOS master disk contains more than thirty files. Your other disks may contain files that you've created, or that came with the disk.

Filename

Just as each folder in a file cabinet has a label, each file on a disk has a name. This name has two parts: a *filename* and an *extension.* A filename can be from one to eight characters in length, and can be typed in uppercase or lowercase letters. MS-DOS automatically converts filenames to uppercase letters.

Filename extensions consist of a period followed by one, two, or three characters. Extensions are optional, but it's good idea to use them, since they are useful for describing the contents of a file to you and to MS-DOS For instance, if you want to be able to quickly identify your report files, you can add the filename extension *.rpt* to each one. Here's an example of a filename with this extension:

progress .rpt

filename filename extension

Directory

A directory is a table of contents for a disk. It contains the names of your files, their sizes, and the dates they were last modified.

Volume Label

When you use a new disk, you can put a label on the outside of it to help you identify its contents. You can also give each of your disks an internal name, called a *volume label.*

You can look at the volume label on a disk by displaying its directory, programs may look at the volume label to see if you are using the correct disk. So make sure that you label your disks.

Disk Drive

To use the files or programs that are on a floppy disk, you must first insert the disk into a floppy disk drive Floppy disk drives are commonly referred to as the A drive and the B drive. A hard disk drive, normally installed inside your computer, is usually referred to as the C drive.

Drive Name

A complete *drive name* consists of a *drive letter* and a *colon.* When using a command, you may need to type a drive name before your filename to tell MS-DOS where to find the disk that contains your file. For example, suppose you have a file named *finances.doc* on the disk in drive B To tell MS-DOS where to find this file you would type the drive name before the filename:

b: finances.doc

drive name filename with extension

Command

Just as you will run programs to create and update files containing your data, you will also need to run some special programs, called MS-DOS commands, that let you

work with entire files.

When you type MS-DOS commands, you are asking the computer to perform tasks. For example, when you use the diskcopy command to copy your MS-DOS master disk, you are using a file named *diskcopy.exe,* whose task is to copy the files on the MS-DOS disk.

Error messages

If you or your computer makes a mistake when using a device or MS-command, MS-DOS displays an appropriate *error message.* Error messages apply to general errors (such as misspelling a command) or to device errors (such as trying to use a printer that is out of paper) For a complete list and explanation of each MS-DOS error message (device and general), see the *MS-DOS User's Reference,* Appendix F.

Memory

Memory is the place in your computer where information is actively used. When you run a program, MS-DOS stores that program and the files it uses in the computer's available memory. Some programs and files use more memory than others, depending on how large and complex they are.

Devices

Whenever you use your computer, you supply the information (input) and expect a result (output). Your computer uses pieces of hardware called *devices* to receive input and send output.

For example, when you type a command, your computer receives input from your keyboard and disk drive, and usually sends output to your screen. It can also receive input from a mouse, or send output to a printer. Some devices, such as disk drives, perform both input and output.

Device Names

Device names are special names given to each device that your computer "knows" about. An example of a device name is LPT1, which stands for the first parallel lineprinter connected to your computer.

When you add a new device, such as a mouse, to your computer, you sometimes need to tell MS-DOS about it by setting up (configuring) your computer for that device.

Glossary:

MS-DOS trademark, abbreviation for Microsoft disk operating system / the operating system that was used in the first PCs

Task 2. Find the definitions of the following terms:

Program, file, filename, directory, volume label, disk drive, drive name, command, error messages, memory, devices, device names

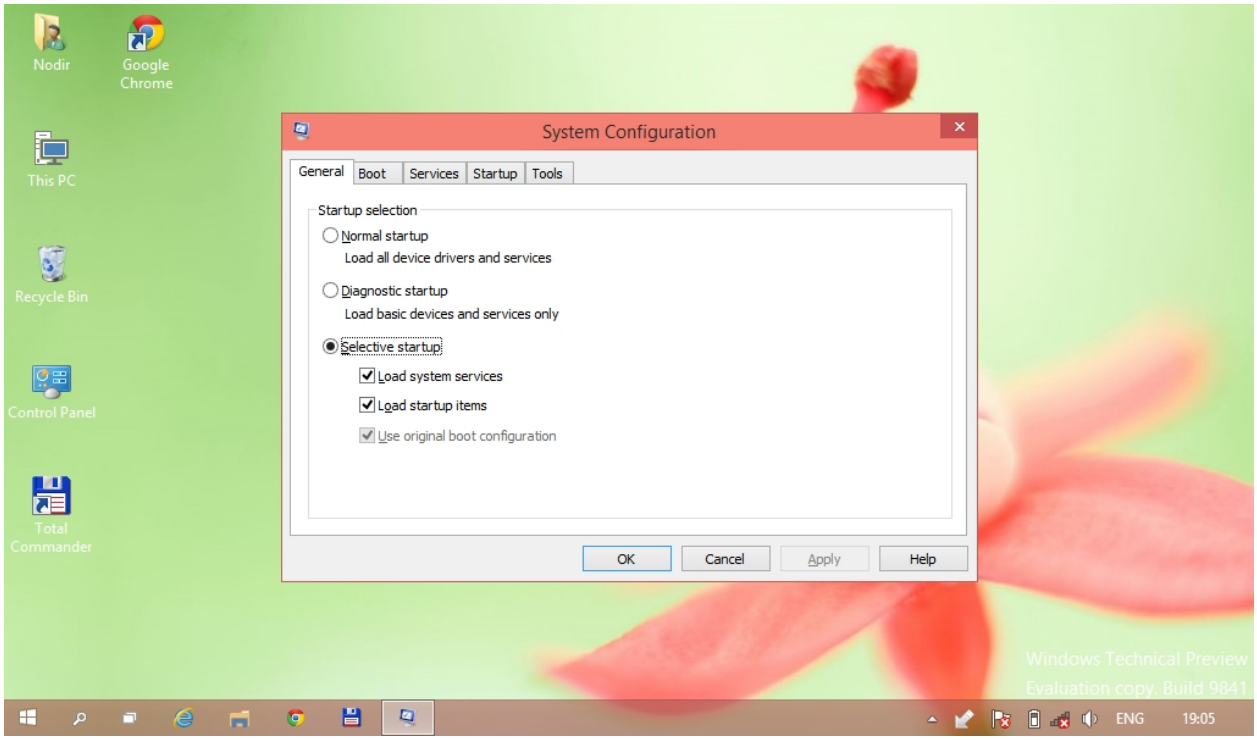
Task 3. Tell about MS-DOS.

Task 4. Read and translate the text.

WINDOWS

Microsoft Windows (or simply Windows) is a software program that makes your IBM PC (or compatible) easy to use. It does this by simplifying the computer's *user interface.*

The word *interface* refers to the way you give your computer commands, the way you interact with it.



Usually the interface between you and the computer consists of the screen and the keyboard: you interact with the computer by responding to what's on the screen, typing in commands at the DOS command line to do your work.

DOS often isn't very intelligent at interpreting your commands and most people consider it awkward or intimidating as a user interface. These commands can be confusing and difficult to remember Who wants to learn lots of computer commands just to see what's on your disk, copy a file, or format a disk?

Windows changes much of this. What's been missing from the PC is a program that makes the computer easy to use. Windows is just such a program. With Windows, you can run programs, enter and move data around, and perform DOS-related tasks simply by using the *mouse* to point at objects on the screen. Of course, you also use the keyboard to type in letters and numbers.

Windows interprets your actions and tells DOS and your computer what to do.

In addition to making DOS housekeeping tasks such as creating directories, copying files, deleting files, formatting disks, and so forth, easier, Windows makes running your favorite *applications* easier, too. (An application is a software package that you use for a specific task, such as word processing. WordPerfect is an example of an application. In this book, I'll use the words *program* and *application* interchangeably.)

Windows owes its name to the fact that it runs each program or document in its own separate *window.* (A window is a box or frame on the screen.) You can have numerous windows on the screen at a time, each containing its own program and/or document. You can then easily switch between programs without having to close one down and open the next.

Another feature is that Windows has a facility - called the Clipboard -that lets you copy material between dissimilar document types, making it easy to *cut* and *paste* information from, say, a spreadsheet into a company report or put a scanned photograph of a house into a real estate brochure. In essence, Windows provides the means for seamlessly joining the capabilities of very different application programs. Not only can you paste portions of one document into another, but by utilizing more advanced document-linking features those pasted elements remain "live". That is, if the source document (such as some spreadsheet data) changes, the results will also be reflected in the secondary document containing the pasted data.

As more and more application programs are written to run with Windows, it'll be

easier for anyone to learn how to use new programs. This is because all application programs that run in Windows use similar commands and procedures.

Windows comes supplied with a few of its own handy programs, and we will discuss them in this book. There's a word-processing program called write, a drawing program called Paintbrush, a communications program called Terminal for connecting to outside information services over phonelines, small utility programs that are helpful for keeping track of appointments and notes, a couple of games to help you escape from your work, and a few others.

Years of research went into developing the prototype of today's popular graphical user interfaces. It was shown in the early 1980s that the graphical user interface, in conjunction with a hand-held pointing device (now called the mouse), was much easier to operate and understand than the older-style keyboard-command approach to controlling a computer A little-known feet is that this research was conducted by the Xerox Corporation and first resulted in the Xerox Star computer before IBM PCs or Macintoshes existed It wasn't until later that the technology was adapted by Apple Computer for its Macintosh prototype, the Lisa.

Glossary:
PC personal computer
DOS disk operating system
Windows the common name for Microsoft Windows, a popular graphical user interface developed by the Microsoft Corporation
IBM abbreviation for the computer company called International Business Machines Corporation

General understanding:
1) What are the advantages of Windows?
2) What is Windows?
3) Why do we call it Windows?
4) What is another feature of Windows?
5) What firm was the first to have some results developing the prototype of Windows?

Task 5. Render the text.

CD-ROM DRIVE UNIT E2850 Important Safeguards

1. *Read Instructions* - All the safety and operating instructions should be read before the product is operated.
2. *Retain Instructions* - The safety and operation instructions should be retained for future reference.
3. *Heed Warnings* - AH warnings on the product and in the operating instructions should be adhered to
4. *Follow Instructions* - All operating and use instructions should be followed.
5. *Water and Moisture* - The product should not be used near water, for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. *Carts and Stands* - The product should be used only with a cart or stand that is recommended by the manufacturer.

A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

7. *Mounting* - The product should be mounted into a computer or a product only as recommended by the manufacturer.
8. *Ventilation* - The product should be situated so that its location or position does not interfere with its proper ventilation. For example, the product should not be situated on a bed, sofa, rug, or similar surface that nay block the ventilation openings; or, placed in a

built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. *Heat* - The product should be situated away from heat sources such as radiators, heat resisters, stoves, or other appliances (including amplifiers) that produce heat.
10. *Power Source* - The product should be connected to a power supply of the type described in the operating instructions or as marked on the product.
11. *Power-Cord Protection* - Power-supply cords should be routed so that they are not likely to be pinched by items placed upon or against them, Paying particular attention to cords at plugs convenience socket and/or jacks, and the point where they exit from the product.
12. *Cleaning* - The product should be cleaned only as recommended by the manufacturer.
13. *Object and Liquid Entry* - Care should be taken so that objects do not enter and liquids are not spilled into the enclosure through openings
14. *Damage Requiring Service which is NOT covered under warranty* The product should be serviced by qualified service personnel when:

a) The power supply cord or the jack/plug has been damaged; or
b) Objects have entered, or liquid has spilled into the product; or
c) The product has been exposed to rain; or
d) The product does not appear to operate normally or exhibits a marked change in performance; or
e) The product has been dropped, or the enclosure damaged.

15. *Servicing* - The user should not attempt to service the product beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

GRAMMAR: Future Simple (Indefinite) Tense

The Future Simple (Indefinite) Tense
These keys *will move* the cursor down. This key *will move* the cursor down.
These keys *will not=won't move* the cursor. This key *will not=won't move* the cursor down.
Will these keys *move* the cursor? *Will* this key *move* the cursor down?

