І. В. Кузнєцова, А. Г. Статкевич

Software
Програмне забезпечення

Практикум з англійської мови для студентів фізико-математичного факультету спеціальностей: «Інформатика», «Математика та інформатика», «Фізика та інформатика»

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   Програмне забезпечення: практикум з англійської мови для студентів фізико-математичного факультету спеціальностей: «Інформатика», «Математика та інформатика», «Фізика та інформатика». – Житомир: Вид-во ЖДУ ім. І. Франка, 2012. – 140 с.

   Практикум складається з 8 розділів, текстів для самостійного опрацювання, додаткового читання та додатків. Тексти підібрані з оригінальної науково-технічної літератури та містять необхідну термінологію зі спеціальності. До складу розділів входять вправи на закріплення лексико-граматичного матеріалу, тести, запитання. Вправи та тести побудовано на мовному матеріалі, який використовується в текстах розділів. Додається підсумковий тест для перевірки знань всього курсу.

   Для студентів неспеціальних факультетів денної, заочної та дистанційної форми навчання, які вивчають інформатику. Пізнавальний характер текстів зацікавить не лише зазначене коло студентів, але й усіх тих, хто поглиблено вивчає англійську мову.

Introduction

Вступ

Інформаційне суспільство висуває нові вимоги до професійної підготовки сучасного фахівця, що передбачає досконале знання комп'ютерної техніки. Автори посібника намагались надати підібраному матеріалу не тільки інформативну, але й професійну спрямованість. Посібник-практикум складений відповідно до вимог Програми з англійської мови для університетів (5-річний курс навчання): Проект. (Київ, 2001 р.) та рекомендацій Ради Європи щодо вивчення іноземних мов.

Основна мета посібника надати необхідну професійно-спрямовану інформацію з вивчення програмного забезпечення комп'ютерної техніки, формування та закріплення вмінь використання даної лексики під час перекладу текстів за фахом на українську мову.

Практикум складається з восьми розділів, текстів для самостійного опрацювання та додаткового читання. Тексти підібрані з оригінальної науково-технічної літератури та містять необхідну термінологію за спеціальністю. Кожний розділ включає набір лексико-граматичних та комунікативних вправ. Вправи та тести побудовано на мовному матеріалі, який використовується в текстах розділів. Додається підсумковий тест для перевірки знань всього курсу.
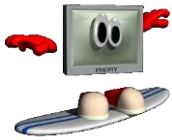
Практикум призначений для студентів неспеціальних факультетів денної, заочної та дистанційної форми навчання, які вивчають інформатику. Пізнавальний характер текстів зацікавить не лише зазначене коло студентів, але й усіх тих хто поглиблено вивчає англійську мову.

Зміст

Aa	Bb	Cc	Dd	Ee	Ff	Gg	Hh	Ii
Jj	Kk	Ll	Mm	Nn	Oo	Pp	Qq	Rr
Ss	Tt	Uu	Vv	Ww	Xx	Yy	Zz	

Unit 1

Task 1. Discuss the following questions:
- Have you got a computer?
- An English proverb says: "Run fast to stay where you are". How do you understand it?
- Give your associations with the word "computer"?

software — computer
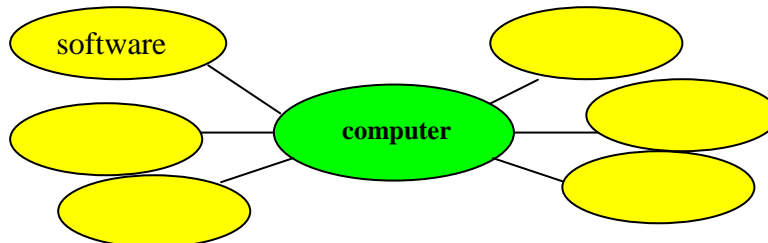
Task 2. Use your dictionary to find the English word for the computer hardware in the pictures. Make up sentences of your own.

1.

2.

3.

4.

5.

6.
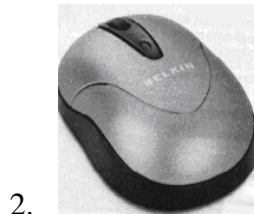
Task 3. Read the phonetic transcription. Practise your pronunciation:

['sɔ:ftweə] ['dʒenərel] [,maɪkrəu'prəusesə] ['sɪstɪm] [,ɔpə'reɪtɪŋ'sɪstɪm] [,ɔpə'reɪtɪŋ'sɪstɪm dɪ'zaɪn] ['menɪdʒmənt] ['deɪtəbeɪs] ['deɪtəbeɪs'menɪdʒmənt] ['sel] ['spredʃi:t] [,ɔ:tə'mætɪkəlɪ] ['erə] [rek'tæŋgjulə] [dɪ'zaɪn] [kəm'pju:tə] ['əɪərɪ] ['və:tjuəlɪ] ['sel] [kə'ma:n d] [,ɪntəfeɪs]

Task 4. Practise saying the following words and phrases. Pay attention to the pronunciation:

software, general kinds of software, operating system software, applications software,microprocessor, operating system design, the management of financial documents, database management, spreadsheet, separate parts, automatically, possible errors, rectangular area, can be combined, virtually, digitized photo, interface, typed command, theory, structure e of the table, visualization, limited number of cells, computer – aided design, computer graphics programs, word – processing program.

Task 5. Read the following international words and guess their meaning:

computer [kəm'pju:tə] *n,* combination [,kɔmbɪ'neɪʃ(ə)n] *n,* number ['nʌmbə] *n,* system ['sɪstɪm] *n,* logic ['lɔdʒɪk] *n,* analysis [ə'næləsɪs] *n,* practical ['præktɪkəl] *adj,* complex ['kɔmpleks] *adj,* project ['prɔdʒekt] *n,* component [kəm'pəunənt] *n,* information [,ɪnfə'meɪʃən] *n*

Task 6. Read the text and make the outline of it.

Computer software

Computer software consists of instructions that control the operation of the computer. Much software also includes information for the computer to process. There are two general kinds of software: (1) operating system software and (2) applications software.

Operating system software reads and responds to user commands, and coordinates the flow of information among the different input and output devices. It also manages the different programs the user runs. It places these programs and the user's data into memory and makes sure that the microprocessor executes the right commands. Thus, the operating system combines the many separate parts of a computer into a single useful system.

Because operating systems serve as the interface (go-between) for computer users and their programs, much work has gone into operating system design. Early operating systems such as MS-DOS (Microsoft Disk-Operating System) used typed commands that users had to memorize or look up. Gradually, however, icons replaced typed commands, giving rise to graphical user interfaces (GUI's).

Applications software is made up of programs for all the specific uses of computers, including word processing, the management of financial documents, database management, and the processing of pictures and sounds.

Word-processing programs enable people to type words into a computer to write articles, books, reports, letters, and other documents. Word-processing software greatly simplifies the work of editing a document. The writer can insert, change, or delete letters, words, or groups of words–sentences, paragraphs, or entire sections of a document. The software automatically adjusts the remainder of the document to reflect the changes.

Most word-processing software has dictionary and spelling programs that can check a document automatically, pointing out possible errors and offering corrections. Some software can also check grammar and punctuation. When the document is completed, the user can print it or distribute it by floppy disk or modem.

Spreadsheet programs are the major type of financial software. The word spreadsheet refers to a table used to present information in these programs. The basic structure of the table is a series of vertical columns and horizontal lines. The rectangular areas created by the intersection of the columns and lines are called cells. Each cell represents a specific kind of business information, such as the cost of a product or the number of units sold. The user enters numbers and other data into cells.

The first spreadsheet program was VisiCalc, introduced in the late 1970's for the Apple II personal computer. Many computer experts consider VisiCalc to be the single program that persuaded many business people to use PC's. VisiCalc could perform only simple calculations over a limited number of cells. Today's spreadsheets for PC's offer hundreds of functions. In addition, numerous spreadsheets representing different aspects of a business can

be linked together. Changes in one cell of one spreadsheet are reflected in related cells in all linked spreadsheets.

Most programs also incorporate powerful graphics tools, which can convert spreadsheet data into charts, graphs, and other illustrations. Some software provides presentation tools, computer instructions for generating posters or photographic slides.

Database management programs enable users to store large bodies of information and to search these databases in several ways.

Computer graphics programs enable computer users to create, change, and display pictures. The term computer graphics is also used to mean the pictures produced with these programs. The computer operator can create the original image on the computer or can use a previously created photograph or other picture that has been digitized. A digitized photo can be changed in a variety of ways. The user can change its dimensions or its colors, for example, or eliminate a part of it. Images in a photo can be moved or copied. Images from many separate photos can be combined. The finished picture can be displayed, printed, sent to other computers via modem, or saved on a disk.

Some computer graphics software works with motion pictures. These programs treat a motion picture as a series of still pictures called frames. Many of the spectacular special effects in today's movies are products of computer graphics. In 1995, Toy Story became the first motion picture created entirely on computers.

Desktop publishing software is also available to home computer users. Individuals can use these programs to produce newsletters and other documents on their PC's. Users can choose from a variety of typefaces, arrange text in columns, and insert photos and other illustrations.

Presentation software is another major type of graphics program. This software enables users to create graphics to project onto motion-picture screens at meetings.

Games software combines graphics, animation, sound, and music with clever design to produce exciting adventures and puzzles. Computer games are played on PC's or dedicated computers called video game units. These special units generally display their pictures on television screens. Some computer games can be played on two or more computers connected by modems. Using a keyboard, a joystick, or a mouse, players can interact with the games, controlling the movement of one or more characters or other elements.

Computer-aided design (CAD) programs are essential to many professions, especially engineering and architecture.

Scientific visualization software is used in virtually every branch of science. One use of this software is to develop and test theories. Astronomers, for example, use mathematical models (sets of equations) to develop theories of how groups of stars form galaxies of various shapes.

Glossary	
software ['sɔ:ftweə] *n* – програмне забезпечення	**computer - aided design** *n* – автоматизоване проектування
operating system [,ɔpə'reɪtɪŋ'sɪstɪm] *n* – операційна система	**cell** ['sel] *n* – елемент, комірка
	user ['ju:zə] *n* – користувач
spreadsheet ['spredʃi:t] *n* – велика електронна таблиця	**design** [dɪ'zaɪn] *n* – план, розробка, проект, конструкція
image ['ɪmɪdʒ] *n* – образ, зображення; *v* – відображати, створювати зображення	**shape** ['ʃeɪp] *n* – форма
memorize ['meməraɪz] *v* – запам'ятовувати	**respond** [rɪs'pɔnd] *v* – відповідати
display [dɪs'pleɪ] *n* – показ; *v* – показувати	**interface** [,ɪntəfeɪs] *n* – інтерфейс (на мові програмування - видима користувачу частина модуля)
data ['deɪtə] *n* – дані, інформація	

<div align="center">**Exercises**</div>

1. Learn the new words and use them in short phrases of your own.

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_____
_____
_____
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2. Render the plot of the text (in 7-8 sentences):

1. What is the main topic of the text?
2. What kinds of software do you know?

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3. Render the following passages into Ukrainian. Discuss the points with your colleagues. Use the following phrases:

My personal opinion…	*На мою думку…*
It would be helpful to know…	*Було б корисно знати, що…*
I am confident that…	*Я впевнений, що…*

Source The actual code that defines how a piece of software works. Computer operating systems can be *open source,* meaning the OS can be examined and modified by users, or they can be *closed source,* meaning users cannot modify or examine the code.

Shell   A program that runs on top of the OS and allows the user to issue commands through a set of menus or some other graphical interface. Shells make using an OS easier to use by changing the user interface. The two shells we will look at most closely are Microsoft's DOS Shell (a menuing system) and Windows (a fully graphical user interface).

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4. Make up the words given in jumbled letters.

e s r u *w t s a r o e f* *c s e s c a* *f e r o r p m* *a t c o d o r i n e* *r o c t m u p e*	

5. Give English equivalents to the following words. Use them in questions to your friend.
програмне забезпечення, операційна система, база даних, редагувати, показувати, апаратне забезпечення, зображення, обробляти інформацію, користувач, зберігати, переводити інформацію в цифрове значення, потужність, швидкість, рухоме зображення, запускати програму, таблиця великого формату, автоматизоване проектування, модель, елемент, взаємодіяти, видимий, розробка, створювати.

_____
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6. Complete the sentences with one of the words in the box. Careful! They are not all used.

hard disks   motherboard   bits   software   user   manufacturer   hardware   bytes   mouse   power

1. _____can hold thousands of programs and files.
2. The technology of_____ is also advancing rapidly.
3. Laptops have the same_____ as desktop computers.
4. Computer information is measured in multiples of_____.
5. The primary microprocessor and main memory are on a circuit board called_____.
6. The largest computer_____ is International Business Machines Corporation (IBM).
7. Artificial intelligence (AI) is an exciting area of_____ research.
8. The user clicks the _____.