Task 6. Make up the sentences negative.
1) He will have dinner at 5 o'clock.
2) You will listen to the news in the morning.
3) She will go home at 6 o'clock.
4) The meeting will take place on Monday.
5) They will go to the library before classes.
6) You will take examinations in June.
7) I shall watch TV in the morning.
8) My parents will go to Moscow next week.
9) I shall read the book tomorrow.
10) He will stay in town in summer.

Task 7. Make up questions beginning with the word in the brackets .
1) I shall get up at 6 o'clock tomorrow.(when?)
2) I shall work at school.(where?)

3) I shall study Informatics at the University.(what?)
4) Nina will become a teacher.(who?)
5) Peter will make a report on Monday.(when?)

Task 8. Translate into English.

1) Сиз қачон кинога борасиз?
2) Биз эртага соат 7 да турамиз.
3) Индинга у Тошкентга кетади.
4) Мен уни эртага кўраман ва китобни бераман.
5) Сиз қачон келасиз?
6) Тушликдан сўнг мен сайр қилгани чиқаман.
7) Мен эртага кутубхонага бормайман.
8) Сен эртага менинг уйимга келасанми?
9) Биз бу текстни таржима қиламиз.
10) Уларда соат 12да танаффус бўлади.

Predicting consequences

Task 9. Link each action (1-10) with a suitable consequence (a-j)

Example: *If you place a floppy disk near the magnet, you will destroy the data.*

1. you will place a floppy disk near the magnet
2. you press Print Screen
3. you input the correct password
4. you add memory to a computer
5. you move the mouse to the left
6. you store data in RAM
7. you use a faster modem
8. there is a memory fault
9. you press the arrow key
10. you move a CD-ROM drive with the disk in place

a. the cursor moves to the left
b. the computer hangs
c. it is not lost when you switch off
d. you damage the drive
e. you copy the screen
f. you have access to the network
g. you destroy the data
h. it runs faster
i. your phone bills are lower
j. the cursor moves across the screen

Task 10. Complete these statements with the suitable action or consequence.

1. If you select the No button on the Shut Down Windows dialog box,…
2. … , you will close down Windows programs.
3. if you input the wrong password, … .
4. … , your printer will not print.
5. If your monitor is too bright, … .

PROBLEM-SOLVING

Task 11. Tell about Windows.

Task 12. Write a summary about MS-DOS

UNIT 9 NETWORKS

Abbreviation

1. ACPI (Advanced Configuration Power Interface) – электр истеъмоли бўйича кенгайтирилган конфигурация интерфейси
2. DMA (Direct Memory Access) – хотирага тўғридан-тўғри рухсат
3. CPU (Central Processor (=Processing) Unit) – марказий процессор (марказий ишловчи қурилма)
4. RAM (Random Access Memory) – оператив хотира
5. ROM (Read Only Memory) – доимий хотира
6. DRAM (Dynamic Random Access Memory) – динамик RAM
7. SRAM (Static Random Access Memory) – статик RAM
8. RISC (Reduced Instruction Set Computer) – буйруқлар мажмуасига қисман эга бўлган компьютер
9. CISC (Complex (=Complete) Instruction Set Computer) – буйруқлар мажмуасига тўлиқ эга бўлган компьютер
10. EPIC (Explicitly Parallel Instruction Computer) – буйруқларни ички-параллел шаклида бажарувчи компьютер

Task 1. Read and memorize the words

1. to link – боғламоқ
2. to allow – рухсат бермоқ, имкон бермоқ
3. to share – бўлишмоқ (ўзаро фойдаланмоқ)
4. feature – хусусият
5. to own – эгалик қилмоқ
6. to exist – мавжуд (бор) бўлмоқ
7. to span – қисқа масофада бўлмоқ
8. to increase – оширмоқ, кўпайтирмоқ

Task 2 Read and translate the text.

What is a network?

A network is simply two or more computers linked together. It allows users to share not only data files and software applications, but also hardware like printers and other computer resources such as fax.

Most networks link computers within a limited area - within a department, an office, or a building. These are called Local Area Networks, or LANs. A LAN connects network devices over a relatively short distance. A networked office building, school, or home usually contains a single LAN, though sometimes one building will contain a few small LANs, and occasionally a LAN will span a group of nearby buildings. In IP networking, one can conceive of a LAN as a single IP subnet (though this is not necessarily true in practice).

Besides operating in a limited space, LANs include several other distinctive features. LANs are typically owned, controlled, and managed by a single person or organization. They also use certain specific connectivity technologies, primarily Ethernet and Token Ring.

But networks can link computers across the world, so you can share information with someone on the other side of the world as easily as sharing with a person at the next desk. When networks are linked together in this way, they are called Wide AREA Networks, or WANs.

A wide-area network spans a large physical distance. A WAN like the Internet spans most of the world!

A WAN is a geographically-dispered collection of LANs. A network device called a router connects LANs to a WAN. In IP networking, the router maintains both a LAN address and a WAN address.

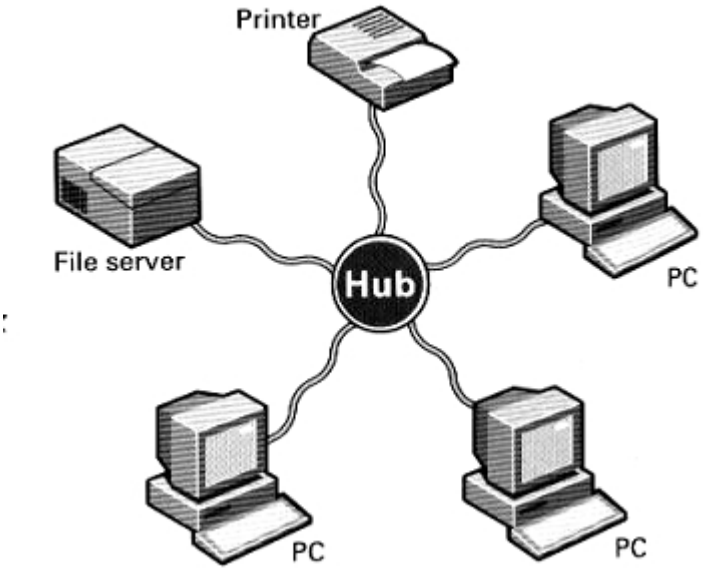
WANs differ from LANs in several important ways. Like the Internet, most WANs are not owned by any one organization but rather exist under collective or distributed ownership and management.

Networks increase productivity by allowing workers to share information easily without printing, copying, telephoning, or posting. They also have money by sharing peripherals such as printers.

Glossary

Local Area Network – computers connected together over a small distance
Wide Area Network – computers connected together over a large distance

Task 3. Study this diagram.



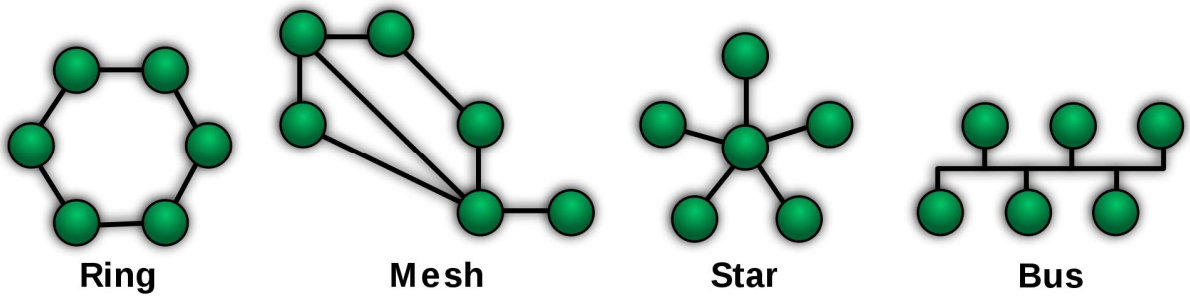
Task 4. General understanding.

1. What is a network?
2. What are its hardware components?
3. What is the difference between the Local Area Networks and Wide Area Networks?
4. What advantages do you think networks have?

Task 5. With the help of the diagram and the text, identify these hardware components of the network.

1. _____ Most networks have at least one central computer which all the desktop computers connect to. This is the most important computer on your network. It stores the data files and application software programs that the users need to access or share with others.
2. _____This is the desktop computer or notebook computer on your desk. It is linked to the server, and can access files and applications on it. Each computer on the network has a device called a network interface card which connects the computer to the network. Many computers come with these cards fitted as standard.
3. _____ Once you have a network you can share any number of these including printers, scanners, CD-ROM drives, and backup devices.
4. _____ Desktops typically connect via telephone-type cabling to this intermediary device, which enables communication between servers and desktops.

Task 6. Read the text and match each diagram with the text.



Network Topologies

Computers in a network can be connected in different ways, in different topologies. Topology is a geometric arrangement of the network. The three basic ways of connecting computers are: a bus, a ring, and a star topology.

A bus topology has all the computers connected to a common cable. The data travels in both directions along the cable. If a computer fails, or we remove one from the network, it won't affect the other computers. But if the main cable (a backbone) fails, the entire network fails too.

In a ring topology each computer is connected to its neighbor in a circle. The data flows in one direction (clockwise or counterclockwise) round the ring. If a cable breaks or one of the computers fails, the whole network will be affected.

A star topology has a server computer and a separate cable connecting the server to each of the other computers in the network. This server is also called a hub. The central server controls the flow of data in the network. If any computer fails, it won't affect the network. But if the central server fails, the whole network will fail.

A mesh topology includes the concept of routes. A message in the network can take any possible path from source to destination. It is the most reliable network topology, because if any computer or a cable fails, it won't affect the entire network. But at the same time it's the most expensive one.

Most networks are usually a combination of star, ring and bus topologies to overcome some of these problems.

Task 7. Which topologies do these statements refer to?

1. If one of the computers fails, the whole network will be affected.
2. If we remove a computer from the network, it won't affect the other computers.
3. If the main cable fails, the whole network will fail.
4. If the central server fails, the whole network will fail.
5. If a cable breaks, the whole network will be affected.
6. If a computer fails, it won't affect the other computers.

GRAMMAR: Revision (Indefinite Tenses (Active Voice))

Indefinite Tense (Active Voice)

Форма	The Present Indefinite Tense	The Past Indefinite Tense	The Future Indefinite Tense
Бўлишли шакли	These keys *move* the cursor This key *moves* the cursor down.	These keys *moved* the cursor This key *moved* the cursor down.	These keys *will move* the cursor This key *will move* the cursor down.
Бўлишсиз шакли	These keys *don't move* the cursor. This key *doesn't move* the cursor down.	These keys *didn't move* the cursor. This key *didn't move* the cursor down.	These keys *will not=won't move* the cursor. This key *will not=won't move* the cursor down.
Сўроқ шакли	*Do* these keys *move* the cursor? *Does* this key *move* the cursor down?	*Did* these keys *move* the cursor? *Did* this key *move* the cursor down?	*Will* these keys *move* the cursor? *Will* this key *move* the cursor down?

Task 8. Put the verbs in brackets into the correct tense.

1. Bill _____ (work) for the company for the last twenty-five years.
2. He _____ (graduate) in business studies and _____ (take) a job in London.
3. He _____ (train) as a systems analyst while he _____ (work) in London.
4. Now he _____ (look after) all the systems used by the Technical Services Division.
5. At the moment he _____ (develop) a system for handling repairs.
6. When something _____ (go) wrong in a service engineer _____ (send) to fix it.
7. Details of every repair _____ (download) to the company's mainframe each night.
8. No changes can _____ (make) until the system _____ (test).
9. Bill thinks that communications_____ (get) faster and faster in the future.
10. He thinks that a paper-free office _____ (not happen).

Task 9. Make up questions beginning with the words in brackets

1. He will get up at 7 o'clock tomorrow. (when?)
2. I saw him in the library. (where?)
3. He plays computer games every day.(what?)
4. The students often come home late. (who?)
5. They studied English at school. (where?)

PROBLEM-SOLVING

Task 10. Tell about networks.

Task 11. Tell about network topologies.