7. **Read the text and fill in the gaps from below. Render it into Ukrainian. Give it a head-line. Discuss with your partner the new trend in programming.**

Artificial intelligence (AI) software can help solve _____ that do not involve numerical equations. This software enables a computer to imitate techniques that people use to solve such problems. For example, a physician investigating an illness applies his or her education, training, and experience to the problem. The physician does not solve the problem by performing_____.

One type of AI software, an expert system, enables a computer to respond to information entered by the computer_____. In making its responses, the computer draws upon vast amounts of _____that human experts supplied to the writers of the software.

(calculations, data, complex problems, user)

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Test your grammar

1. Fill each gap with a preposition from the box.

to	for	in	up	of	from	by	on	into	with

1. One …. the most popular software packages …. PC's consists …. several types …. software combined …. a suite.
2. A typical suite contains a word processor, spreadsheet, database, graphics package, communications software …. use …. a modem, and an electronic calendar and address book.
3. A digitized photo can be changed … a variety … ways.
4. Applications software is made …. of programs …. all the specific uses ….computers.
5. Computer software consists …. instructions that control the operation …. the computer.
   Some computer graphics software works …. motion pictures.
6. Systems analysts determine the most efficient use …. computers …. particular situations.

Suffixes and prefixes

2. Make at least *one* new word with each base word using either a suffix or a prefix. Use your dictionary to help. Sometimes you will need to change the spelling a little.

prefixes	Base word	suffixes
up	active	al
	configure	
	equal	
	specific	ful
	response	
	develop	ate
dis	agree	ment
	power	
	avail	
	execute	able
	close	
	proper	
	quick	ible
un	secure	
	common	
	odd	ic
	effective	
	grade	ity
	official	ly
	agreement	
	design	
re	size	er

3. Put the verb into the correct form (use Present Simple):

1. Operating system software (to read) _____ and (to respond) _____ to user commands.
2. Presentation software (to be) _____ another major type of graphics program.
3. Computer-aided design programs (to be) _____ essential to many professions.
4. The user (to enter) _____numbers and other data into cells.
5. Educational software (to help) _____ students learn.
6. Some educational programs (to create) _____ simulations, which are computer models of such experiences as dissecting a frog or flying an airplane.
7. Some modern applications programs (to contain) _____tens of millions of lines of programming instructions.
8. Educational software (to be) _____ especially useful for learning such subjects as mathematics or foreign languages.
9. On-line services (to be) _____ commercial computer networks to which subscribers pay monthly or hourly fees.
10. The United States (to have) _____ the worlds largest computer industry, employing more than 2 million people.

4. Make up questions to the following statements:
1. There are two general kinds of software: (1) operating system software and (2) applications software.
   _____
   _____
   _____
2. Presentation software is another major type of graphics program.
   _____
   _____
   _____
3. The first spreadsheet program was VisiCalc.
   _____
   _____
   _____
4. Computer graphics programs enable computer users to create, change, and display pictures.
   _____
   _____
   _____
5. Games software combines graphics, animation, sound, and music.
   _____
   _____
   _____
6. Binary numeration system is a system of number symbols used by computers.
   _____
   _____
   _____
7. The system uses only the numerical symbols 0 and 1.
   _____
   _____
   _____

Speaking Task
Look at the pictures. Compare and contrast them. Describe them with your partner.
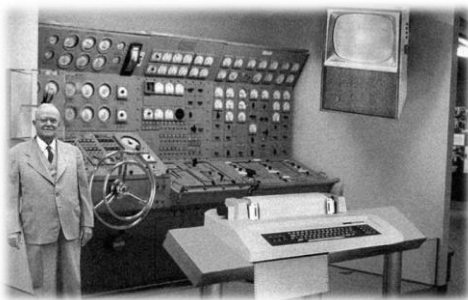
Words you may need: *massive calculators, first computers, could only calculate, to obtain, new functions, multi-tasking, home and office assistants, to allow, manufacturing controllers.*

Project Work
Prepare a multimedia presentation on the topic "*Computer Software*". Use Power Point.

Notes on the topic studied:

_____

Notes on the topic studied:

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Notes on the topic studied:
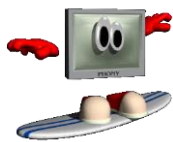
Unit 2

Task 1. Discuss the following questions:
- Have you got any idea about the structure of a computer?
- Do you know the definition of the operating system?

Task 2. Read the phonetic transcription. Practise your pronunciation:

[ək,selə'reɪʃən] [kəud] [ɪn'vaɪrənmənt] ['fʌŋkʃən] ['ɔptɪmaɪz] [,ɪntər'ækt] [rʌn] ['vju:] ['ɪsju:] [,wə:d 'prəusesɪŋ 'prəugræm] [prə'vaɪd] ['ækses] ['sʌplɪmənt] [kəm'paɪl] [rɪ'kwaɪə] [kəu'ɔ:dnɪt] [ə'kʌmplɪʃ] [pə'fɔ:m] ['ɑ:kɪtektʃə] ['ju:tɪlɪtɪ]

Task 3. Practise saying the following words and phrases. Pay attention to the pronunciation:

global computer revolution, acceleration, programmed code, software designers, less difficult to use, major distinctions, graphics, speed, advantage, a consistent environment, to provide services, specifically compiled, unique, management, extremely powerful, basic resources, similar, to supplement, particular task, properly, function, utilities, disagreements, architecture, stable, input-output mechanism, a particular task, similar versions, a number of disagreements.

Task 4. Read the following international words and guess their meaning:

video ['vɪdɪəu] *n,* **argument** ['ɑ:gjumənt] *n,* **battery** ['bætərɪ] *n,* **binary** ['baɪnərɪ], **card** [kɑ:d] *n,* **cassette** [kə'set] *n,* discussion[dɪs'kʌʃən] *n,* form ['fɔ:m] *n,* equivalent [ɪ'kwɪvələnt] *n,* general ['dʒenərəl] *adj,* **clone** [kləun] *n,* **controller** [kən'trəulə] *n,* **critical** ['krɪtɪkəl] *adj* **program** ['prəugræm] *n,* **identify** [aɪ'dentɪfaɪ] *v,* **architecture** ['ɑ:kɪtektʃə] *n,* **version** ['və:ʃən] *n,*

Task 5. Read the text and find information about:
- *the main task of OS*
- *input devices*
- *network operating system*

Operating system

The incredible global computer revolution is not due just to hardware, though, in many ways, the acceleration of computer usage over the last decade has had more to do with the ever-improving operating systems that humans use to interact with these machines. Computers require programmed code (called *software)* to run, and they require an input-output mechanism to allow users to give the machine instructions and to view the results of those commands. The *operating system* (OS) is the primary software used to achieve these ends, and the evolution of more powerful and user-friendly operating systems has made computers less difficult to use and more enjoyable.

Graphics, speed, GUI interfaces, and multiple programs running concurrently are all made possible because software designers take full advantage of the hardware for which they are designing their software.

Types of Software

There are a number of different types of personal computer software, and each has a specific role in the operation of the machine. Among these are the following major distinctions:

Operating System (OS)   provides a consistent environment for other software to execute commands. The OS gives users an interface with the computer so they can send commands (input) and receive feedback or results back (output).

 To do this, the OS must communicate with the computer hardware to perform the following tasks:

- Disk and file management
- Device access
- Memory management
- Output format

Once the OS has organized these basic resources, users can give the computer instructions through input devices (such as a keyboard or a mouse). Some of these commands are built into the OS, whereas others are issued through the use of applications. The OS becomes the center through which the system hardware, other software, and the user communicate; the rest of the components of the system work together through the OS, which coordinates their communication.
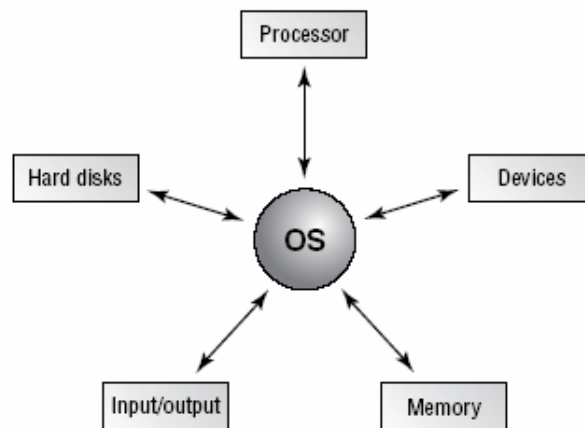
Network Operating System (NOS)   Similar to a standard operating system, except that the NOS is optimized to provide services to other machines on the network.

Application   Used to accomplish a particular task, an application is software that is written to supplement the commands available to a particular OS. Each application is specifically compiled (configured) for the OS on which it will run.

Driver   Extremely specific software written for the purpose of instructing a particular OS on how to access a piece of hardware. Each modem or printer has unique features and configuration settings, and the driver allows the OS to properly understand how the hardware works and what it is able to do.

Types of PC Operating Systems

There are the following types of PC operating systems:

- CP/M
- DOS
- Windows (l-3.x)
- OS/2
- Windows 95 and later
- Linux
- Macintosh OS

Classic Operating Systems: **CP/M**

The *Control Program for Microcomputer (CP/M)* is an OS you may never have heard of, because it is not in use on modern PCs. Gary Kildall wrote this OS in 1973, using his PL/M programming language. It initially ran on the Intel 8008. It was later ported to the 8080 chip and was, in many ways, very similar in function to DOS.

MS-DOS and PC-DOS

In the 1980s and early 1990s, the OS that shipped with most PCs was a version of the *Disk Operating System (DOS)* created by Microsoft: *MS-DOS.* (A number of companies manufactured DOS, but most of them produced similar versions—they differed only in syntax and a few utilities. The important differences among DOS variants are to be found from one chronological version to the next, not among manufacturers.)

OS/2 Even as Windows 3.1 was in development, Microsoft was participating in a joint effort with IBM to create a next-generation OS for use with 286 and higher processors. This OS was to be IBM/Microsoft's second-generation OS, or OS/2, intended to replace DOS. Differing goals for the design of the new system caused a number of disagreements, though, and the partnership soon broke up. IBM continued the development of OS/2 on its own, and Microsoft took its part of the technology and began to develop LAN Manager, which would eventually lead to the development of Windows NT. With the second version, IBM made OS/2 a 32-bit system that required at least a *386* processor to run.

Mac OS The Mac OS isn't a PC OS (although many people are trying hard to get it to be one), in that it runs only on a Macintosh computer.

Linux The architecture of Linux is based on Unix, the OS used in mainframes and other high-end computers, and it is extremely powerful and stable. Linux is also commonly used as a web server or an e-mail server on the Internet, and can function as either a network OS or a desktop OS, just as Windows NT can.

Glossary

optimize ['ɔptɪmaɪz] *v* – оптимізувати
interact [,ɪntər'ækt] *v* – взаємодіяти
run [rʌn] *n* – запуск програми; *v* – запускати програму
view ['vju:] *v* – дивитися, переглядати
issue ['ɪsju:] *v* – видавати

word – processing program [,wə:d 'prəusesɪŋ 'prəugræm] *n* – електронна обробка текстів (текстовий редактор)
provide [prə'vaɪd] *v* забезпечувати, надавати, постачати
access ['ækses] *n* – доступ; *v* – отримувати доступ
supplement ['sʌplɪmənt] *n* – додаток, доповнення
compile [kəm'paɪl] *v* компілювати

require [rɪ'kwaɪə] *v* – вимагати, потребувати
co-ordinate [kəu'ɔ:dnɪt] *v* – погоджувати, координувати
accomplish [ə'kʌmplɪʃ] *v* – завершувати, доробляти, удосконалювати
perform [pə'fɔ:m] *v* – виконувати, робити
utilities ['ju:tɪlɪtɪ] *n* – обслуговуюча програма, утиліт

Exercises
1. Learn the new words and use them in short phrases of your own.

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2. Render the plot of the text (in 7-8 sentences):
  a) without details (in three or four minutes' time),
  b) give a brief summary of the text.
- **Ask one of your fellow-students questions about different types of personal computer software. Use the active vocabulary of the text.**
- **Make up a story on the basis of the information gained.**

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3. To revise the vocabulary studied and necessary for communication on Software write out as many words as you can concerning computers and software and beginning with the given letters, like in Column 1.

S	ound	C	C	P
Y	ear	O	O	R
S	ockets	M	M	I
T	racs	P	M	N
E	lectron	U	A	T
M	onitor	T	N	E
		E	D	R
		R		

4. Render the following terms into Ukrainian. Discuss the points with your colleagues. Use the following phrases:

  I am in full agreement with… *Я повністю погоджуюсь…*
  It is interesting to know… *Цікаво знати…*
  I am not completely certain that… *Я не зовсім впевнений в тому, що…*

software An application program or an operating system that a computer can execute. Software is a broad term that can imply one or many programs, and it can also refer to applications that may actually consist of more than one program.

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hardware All the physical electronic components of a computer system, including peripherals, printed-circuit boards, displays, printers.

_____
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system software The programs that make up the operating system, along with the associated utility programs, as distinct from an application program.

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operating system (OS) The software responsible for allocating system resources, including memory, processor time, disk space, and peripheral devices such as printers, modems, and the monitor. All application programs use the operating system to gain access to these system resources as they are needed. The operating system is the first program loaded into the computer as it boots, and it remains in memory at all times thereafter.

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DOS 1. Acronym for Disk Operating System, an operating system originally developed by Microsoft for the IBM PC. DOS exists in two very similar versions: MS-DOS, developed and marketed by Microsoft for use with IBM-compatible computers; and PC-DOS, supported and sold by IBM for use only on computers manufactured by IBM.

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multitasking A feature of an operating system that allows more than one program to run simultaneously.

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MS-DOS (Microsoft Disk Operating System) A single-user, single-tasking operating system, with either a command-line interface or a shell interface. MS-DOS, like other operating systems, allocates system resources (such as hard and floppy disks, the monitor, and the printer) to the applications that need them.

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Unix   Pronounced "you-nix." A 32-bit, multiuser, multitasking, portable operating system.

version A number used by computer programmers to tell modified programs apart. Each time computer software is modified, new features are added and old problems are fixed. The version is incremented by one digit (for example, from 1.0 to 2.0) for major revisions, or by a tenth of a digit (for example, from 2.0 to 2.1) for minor modifications. Higher version numbers mean newer versions.

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5. Words that go together.

Look at the following groups of words. Which of the surrounding words cannot go with the noun in the centre? Give your reasons.
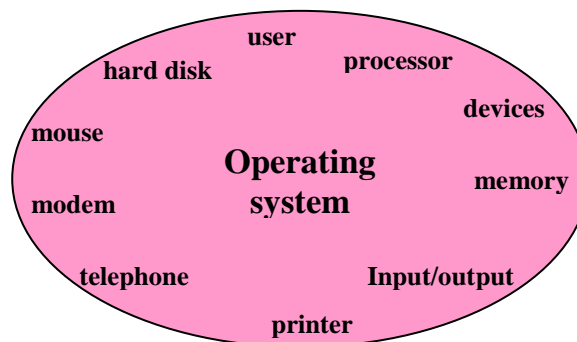
6. Are the following statements True (T) or False (F)? Correct the false ones.

<div style="background:pink">

                                                         T   F

1. There are a number of different types of personal computer software.
2. Computers require programmed code (called *hardware)* to run.
3. Operating System (OS)   provides a consistent environment for other systems to execute commands.
4. The OS gives users an interface with the computer so they can send commands (input) and receive feedback or results back (output).

</div>

7. Match a line in A with a line in B

A	B
Bit	- is a device that allows a computer to transmit information over a telephone line.
Byte	- is a group of bits ready for transmission over a network.
Memory	- is the basic unit of information.
Modem	- is a group of computers connected by a communication channel.
Monitor	- is a combination of 8-bits.
Network	- is the primary random access memory installed in the computer.
Packet	- is a video output device capable of displaying text and graphics/

8. Read the text and fill in the gaps from below. Render it into Ukrainian. Give it a head-line. Discuss with your partner the advantages of modems.

The communication of data over _____ is one of the most important and influential uses of computers. Using modems, people can send text and graphics files, exchange messages, and search databases over worldwide computer networks. As more of the world's information is digitized, more people seek access to the global "digital library." The combination of computers, modems, databases, and communications lines has become known as the _____.

Businesses establish much smaller _____ for their own use. One type, a local area network (LAN), connects a company's workstations within the same building or in neighboring buildings. A wide area network (WAN) links workstations over larger areas. Both LAN's and WAN's enable co-workers to exchange _____ rapidly. They also enable computers to share printers and storage devices.

(information superhighway, networks, information, telephone lines and by radio)

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Work in pairs

9. Discuss the following questions with your partner in a dialogue. Give your point of view in 2-3 sentences.
Model:
- I know well that there are different types of personal computer software, and each has a specific role in the operation of the machine .For example, Linux is commonly used as a web server or an e-mail server on the Internet.
- I am in full agreement with you. As far as I know ….
1. What types of PC operating systems do you know?

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2. What type of OS do you consider to be the best?

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3. What code do computers require to run?

_____
_____
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4. What does OS provide?

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Test your grammar

1. All of the words in the list are to do with the computer. Divide them into three groups. Some of the words can go into more than one group.

System, operating, term, sound, server, distribution, application, interface, access, design, monitor, use, change, appear, click, display, additional, particular, search, perform, complex, appear, memory, space, acceleration.

Nouns	Verbs	Adjectives

2. Form words with the help of prefixes. Read and translate them.

un-   easy, familiar, happy, natural, popular, necessary, reliable

_____
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in-   correct, expert, corporate, accurate, significant, sufficient

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dis-   to cover, to like, to connect, to prove, to integrate, to join, to play, to place

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ir-   regular, rational, radiation, recoverable, resolution, reparable

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mis-   to use, to take, to direct, to print, to read, to spell

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non- metal, stop, sense, productive, conductor, communicative

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3. Use the correct form of Present Simple:

1. Computers (to require) _____ programmed code to run.
2. The operating system (to be) the primary software, (not to be) _____ it?
3. The OS (to become) the center through which the system hardware, other software, and the user (to communicate) _____.
4. _____(to remain) the way you use these tools consistent across platforms?
5. Networks (to allow) _____ computers to share information and resources quickly and securely.
6. Graphical User Interface (to be) _____ the method by which a person (to communicate) _____with a computer.
7. DOS 5.0 and DOS 6.0 (to be) _____versions of MS-DOS.
8. Each type of personal computer software (to have) _____ a specific role in the operation of the machine.
9. _____(to vary) the tools often between the different OSs?
10. Network (to be) any group of computers that (to have) _____ a physical communication link between them.

4. Complete the chart with the missing verb forms.

Infinitive	Past Simple	Past participle
grow		
	left	
		fallen
find		
	sold	
		driven
feel		
	dealt	
		chosen
fly		
connect		
set		
	won	
appear		

5. Use the correct form of Past Simple:
1. The Control Program for Microcomputer initially (to run) _____ on the Intel 8008.
2. As a matter of fact, it (to look) _____ quite similar to DOS.
3. A number of companies (to manufacture) _____ DOS, but most of them (to produce) _____ similar versions.
4. Those versions (to differ) only in syntax and a few utilities.
5. Differing goals for the design of the new system (to cause) _____ a number of disagreements.
6. Soon the partnership (to break) _____ up.
7. IBM (to continue) _____ the development of OS/2 on its own.
8. Microsoft (to take) _____ its part of the technology and (to begin) to develop LAN Manager.
9. IBM (to make) _____ OS/2 a 32-bit system.
10. The Mac OS (not to be) a PC OS, in that it (to run) _____ only on a Macintosh computer.

6. Ask questions to which the following sentences are the answers:
1. They came to the same conclusion.
2. These words contradict the commonly accepted principles.
3. It is difficult to follow your line of reasoning.
4. The word *wish* has the same meaning as the word *desire.*
5. Albert Einstein was a great philosopher and mathematician.
6. In 1946, two engineers at the University of Pennsylvania, J. Presper Eckert, Jr., and John William Mauchly, built the first general-purpose electronic digital computer.

7. Look at the picture. Can you understand it? Why is it funny? Make up the story of your own.

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Notes on the topic studied:

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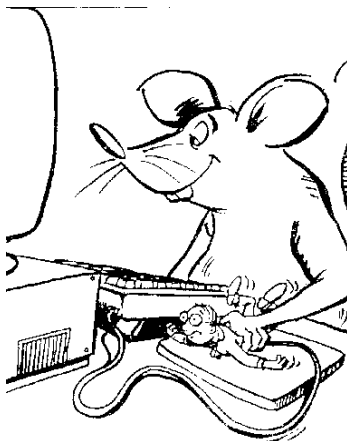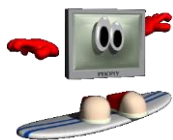
Unit 3

Task 1. Discuss the following questions:

- Do you know what Windows is?
- There are many versions of Windows, aren't there? Will you name some of them?

Task 2. Read the phonetic transcription. Practise your pronunciation:

[sək'ses] [ıg'zıstəns] [ək'septəns] ['kɔmpleks] ['nævıgeıt] ['edıt] ['bætʃ] ['hʌnt] ['nʌdʒ] [keıpəbl] ['spə:] [gəu 'ɔnwəd] [sʌbsıkwənt] [ı'vɔlv] ['haıd] ['ju:zə] [dı'rektərı]

Task 3. Practise saying the following words and phrases. Pay attention to the pronunciation:

knowledge, existence, great acceptance, to navigate, average user, through directories, to go onward, enhancement, subsequent versions, successor, to replace, to new heights, a brief examination, groundbreaking work, entirely, networking features, strong security, should be nudged toward, simultaneously, multitasking

Task 4. Read the text and complete the following sentence:

- The best Windows version is...

Microsoft Windows

Any real understanding of the success of DOS after 1987 requires knowledge of Windows. In the early years of its existence, Microsoft's DOS gained great acceptance and became a standard as a PC OS. Even so, as computers became more powerful and programs more complex, the limitations of the DOS command-line interface became apparent (as well as the aforementioned conventional memory limitation).

The solution to the problem was to make the OS easier to navigate, more uniform, and generally more friendly to the user. IBM understood that the average user did not want to receive their computer in pieces but preferred to have it ready to go out of the box. Oddly, the company did not understand that the same user who wanted their *hardware* to be ready to go also wanted their *software* to be the same way. They also did not want to edit batch files or hunt through directories using CD or DIR commands. As a result, when Microsoft came to IBM with a graphical user interface (GUI) based on groundbreaking work done by Xerox labs, IBM was not interested, preferring to go onward with the development of OS/2 (a project it had already started with Microsoft).

Windows Versions

After the development of Windows, many of the enhancements made to subsequent versions of DOS were designed to help free up and reallocate resources to better run Windows and Windows-based applications. Similarly, PC hardware continued to evolve far past the limits of DOS's ability to effectively use the power available to it, and later versions of Windows were designed to hide and overcome the limitations of the OS. The combination of MS-DOS and its Windows shell made Microsoft the industry leader and spurred the PC movement to new heights in the early 1990s. Following is a brief examination of the development of the Windows shell and a look at its different versions.

Windows 98/Me/NT/2000/XP

After Windows 95, Windows 98 was introduced as its successor, followed by Windows Me (Millennium Edition). Windows 98/Me is currently the most common PC OS on the market, although XP is poised to replace it quickly. Still, for users who need more power, other options are available. One of these is the Windows NT OS. NT (which unofficially stands for New Technology) is an OS that was designed to be far more powerful than any previous Windows version. It uses an architecture based entirely on 32-bit code and is capable of accessing up to 4GB (4,000MB) of RAM.

After Windows 98 and NT, Windows 2000 was released. It used the same interface as Windows 98 (with a few important enhancements). It came in many versions, but the most popular were Windows 2000 Professional (workstation OS) and Windows 2000 Server (server OS).

Recently came the introduction of Windows XP. It comes in two versions: XP Home and XP Professional. They are close to being the same, but XP Professional contains more corporate and networking features. Users who need higher performance or strong security should be nudged toward NT, 2000 Professional, or XP Professional.

Glossary

success [sək'ses] *n* – успіх, досягнення

existence [ɪg'zɪstəns] *n* – існування, наявність

acceptance [ək'septəns] *n* – прийняття запиту (системи)

complex ['kɔmpleks] *adj* – комплексний, складний, складений

directory [dɪ'rektərɪ] *n* – каталог, папка, довідник

hunt ['hʌnt] *n* – пошук

navigate ['nævɪgeɪt] *v* – оперувати, керувати

edit ['edɪt] *v* – редагувати

batch ['bætʃ] *v* – формувати (пакет), накопичувати; *n* – пакет, група, серія

nudge ['nʌdʒ] *v* – просувати, заставляти

enhancement [ɪn'hɑ:nsmənt] *n* – модернізація, вдосконалення, розширення (можливостей програмних засобів)

capable [keɪpəbl] *v* – що піддається (чому-н.), що допускає (що –н.)

go onward [gəu 'ɔnwəd] *v* – йти попереду

subsequent [sʌbsɪkwənt] *adj* – наступний

evolve [ɪ'vɔlv] *v* – розвивати

hide ['haɪd] *v* – ховати, приховувати

spur ['spə:] *v* – стимулювати, спонукувати

Exercises

1. Learn the new words and use them in short phrases of your own.

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2. Render the plot of the text:

    a) without details (in three or four minutes' time),
    b) give a brief summary of the text.

- **Ask one of your fellow-students questions about the versions of Windows XP. Use the active vocabulary of the text.**
- **Make up a story on the basis of the information gained (in 7-8 sentences).**

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3. Render the following key terms into Ukrainian. Discuss the points with your colleagues. Use the following phrases:

As far as I know…   *Наскільки мені відомо…*
I fully support…   *Я повністю підтримую…*
If am not mistaken…   *Якщо я не помиляюсь…*

Windows 95   A 32-bit, multitasking, multithreaded operating system capable of running DOS, Windows 3.1, and Windows 95 applications. It supports Plug and Play (on the appropriate hardware) and adds an enhanced FAT file system in the virtual FAT that allows long filenames of up to 255 characters while also supporting the DOS 8.3 file-naming convention.