UNIT 10 THE INTERNET 1: INTRODUCTION

Abbreviation

1. MMX (MultiMedia Extentions) - мультимедиа кенгайтмалари
2. SIMD (Single Instruction Multiple Data (stream)) – кўп оқимли маълумотларнинг якка оқими
3. SPARC (Scalable Processor Architecture) – масштабланучи процессор архитетктураси
4. FPM DRAM (Fast Page Mode DRAM) – тез саҳифаланувчи динамик хотира
5. EDO (Extended Data Out) – маълумот чиқишини ушлаб турувчи кенгайтирилган вақт
6. BEDO (Burst EDO) – блок қурилмали EDO
7. SDRAM (Synchronous DRAM) – синхрон динамик хотира
8. PB SRAM (Pipelined Burst SRAM) – блок конвейерли статик хотира
9. DIP (Dual In Line Package) – маълумотни икки қатор киритувчи корпус
10. SIP (Single In Line Package) – маълумотни бир қатор киритувчи корпус

Task 1. Read and memorize the words.

to retrieve — чиқармоқ (маълумотни)
variety — хилма-хиллик, спектр
recreation — кўнгилхушлик, дам олиш
humanities — гуманитар фанлар
business transactions — тижорат операциялари
to browse — кўриб чиқмоқ
browser — браузер (маълумот қидирувчи программа)
to provide — таъминламоқ
provider — провайдер (маҳаллий телефон тармоқлари орқали интернетга кириш имкониятини берувчи компания)
broadcast live — жонли эфирда узатмоқ
hyperlink — гипержўнатма
to compete — якунламоқ

Task 2. Read and translate the text.

Introduction to the WWW and the Internet

Millions of people around the world use the internet to search for and retrieve information on all sorts of topics in a wide variety of areas including the arts, business, government, humanities, news, politics and recreation. People communicate through electronic mail (e-mail), discussion groups, chat channels and other means of informational exchange. They share information and make commercial and business transactions. All this activity is possible because tens of thousands of networks are connected to the Internet and exchange information in the same basic ways.

The World Wide Web (WWW) is a part of the Internet. But it's not a collection of networks. Rather, it is information that is connected or linked together like a web. You access this information through one interface or tool called a **Web browser.** The number of resources and services that are part of the World Wide Web is growing extremely fast. In 1996 there were more than 20 million users of the WWW, and more than half the information that is transferred across the Internet is accessed through the WWW. By using a computer terminal (hardware) connected to a network that is a part of the Internet, and by using a program (software) to browse or retrieve information that is a part of the World Wide Web, the people connected to the Internet and World Wide Web through the local providers have access to a variety of information. Each browser provides a graphical interface. You move from place to place, from site to site on the Web by using a mouse to click on a portion of text, icon or region of a map. These items are called hyperlinks or links. Each link you select represents a document, an image, a

video clip or an audio file somewhere on the Internet. The user doesn't need to know where it is, the browser follows the link.

All sorts of things are available on the WWW. One can use Internet for recreational purposes. Many TV and radio stations broadcast live on the WWW. Essentially, if something can be put into digital format and stored in a computer, then it's available on the WWW. You can even visit museums, gardens, cities throughout the world, learn foreign languages and meet new friends. And, of course, you can play computer games through WWW, competing with partners from other countries and continents.

Just a little bit of exploring the World Wide Web will show you what a lot of use and fun it is.

Glossary

World Wide Web, (the) – an information service on the Internet that allows document pages to be accessed using hyperlinks

browser – a program used for displaying webpages **I**

nternet, (the) – the connection of computer networks across the world

graphical interface – part of an operating system that allows the user to interact with a computer using images and a cursor

Task 3.General understanding:

1. What is Internet used for?
2. Why so many activities such as e-mail and business transactions are possible through the Internet?
3. What is World Wide Web?
4. What is Web browser?
5. What does a user need to have an access to the WWW?
6. What are hyperlinks?
7. What resources are available on the WWW?
8. What are the basic recreational applications of WWW?

Task 4. Which of the listed below statements are true/false. Specify your answer using the text.

1. There are still not so many users of the Internet.
2. There is information on all sorts of topics on the Internet, including education and weather forecasts.
3. People can communicate through e-mail and chat programs only.
4. Internet is tens of thousands of networks which exchange the Information in the same basic way.
5. You can access information available on the World Wide Web through the Web browser.
6. You need a computer (hardware) and a special program (software) to be a WWW user.
7. You move from site to site by clicking on a portion of text only.
8. Every time the user wants to move somewhere on the web he/she needs to step by step enter links and addresses.
9. Films and pictures are not available on the Internet.
10. Radio and TV-broadcasting is a future of Internet. They're not available yet.

Task 5. Match the following:

1. You access the information through one interface or tool called a...
2. People connected to the WWW through the local... have access to a variety of information.
3. The user doesn't need to know where the site is, the... follows the...

4. In 1996 there were more than 20 million users of the...
5. Each... provides a graphical interface.
6. Local... charge money for their services to access... resources.

Words to match with: web browser, providers, link, WWW

Task 7. Read and translate the text

Email

From: eastleigh@gltech.ac.uk. Date: 9/10/05, 15.35
To: gpark@ed.ac.uk, pricel@aol.com, aperez@kmc.ed.uk
Subject: Party

Dear All,
Too lazy to type. I've recorded this message as an attachment.
Hi. I started my course last Monday. We've got classes every day from 8.45 until a quarter past four, apart from Fridays when we finish at 2.30). We can use the computer lab then, so I've taken the chance to send this message. The course is OK so far. 'Design and Make' is the best class. We've got to construct a project of our own. I'm thinking of a security alarm for my bike.
Staff are fine apart from Maths – no sense of humour – and I'm getting to know the rest of the class. There's an indoor sports centre we can use at lunchtimes, and a few of us have started kicking a ball about most days. We might get a team going.
Let me know how your course is going and how life is treating you. If you're free on the 17th, come over. I'm having a party al my flat. Nothing fancy, but you'll meet Sandra again.
John

email – the common name for electronic mail, i.e. messages sent electronically using a computer

Task 8. General understanding.

1. Who is the sender?
2. What is his mail address?
3. Who is it sent to?
4. What is it about?
5. What time was the message sent?
6. In what form is the main part of the message?
7. When did he start his course?
8. Why is Friday different from other days?
9. Which class does he most enjoy?
10. What is he thinking of for a project?
11. Why doesn't he like the Maths lecturer?
12. What sport does he play at lunchtime?
13. What's happening on the 17 th?
14. Where will it be?
15. Who will be there?

Newsgroups

news group- an Internet discussion group made up of people with a common interest who use an area on a server computer to display messages about their interest

Task 9. You can exchange views on almost any subject by joining an Internet newsgroup. Which of these groups would interest the following people?

a. alt.algebra.help
b. alt.asian-movies
c. alt.comics.batman
d. alt.education.disabled
e. alt.fasion
f. alt.sport.soccer.european
g. alt.tasteless-jokes
h. rec.antiques.bottle
i. alt.food.wine
j. alt.music.world

1. a football fan
2. a student with maths problems
3. a bottle collector
4. a comic book collector
5. a fan of Indian cinema
6. some one interested in clothes

Task 10 Write a brief email to a friend describing your course. Your message should answer these questions.

1. What is your course called?
2. When do you have classes?
3. Which subjects do you study?
4. Which subjects do you enjoy most? Why?
5. Which subjects do you like least?
6. What do you do in your free time?

GRAMMAR: Indefinite Tenses (Passive Voice).

THE PASSIVE VOICE:

Data	is lost
Маълумот	йўқотилди
Нима?	Маълумотлар билан нима қилинди?
Эга	*Кесим*
Иш ҳаракат уни устидан содир этилган объект	Юз берган иш ҳаракат

Note: in computer messages the auxiliary verbs are often omitted:
e.g. Data is lost = Data lost.

The basic form of the Passive Voice:

to be + Ved(VIII)
the Present Tense - am/is/are loaded, found
the Past Tense - was/were loaded, found
the Future Tense - shall/will be loaded, found

Task 12. Pay attention to the following sentences:

1. Historically, most programs have been written in "higher-level" languages such as COBOL, FORTRAN, PL/I, and C.
2. C is a structured, procedural programming language that has been widely used both for operating systems and applications.
3. C is being quickly replaced as the programming language by C++.
4. Java can be used to create complete applications that may run on a single computer or be distributed among servers and clients in a network.
5. Using a language that comes with a virtual machine for each platform, your source language statements need to be compiled only once and will then run on any platform.

Task 13. Change the sentences into the Passive Voice:

1. A programmer writes language statements.
2. The program processes the source code.
3. An assembler converts the assembler language statements into machine language.
4. The Central Processing Unit (CPU) of a computer executes elementary instructions.
5. Most languages share many functional features.

PROBLEM-SOLVING

Task 14. Questions for group discussion:

1. Some people think that Internet is very harmful, especially for young people, because it carries a lot of information about sex, drugs, violence and terrorism. Do you think that some kind of censorship is necessary on the WWW?
2. World famous authors and publishers say that the Internet violates their copyright because Web-programmers put all kinds of books, pictures, music, films and programs free on the Internet and this reduces their sales and profits.
3. Has anyone in your group experience working on the Internet? Ask them 1) about the difficulties they had; 2) useful information retrieved; 3) fun they got?
4. Why so few people have experience working on the Internet?

SUPPLEMENTARY READING

Task 15. Read and translate the text.

HISTORY OF INTERNET

The Internet technology was created by Vinton Cref in early 1973 as a part of a project headed by Robert Kahn and conducted by the Advanced Research Projects Agency, part of the United States Department of Defence. Later Cerf made many efforts to build and standardise the Internet. In 1984 the technology and the network were turned over to the private sector and to government scientific agencies for further development. The growth has continued exponentially. Service- provider companies that make "gateways" to the Internet available to home and business users enter the market in ever increasing numbers. By early 1995, access was available in 180 countries and more than 30 million users used the Internet. The Interner and its technology continue to have a profound effect in promoting the exchange of information, making possible rapid transactions among businesses , and supportingglobal colloboration among individuals and organisations. More than 100 million computers are connected via the global Internet in 2000, and even more are attached to enterprise internets. The development of the World Wide Web leads to the rapid introduction of new business tools and activities that may lead to annual business transactions on the Internet worth hundreds of billions of dollars.

UNIT 11. THE INTERNET 2: THE WORLD WIDE WEB

Abbreviation

1. SIMM (Single In Line Memory Module) - модуль памяти с одним рядом контактов
2. DIMM (Dual In Line Memory Module) - модуль памяти с двумя рядами контактов
3. DDR SDRAM (Double Data Rate Synchronous Dynamic Random Access Memory) – синхронная динамическая память с произвольным доступом и удвоенной скоростью передачи данных
4. CELP (Card Edge Low Profile) - невысокая карта с ножевым разъемом на краю
5. DOS (Disk Operating System) - дисковая операционная система
6. FAT (File Allocation Table) - таблица размещения файлов
7. MBR (Master Boot Record) - главная загрузочная запись

8. MFM (Modified Frequency Modulation) - модифицированная частотная модуляция
9. RLL (Run Length Limited) - запись с ограниченной длиной отрезка
10. IDE (Integrated Drive Electronics) - интегрированная дисковая электроника
11. ESDI (Enhanced Small Device Interface) – улучшеный интерфейс

Task 1.Work in groups. Study this extract from the Yahoo search engine home page (http://www.yahoo.com). Which category is the best one to search in for this information?

1. the phone number of the White House
2. a video of a black hole developing
3. a new treatment for cancer
4. new Hollywood movies
5. the Italian word for *computer*
6. the main news stories in the US
7. Tibetan Buddhism
8. unemployment statistics for Germany

YAHOO!