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Windows 98   The home PC operating system released by Microsoft as the successor to the popular Windows 95 operating system. Basically the same as Windows 95, it offers a few improvements. For example, Windows 98 improves the basic look and feel of Windows 95 with a browser-like interface. It also contains bug-fixes and can support two monitors simultaneously. In addition to new interface features, it includes support for new hardware, including Universal Serial Bus devices.

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Windows 2000   A Windows operating system version that incorporates the look and feel of Windows *9x* with the power of Windows NT and some additional interface enhancements.

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Windows ME   The last version of Windows to use the Windows 95/98 "look and feel" as well as the Windows *9x* operating system kernel.

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Windows NT   A 32-bit multitasking, portable operating system developed by Microsoft. Initial versions ran on Intel 80386 (or later) processors and RISC processors, such as the MIPS R4000 and the DEC Alpha. Windows NT contains the graphical user interface from Windows 3.1 and can run Windows 3.1 and DOS applications as well as OS/2 16-bit character-based applications and new 32-bit programs specifically developed for Windows NT. Multitasking under Windows NT is preemptive, and applications can execute multiple threads. Security is built into the operating system at the U.S. Government—approved C2 security level. Windows NT supports the DOS FAT file system, the OS/2 HPFS, installable file systems such as CD-ROM systems, and a native file system called NTFS. Windows NT also supports multiprocessing, OLE, and peer-to-peer networking.

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Windows XP   The latest release of Windows that includes an interface redesign and updated security features. It is based on the Windows NT kernel and platform and, as such, is fully 32-bit and includes multitasking.

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Windows Vista is a line of operating systems developed by Microsoft for use on personal computers, including home and business desktops, laptops, Tablet PCs, and media center PCs. Prior to its announcement on July 22, 2005, Windows Vista was known by its codename "Longhorn". Development was completed on November 8, 2006; over the following three months it was released in stages to computer hardware and software manufacturers, business customers, and retail channels. On January 30, 2007, it was released worldwide, and was made available for purchase and download from Microsoft's website. The release of Windows Vista comes more than five years after the introduction of its predecessor, Windows XP, the longest time span between successive releases of Microsoft Windows.

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4. Speaking Task

The following diagram illustrates the development of operating systems. Look at the diagram and describe Windows Family Tree and the timeline of windows creations. Which operating system is the best one? Justify your opinion.

5. Review questions:

1) What does CP/M stand for?
   a. Control Processing Management
   b. Control Program for Microcomputer
   c. Control Power for Microcomputer
   d. Control Processing Microcomputer
2) What was the first 32-bit preemptive multitasking system?
   a. Windows XP
   b. Windows 2000
   c. Windows 98
   d. Windows 95

3) Which of these Microsoft operating system is the best for users who need to deal with large files or complex programs?
   a. Windows NT
   b. Windows 95
   c. Windows 98
   d. DOS
4) Which Windows operating system provides high performance and file security!
   a. Windows *95*
   b. Windows 98
   c. Windows NT
   d. Windows Me

Self Check

6. Complete the sentences. Develop the idea. There is a model at the beginning.

Model: *After Windows 95, Windows 98* <u>*was introduced as its successor, followed by Windows Me (Millennium Edition).*</u> *Windows 98/Me is currently the most common PC OS on the market, although XP is poised to replace it quickly.*

1. There are many versions of Windows

   _____
   _____
   _____
   _____
   _____.

2. Windows NT contains

   _____
   _____
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   _____.

3. Windows 98 improves the basic look

   _____
   _____
   _____
   _____
   _____.

4. Windows XP comes in two versions:

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   _____
   _____
   _____
   _____.

5. The latest release of Windows is

   _____
   _____
   _____
   _____
   _____.

7. Read the text. Render it into Ukrainian. Give it a head-line. Discuss with your partner the importance of the invention of the first computer.

In 1888, American inventor and businessman Herman Hollerith devised a punched card system, including the punching equipment, for tabulating the results of the United States census. Hollerith's machines used electrically charged nails that, when passed through a hole punched in a card, created a circuit. The circuits registered on another part of the machine, where they were read and recorded. Hollerith's machines tabulated the results of the 1890 census, making it the fastest and most economical census up to that date. In a single day, 56 of these machines could tabulate census information about more than 6 million people.

Governments, institutions, and industries found uses for Hollerith's machine. In 1896, Hollerith founded the Tabulating Machine Company. He continued to improve his machines. In 1911, he sold his share of the company. Its name was changed to the Computing-Tabulating-Recording Company (C-T-R). In 1924, the name was changed to International Business Machines Corporation (IBM).

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Test your grammar

1. The following verbs are all irregular. What is the Past Simple and Past Participle?

Keep, run, have, read, put, do, become, see, show, draw, take, hold, deal, make, begin, choose, mean, send, set, lose, give, write.		

2. Form words with the help of prefixes. Read and translate them.

inter- action, national, change, to connect, communication, planetary

_____
_____
_____

auto- road, code, type, graphic, oscillation

_____
_____

re- to build, to group, to construct, to produce, to solve, to join, to act

_____
_____
_____

sub- normal, set, division, marine, to divide, tropical, way

_____
_____
_____

3. Use the correct form of Past Simple:
1. In the early years of its existence, Microsoft's DOS (to gain) _____great acceptance and (to become) _____a standard as a PC OS.
2. Programs (to be) _____more complex.
3. IBM (to understand) _____that the average user (not to want) _____to receive their computers in pieces.
4. Users (to prefer) _____to have the OS ready to go out of the box.
5. The same users (to want) _____their software to be the same way.
6. Recently (to come) _____ the introduction of Windows XP.
7. The most popular (to be) _____Windows 2000 Professional and Windows 2000 Server.
8. The combination of MS-DOS and its Windows shell (to make) _____Microsoft the industry leader.
9. This combination (to spur) _____the PC movement to new heights in the early 1990s.
10. Windows 98 (to be) _____basically the same as Windows 95.

4. Use the correct form of Future Simple:
1. If you look closely at the monitors, you (to notice) _____that the names of some of the icons are different.
2. As a technician, you (to realize) _____quickly that this overall standardization is good for you.
3. You (not to see) _____the great difference between two monitors.
4. The difference (to be) _____ in the names of some icons.
5. If you click the secondary button, you (to change) _____the Desktop's background patterns, color scheme and size.
6. Even if a few new files appear, it (to be) _____still an upgrade.
7. After loading into the computer, the operating system (to remain) _____in its memory at all times thereafter.
8. If you want to modify computer software, you (to add) _____ new features and (to fix) _____ old problem
9. Higher version numbers (to indicate) _____newer versions.
10. You (not to use) _____Windows 95 if you need high performance and strong security.

5. Make up questions to the following statements:

1. In 1888, American inventor and businessman Herman Hollerith devised a punched card system.

    _____
    _____
    _____

2. Windows NT a 32-bit multitasking, portable operating system developed by Microsoft.

    _____
    _____
    _____

3. Using modems, people can send text and graphics files, exchange messages, and search databases over worldwide computer networks.

    _____
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    _____
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4. The OS becomes the center through which the system hardware, other software, and the user communicate.

    _____
    _____
    _____

5. The hard disk is built into the computer.

    _____
    _____

6. The hard disk is built into the computer.

    _____
    _____

Look at the picture. Can you understand it? Why is it funny? Make up the story of your own.

"Press any key to continue"

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Notes on the topic studied:

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Notes on the topic studied:
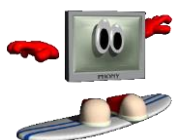
Unit 4

Task 1. Think over the questions. Give you motives:
- What is the monitor? What is its main function?
- Where can the monitor also be found except computers?

Task 2. Match a line in A with a line in B

A	B
Word	Used to organized files on the hard drive.
Scanner	An easily removable and portable floppy disk.
Port	The main printed circuit board in a computer.
Peripheral	Any hardware device attached to and controlled by a computer.
Motherboard	In binary communications, multiple bytes associated together.
Diskette	An optical device used to digitize images such as line art or photographs.
Directory	A generic term for any connector on a computer that allows a cable to be plugged into it.

Task 3. Practise saying the following words. Pay attention to the pronunciation:

workstation, remarkably, fashion, basically, background patterns, access, notice, identical, to accomplish, utilities, standardization, special command, virus-protection, spreadsheet, additional elements, option, circuit board, apart.

**Task 4. Read the text and find the key sentence in it.**

The Windows Interface

When you look at the monitor of a machine running Windows 98 and then look at the monitor of a machine running Windows Me/NT/2000, it is difficult to tell them apart. If you look closely, you will notice that the names of some of the icons are different, but for the most part they're identical and look very much like the screen in Figure 1. If you look at the monitor of a machine running Windows XP, you'll notice that it looks a bit different than the older interfaces. However, don't despair; things still basically work the same way.

As a technician, you will quickly realize that this overall standardization of Microsoft's graphical interface for all of its OSs is good for you. Most basic tasks are accomplished in almost identical fashion *on* everything from a Windows 95 workstation computer to a Windows 2000 Advanced Server computer to a Windows XP Professional computer. Also, although the tools that are used often vary between the different OSs, the way you use those tools remains remarkably consistent across *platforms.*
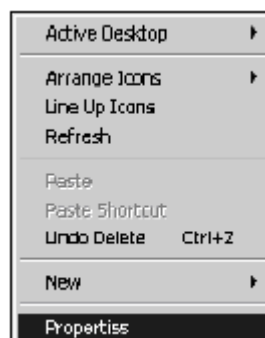
40

Figure 1 The Windows interface
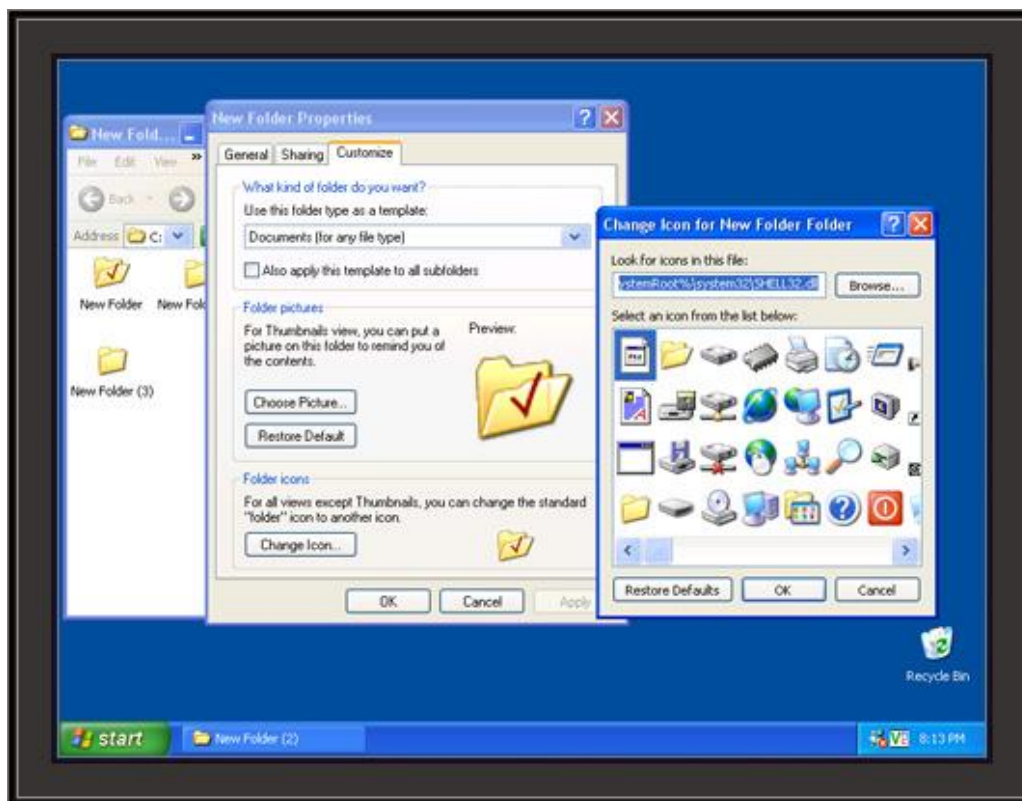
We will begin with an overview of the common elements of the Windows GUI. We will then look at some tasks that are similar across Windows 9x/Me and NT/2000/XP. If you have a copy of Windows 9-v/Me or Windows NT4/2000/XP available, you may want to follow along by exploring each of the elements as they are discussed.

The Desktop

The Desktop is the virtual desk on which all of your other programs and utilities run. By default it contains the *Start menu,* the *Taskbar* and a number of *icons.* The Desktop can also contain additional elements, such as web page content, through the use of the Active Desktop feature.

You can change the Desktop's background patterns, Screensaver, color scheme, and size by right-clicking any area of the Desktop that doesn't contain an icon. The menu that appears allows you to do several things, such as creating new Desktop items, changing how your icons are arranged, or selecting a special command called Properties, similar to the one shown in Figure 2. If you're looking at the Desktop of a computer running Windows XP, you'll notice that the Active Desktop option is missing from the menu. This feature is still available, but you access it through Properties ► Desktop ► Customize Desktop ► Web.

Figure 2 The Desktop right-click menu

41

The Taskbar

The Taskbar (see Figure 3) is another standard component of the Windows interface. Note that although the colors and feel of the Desktop components, including the Taskbar, have changed in Windows XP, the components themselves are the same. The Taskbar contains two major items: the Start menu and the System Tray. The Start menu is on the left side of the Taskbar and is easily identifiable: It is a button that has the word *Start* on it. The System Tray is located on the right side of the Taskbar and contains only a clock by default, but other Windows utilities (for example, screensavers or virus-protection utilities) may put their icons here when running to indicate that they are running and to provide the user with a quick way to access their features.

FIGURE 3 The Taskbar

The Start Menu

To display the Start menu, click the Start button in the Taskbar. You'll notice that in Windows XP, the look of the Start menu has changed quite a bit from earlier versions of Windows. The Windows XP Start menu serves the same function (quick access to important features and programs); however, its layout and options have changed. Note that if you change the Desktop's appearance to the Windows Classic look, this only changes the color scheme, and so on—the options and layout of the Windows XP Start menu remain different from older versions of Windows. However, the way the Start menu works (the principles it applies) is essentially the same in Windows XP as in older versions.

Glossary		
apart [ə'pa:t] *adv* – осторонь, окремо **utilities** ['ju:tılıtı] *n* – обслуговуюча програма, утиліт **default** [dı'fɔlt] *n* – замовчення (оператор по замовченню) **background pattern** – фонове зображення **activate** ['æktıvəıt] *v* – активувати, приводити в дію **select** [sı'lekt] *v* – відбирати, підбирати	**notice** ['nəutıs] *v* – відзначати, повідомляти **appear** [ə'pıə] *v* – показувати **appearance** [ə'pıərəns] *n* – зовнішній вигляд, поява **screensaver** ['skri:nseıvə] *n* – заставка екрану **arrange** [ə'reındʒ] – класифікувати, упорядковувати **display** [dıs'pleı] *n* – показ; *v* – показувати, виводити дані на екран	**button** ['bʌtn] *n* – кнопка (управляючий елемент інтерфейсу) **advertisement** [əd'və:tısmənt] *n* – оголошення, реклама

42

1. Learn the new words and use them in short phrases of your own.

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2. Render the plot of the text:
    a) without details (in three or four minutes' time),
    b) give a brief summary of the text.

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3. Ask one of your fellow-students questions about the functions of the Desktop. Use the active vocabulary of the text.
Make up a story on the basis of the information gained (in 7-8 sentences).

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4. Render the following key terms into Ukrainian. Discuss the points with your colleagues. Use the following phrases:
    My personal opinion…   *На мою думку…*
    It would be helpful to know…   *Було б корисно знати, що…*
    I am confident that…   *Я впевнений, що…*
interface Any port or opening that is specifically designed to facilitate communication between two entities.

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Desktop   Contains the visible elements of Windows and defines the limits of the graphic environment.

_____
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Desktop Control Panel Windows control panel applet that is used to configure the system so it easier to use. Control Panel contains the settings for the background color and pattern as well as screen saver settings.

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multithreading   The ability of a program to send multiple tasks to the processor at the same time. This allows an application to execute more quickly, but it requires the support of a multithreaded operating system.

_____
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source   The code that defines what a program is and how it works. All computer programs—operating system or application—are nothing but a collection of program code. The open source movement is involved with allowing you to see and even modify this source code.

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Taskbar   The area of the Windows 9x/NT/2000 interface that includes the Start button and the System Tray, as well as icons for any open programs.

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window In a graphical user interface, a rectangular portion of the screen that acts as a viewing area for application programs. Windows can be tiled or cascaded and can be individually moved and sized on the screen. Some programs can open multiple document windows inside their application window to display several word-processing or spreadsheet data files at the same time.

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Exercise for computer use:

1. Auto-Hiding the Taskbar

You can make the Taskbar automatically hide itself when it isn't being used (thus freeing that space for use by the Desktop or other windows):

1. Right-click the Taskbar.
2. Choose Properties, which will bring up the Taskbar Properties Screen (Windows 9x/NT) or the Taskbar And Start Menu Properties screen (Windows Me/2000/XP).
3. In Windows 9x/NT, check the Auto Hide option on the Taskbar Options tab. In Windows Me/2000, check the Auto Hide option on the General tab. In Windows XP, check the Auto-Hide The Taskbar option on the Taskbar tab.
4. Click OK.
5. In Windows 9x/Me/NT/2000, move your mouse to the top of the Desktop or click on the Desktop. The Taskbar will retract off the screen. In Windows XP, the Taskbar retracts as soon as you click OK.
6. Move the mouse pointer to the bottom of the screen, and the Taskbar will pop up and be available for normal use.

2. Give English equivalents of:

комп'ютерні технології, програмне забезпечення, мережеві ресурси, портативні комп'ютери, користувач, апаратне забезпечення, графічний інтерфейс, пристрій загального призначення, апаратне забезпечення, комп'ютери нового покоління, електронна пошта, виконувати команди, мати доступ, сучасні технології, фонове зображення, заставка екрану, стисло, з'являтися, по замовченню, пошук, ховати, закривати.

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3. Discuss the following questions in groups:
- What is the taskbar?
- Where is the taskbar situated?

4. Are the following statements True (T) or False (F)? Correct the false ones.

	T	F
1. The Taskbar is the standard component of the Windows interface.		
2. The Desktop is the virtual desk.		
3. After Windows 98 and NT, Windows 2000 was released.		
4. Windows XP comes in two versions: XP Home and DOS.		
5. If you look at the monitor of a machine running Windows XP, you will notice that it looks similar to the other interfaces.		
6. Users cannot make the Taskbar automatically hide itself.		
7. The Start menu is on the right side of the Taskbar.		

5. Review questions:

1. The screensaver can be changed in the _____ dialog box.
   a. Display Properties
   b. Task bar
   c. Menu Bar
   d. Shortcut Menu

2. In Windows XP, how can you start a search for files and folders?
   a. Click Start > All Programs > Search
   b. Run srch.exe at the command prompt
   c. Left-click a directory and choose Find
   d. Click Start > Search

Words that go together.

Look at the following groups of words. Which of the surrounding words cannot go with the noun in the centre? Give your reasons.

Start menu
case
screen
desktop
slot
INTERFACE
adapter
icon
Control panel
Sub menu
Task bar
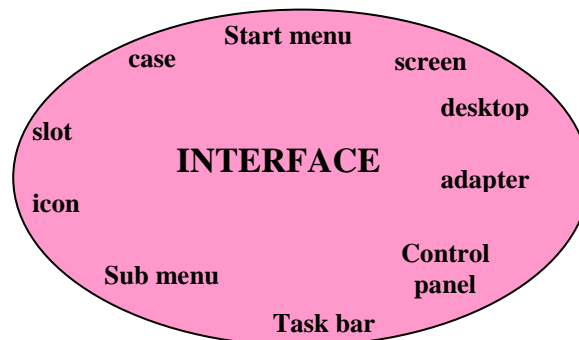
6. Fill in the gaps and complete the sentences:
   1. If you double-click a disk drive or device, you will see the contents of that …
      a. Control Panel
      b. disk drive or device
      c. Folder Options
   2. By right-clicking an icon once, you make that icon the active icon, and a drop-down menu
      a. Appears
      b. Disappears
      c. All of the above
   3. The icon of the solitaire program is labeled….
      a. Windows XP
      b. Properties
      c. Solitaire

7. To revise the vocabulary studied and necessary for communication on Software write out as many words as you can concerning computer and software and beginning with letters of the given word.

M	odem
U	nit
L	aser
T	erminal
I	nternet
M	ouse
E	lectricity
D	evice
I	mage
A	dapter

L	**V**	**P**	
A	**E**	**R**	
P	**R**	**O**	
T	**S**	**T**	
O	**I**	**O**	
P	**O**	**C**	
S	**N**	**O**	
		L	

8. Make up the words given in jumbled letters. All of them are nouns.

i t o r n o m	
v e s r e r	
c i s o n	
r s c e s r o p o	
r c e n e s	
u m s e o	

Test your grammar

1. Arrange these words according to the parts of speech they belong to. Give their Ukrainian equivalents:

system – systematize – systematic, great – greatly – greatness, design – designer, calculate – calculation – calculator, act – acting – action - active – activity - activate – activation, success – successful – successfully, power – powerful, simple – simplify – simplicity – simplification, effect – effective – effector – effectual, add – addition – additional

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2. Use the correct form of Simple Tenses (Active):
1. Each machine (to have) _____a different startup routine, called the POST.
2. During the early 1670's, the German mathematician Gottfried Wilhelm von Leibniz (to improve) _____Pascal's calculator.
3. Setup (to ask)_____you to enter your name and organization to uniquely identify the person installing Windows NT.
4. You should choose a name that (to be) _____completely unique on the entire network.
5. Windows 9x and Windows (to look) _____a lot alike when they were running.
6. After the installing partition is formatted, the system (to check) _____the new partition for errors.

7. It is his work that I (to show) _____you.
8. They (to discuss) _____various aspects of the problem last week.
9. Also in 1951, Eckert and Mauchly (to invent) _____ a more advanced computer called UNIVAC 1 (UNIVersal Automatic Computer).
10. It (to allow) _____ a program to do many things at once.

3. Use the correct form of Present Perfect:

1. Windows (to include) _____always a very good Help system.
2. The Settings submenu (to provide) _____ easy access to the configuration of Windows.
3. Operating System (to give) _____ users an interface with the computer so they can send commands and receive feedback or results back.
4. Once the OS (to organize) _____basic resources, users can give the computer instructions through input devices.
5. The OS (to become) _____the center through which the system hardware, other software, and the user communicate.
6. You (to hear) _____never of the Control Program for Microcomputer. It is not in use on modern PCs.
7. Gary Kildall (to write) _____this OS, using his programming language.
8. A number of companies (to produce) _____a lot of DOS variants.
9. _____(To hear) ever about computer software?
10. The introduction of Windows XP (to come) _____already.

4. Make up questions to the following statements:

1. Computer technology improved rapidly during the 1960's.
   _____
   _____
   _____
2. During the 1830's, Babbage developed the idea of a mechanical computer that he called an analytical engine.
   _____
   _____
   _____
3. IBM introduced its first transistorized computers in 1959.
   _____
   _____
   _____
4. Bulletin board is an electronic message center.
   _____
   _____
   _____
5. Most bulletin boards serve specific interest groups.
   _____
   _____
   _____
6. Bulletin boards allow users to read messages left by others and to leave their own as well.
   _____
   _____
   _____

5. Look at the picture. Can you understand it? Why is it funny? Make up the story of your own.

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Project Work
1. Draw a scheme how to find a file or directory in Windows XP.
2. Prepare a multimedia presentation on the topic of the text.

Notes on the topic studied:

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Notes on the topic studied:
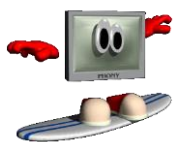
Unit 5

Task 1. Discuss the following questions:
- What programming languages do you know? Name them.
- What programming language is commonly used?

Task 2. Practise saying the following words and phrases. Pay attention to the pronunciation:

detailed instructions, sequence of operations, programmers, programming languages, low-level language, machine language, commonly used programming language, Object-Oriented Programming, debugged, Hyper-Text Markup Language, smart program, high-level programming languages, interpreter, to prepare diagrams, assembly language, compilers and assemblers, new computer functions.

Task 3. Use your dictionary to find the English word for the computer hardware in the pictures. Make up sentences of your own.

1.

2.

3.

4.

5.

6.

Task 4. Read the text and make an outline of it.

Programming a computer

Computer programming is the preparation and writing of detailed instructions for a computer. These instructions tell the computer what data to use and what sequence of operations to perform with the data.

Computer scientists and other computer specialists called programmers write most instructions for computers. These people use programming languages that consist of words, individual letters, numerals, and other symbols, as well as rules for combining those elements.

A computer cannot work directly with a program written in a programming language. The instructions must be translated into a machine language composed of binary digits. These digits represent operating codes, memory addresses, and various symbols, such as plus and minus signs. Machine language is also known as low-level language.

Special programs called compilers and assemblers translate programming languages into machine language. Compiled programs are permanently translated into machine language. Other programs are translated each time the program is run, requiring another type of program, called an interpreter.

Compilers, assemblers, and operating systems may be viewed as "smart programs" because they enable a computer to carry out complicated instructions. The user communicates

with the smart program, and the smart program communicates with the computer.

Preparing a program begins with a complete description of the job that the computer is to perform. This description explains what input data are needed, what computing must be done, and what the output should be. Computer programmers use the description to prepare diagrams and other pictorial aids that represent the steps needed to complete the task. The programmers may produce a diagram called a systems flow chart that shows how all the major parts of the job fit together. After a computer program is written, it is debugged-that is, tested on the computer for mistakes, then corrected.