Art & Humanities
Literature, Photography …

Business & Economy
B2B, Finance, Shopping, Jobs

Computers & Internet
Internet, WWW, Software, Games

Education
College and University, K-12

Entertainment
Cool links, Movies, Humor, Music

Government
Elections, Military, Law, Taxes

Health
Medicine, Disease, Drugs, Fitness

News & Media
Full Coverage, Newspapers, TV

Recreation & Sports
Sports, Travel, Autos, Outdoors

Reference
Libraries, Dictionaries, Quotations

Regional
Countries, Regions, US States

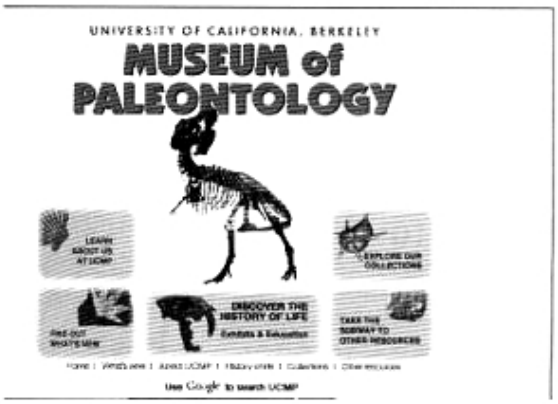
Science
Animals, Astronomy, Engineering

Social Sciences
Archeology, Economics, Languages

Society & Culture
People, Environment, Religion

Task 2. Study these sample webpages. Classify them as:
1 news 2 sport 3 entertainment 4 education

Webpages



Task 3. Match each webpage to the correct text.

A Offering unparalleled access to world news and current affairs, the Internet lets you keep up with the latest stories as they happen. Newspapers from around the world are available online, and TV news services, such as CNN (Cable News Network) and Sky TV, offer excellent coverage. There are even special interest news sites, including some designed for children.

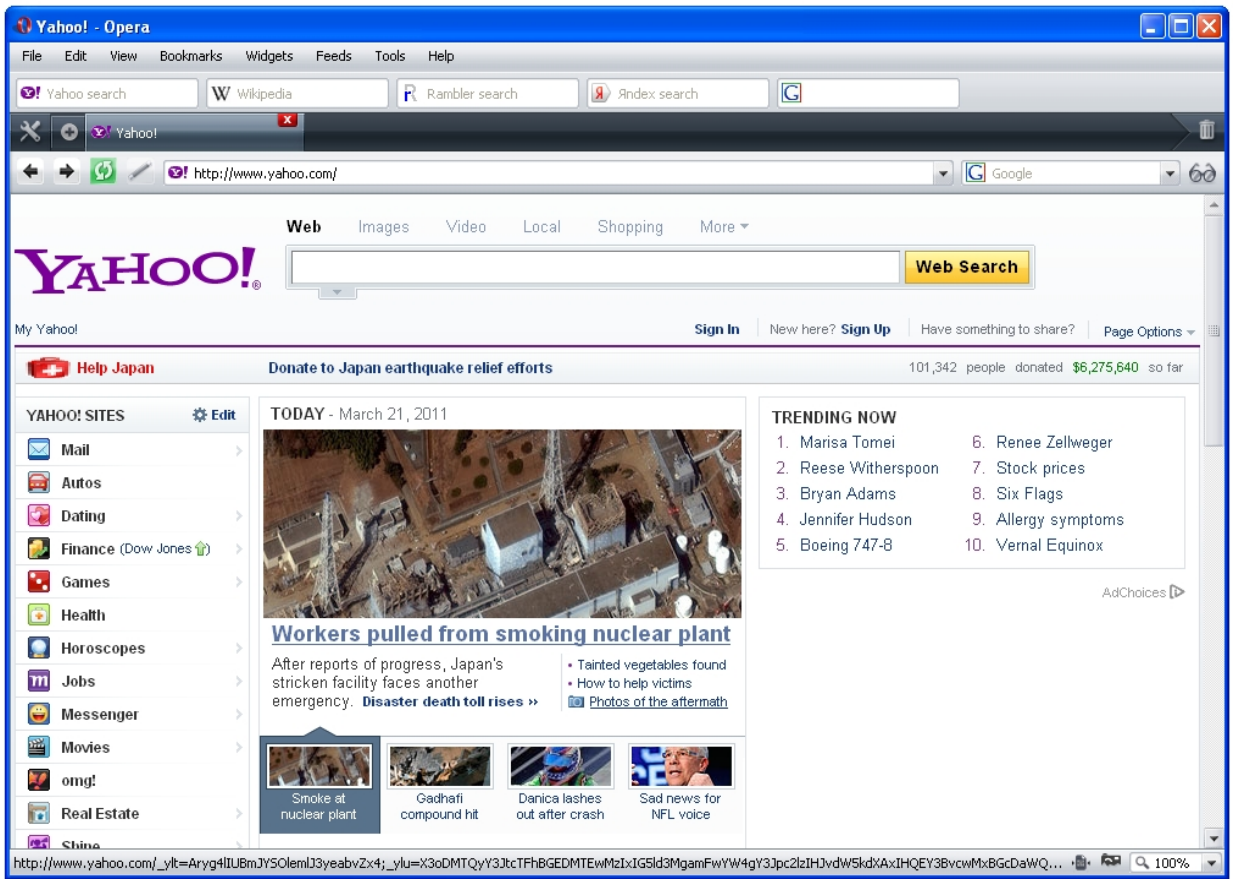
B Whatever your favourite sport, it is likely to have at least one devoted fan who has prepared a website dedicated to it. By visiting the site, you can pick up the latest news and gossip, and even chat to other fans around the world. As you might expect, football fans are well catered for on the Web with a mass of information on famous teams, league positions, fixtures, and player profiles.

C Keeping up with your favourite band, finding out about exhibitions, or simply organizing your TV viewing is easy on the Web. Major TV companies have their own sites where you can find a wealth of information on TV shows and the activities of your favourite celebrities. If you want to find a restaurant, see a movie, or just visit a new bar, you will find the Internet a great resource.

D You can study for school or college and even obtain a degree using the Internet. Universities from around the world have sites and some offer online courses. Most schools now have an Internet connection, and many school children use it for research and for keeping in touch with schools abroad. Children can also visit special online exhibitions created by world-famous museums.

Task 4. Saladin designs websites. This is one of his designs. Discuss with your group what you think a good website should have.

Website designer



Task 5. Read and translate the interview.

Part 1

INTERVIEWER: What kind of people want websites and why do they want websites?

SALADIN: People who feel they have to be on the Web because competitors are on the Web. They feel that not having a website is a sign of being behind the times.

INTERVIEWER: So other people have got a website and therefore they have to have one, too?

SALADIN: Yes. The better reason is people who have information they would normally provide free-like brochures, application forms, anything that would normally be sent out by mail.

INTIERVIEWER: So it saves fax, postage ...

SALADIN: Printing costs. I think it's particularly useful for colleges and universities.

INTERVIEWER: Why is that?

SALADIN: Because they tend to have a large amount of information to distribute.

INTERVIEWER: If a client comes to you and asks you for a webpage, how do you set about designing a page for a client?

SALADIN: The first thing I would ask for is all their printed promotional material. I would look at all that material and then discuss with the client how much of it to put on the Web. The most important thing is to decide who is the audience for this website , who's it aimed at.

INTERVIEWER: Is there a danger of putting too much on?

SALADIN: There's certainly a danger of putting too much on. Also, the client has to make a clear decision about how much time or money they're going to spend to keep the pages updated.

INTERVIEWER: Aha. so it's not enough simply to have a page, you need regular maintenance of that page.

SALADIN: Right, so these are the first two questions - who is it aimed at and how often will it be updated?

Part 2

SALADIN: Once we've decided what materials should be put on, there are a couple of basic principles to follow. One is that there should never be any dead ends, you should never reach a page which has no...

INTERVIEWER: Ah, which doesn't go anywhere?

SALADIN: ... Which has no links to take you back to somewhere else. So that's one principle. And the other principle is to try to limit the number of steps that have to be taken from the main home page to any other page. I would normally aim for a maximum of four steps.

INTERVIEWER: Do people give up if there are more than two or three links, they simply give up, is that a problem?

SALADIN: Some people will give up. Others will just never find the information, there are too many diversions. Another principle is not to have too many links to scroll through on one page. If you have a page which has 150 links and you have to keep scrolling through them, people will give up ... they'll never find the links at the bottom.

INTERVIEWER: What about graphics, sound and animations, and all these multimedia features? What's your feeling about these?

SALADIN: Always ask why is it there? That's the first thing. And if it's there simply because it makes the page look nicer, think quite carefully about whether to put it there or not. The more of that sort of thing you have, the more time it will take to download the pages. Another factor to bear in mind is that there are still a lot of users with less sophisticated browsers than Netscape or Microsoft Explorer, and if you make the use of the page dependent on graphics and so on, you'll exclude these users.

INTERVIEWER: So no dead-ends, no more than four steps from home, and pictures have to serve a serious purpose.

Part 3

SALADIN: Another aspect of designing pages is to break the information into relatively small sections.

INTERVIEWER: Is that just because of the size of the screen, what you can see at one time?

SALADIN: It's partly that, but it's also to do with download time and printing. People can find they're printing forty pages of a document, most of which they don't want.

INTERVIEWER: Is it a big temptation to add links to similar organizations? Is there strength in that, or is there a danger in that?

SALADIN: In most cases it's a big strength. Browsers who come across your page, if they discover that your page is a very good gateway to all sorts of interesting sites, will bookmark your page because they know it's a good way to get to all the other sites. If they're coming back to it, they're exposed to your message every time. One final point: it is useful to have on the front page something brief which catches the reader, which says 'this is who we are'.

Task 6.In this interview Saladin describes what makes a good website. Read Part 1 of the interview and answer these questions.

1. Name two kinds of people who want websites.
2. Why is a website good for people with a lot of information to distribute?
3. What sort of clients is a website particularly useful for?

4. What does Saladin ask for first from a client?
5. What important point must be decided?
6. What must the client make a clear decision about?

Task 7. Read Part 2 of the interview and complete the five design principles mentioned.

1. There should never be_____ .
2. A maximum of _____ from home page to other pages.
3. Don't have _____on one page.
4. Don't use multimedia simply to make _____ .
5. Remember there are still a lot of users with ____.

Task 8. Read Part 3 of the interview. Decide which of these statements Saladin would agree with.

1. Information on websites should be divided into small sections.
2. Long sections can be a problem for users who want to print from a website.
3. It's a bad idea to have a lot of links to other sites.
4. You want users to bookmark your site as a way to get to other sites.
5. Your website should start with a brief piece of information to attract the reader.

Task 9. Read the whole interview again. Put these pieces of advice about website design into two sets: A (things to do) and B (things *not* to do).

1. Include graphics only to make it look nice.
2. Divide information into small sections.
3. Have pages with dead-ends.
4. Have a lot of links to other sites.
5. Have a lot of links on one page.
6. Start with a brief piece of information to attract the reader.
7. Forget about readers with less sophisticated browsers.
8. Update your page regularly.

GRAMMAR: Modal Verbs (Indicating Importance)

Modal verbs and its equivalents	
obligation	*must, to have to, to be to, should*
physical ability	*can, could, to be able to ,*
permission	*may, might, to be allowed to*

Task 10. Give advice about website design using *has/have to* or *must/mustn't.* Use these answers to Task 9 to help you.

A: things to do	B: things not to do
1. Divide information into small sections	1. Have a lot of links on one page
2. Have a lot of links to other sites	2. Include graphics only to make it look nice.
3. Start with a brief piece of information to attract the reader	3. Forget about readers with the sophisticated browsers.
4. Update your page regularly	4. Have pages with dead-ends

PROBLEM-SOLVING

Task 11. Write a set of points to advise someone thinking of designing a website. Advise them of things to do or not to do. Use the interview with Saladin and your own ideas.

UNIT 12. LANGUAGES

Abbreviation

1. SCSI (Small Computer System Interface) – кичик компьютер системалири интерфейси
2. PIO (Processor Input/Output) – Марказий процессор орқали маълумот узатиш режими, дастурий киритиш/чиқариш
3. CLV (Constant Linear Velocity) – доимий чизиқли тезлик
4. DVD (Digital Versatile Disk) – рақамли универсал диск
5. DDE (Dynamic Data Exchange) – динамик маълумот алмашинуви
6. OLE (Object Linking and Embedding) – объектларнинг алоқаси ва киритилиши
7. IRQ (Interrupt Request) – халақитга бўлган сўров
8. IBM (International Business Machines) – халқаро бизнес-машиналари
9. DBMS (Database Management System) – маълумотлар базасини бошқарув системаси
10. SQL (Structured Query Language) – структураланган сўровлар тили

Task 1. Read and translate the text about computing languages and make notes in the table.