Using programming languages. Computers appear to work directly with programs written in programming languages. But actually, the smart program first translates the written program into machine language. The smart program next enters the translated version into the computer's memory. The microprocessor then reads and executes each translated instruction.

There are many high-level programming languages. Some of them closely resemble the language of mathematics. Others enable programmers to use symbols and various everyday expressions, such as "READ," "PRINT," and "STOP."

The language that a programmer uses depends largely on the job to be done. For example, if a task involves processing business data, the programmer would most likely use COBOL (COmmon Business Oriented Language). Programming a computer to solve complicated scientific problems might require the use of a mathematically oriented language, such as FORTRAN (FORmula TRANslation).

Another commonly used programming language is BASIC (Beginner's All-purpose Symbolic Instruction Code). This programming language is well suited for writing relatively simple programs for PC's. Numerous elementary schools and high schools that offer a course in programming teach BASIC. Pascal, named for the French mathematician, scientist, and philosopher Blaise Pascal, also is taught in some schools.

Some computer programs may be written in an assembly language. This kind of language is harder to use than a high-level language. The programmer must state each instruction with much more detail than is needed when using a high-level language.

As computers have grown more powerful and their functions more various, the size of computer programs has grown dramatically. Some modern applications programs contain tens of millions of lines of programming instructions. Because of their large size, many modern programs are distributed on CD-ROM's.

New languages are constantly developed for computers. Some, such as Visual BASIC, build upon earlier versions of a language. Others are developed for new computer functions. One such language is HTML (Hyper-Text Markup Language), which is used to create interactive pages for the World Wide Web.

Many programmers use programming objects. An object is an independent section of code that performs a particular function. Object-Oriented Programming (OOP) uses objects that can work together to create a whole program. OOP relieves programmers of the need to re-create sections of code in long programs. The same object can be used again and again.

HTML – Hyper Text Markup Language. Defines the structure of the document. It is basic language of web development, and the first language that is studied by beginners in web development.

XHTML – Extensible Hyper Text Markup Language. It will replace HTML in the near feature.

CSS – Cascading Style Sheets. Another markup language that is used in client-side web development.

CSS defines the presentation of the document. For example, using CSS you can define the color of the element, it's position in the document, borders, and other element properties.

JavaScript – is the main client-side scripting language. It is not a markup language. It is an interpretive programming language. JavaScript programs are executed in the browser. It is

the third of the three main languages that are used to create client-side applications – (X)HTML, CSS and JavaScript. JavaScript's are used for making visual effects, forms checking, improving usability, interaction with Document Object Model and AJAX.

The Document Object Model is a platform- and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure and style of the documents.

On the client side DOM is used with JavaScript.

To understand Document Object Model you have to know at least HTML well.

Adobe Flash (previously called Shockwave Flash and Macromedia Flash) is a set of multimedia technologies developed and distributed by Adobe Systems and earlier by Macromedia. Since its introduction in 1996, Flash technology has become a popular method for adding animation and interactivity to web pages; Flash is commonly used to create animation, advertisements, various web page components, to integrate video into web pages, and more recently, to develop rich Internet applications.

Microsoft Internet Information Services (IIS, formerly called Internet Information Server) is a set of Internet-based services for servers using Microsoft Windows. It is the world's second most popular web server in terms of overall websites, behind Apache HTTP Server. As of May 2008 it served 35% of all websites according to Netcraft. The servers currently include FTP, SMTP, NNTP, and HTTP/HTTPS.

Perl is a dynamic programming language created by Larry Wall and first released in 1987. Perl borrows features from a variety of other languages including C, shell scripting (sh), AWK, sed and Lisp. Perl was widely adopted because it provides powerful text processing facilities without arbitrary data length limits, as were present in many Unix tools at the time.

SQL (Structured Query Language), is a database computer language designed for the retrieval and management of data in relational database management systems (RDBMS), database schema creation and modification, and database object access control management. Usually used on database servers as MySQL or PostgreSQL.

The Extensible Markup Language is a general-purpose specification for creating custom markup languages. It is classified as an extensible language because it allows its users to define their own elements. Its primary purpose is to facilitate the sharing of structured data across different information systems, particularly via the Internet, and it is used both to encode documents and to serialize data.

JSON (pronounced "Jason"), short for JavaScript Object Notation, is a lightweight computer data interchange format. It is a text-based, human-readable format for representing simple data structures and associative arrays (called objects).

The JSON format is often used for transmitting structured data over a network connection in a process called serialization. Its main application is in Ajax web application programming, where it serves as an alternative to the traditional use of the XML format.

Ajax (asynchronous JavaScript and XML), or AJAX, is a group of inter-related web development techniques used for creating interactive web applications. A primary characteristic is the increased responsiveness and interactivity of web pages achieved by exchanging small amounts of data with the server "behind the scenes" so that entire web pages do not have to be reloaded each time there is a need to fetch data from the server. This is intended to increase the web page's interactivity, speed, functionality and usability.

Glossary	
interpreter – інтерпретатор даних	**processing business data** – обробка
smart program – інтелектуальна	ділової інформації
програма	**description** – характеристика, опис
particular function – визначена функція	**sign** – символ

Exercises

1. Learn the new words and use them in short phrases of your own.

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2. Render the plot of the text :
    a) as it is,
    b) give a brief summary of the text.

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3. Ask one of your fellow-students questions about the high-level programming languages. Use the active vocabulary of the text.

4. Make up a story on the basis of the information gained (in 7-8 sentences).

_____
_____
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5. Give Ukrainian equivalents of:
relatively simple programs, read and execute each translated instruction, course in programming, to use symbols, memory addresses, assembly language, binary digits, pictorial, to work directly with programs, to carry out complicated instructions, plus and minus signs, particular function, need to re-create, translated version, high-level language, low-level language, Hyper-Text Markup Language, Beginner's All-purpose Symbolic Instruction Code, usability, human-readable format, interchange format.

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6. Are the following statements True (T) or False (F)? Correct the false ones.

	T	F
1. The microprocessor reads and delete each translated instruction.		
2. A program window is a round area created on the screen.		
3. Command "move" means to move files from one folder to another.		
4. Command "type" means to delete a directory.		
5. In Windows XP, when you first open Control Panel, it displays in Category view.		

Self Check

7. Complete the sentences. Develop the idea. There is a model at the beginning.

Model: *Computers appear to work directly with programs written in programming languages.* *The smart program first translates the written program into machine language. The smart program enters the translated version into the computer's memory.* *The microprocessor* then reads and executes each translated instruction.

1. Computer programming is the preparation and writing of detailed instructions
   _____
   _____
   _____
   _____
   _____.

2. Computer scientists and other computer specialists called
   _____write most instructions for computers.

3. Numerous elementary schools and high schools that offer a course in programming teach
   _____
   _____
   _____
   _____.

4. The language that a programmer uses depends largely on the
   _____ to be done.

5. Object-Oriented Programming (OOP) uses_____ that can work together to create a whole program.
   _____

8. Put the words in the right order to form a sentence.

1. 1996, a kind, called, of, appeared, DVD, the same size, disc, in, the, optical.
   _____
   _____

2. are, means, multimedia, of, programs, CD-ROMs, the, distributing, primary.
   _____
   _____

3. devices, work, the, output, the, by, done, computer, display.
   _____
   _____

4. files, thousands, can, hard, programs, of, hold, discs, and.
   _____
   _____

5. and, instructions, the, send, input, devices, information, computer, to.
   _____
   _____

9. Render the following key terms into Ukrainian. Discuss the points with your colleagues. Use the following phrases:

I'd like to talk about…	***Я хотів би поговорити про…***
Talking about…	***Говорячи про…***
It is my belief that…	***Я впевнений, що…***

icons   On-screen graphics that act as doors through which programs are started and therefore used to spawn windows. They are shortcuts that allow you to open a program or a utility without knowing where that program is or how it needs to be configured.

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disk drive   A peripheral storage device that reads and writes to magnetic or optical disks. When more than one disk drive is installed on a computer, the operating system assigns each drive a unique name—for example A: and C: in DOS, Windows, and OS/2.

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scanner An optical device used to digitize images such as line art or photographs, so that they can be merged with text by a page-layout or desktop publishing program or incorporated into a CAD drawing.

_____
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10. Discuss the following questions in groups:
   1. How often do you think computer users use Help and Support Command?
   2. How often do you do it personally?

11. Give English equivalents to the following words. Use them in questions to your friend:

мови програмування, програміст, мова високого рівня, тестувати, перекладати, комп'ютерна пам'ять, створювати програму, компілятор, комп'ютерна графіка, виконувати команди, визначена функція, цифра, символ, ранні версії, виправляти помилки, друкувати, об'єктно-орієнтована мова програмування.

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Test your grammar

1. Complete the chart with the missing verb forms.

Infinitive	Past Simple	Past participle
write		
	forgot	
		shown
fly		
	knew	
		given
feel		
	struck	
		done
grow		
	sat	
		thrown
	tore	
swing		

2. Use the correct form of Present Perfect:

1. Many commands _____ already _____ a number of different options (has got, have got, will get).

2. At the finish of the wizard, the computer performs the requested task based on the information it _____(gathered, has gathered, have gathered).

3. _____ you already _____ the commands suggested in the text? (have learnt, has learnt, learn)

4. The information is not in RAM. Windows _____ the data into near-line storage on the hard drive (moved, has moved, have moved).

5. It's no wonder, that most computers _____ already _____ with software to connect them to the Internet (is coming, have come, has come).

6. Upgrading from DOS version 6.21 to 6.22 _____ only a few new files (have involved, has involved, involved).

7. _____ IBM _____ the development of OS/2 on its own? (has continued, have continued, did continue)

Windows 2000 _____ in three versions, but only in two (has come, hasn't come, didn't come).

8. _____ you ever _____ to the magic Internet world? (did been, have been, has been)

9. PC hardware _____ to evolve far past the limits of DOS's ability (has continued, have to continue, has to continue).

Conversion.

3. Conversion *is the transposition of a word from one part of speech to the other.* **For example, verb↔noun:**

to look↔a look	to switch↔a switch
to click↔a click	to step↔a step
to place↔a place	to copy↔a copy
to display↔a display	to file↔a file
to access↔an access	to function↔a function
to help↔a help	

Study these examples, choose the pair you like and make up two sentences.

_____
_____
_____
_____
_____
_____

4. Read these sentences and find the Complex Object. Translate the sentences.

1. He found the modification to require a lot of work.
2. We believed the advantages of the new computer to be obvious.
3. Everybody knows matter to consist of small particles called atoms.
4. We know every computer to depend on software.
5. I expect you to install the disk by applying the rule you have just learned.

5. Read these sentences. Note the form of the Complex Subject. Name the predicate in these sentences and translate them.

1. The computation proved to be complicated.
2. This law has always been thought to be useful.
3. After Leibnitz's death, the binary system was almost forgotten but in recent years this system has been found to be useful.
4. The students are expected to know that problem.
5. They were understood to agree with our viewpoint.

Look at the picture. Can you understand it? Why is it funny? Make up the story of your own.

Windows   Doors

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Notes on the topic studied:

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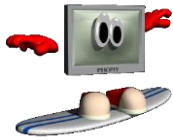
Unit 6

Task 1. Discuss the following questions:
- What do you know about virtual memory?
- Is it possible to change it?

Task 2. Practise saying the following words. Pay attention to the pronunciation:

to configure, *swap* file, *paging* file, *near-line* storage, virtual memory, near future, physical memory, to handle, to configure, root directory, extremely, easier access, actual world, virtual reality images, tiny display screens, disk space, illusion, processor, dynamically, special sensor, unbootable, unstable, display the image, enough, objects.

Task 3. Read the text and make an outline of it.

Virtual Memory

Another thing you may need to configure is *"virtual memory."* Virtual memory uses what's called a *swap* file, or *paging* file. A swap file is actually hard drive space into which idle pieces of programs are placed, while other active parts of programs are kept m or swapped into main memory. The programs running in Windows believe that their information is still in RAM, but Windows has moved the data into *near-line* storage on the hard drive. When the application needs the information again, it is swapped back into RAM so that it can be used by the processor.

Because the concept of virtual memory can sometimes be hard to grasp, here is <m analogy. When you are working m your office and need a document, you may have to walk to a file cabinet to get it. You then return to your seat and read the document. When you have finished and are ready to go on to another task, you need to put down the current document. If you don't need it again in the near future, you should get up and put it back in the file cabinet. However, if you will need it again, you may just set it on your desk for easier access. When you need the document again, you have to pick it back up (unless you can remember what it said without looking again). Generally, you can think of a computer's disk drive as the file cabinet and virtual memory as the desk.

Random access memory (RAM) is the computer's physical memory. The more RAM you put into the machine, the more items it can remember without looking anything up. And, the larger the swap file, the fewer times the machine has to do intensive drive searches. The maximum possible size of your swap file depends on the amount of disk space you have available on the drive where the swap file is placed:

■ If you don't make any changes to the swap file, in Windows 9-v/Me, Windows automatically handles the size of the swap file dynamically, as shown in Figure 3. To configure the minimum and maximum swap file size, you must change the default setting.

FIGURE 3   The Windows 98 Virtual Memory window
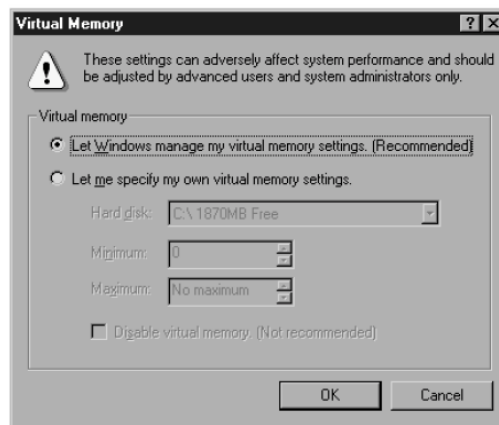
In Windows XP, it's just the opposite. Windows XP configures the minimum and maximum swap file size automatically, but if you want Windows to handle the size of the swap file dynamically, you have to change the default setting by selecting System Managed Size in the Virtual Memory dialog box. We'll show you how to get there in a moment.

■ In Windows NT/2000, Windows sets the minimum and maximum swap file size for you, and you can adjust these settings. However, you can't tell NT or 2000 to dynamically handle the swap file.

By default, on Windows 9x/Me, the swap file is called WIN 386. SWP, and you'll find it in the Windows directory. On Windows NT/2000/XP, the file is called PAGEFILE. SYS, and it's located in the root directory of the drive on which you installed the OS files. The swap file is a hidden file, so to see the file in Windows Explorer you must have the folder options configured to show hidden files. Typically, there's no reason to view the swap file in the file system, because you'll use Control Panel to configure it. However, you may want to check its size, and in that case you'd use Windows Explorer.

To modify the default Virtual Memory settings:

■ In Windows 9x/XP, click Start ► Settings ► Control Panel. Double-click the System icon and select the Performance tab. The Virtual Memory button is along the bottom of the window.

■ In Windows NT, click Start ► Settings ► Control Panel. Double-click the System icon and select the Performance tab. Then, click Change in the Virtual Memory area.

■ In Windows 2000, click Start ► Settings ► Control Panel. Double-click the System icon and select the Advanced tab. Then, click Performance Options and, in the Virtual Memory area, click Change.

■ In Windows XP, click Start V Control Panel. Double-click the System icon and select the Advanced tab. In the Performance area, click Settings. Next, click the Advanced tab 'yes, another Advanced tab), and then, in the Virtual Memory area, click Change.

Note that in addition to changing the swap file's size and how Windows handles it, you can also specify the drive on which you want to place the file.

Do not set the swap file to an extremely small size. Another general rule would be that the swap file should be at least as big as the amount of RAM in the machine. If you make the swap file too small, the system can become unbootable, or at least unstable.

Virtual reality (VR) software uses graphics, sound, and other tools to create an artificial world through which a user can seem to move. Virtual reality systems generally include a headset that has two tiny display screens, one for each eye. The images on the screens differ in a way that creates the illusion of three dimensions when viewed together. That illusion is enhanced when the user's head moves. The computer adjusts the images to the new perspective resulting from the movement.

63

Virtual worlds are filled with objects that can be "handled" by users wearing special sensor-lined gloves. The sensors tell the computer when the wearer moves a gloved hand. Suppose the user of a VR system closes the fingers of a gloved hand so that the corresponding virtual hand closes around a virtual ball. Then suppose the user raises the gloved hand. The computer will display the image of the ball being picked up.

Virtual reality images do not have nearly the detail of what is seen in the actual world, or even in nonvirtual video games. However, the images are realistic enough for video games.

Glossary	
idle piece – вільний простір	**extremely** – надзвичайно
to swap – переставляти, міняти	**headset** – навушники
temporary – тимчасовий	**directory** – папка, каталог

Exercises

1. Learn the new words and use them in short phrases of your own.

_____
_____
_____
_____

2. Render the plot of the text:
    a) without details (in three or four minutes' time),
    b) give a brief summary of the text.

_____
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3. Render the following key terms into Ukrainian. Discuss the points with your colleagues. Use the following phrases:

To my way of thinking…	*На мою думку…*
I might add…	*Я міг би додати …*
I would say that…	*Я б сказав, що…*

virtual memory   A memory-management technique that allows information in physical memory to be swapped out to a hard disk. This technique provides application programs with more memory space than is actually available in the computer. True virtual-memory management requires specialized hardware in the processor for the operating system to use; it is not just a question of writing information out to a swap file on the hard disk at the application level.

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swap file   On a hard disk, a file used to store parts of running programs that have been swapped out of memory temporarily to make room for other running programs. A swap file may be permanent, always occupying the same amount of hard disk space even though the application that created it may not be running; or it may be temporary, created only as and when needed.

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directory   Used to organize files on the hard drive. Another name for a directory is a folder. Directories created inside or below others are called subfolders or subdirectories.

_____
_____
_____
_____
_____

4. Complete the sentences with one of the words in the box. Careful! They are not all used.

High level

computer code

assembly

programming languages

smart program

memory

information device

files technology

word processors

1. Virtual _____uses what's called a swap file, or a paging file.
2. The user communicates with the _____.
3. Computers appear to work directly with programs written in_____.
4. There are many _____ programming languages.
5. Some computer programs may be written in an _____language.
6. _____are computers that mainly type, edit, and print letters and other documents.
7. Electronic devices in the pen and under the surface of the pad interact to translate the motions into_____.
8. The main use of tape drivers for file storage is to back up _____stored on hard disks.

5. To revise the vocabulary studied and necessary for communication on Software write out as many words as you can concerning computer and software and beginning with the given letters, like in Column 1.

W	izards
I	con
N	etwork
D	ata
O	bject
W	ords
S	oftware

M
I
C
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D

6. Read the text. Render it into Ukrainian. Give it a head-line. Discuss with your partner one of the locations on the World Wide Web.

Web browser is a software package used to access locations on the World Wide Web, part of the global computer network called the Internet. Most browsers also contain electronic mail (e-mail) software, including a simple word processor and a system for storing mail.

To browse the Web, a computer user must first establish a telephone connection with a computer operated by a business called an Internet service provider (ISP). The user makes this connection by means of a device known as a modem and special software.

Once the connection is made, a display created by the ISP appears on the screen. In some cases, the user can employ the browser directly from this display. In other cases, the user must access a separate browser display. The key part of a browser display--or the browser portion of an ISP display--is a box called an address field. To access a location on the Web, known as a Web site, the user types the site's address in the address field.

Web sites generally consist of several displays called pages. Accessing a site brings the first page to the screen via the telephone connection. This page contains text and, in many cases, illustrations. Certain illustrations and passages of text are "hot"-they contain electronic links to other pages or even other Web sites. The user can access another page or site by selecting the "hot" area-with a mouse, for example. The browser manages all the switching between links.

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Speaking Task

7. Look at the pictures below. What do you know about Windows? Compare and contrast the pictures. Think of what types of operating systems were designed to help free up and reallocate resources to better run Windows and Windows-based applications.

Modal Verbs

1. Translate the sentences and analyze the meanings of modal verbs. What's the difference?

Can

➢ Users can give the computer instructions through input devices.

➢ _____
_____

➢ You can add other options (such as Printers And Faxes) to the Start menu.

➢ _____
_____

May

▪ Clicking one of the menu choices displays a list of related options you may choose from.

▪ _____
_____

▪ The available programs may be very useful to a technician.

▪ _____
_____

Should

❖ You should be familiar with the command's available switches.

❖ _____
_____

❖ Once you choose a category, you should pick a task, and the appropriate control-panel program is opened for you.

❖ _____
_____
_____

Need

o To send and to receive e-mail, you need to have only two things: an e-mail account and an e-mail client.

o _____
_____
_____

o You needn't attend computer classes to become a computer hacker.

o _____
_____

Must

✚ You must buy a computer to be a good specialist.

✚ _____
_____

✚ To configure the minimum and maximum swap file size, you must change the default setting.

✚ _____
_____

Have to

- To issue a command from the command prompt, you have to know the structure the command uses.

- _____
_____
_____

- To know the structure of a computer, you have to learn a lot of terms by heart.

- _____
_____

- Choose three modal verbs and make your own sentences with them.

- _____
_____

2. Translate the following sentences using the appropriate modal verbs:

1. За допомогою комп'ютера ви можете виконувати будь-які обчислення.
2. Вам необхідно перевірити всю систему.
3. Мені дуже прикро, але я не можу інсталювати цей диск.
4. Вона ніколи не могла запустити програму в правильному режимі.
5. Ти можеш знайти необхідну інформацію в Інтернеті.
6. Ти повинен зареєструвати свою електронну адресу.
7. Він міг годинами грати в комп'ютерні ігри.
8. Тобі прийдеться вивчити як виконувати цю вправу на комп'ютері.

3. Name the tense form in which the underlined verb is used:

1. All versions of Windows <u>include</u> a number of applications. (_____)
2. The Windows system <u>is</u> functional from the time it <u>is</u> first <u>installed</u>. (_____) (_____)
3. Software designers <u>take</u> full advantage of the hardware for which they <u>are designing</u> their software. (_____) (_____)
4. Higher version numbers <u>mean</u> newer versions. (_____)
5. It initially <u>ran</u> on the Intel 8008. (_____)
6. E-mail <u>has allowed</u> you to transfer messages to other people.(_____)
7. Either way, you <u>will have</u> an address that <u>looks</u> like <u>username@domain.com</u>. (_____) (_____)
8. A number of companies <u>manufactured</u> DOS, but most of them <u>produced</u> similar versions. (_____) (_____).
9. Common browsers <u>are</u> Netscape's Navigator and Microsoft's Internet Explorer. (_____)
10. If you <u>are using</u> Windows XP and you have your Control Panel view set to Category View, you <u>won't see</u> the Mail applet. (_____) (_____)

Notes on the topic studied:

_____

Notes on the topic studied:
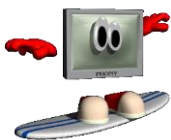
Unit 7
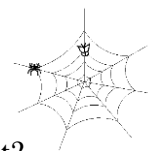
- Will you define the word _Internet_? Have you an access to it?
- How often do you use it? What is the most frequent purpose of your usage?
- Do you know any protocols? Will you name them?

Task 2. Practise saying the following words. Pay attention to the pronunciation:

network, huge mainframe, special hardware, high-speed communications lines, businessperson, elaborate, visual quality, medical treatments, publisher, to make and track investments, advertisers, monthly service charge, technicians, to be familiar, directly, receipt of messages, particular situations, requested task, machine's host name, assignments, to distribute, animation, sound effects, electronic "chat rooms", hierarchy.

Task 3. Read the text and find some information about Internet Service Providers.

Internet

Internet is a vast network of computers that connects many of the world's businesses, institutions, and individuals. The Internet, which means interconnected network of networks, links tens of thousands of smaller computer networks. It enables computer users throughout the world to send and receive messages, share information in a variety of forms, and even play computer games with people thousands of miles away. Computers linked to the Internet range from simple and inexpensive personal computers, often called PC's, to huge mainframe computers used by government institutions, educational institutions, and businesses.

Computers require special hardware and software to connect to the Internet. Necessary hardware includes a modem, a device that translates a computer's digital information into signals that can be transmitted over telephone lines. Required software includes a communications program that allows the transmission and receipt of messages.

The Internet, often called simply the Net, began as a collection of text-based information. But the development and rapid growth of a part of the Internet called the World Wide Web (also known as WWW or the Web), transformed the presentation of information on the Net. In addition to text, the Web allows the use of photographs, moving pictures, and sound to create presentations approaching the visual quality of television and the audio quality of recorded music.

Uses of the Internet

The major uses of the Internet include communication, research, publishing, and sales.

Communication. Probably the most popular use of the Internet and the Web is electronic mail, also called e-mail. Virtually every Internet user is assigned an electronic address from which e-mail messages are sent and at which they are received. The Internet carries hundreds of millions of e-mail messages each day.

An Internet service provider (ISP) offers local telephone numbers through which an individual, using a computer and modem, can connect to the Internet. An ISP maintains its customers' e-mail addresses, routes e-mail and requests for Internet-based information to and from its users, and manages high-speed communications lines that speed up Internet sessions. An on-line service provides a wide range of exclusive content in addition to Internet access.

Research. The Internet is like a vast library, containing as much knowledge on every subject as might be held in millions of books. Information is available in many forms, from files consisting only of text to multimedia files that combine text, photos, animation or video, software programs, and sound. Internet resources grow larger every day.

Because of the ease with which information is stored on computers, and the speed with which it can be accessed, the Internet is a popular first stop for many people performing research. A businessperson might search Internet resources for help in developing sales or product information. Students can access databases to find material related to homework assignments or courses of study.

Physicians use the Net to compare medical treatments and to review advances in medical science. Scientists share research data on the Internet.