Computing languages

C++ was developed from the C language. It was designed as a systems programming language with features that make it easy to control the computer hardware efficiently. It was used to produce the Microsoft Windows operating system. It is portable, i.e. programs written in C++ can be easily adapted for use on many different types of computer systems.

HTML stands for Hyper Text Markup Language. It is a page description language used for creating webpages. HTML uses a system of tags to mark page links and formatting. For example, the tag <u> tells the program to start underlining a text. Although programs cannot be created using HTML, small programs can be embedded in HTML code using a scripting language like JavaScript.

Java is a programming language originally designed for programming small electronic devices such as mobile phones. It can run unchanged on any operating system that has a Java Interpreter program. Java is used for writing programs for the World Wide Web.

JavaScript is a scripting language. It is powerful and easy to use. Scripts are small programs that can be used to perform simple tasks or tie other programs together. JavaScript is designed for use inside webpages. It can enable a webpage to respond to a mouse click or input on a form. It can also provide a way of moving through webpages and produce simple animation.

Visual Basic is a programming environment, not simply a language. It uses the language BASIC, a simple language developed to make it easy for people to learn how to program. Visual Basic has predefined objects such as dialog boxes, buttons, and text boxes which can be chosen from a toolbox and dragged across the screen using the mouse and dropped into the required position. BASIC programming code is attached to form a complete program. Visual Basic is used to write general purpose applications for the Windows operating system.

Delphi is similar to Visual Basic. It is also a programming environment for developing programs for the Windows operating system. It has predefined objects that can be chosen from a toolbox. In Delphi, however, the code attached to the objects is

written in a form of Pascal. You can think of Delphi as a kind of 'Visual Pascal', Like Visual Basic, it is often used for general purpose programs.

	Associated language	Type of language	Use
C++			
HTML			
Java			
JavaScript			
Visual Basic			
Delphi			

Task 2. General understanding.

1. Which language uses a system of tags?
2. Which languages are designed to be used inside webpages?
3. Which language was used to write the Windows operating system?
4. What is a 'portable' language?
5. Which language can have small programs embedded in it using JavaScript?
6. What does HTML stand for?
7. Which languages can only be used in the Windows operating system?
8. Which language cannot be used for writing programs?

Task 3. Using the information in the reading text decide which languages would be best for these users and tasks.

1. A language for school pupils learning to program for the first time.
2. A language for professional programmers who want their software to run on any type of computer system.
3. A language for a student who wants to create her own webpage.
4. A language for a website designer who wants to include simple animation in a site.
5. A language for computing students who want to write a general purpose program as a college project.

GRAMMAR: Revision (Indefinite Tenses, Passive Voice)

Task 4. Change the following sentences into the Passive Voice

1.We thought of him all the time. 2.The doctor will pay for the car soon. 3.He will operate on her in a week. 4.The teacher sent for the pupil's parents. 5.I look for the newspaper everywhere. 6.Mother reminded me of the incident. 7.The neighbor asked for the telegram. 8.The senior students laughed at the freshman. 9.The group spoke to the dean yesterday. 10.The young mothers looked after their children with great care. 11.We asked him about his holidays. 12.They discuss the novel. 13.He didn't give me his address. 14.She showed him the way to the metro. 15.He will introduce me to his friends. 16.They built the bridge over the river. 17.I shall not translate this article. 18.We saw that man yesterday. 19.They spoke about the film at the lesson. 20.The dean sent for the monitor of group 12.

PROBLEM-SOLVING

Task 4. Look back at the notes you made in the table in Task 1. Write a brief summary of the reading text based on your notes.

Example C++ is a programming language. It is used for general and systems programming.

UNIT 13 PROBLEMS IN COMPUTING

Abbreviation

1. UTP (Unshielded Twisted-Pair) – экранлаштирилмаган ўралган жуфт
2. STP (Shielded Twisted-Pair) – экранлаштирилган ўралган жуфт
3. IEEE (Institute of Electrical and Electronic Engineers) - институт инженеров по электротехнике и электронике
4. HTML (Hypertext Markup Language) - гипертекстовый язык меток/язык разметки гипертекста
5. HTTP (Hypertext Transfer Protocol) - гипертекстовый протокол передачи/протокол передачи гипертекста
6. FTP (File Transfer Protocol) - протокол передачи файлов
7. TCP (Transmission Control Protocol) - протокол управления передачей
8. URL (Uniform Resource Locator) - унифицированный/ универсальный адрессатор/ указатель ресурса
9. WWW (World Wide Web) - всемирная (глобальная) паутина
10. P2P (Peer-to-Peer Network) - одноранговая/равноправная сеть

Task 1. Try to answer these questions in your group.

1. What is a computer virus?
2. How are viruses spread?
3. How can you deal with viruses?
4. Name any viruses you know.

Task 2. Read this text to check your answers to Task 1. Then find the answers to these questions.

1. List three computer crimes.
2. What do you think these words in the passage mean?
flash
gobbledegook
dormant
eradicate
3. Why is it difficult to remove all viruses?
4. Complete this table.

Virus	**Effect**
Yankee Doodle	
Cascade	
Michelangelo	
Jerusalem B	

Computer viruses

The Maltese Amoeba may sound like a cartoon character, but if it attacked your computer, you wouldn't be laughing. The Maltese Amoeba is a computer virus. It is a form of software which can 'infect' your system and destroy your data. Making computer viruses is only one type of computer crime. Others include hacking (changing data in a computer without permission) and pirating (illegally copying software programs).

Viruses are programs which are written deliberately to damage data. Viruses can hide themselves in a computer system. Some viruses are fairly harmless. They may flash a message on screen, such as 'Gotcha! Bet you don't know how I crept in'.

The Yankee Doodle virus plays this American tune on the computer's small internal speaker every eight days at 5 p.m. Others have serious effects. They attach themselves to the operating system and can wipe out all your data or turn it into gobbledegook.

When the Cascade virus attacks, all IB the letters in a file fall into a heap at the bottom of the screen. This looks spectacular but it's hard to see the funny side when it's your document.

Most viruses remain dormant until activated by something. For example, the Jerusalem B virus is activated every Friday the 13th and erases any file you try to load from your disk.

The Michelangelo virus was programmed to become active on March 6th 1992, the 517th birthday of Michelangelo. It attacked computer systems throughout the world, turning data on hard disks into nonsense.

Viruses are most commonly passed via disks but they can also spread through bulletin boards, local area networks, and email attachments. The best form of treatment is prevention. Use an antivirus program to check a disk before using it. Always download email attachments onto a disk and check for viruses. If you do catch a virus, there are antivirus programs to hunt down and eradicate the virus. The problem is that around 150 new viruses appear every month and you must constantly update your antivirus package to deal with these new forms.

Task 3.Read the text and translate the text.

ACCESS SYSTEMS

How can you protect your computer from unauthorized access? Various ways have been developed to ensure that only the right people can access a system. We can divide these methods into three groups: what you have, what you know, and who you are.

What you have

You may have a plastic card, a swipe card, to get into rooms where there are computers. In some companies, workers wear an active badge, an ID card with an embedded chip, which signals where the wearer is at any time. The company knows immediately if an employee enters a computer room.

What you know

Computers are often protected by passwords. You have to know the correct password to enter the system, in the same way that you have to know your personal identification number to get money out of a bank cash machine.

Who you are

Every individual is unique. Some security systems use individual body characteristics. For example, your computer can be protected by a fingerprint recognition system. The computer will only respond when it reads your unique fingerprint. A new product called *FaceIt* uses face recognition to protect individual files. It will only give access to a file if your face matches stored pictures of authorized users. However, beards and spectacles can cause problems. Voice recognition and identification, by the retina of the eye are other means to protect access.

Some systems use a combination of these groups. For example, an ID card and a password.

Task 4. Make notes about each type of access system in the table Access system Examples

Access system	**Examples**
What you have	
What you know	
Who you are	

GRAMMAR: ***SOME, ANY*** гумон олмошлари ва ***NO*** бўлишсизлик олмоши

Контекстдан келиб чиқиб **some** ва **any** олмошлари ўзбек тилига «баъзи», «қандайдир», «бир қанча», «бир оз», «қанчадир» каби таржима қилинади.

Бўлишли гапларда **some** ишлатилади:

I have some cassettes of country music.

Бўлишсиз ва сўроқ гапларда **any** ишлатилади:

– Have you any cassettes of country music?

– I haven't any cassettes of country music.

not any бирикмаси ўрнига асосан **no** бўлишсизлик олмоши ишлатилади:

I have not any cassettes of pop music. *ёки* I have no cassettes of pop music.

ЭСЛАБ ҚОЛИНГ!

	+thing	**+body, one**	**+where**
some	**something** нимадир	**somebody, someone** Кимдир, биров	**somewhere** Қаердадир, қаергадир
any	**anything** қандайдир, исталган	**anybody, anyone** кимдир, исталган	**anywhere** исталган ерда, ҳар ерда
no	**nothing** ҳеч нима	**nobody, no one** ҳеч ким	**nowhere** ҳеч қаерда, ҳеч ерда

There is **something** on the table. Is there **anything** on the table? There is **nothing** on the table.

Task 5. Answer the questions:

1. What is there in your bag?
2. What is there in your hand?
3. What is there on the wall?
4. How many students are there in the classroom?
5. How many tables are there in the room?
6. Are there any newspapers on the desk?
7. Is there anybody in the corridor?
8. Is there anything in your bag?

9. Was there a concert at the Theatre last Sunday?
10. Will there be a party at school next Saturday?

PROBLEM-SOLVING

Task 6. These headlines cover some of the ethical issues involved in computing. Try to match the headlines to the first sentence of each story.

1 **NET BOMB BLAST INJURES BOYS**

2 **Cyberspace faces crucial court test**

3 **Police turning cybercop to net villains**

4 **Fears that new virus causes Internet chaos**

5 **CRIME AND PUNISHMENT**

a **The Internet may prove to be** a superhighway to crime for technologically-minded villains, the head of the National Criminal Intelligence Service has warned.

The Scotsman

b **An historic test case in a German court is to weigh the ethical and commercial question of who controls information on the Internet with the** American online services company CompuServe being accused of trafficking in pornography and neo-Nazi propaganda.

The Guardian

c The Federation Against Software Theft (FAST) and the mid-Glamorgan Trading Standards office have employed forensic technology to nab a software pirate.

PC Pro

d **Two 16-year-old Finnish schoolboys could face serious charges after a bomb they were making from** instructions found on the Internet blew up.

The Guardian

e **If you switch on your computer** today and a sign appears saying 'You have GOT to read this' – do not be tempted, because hidden in this email is a sinister new virus.

The Scotsman

Task 7. Revise the following abbreviations:

ISA, MCA, PCI, VESA ,USB, AGP, DMA, CPU, RAM, ROM, DRAM, SRAM, SDRAM, FPM DRAM, PB SRAM, SIMM, DIMM, CD-ROM, DVD, PCMCIA

UNIT 14 FUTURE TRENDS

Task 1. Read and translate the text.

Virtual Reality

Part 1

Virtual reality (VR) means using 3-D graphics to create an imaginary world, or virtual world, which surrounds the user.

You need special equipment to use VR. A VR headset or head-mounted display shows graphics on a screen in front of your eyes. As you turn your head, the picture on the screen moves around too, so it feels as if you are in a 3-D world. A dataglove, or VR glove, is a glove with pressure pads which make your hand feel as if it's picking up objects or touching surfaces. You use a kind of mouse called a VR mouse. 3-D mouse or virtual mouse to move around in virtual space.

Part 2

Virtual reality is already being used in many ways —in medicine, entertainment, and design. But VR is not yet very realistic. As techniques improve, though, VR could seem so real that you could live a virtual life -having many of your experiences through VR. For example, virtual travel systems could take you on a virtual holiday, letting you experience other parts of the world through a VR headset.

Some people even think that VR headsets might he replaced by DNI-Direct Neural Interface - that would stimulate your brain cells to give you a virtual experience. A brain implant would work in a similar way, but would give you special skills, like being able to speak a new language or play an instrument, without, having to learn it.

Glossary

virtual (reality) mouse- a cursor control input device used in VR systems
virtual reality- a simulated three dimensional environment that surrounds the user and
robot- a mechanical device controlled by a computer
robotic- to do with robots
robotics- the study of robot systems
smart card- a plastic card containing a processor and memory chip

Task 2. Complete the gaps in this table of equipment required to use virtual

Equipment	Alternative name	Purpose
_____	head-mounted display	_____
VR glove	_____	makes your hand feel pressure
VR mouse	_____	

Task 3. Make a note of the existing and possible future uses of virtual reality which are mentioned.

Existing uses	Possible future uses
_____	_____
_____	_____
_____	_____

Task 4. Read and translate the text.

FUTURE DEVELOPMENTS

Smart Cards

A chip to save your life

If your friend suddenly had an accident and was unconscious or incoherent, could you provide any information to an ambulance crew? Would you know her blood type, her allergies, and the prescription drugs she takes? Probably not. Even family members may not have this information, or be too distraught themselves to provide needed medical information. Enter the MediCard, a plastic card that has an embedded chip containing all that patient information. Small computers that can read the cards are installed in ambulances and in hospital emergency rooms. This system is working successfully in some communities. The biggest problem is making sure that people carry their cards at all times.

Robotics

What is a micro-machine?

One of the most important steps in computing technology in the coming years is likely to be a return to mechanical methods. Using the same process used to create chips, it's possible to fabricate mechanical parts -levers, gear wheels, and small motors.

The best known example of a micro-machine was created by Sandia Laboratories in New Mexico in the US. It's a complete motor developing 50uW of power in one square millimetre - still a bit big for some of the micro-machines planned for the future.

What are micro-machines going to be used for? Obvious applications are sensors, gyros, and drug delivery. The idea is that a micro-machine could have a strain sensor or a gyroscopic attitude sensor and electronics built into a single chip-sized package. The idea of using a micro-machine to deliver drugs is getting a bit closer to more sci-fi applications. Only a step further is the idea of building insect-sized robots that could do difficult jobs in very small places. Swallowing an ant-sized machine to cure you or putting one inside some failed machinery seems like a really good idea!

Virtual Reality

Getting practical

Here are some applications of virtual reality under development. Wearing head mounts, consumers can browse for products in a "Virtual showroom". From a remote location a consumer will be able to manoeuvre and view products along rows in a warehouse. Similarly, from a convenient office a security guard can patrol corridors and offices in remote locations.

Air traffic controllers may someday work like this. Microlaser scanner glasses project computer-generated images directly into the controller's eyes, immersing the controller in a three-dimensional scene showing all the aircraft in the area. To establish voice contact with the pilot of the plane, the controller merely touches the plane's image with a sensor-equipped glove.

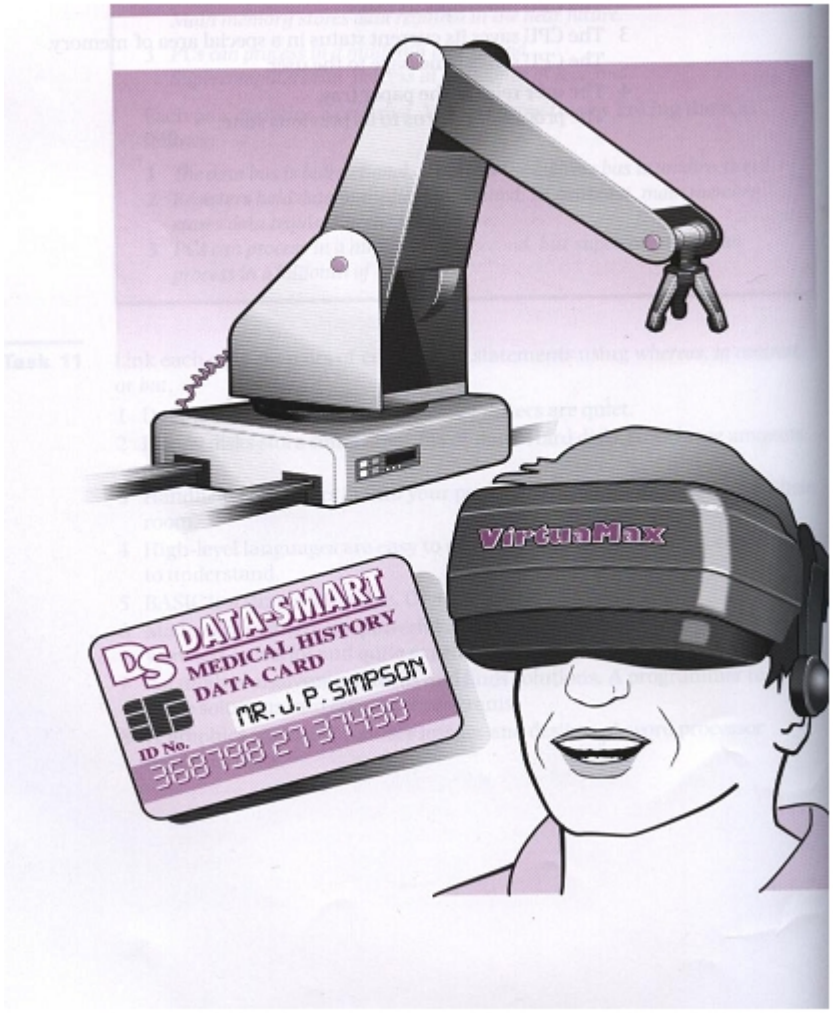
Using virtual reality headsets and gloves, doctors and medical students will be able to experiment with new procedures on simulated patients rather than real ones.

Task 5. Read the texts and make notes in the table below.

Development _____

Applications _____

How soon? _____



Task 6. Read and translate the texts.

FUTURE TRENDS
HEALTH

Body chips

In the next decade we can have miniature computers inside us to monitor, and even regulate, our blood pressure, heart rate, and cholesterol. Such a chip would include a microprocessor, sensors, and a radio frequency device that would permit accurate read-cuts of vital statistics. All this would happen, of course, without taking any blood or attaching any external devices to the body.

Since we are already familiar with the notion of an internal pacemaker for the heart, including a chip or two may not seem all that astonishing. But this is just the beginning. Experts foresee, within twenty years, implanted chips that can correct our ability to interact with the world. Once implanted, the chip is invisible, unlike a hearing aid. A more common implant would be a chip to correct visual signals. No more glasses!

SHOPPING

Computer shopping

This may sound very much like shopping by the Internet, but in fifty years' time it will be very different. Shoppers will be able to scan down virtual supermarket aisles on their PC and click on to whatever they want; the goods will then be delivered shortly afterwards. Customers may well be able to call up a virtual assistant who will talk them through their shopping or to ask the computer for suggestions. Moreover, people will be able to get background information on shops and goods, and will be able to boycott any that offend their ethical considerations.

MONEY

Electronic cash

Bank customers can now download money from their account to an electronic wallet, a smart card, using a specially designed phone equipped with a smart card reader. To download cash you have to enter your PIN. You can then use your electronic wallet to pay for goods and services, to purchase goods across the Internet, and to transfer money to other cardholders.

Using the Internet, customers can now check their account balance and see their latest statement. One bank has developed a multi-currency payment engine which allows online retailers to sell their goods in sixteen
countries, with customers paying in their local currency. With these developments, coins and notes are likely to disappear.

GRAMMAR: Revision phrases

Task 7. Read and translate the following phrases, find the main word:

a database program, a subsequent action, external device, file time, collection of partitions, interactive mode, a remote computer, font family, digital system, code distortion, common interface, a single character, physical layer, definition of data, a file error, power failure, the title of the window, program execution, screen buffer, dialog box, Disabled User Account, hardware-level resources, printing support, page fault, clipboard buffer, executable file, boot sequence, system management mode, path name, mouse button, logical device, input\output space, memory size, insert mode, database device

PROBLEM-SOLVING

Task 8. Write a summary "How computers will affect our future lives". Use the vocabulary and information from the texts.

Task 9. Revise the following abbreviations:

PC/XT, PC/AT, ISA, EISA, ACPI, RISC, CISC, EPIC, SPARC, SIP, DIP, EDO, BEDO, CELP, MMX, IDE, ESDI, SCSI, PIO, MFM

SUPPLEMENTARY READING

History of robotics

The concept of robots dates back to ancient times, when some myths told of mechanical beings brought to life. Such automata also appeared in the clockwork figures of medieval churches, and in the 18th century some clockmakers gained fame for the clever mechanical figures that they constructed. Today the term automaton is usually applied to these handcrafted, mechanical (rather than electromechanical) devices that imitate the motions of living creatures. Some of the «robots» used in advertising and entertainment are actually automata, even with the addition of remote radio control.

The term robot itself is derived from the Czech word robot, meaning "compulsory

labour". It was first used by the Czech novelist and playwright Karel Chapek, to describe a mechanical device that looks like a human but, lacking human sensibility, can perform only automatic, mechanical operations. Robots as they are known today do not only imitate human or other living forms. True robots did not become possible, however, until the invention of the computer in the 1940s and the miniaturization of computer parts. One of the first true robots was an experimental model designed by researchers at the Stanford Research Institute in the late 1960s. It was capable of arranging blocks into stacks through the use of a television camera as a visual sensor, processing this information in a small computer.

Computers today are equipped with microprocessors that can handle the data being fed to them by various sensors of the surrounding environment. Making use of the principle of feedback, robots can change their operations to some degree in response to changes in that environment. The commercial use of robots is spreading, with the increasing automation of factories, and they have become essential to many laboratory procedures. Japan is the most advanced nation exploring robot technology. Nowadays robots continue to expand their applications. The home-made robots available today may be one sign of the future.

UNIT 15 CAREERS IN COMPUTING

Task 1. Work in groups. List some of the jobs you know in computing. Compare your lists with other students in the class.

Task 2. Which of the jobs listed would you like to make your career-Explain why to others in your group.

Task 3. Read these descriptions of jobs in computing and make notes about the main responsibilities.

Computing jobs

Example

Systems Analyst

Studies methods of working within an organization to decide how tasks can be done efficiently by computers. Makes a detailed analysis of the employer's requirements and work patterns to prepare a report on different options for using information technology. This may involve consideration of hardware as well as software. Either uses standard computer packages or writes a specification for programmers to adapt existing software or to prepare new software. May oversee the implementation and testing of a system and acts as a link between the user and the programmer.

Job	Main responsibilities
Systems analyst	*Studies employer's requirements and working patterns. Reports on different options. Writes specifications for programmers. Oversees implementation and testing.*

Software Engineer/Designer

Produces the programs which control the internal operations of computers. Converts the system analyst's specification to a logical series of steps. Translates these into the appropriate computer language. Often compiles programs from libraries or sub-programs, combining these to make up a complete systems program. Designs, tests, and improves programs for computer-aided design and manufacture, business applications, computer networks, and games.

Computer Salesperson

Advises potential customers about available hardware and sells equipment to suit individual requirements. Discusses computing needs with the client to ensure that a suitable system can be supplied. Organizes the sale and delivery and, if necessary, installation and testing. May arrange support or training, maintenance, and consultation. Must have sufficient technical knowledge.

Computer Systems Support Person

Systems support people are analyst programmers who are responsible for maintaining, updating, and modifying the software used by a company. Some specialize in software which handles the basic operation of the computers. This involves the use of machine codes and specialized low-level computer languages. Most handle applications software. May sort out problems encountered by users. Solving problems may involve amending an area of code in the software, retrieving files and data lost when a system crashes, and a basic knowledge of hardware.

Computer Systems Analyst Programmer

Creates the software programs used by computers. May specialize in the internal operating systems using low level computer language, or in applications programs. May specialize in one aspect of the work, e.g. programming, systems design, systems analysis, or cover them all. May support the system through advice and training, providing user manuals, and by helping users with any problems that arise.

Hardware Engineer

Researches, designs, and develops computers, or parts of computers and the computerized element of appliances, machines, and vehicles. Also involved in their manufacture, installation, and testing. May specialize in different areas: research and development, design, manufacturing. Has to be aware of cost, efficiency, safety, and environmental factors, as well as engineering aspects.

Network Support Person

Maintains the link between PCs and workstations connected in a network. Uses telecommunications, software, and electronic skills, and knowledge of the networking software to locate and correct faults. This may involve work with the controlling software, on the wiring, printed circuit boards, software or microchips on a file server, or on cables either within or outside the building.

Task 4. Read about five people employed in computing talking about their work. Try to match each extract to the correct job from this list.

Talking about Work

a. □ Hardware Engineer
b. □ Network Support Person
c. □ Operator
d. □ Software Designer
e. □ System Analyst Programmer
f. □ System Support Person
g. □ Technical Sales Manager

1. Before I write a program. I have to carry out a feasibility study in the company. The aim is to see whether a new program would he better than the methods they use at present. I have to observe what the users do, speak to them, and make an analysis of

their systems. It's very important to speak to the actual users, not just the managers.
2. My job is to persuade customers that it's worth investing in new computer systems or extending the systems they already have. But it's not enough simply to sell the systems. We have to keep in touch after the sale and make sure things are working well, and to provide any backup the client needs. That's the only way to build up trust with a customer and to get new orders. It's a very competitive market.
3. I'm called out if there's a fault on the network. We try to solve the problem by phone at first, but if that doesn't work, we have to go and look for ourselves. It could be anything: the software, the server, even the cabling. Sometimes the problem is the user! You have to be good at working out where the problem is.
4.It's my job to try out new components before they're used in our computers, it's not only how well the components work that matters, they also have to meet health and safety requirements. I need to write reports and make recommendations on my findings. If problems arise after the components have been installed, I'm the person who has to find the solution.
5. I have to change the specifications for a system into a logical sequence that can be programmed. The language I choose for coding will depend on various factors such as what type of program it is, and where it's going to be used. A lot of testing has to be done and I use the feedback to decide where improvements can be made.

GRAMMAR: Revision
Task 5. Read and translate the following sentences:
1. The device driver does not exist.
2. The data type is not supported by the processor.
3. Use a different print processor for jobs that have this data type, or rewrite the application so that it uses a data type the print processor can recognize.
4. The service cannot be controlled in its present state.
5. This workstation is already logged on to the local-area network.
6. You specified an invalid password.
7. The user accounts database is full.
8. The RPL.MAP file cannot be opened or may be corrupted.
9. Verify the correct filename and retype the command.
10. Unable to complete execution too many open files.
11. The command failed because too many files were open.
12. Unable to allocate memory.
13. The computer ran out of memory.
14. The specified program couldn't be found.
15. An error occurred while MAKEIMG was creating a subdirectory on the floppy disk.
16. You must use a floppy disk formatted with MS-DOS.
17. Use CHKDSK to be sure the floppy disk is not damaged.
18. The drive you specified doesn't exist.
19. This floppy disk is not a bootable MS-DOS disk.
20. MAKEIMG couldn't read the floppy disk.
21. You tried to perform an administrator task in a domain without having admin privilege in the domain.
22. This is an invalid response.

Task 6. Revise the following abbreviations:
RLL, CLV, DDE, OLE, IRQ, IBM, DBMS, SQL, UTP, STP, IEEE, HTML, HTTP, FTP, TCP, URL, WWW, P2P, DOS, FAT, MBR

PROBLEM-SOLVING.
Task 7. Write a summary "What I want to be?"

UNIT 16. LINUX OPERATING SYSTEM

Task 1. Read and translate the text.

What is Linux?

Linux is a Unix-like operating system that was designed to provide personal computer users a free or very low-cost operating system comparable to traditional and usually more expensive Unix systems. Linux has a reputation as a very efficient and fast-performing system. Linux's kernel (the central part of the operating system) was developed by Linus Torvalds at the University of Helsinki in Finland. To complete the operating system, Torvalds and other team members made use of system components developed by members of the Free Software Foundation for the GNU Project.

Linux is a remarkably complete operating system, including a graphical user interface, an X Window System, TCP/IP, the Emacs editor, and other components usually found in a comprehensive Unix system. Although copyrights are held by various creators of Linux's components, Linux is distributed using the Free Software Foundation's copyleftstipulations that mean any modified version that is redistributed must in turn be freely available.

Unlike Windows and other proprietary systems, Linux is publicly open and extendible by contributors. Because it conforms to the Portable Operating System Interface standard user and programming interfaces, developers can write programs that can be ported to other operating systems. Linux comes in versions for all the major microprocessor platforms including the Intel, PowerPC, Sparc, and Alpha platforms. It's also available on IBM's S/390. Linux is distributed commercially by a number of companies. A magazine, *Linux Journal*, is published as well as a number of books and pocket references.

Linux is sometimes suggested as a possible publicly-developed alternative to the desktop predominance of Microsoft Windows. Although Linux is popular among users already familiar with Unix, it remains far behind Windows in numbers of users. However, its use in the business enterprise is growing.

Linux is a contraction for *Linus' Unix*; the short *i* sound preferred by most (including Torvalds) derives from the Swedish pronunciation of *Linus*.

Glossary:

GNU – General Nationwide Usage (computer users can have the freedom to share and improve the software they use)
contributor – a person who makes contributions

GLOSSARY
OF COMPUTING TERMS AND ABBREVIATIONS

A

active badge a smartcard device worn by the user
Active Server page a type of webpage that contains a script that is processed on a web server
active window the window in WIMP system that is currently being used. It is usually on top of any other open windows.
add-on a small program that can be attached to a browser program to give the browser extra functions
address box the area in a web browser program where the web address is displayed
address bus the set of conductors that carry the memory address signals between different parts of a computer system
ALU abbreviation for arithmetic and logic unit
amend to make corrections
analogue signal a type of signal that can take any value between a maximum and a minimum
analogue-to-digital converter a device for changing analogue signals into digital signals
animation drawings that have moving images
anti-virus program a set of programs used to detect, identify, and remove viruses from a system
aperture grill pitch the distance between the holes or slots in the filter screen inside a monitor
Apple Macintosh a type of personal computer manufactured by Apple Computer Incorporated
applications (program or software)a computer program or programs designed to be used for a particular purpose
arithmetic and logic unit the part of the CPU that performs the mathematical and logical operations
arrow keys the set of four keys on a keyboard used for moving the cursor around the screen
assembly language a low-level computer language that uses mnemonics rather than only numbers, making it easier than machine code for humans to read and write

B

back up to store a copy of data on a storage device to keep it safe
backup the process of storing a copy of data on a storage device to keep it safe
backup device a storage device used for copying files to a storage medium to keep them safe
barcode a sequence of vertical parallel lines used to give items a unique identification number /to mark with a barcode
barcode label a label that is used to attach a barcode to an item
barcode reader an optical input device that uses the reflection of a light beam to read barcode labels
batch job sets of data to be processed together by a mainframe computer
bidirectional designed to carry signals in either direction
binary belonging to the number system that has only two digits, i.e. 1 and 0
bit a small unit of storage capacity / one of the eight binary digits that make up a byte. The term comes from an abbreviation of binary digit.
bookmark a web address stored in a browser program to allow a webpage to be found easily / to store a web address in a browser program to allow a webpage to be found easily
branch a point in a program or flowchart where there are two possible paths
browser a program used for displaying webpages

bulletin board a kind of electronic noticeboard system that enables users to display messages for other users to read bus
bus the set of conductors that carry the signals between different parts of a computer
bus topology a physical layout of a network where all the computers are attached to one main cable terminated at both ends
byte a unit of capacity. A byte is made up of eight bits and stores one character, i.e. a letter, a number, a space or a punctuation mark.

C

cache memory high speed memory used to speed up a computer
CCD abbreviation for charge-coupled device
CD-ROM (disk) abbreviation for compact, disk read-only memory. A read-only storage device (a disk)| that is read using laser light.
CD-ROM drive a storage device for reading CD-ROM disks
cell the rectangular box formed where a row and a column meet in a spreadsheet
Central Processing Unit the electronic processor at the centre of a computer. It is sometimes used lo refer to the combination of the processor and the main memory.
checkbox a dialog box component in the form of a small square box used to indicate one of two alternative states, e.g. true or false. When the user clicks the box with a mouse, a cross appears in the box. Clicking again clears the box.
chip common name for a microchip
click to press and release a button on a mouse
client a network computer used for accessing a service on a server
clock chip the electronic device in a computer that controls the timing of the signals
clock line the conductor that carries the clock signal to different parts of thecomputer
coax(ial) cable a type of shielded cable for carrying signals. It is often used with radio frequency and video signals.
code a program written in a computer language/to write a program using a computer language
COM port another name for a serial port (from an abbreviation for communications)
command button a dialog box component that takes the form of a rectangular icon that causes a program command to be carried out when clicked with a mouse
compilation error a programming error that prevents a program from being converted into machine code by a compiler
compile to convert a program written in a high-level language into machine code using a compiler
compiler a program that converts the whole of a program into machine code before the program is used
computer aided design the process of designing using a computer program
computing the theory and practice of computers
control bus the set of conductors that carry the control signals between the control unit and other parts of a computer
control unit the part of the CPU that generates the signals that control the computer programs and hardware
CPU abbreviation for central processing unit
crash a sudden and complete failure/to fail suddenly and completely
CU abbreviation for control unit
cursor the symbol on the monitor screen that indicates the point on the screen that is being used

D

data the information processed by a computer
data bus the set of conductors that carry the data signals between different parts of a computer
database a type of application program used for storing information so that it can be easily searched and sorted

decode to decide what a program instruction means
desktop (computer) a personal computer designed to sit on a desk
desktop publishing an application program that is used for creating and editing the text and layout of pages to be published
dialog box a window in a WIMP system that is used to provide information or obtain information from the user
digital camera an input device for taking pictures that has an electronic lens and uses electronics for storing the images rather than chemical film
digital signal a signal that only has one of two values representing on or off
disk a flat circular storage device
disk drive a storage device for reading from and writing to disks
distributed computing a network system that uses different servers throughout the network rather than a single server at the centre of the network
DNI an abbreviation for direct neural interface
dot pitch the distance between the dots on a monitor screen
dot-matrix printer a printer that prints by hammering pins onto an linked ribbon
double density floppy (disk) a removable magnetic storage device in the form of a plastic disk that can hold about 712 kilobytes of data
download to copy a file from a server to a client computer in a network
drag to move an object across the display screen by moving a mouse while holding down the mouse button
drop-down list box a dialog box component that opens a list of items when the user clicks on the arrowhead at the end
drop-down menu a list of options that opens downwards and stays open when clicked with a mouse
DVD abbreviation for digital versatile disk. An optical disk storage device that can hold a large amount of video data
dye sublimation printer a type of colour printer that prints by heating dye that is transferred onto special paper.

E

E-time a common name for the execution time
Edit to make changes to
editing keys the set of keys on a PC keyboard to the right of the main keyboard that is used for moving around the screen and making changes lo a document
electronic wallet a smartcard used for storing money downloaded from a computer bank account
email the common name for electronic mail, i.e. messages sent electronically using a computer / to send an email message
email address the unique address code used to contact someone using electronic mail
email attachment a file that is attached to an email message
embed to insert an object inside another object
encode to write information in a coded form
execute to perform a computer operation by processing a program instruction
execution time the time taken to execute a program instruction and store the result in memory
expansion card an electronic circuit board used for adding facilities to a computer
expansion slot a long thin connector that is used for adding additional electronics in the form of expansion cards
extended keyboard the common arrangement of keys on a PC keyboard with editing keys and a numeric keypad to the right of the main keyboard

F

fibre-optic(s) a cable made from strands of glass that is used for carrying information signals on a beam of light
field a section of a database where an item of data is stored

file a computer program or data stored on a storage device
file server a main computer that provides a data file store on a network
flicker-free having no variation in the brightness of the display of a monitor screen
floppy (disk) a magnetic storage device in the form of a small plastic disk (also known as a diskette)
floppy (disk) drive a common magnetic storage device that reads and writes data on a floppy disk
flowchart a kind of diagram used by programmers to show the logical steps in a program
folder a way of grouping filenames so that the files can be easily located on a storage device
font a set of text characters of a particular design
format (1) the design and appearance of text in a document / to design the look of text in a document
format (2) the arrangement of storage areas on a storage medium / to create storage areas on a storage medium
formatting toolbar a row of icons in a program, used to change the appearance of the text when clicked with a mouse
freeze suddenly to stop responding. It is usually used in reference to a screen display.
function keys keyboard keys that are normally programmed to perform different functions by each program or by the user

G

graphic a picture, drawing, animation or other type of image
graphical user interface part of an operating system that allows the user to interact with a computer using images and a cursor
graphics card an expansion board containing electronics for controlling the computer output to a monitor
graphics package a type of applications program that is used for creating and editing images and drawings
graphics tablet a graphical input device that tracks the movement of a stylus across a flat surface
GUI abbreviation for graphical user interface

H

hacking the practice of breaking into computer systems and changing data without permission
handheld a small portable computer that can he held in one hand.
hang suddenly and unexpectedly to stop processing during the execution of a program
hard (disk) (drive) a common magnetic storage device that reads and writes data on metal disks inside a sealed ease
hardware the physical components of a computer system
high density floppy (disk) a removable magnetic storage device in the form of a plastic disk that can hold about 1.4 megabytes of data. i.e. twice as much as a double density disk
high-level language A programming language closer to human language than low-level computer languages such as machine code or assembly language
home page the starting page on a website
HTML abbreviation for hypertext markup language/a computer language that uses a system of tags for creating web pages
hub an electronic device at the centre of a star network topology

I

I-time a common name for the instruction time
IT abbreviation for information technology
IBM abbreviation for the computer company called International Business Machines Corporation

icon a small picture used in a WIMP system to represent a program, folder or file
information technology the study and practice of techniques or use of equipment for dealing with information
inkjet printer a printer that prints by spraying ink onto paper
input data put into a system / to put data into a system
input device a piece of equipment used for entering data or controlling a computer
insertion point the position where something is put into a file
instruction one line of a computer program
instruction time the time taken to fetch and decode a program instruction
interface the connection between two different systems / to provide a connection between two different systems
Internet service provider an organization that provides Internet connections for a fee
Internet, (the) the connection of computer networks across the world
interpreter a program that converts other programs into machine code line by line as the programs are being used
interrupt a signal that causes the processor to stop what it is doing temporarily so that it can process something that is more urgent
ISP abbreviation for Internet service provider

J

jam to get stuck in one position
joystick a cursor control input device with an upright arm. It is commonly used for controlling fast moving objects in computer games.

K

keyboard the main electronic input device that has keys arranged in a similar layout to a typewriter
keypad a small keyboard with a few keys used for a special purpose

L

LAN acronym for local area network
laptop (computer) the largest type of portable computer
laser high-frequency light used in optical devices
laser printer a printer that prints using toner powder and laser light on a photosensitive drum
LCD abbreviation for liquid crystal display / an electronic display device that uses liquid crystal cells to control the reflection of light
light pen a pen-shaped input, device used for drawing on a display screen. It detects light on the screen.
linking error a programming mistake caused by trying to use a function from a program library that is not available
local area network computers connected together over a small distance
log to record the time that an event happened
logic error a programming mistake caused by the use of a sequence of instructions that are not logical
loop a part of a program that is repeated until a set condition occurs
loudspeaker sound output device
low-level language a computer language such as machine code or assembly language that is closer to the form that a computer understands than to that of a human language

M

machine code a computer language that consists entirely of a combination of 1s and 0s
magnetic tape a magnetic storage medium in the form of a thin plastic ribbon wound on a reel or a cassette
magneto-optical disk a storage device that uses a combination of magnetism and laser light to store data
main memory the electronic memory that holds the programs and data being used

mainframe (computer) the largest and most powerful type of computer. It is operated by a team of professionals.
memory (store) the part of a computer system that is used for storing programs and data
memory address a code indicating the location of a unit of memory
memory chip an electronic integrated circuit that is used for storing programs and data while they are being used by a computer
memory slot a connector on the motherboard of a computer that enables extra memory chips to be added
menu a list of options displayed on a computer screen
menu bar a row of icons on a display screen that open up menus when selected
mesh topology an arrangement of computers in a network where every computer is connected to every other computer by a separate cable
micro-machine an extremely small mechanical mechanism that contains a tiny computer
microchip an electronic integrated circuit in a small package
microcomputer a personal computer, smaller and less powerful than a mainframe or a minicomputer
microphone an input device used for sound
microprocessor the main electronic chip in a computer
minicomputer a computer that is slightly less powerful and a little smaller than a mainframe
modem an electronic device for converting signals to enable a computer to be connected to an ordinary telephone line.
monitor the main output device used to display the output from a computer on a screen.
motherboard the main electronic circuit board inside a computer trial holds and connects together all the main electronic components
mouse a common cursor control input device used with a graphical user interface. It has two or three button switches on top and a ball underneath that is rolled on a flat surface.
mouse button a switch on a mouse that is pressed to select an object on the screen
mousemat the small pad that a mouse sits on
MS-DOS trademark, abbreviation for Microsoft disk operating system / the operating system that was used in the first PCs
multimedia the combination of text, graphics, animation, sound, and video
multimedia computer a computer suitable for running multimedia programs. It usually has a sound card and a CD-ROM drive.
multiuser capable of being used by many people at the same time

N

network a combination of a number of computers and peripheral devices connected together/to connect a number of computers and peripheral devices together
network (interface) card the electronic circuit board inside a computer that is used to connect the computer to a network
news group an Internet discussion group made up of people with a common interest who use an area on a server computer to display messages about their interest
notebook (computer) a portable computer that is about the same size as piece of writing paper

O

OCR abbreviation for optical character recognition
online connected to a system and able to be used
operating system the set of programs that control the basic functions of a computer
optical disk a storage device in the form of a disk that uses laser light to store data
output data brought out of a system/to bring data out of a system

output device a piece of equipment used to bring data out of a system

P

package an application program or collection of programs that can be used in different ways
palmtop (computer) a portable computer that is small enough to be held in the palm of one hand.
password a secret code used to control access to a network system
paste to insert a copy of data held in the computer's memory at a chosen position
picture-in-picture a display screen feature that has a video picture displayed inside another video picture
PIN abbreviation for personal identification number
port a connector at the back of a system unit of a PC that is used for connecting external devices to the CPU
portable (computer) a computer that is small and light enough to be carried from place to place. It can usually be powered by batteries.
post to display a message in a computer newsgroup or bulletin board
power supply the electrical component that provides filtered mains electricity at the correct voltage for a computer
printer a common output device used for printing the output of a computer on paper
processor the part of a computer that processes the data
program a set of instructions written in a computer language that control the behavior of a computer
programming language a computer language used for coding computer programs
punched card an obsolete computer input medium consisting of a set of cards with holes punched in them

R

RAM acronym for random access memory - memory that can be read and written to by the processor
random access a system of getting access to any location in a storage area in any order
read-only an only be read from and not written to
read-only memory memory that contains programs and data that the user cannot change, for example, it may contain the programs required to start up a computer
record a section of a database made up of related database fields
recycle bin a program used to hide files that are no longer required and bring them back if they are required again. Emptying the recycle bin deletes the files completely
ring topology a physical layout of a network where all the computers are connected in a closed loop
robot a mechanical device controlled by a computer
robotic to do with robots
robotics the study of robot systems
ROM acronym for read-only memory
run to execute a program, i.e. to get a program to process the data

S

scanner an optical input device that uses the reflection of light to copy text or graphics into a computer
scripting language a simple computer language used for writing scripts that control computer applications
scroll to move displayed information, either horizontally or vertically, on the screen
serial port the small connector at the back of the system unit of a PC that is used to connect a serial device such as a serial mouse or a modem.
server a main computer that provides a service on a network
SIMM acronym for single in-line memory module/a small electronic circuit board containing memory chips.

smart card a plastic card containing a processor and memory chip
software the programs and data used in a computer
spacebar the long key along the bottom of a keyboard used for inserting blank spaces in a document
spreadsheet a type of application program with an array of cells that, is used for calculating formulas
SQL abbreviation for structured query language, used for searching databases
star topology a physical layout of a network where all the computers are connected by separate cables to a central hub
storage medium a material used for storing programs and data
subnotebook (computer) a portable computer that is a little smaller than a notebook computer. It is small enough to fit inside a jacket pocket.
subscriber a user who becomes a member of a newsgroup
supercomputer the most powerful type of mainframe computer
syntax error a mistake in a program due to a wrong word or punctuation symbol being used
system error a program error caused by a fault affecting the operating system, usually due to a hardware failure

T

tab a dialog box component that is used to switch between different sets of data
TCP/IP abbreviation for transmission control protocol
terminal a network device used to input and output data
toner the powder used inside laser printers
toolbar a row of icons displayed on a screen that start common program functions when clicked with a mouse
toolbox a set of icons displayed on a screen for selecting common program editing functions
topology the physical layout of a network
touchscreen an input device in the form of a monitor screen that responds when touched by the user
tracker ball cursor control input device that has a hall on top that is moved by the user's fingers
Trinitron the trade name for a type of monitor technology created by Sony

U

undo to restore a file to the condition it was in before the last change was made
update to bring up to date. i.e. to change into the latest version
upgrade to add components to improve the features or performance of a system
USB abbreviation for universal serial bus. A standard way of connecting peripherals to a computer system.

V

VDU abbreviation for visual display unit / another name for a computer monitor
video memory the memory used to store graphics data on a graphics card
video (VGA) port the small connector at the back of the system unit of a PC that is used to connect the monitor to the graphics card
virtual (reality) mouse a cursor control input device used in VR systems
virtual reality a simulated three dimensional environment that surrounds the user and is generated by a computer
virus a program written deliberately lo damage data or cause a computer to behave in an unusual way
voice mailbox a storage area for spoken messages
voicemail a system of communication that uses computers to store spoken messages
VR abbreviation for virtual reality

W

WAN acronym for wide area network

Web, (the) the common name for the World Wide Web
webpage a hyperlinked page in a web network system
website a set of pages on the World Wide Web
website address the unique address that is used to access a website
White Pages, (the) a website used for finding the email addresses of registered users
wide area network computers connected together over a large distance
WIMP system acronym for windows, icons, menus, and pointers/a common type of graphical user interface
window a rectangular screen area containing a program, folder, or file in a WIMP system
Windows the common name for Microsoft Windows, a popular graphical user interface developed by the Microsoft Corporation
workstation a desk area used for working with a computer system
World Wide Web, (the) an information service on the Internet that allows document pages to be accessed using hyperlinks

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Text. Network Topologies.
Grammar: Revision (Indefinite Tenses, Active Voice)
Problem-solving
Unit 10. INTERNET 1: INTRODUCTION TO THE WWW AND THE INTERNET
Abbreviation
Text. Introduction to the WWW and the Internet
Text. Email.
Grammar: Indefinite Tenses, Passive Voice
Problem-solving
Supplementary reading. History of Internet
Unit 11. INTERNET 2: THE WORLD WIDE WEB
Abbreviation
Text. Yahoo
Text. Webpages
Text. Website designer
Grammar: Modal Verbs (Indicating Importance)
Problem-solving
Unit 12. LANGUAGES
Abbreviation
Text. Computing Languages
Grammar: Revision (Indefinite Tenses, Passive Voice)
Problem-solving
Unit 13. PROBLEMS IN COMPUTING
Abbreviation
Text. Computer Viruses
Text. Access System
Grammar: Indefinite pronouns *"SOME, ANY"* and negative pronoun *"NO"*
Problem-solving
Unit 14. FUTURE TRENDS
Text. Virtual Reality
Text. Future Developments
Text. Future Trends
Grammar: Revision (Phrases)
Problem-solving
Supplementary reading. History of Robotics
Unit 15. CAREERS IN COMPUTING
Text. Computing Jobs
Text. Talking about Work
Grammar: Revision
Problem-solving
UNIT 16. LINUX OPERATING SYSTEM
GNOM
KDE
GLOSSARY
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