Publishing. Publishers are increasingly using the Internet as a medium for presenting newspapers, magazines, and books. Because information on the Net is electronic, the publisher is freed from the costs of paper, printing, and distribution. More importantly, the publisher can update information instantly, making it possible to distribute far more current news than could be provided on paper.

Sales. Many businesses use the Internet to carry on commerce. Retail establishments sell nearly every type of product over the Internet. Software publishers view the Net as a convenient and inexpensive way to distribute products. Over the Internet, users can buy new programs, sample programs before purchasing them, or receive upgrades to programs they already own. Users generally make Internet purchases with credit cards.

Because tens of millions of people use the Internet every day, advertisers are eager to place messages in frequently visited spots. Those ads can be electronically linked to an advertiser's own information, which often takes the form of elaborate multimedia files. In effect, advertisers can invite Internet users to view commercials on their computer. Additionally, a user can supply the advertiser with his or her e-mail address to get further information or incentives, such as discount coupons.

The Internet also has important uses within the financial community. Many banks and stockbrokers offer their customers software to make and track investments from their computer.

Other uses. A popular feature of the Net is chat. Using special software, users can gather in Other uses. A popular feature of the Net is chat. Using special software, users can gather in electronic "chat rooms" and send typed messages back and forth, discussing topics of common interest. The Internet also features many Web-based games with animation, sound effects, and music. Game players can challenge players in distant countries to tournaments.

One of the procedures today's technicians perform most often is setting up a computer to connect to the Internet. It has been estimated that over 50 percent of the homes have computers and that over 50 percent of those computers are connected to the Internet. It's is no wonder that most computers come with software to connect them to the Internet.

There are some common terms and concepts every technician must understand about the Internet. First, the Internet is really a bunch of private networks connected together using public telephone lines. These private networks are the access points to the Internet and are run by companies called Internet Service Providers (ISPs). They sell you a connection to the Internet for a monthly service charge (like your cable bill or phone bill). Your computer talks to the ISP using public phone lines, or even using technologies such as cable or wireless.

Two major protocols are used on Windows networks: Transmission Control Protocol/Internet Protocol (TCP/IP) and Internetwork Packet eXchange/Sequenced Packet eXchange (IPX/SPX; NWLmk). Each has benefits over the other for particular situations (although TCP/IP has become the de facto standard for most networks because of its use on the Internet).

TCP/IP

Because the Internet is a network, everyone on it needs to be running the same protocol in order to communicate. The protocol of the Internet is TCP/IP, and increasingly, the protocol of the Internet is becoming the primary protocol of all networks. Named for two of

its most commonly used components, TCP/IP is actually a suite of protocols rather than just being a single monolithic creation.

When you're starting to work with TCP/IP, the first thing to note is that it is generally managed by using two independent hierarchical structures. The first is the IP address hierarchy. Each computer that runs TCP/IP must have a unique IP address assigned to it, and that address must fall within a specific range. IP addresses are composed of a set of four numbers, each of which must be in the range from 0 to 255. The IP address can either be automatically assigned to the machine or an administrator can specifically assign it. Aside from its IP address, a machine also has a *host name* which identifies it on the network. Host names are friendly names by which computers can be more easily located, and they are managed using a worldwide naming system called the *Domain Nante System (DNS)*. DNS allows a user to type in http://www.yahoo.com and be connected directly to a computer hundreds or thousands of miles away. The same user could use an IP address such as http://200.50.172 .14 (not Yahool's actual address), but most people find that the domain name (yahoo.com) is far easier to remember. Table 4 includes a list of other common Internet terms with which you will want to be familiar.

TABLE 4   **Internet Terminology**

Term	What It Means
ISP Host	Internet Service Provider. A company that provides access to the Internet. A computer on a TCP/IP network such as the Internet.
www	World Wide Web (or just Web). This graphical extension of the Internet allows users to search for and view information easily through the use of a browser. Users navigate the Web by jumping from one page to the next through hyperlinks.
Hyperlink	Text or an image on a web page that, when clicked, takes the user to another place on the page or to a different page.
Browser	Software made to understand and interpret HTTP content.
HTTP	A TCP/IP protocol that defines how World Wide Web content is downloaded and displayed in your browser. HTTP stands for Hypertext Transfer Protocol.
FTP	File Transfer Protocol; another TCP/IP protocol. Used to transfer large files over the Internet. Users can use either a graphical client or a command line.
E-mail	Electronic mail. A way of sending and receiving messages over the Internet.
DHCP	Dynamic Host Configuration Protocol. Used to automatically configure TCP/IP information for hosts on the network.
WINS	Windows Internet Name Service. Manages Microsoft NetBIOS-based names and makes it easier to find resources on a Microsoft network.
DNS	Domain Name System. Manages Internet host and domain names and makes it easier to find resources on TCP/IP networks.
HTML	Hypertext Markup Language. The programming language in which web pages are designed. This simple language describes what items are on the page; the web browser interprets the HTML when loading the page and displays it.
HTTPS	*Hypertext Transport Protocol—Secure.* One method of securing HTTP connections between web server and web browser.

Glossary	
buzzword – спеціальний термін	**to estimate** – оцінювати, приблизно підраховувати
benefits – вигода	
de facto – фактично	**to be familiar** – бути добре відомим
	to assign – надавати

<div align="center">

Exercises

</div>

1. Learn the new words and use them in short phrases of your own.

_____
_____
_____
_____
_____
_____

2. Render the plot of the text:
   a) without details (in three or four minutes' time),
   b) give a brief summary of the text.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

3. Ask one of your fellow-students questions about the Internet facilities. Use the active vocabulary of the text.

4. Make up a story on the basis of the information gained (in 7-8 sentences).

_____
_____
_____
_____
_____
_____
_____
_____
_____

5. Render the following key terms into Ukrainian. Discuss the points with your colleagues. Use the following phrases:

I am interested in your opinion.	*Мене цікавить ваша думка.*
I agree entirely with …	*Я в цілому погоджуюсь з…*
I believe it is rather…	*Я вважаю, що це достатньо…*

protocol In networking and communications, the specification that defines the procedures to follow when transmitting and receiving data. Protocols define the format, timing, sequence, and error-checking systems used.

_____
_____
_____
_____
_____
_____

browser   A piece of software used to access the Internet. Common browsers arc Netscape's Navigator and Microsoft's Internet Explorer.

_____

_____

_____

host name The name by which a computer is known on a **TCP/IP** network. This name must be unique within the domain the machine is in. In Windows 2000, the computer name is always the same as the machine's host name, whereas in Windows *9x* the two can be different.

_____

_____

_____

_____

_____

_____

wizard   A preprogrammed utility that walks you through a particular task. Each wizard generally includes a number of different pages, each of which allows you to enter information or choose particular options. At the finish of the wizard, the computer performs the requested task based on the information it has gathered.

_____

_____

_____

_____

_____

_____

_____

6. Give Ukrainian equivalents of:
display, adapter, cable, socket, function, circuit, keyboard, resource, digit, operating systems, software, hardware, speed, accuracy, memory, design, capability, network, scheme, property, sound, figure, to click, to connect, to issue, to replace, to perform, to execute, to locate, to access, to minimize, to start, to configure, to find, to include, to provide.

_____

_____

_____

_____

_____

_____

_____

7. Fill in the blanks with the necessary words in brackets:
1. Mainframes are the fastest _____, and they use the largest storage system. (processors, computers, programs)
2. Monitors have a screen much like a _____(touch screen, plotters, television screen).
3. The control unit directs and coordinates computer operations according to instructions stored in the _____.(memory, floppy disc, hard disc).
4. Double-clicking closes the _____and shuts down the application (disk, window,   monitor).
5. Computers can connect to the Internet through local access _____(users, servers, providers).

8. Read the text and fill in the gaps from below. Render it into Ukrainian. Give it a head-line. Discuss with your partner a basic understanding of what each protocol does.

Hypertext Transfer Protocol (HTTP) The command and control protocol used to manage communications between a web browser and a_____. When you access a web page on the _____or on a corporate intranet, you see a mixture of text, graphics, and links to other documents or other Internet resources. HTTP is the protocol that initiates the transport of each of the components of a web page.

File Transfer Protocol (FTP)   A TCP/IP protocol that provides a mechanism for single or multiple file transfers between_____; when written in lowercase, ftp is also the name of the client software used to access the FTP server running on the remote host. The ftp package provides all the tools needed to look at files and directories, change to other directories, and transfer text and _____from one system to another. FTP uses TCP port 21 to actually move the files.

Network News Transfer Protocol (NNTP) Used to transport Internet news (also called Usenet news) between news servers. It is also the protocol used to transport these news articles between news servers and news clients. This protocol is often confused with the Network Time Protocol (NTP), which serves a different purpose.

(computer systems, binary files, web server, Internet)

Test your grammar

1. Fill in the missing forms:
Model: simple-simple-the simplest, dangerous-more dangerous-the most dangerous

Positive degree	Comparative degree	Superlative degree
high	higher	the highest
...	quicker	...
secure	…	…
stable	…	…
…	...	the newest
…	older	…
…	more powerful	…
great	…	…
complex	…	…
…	…	the most popular
different	...	...
…	more difficult	...
easy	…	...
rectangular	…	...
…	more active	...
far	…	...
...	further	...
many	...	...
...	…	the most

Suffixes and prefixes

2. Make at least *one* new word with each base word using either a suffix or a prefix. Use your dictionary to help. Sometimes you will need to change the spelling a little.

Prefix	Base word	Suffix
	possible	
	thought	
	agree	
	care	
un	hope	ful
	conscious	
in	human	less
	success	
im	polite	able
il	help	ness
	understand	
dis	taste	ment
mis	legal	ity
	logical	
	stress	
	popular	
	use	
	like	

3. Use the correct form of Passive Voice:
1. Any keystrokes (to direct) _____ to the active window by default.
2. Some of these commands (to built) _____ into the OS, whereas others (to issue) through the use of applications.
3. Very minor revision (to indicate) _____ with an additional decimal point.
4. The architecture of Linux (to base) _____ on UNIX.
5. PC-DOS (to support) _____ and (to sell) _____ by IBM for use only on computers that (manufacture) by IBM.
6. After Windows 95, Windows 98 (to introduce) _____ as its successor.
7. NT (which unofficially stands for New Technology) is an OS that (to design) _____ to be far more powerful than any previous Windows version.
8. _____ (to use) Windows control panel applet to configurate the system?
9. The System Tray (to locate) _____ on the right side of the Taskbar, _____ it?
10. In addition, the Help system (to update) _____ with a new interface and new tools in Windows XP.

4. Ask questions for which the sentences below provide the answers:

1. There are a number of digital computers here.

   _____
   _____
   _____

2. There were some major errors in the instructions.

   _____
   _____
   _____

3. The World Wide Web is the most visible part of the Internet.

   _____
   _____
   _____

4. The user can also write the message in an e-mail form.

   _____
   _____
   _____

5. Computer technology improved rapidly during the 1960's.

   _____
   _____
   _____

6. In 1975, college students Bill Gates and Paul Allen founded Microsoft Corporation to develop programs for the Altair.

   _____
   _____
   _____

7. The first special-purpose electronic digital computer was constructed in 1939 by John V. Atanasoff, an American mathematician and physicist.

   _____
   _____
   _____

8. The first true calculating machines were developed in the 1600's.

   _____
   _____
   _____

Notes on the topic studied:

Notes on the topic studied:
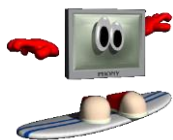
Unit 8

Task 1. Think and answer such questions:
- Are you an Internet club goer?
- Do you enjoy writing letters? What about receiving them?
- How often do you get e-mail? Who sends messages to you?

Task 2. Match a line in A with a line in B

A	B
The Internet is really a bunch of private networks… The protocol of the Internet is becoming… Each computer that runs TCP/IP… A swap file is actually hard drive space… RAM is… Display is… CPU is…	- the primary protocol of all networks. - into which idle pieces of programs are placed. - the computers physical memory. - the screen element in a laptop computer. - the computing and control part of the computer. - connected together using public telephone lines. - must have a unique IP address assigned to it.

Task 3. Practise saying the following words. Pay attention to the pronunciation:

company, domain, applet, account, e-mail client, inexpensively, address, define, to retrieve, for instance, username, to switch, visible part, associated peripherals, channel capable, clearance, hosts, via the network file server, message, communications program, on-line service, automatically, word-processing program, graphics files, inexpensively, unique, incoming mail, e-mail application.

Task 4. Read the text and write down some specific rules how to write a domain.

E-Mail

Electronic mail (e-mail) is one of the most-used features available on the Internet and through on-line services. Just as every Web site or Internet location has an electronic address, so does every individual computer connected to a local access provider or on-line service. Individuals and businesses use these addresses to send one another messages known as electronic mail (e-mail). E-mail allows you to quickly and inexpensively transfer messages to other people.

The user can write an e-mail message in a word-processing program, then transfer it to a communications program. The user can also write the message in an e-mail form, a box displayed on the monitor. Most communications software and on-line services provide e-mail forms. After completing the message, the user can attach nontext material, such as graphics files, to it. The user then addresses the message. The user can send the message to several addresses without rewriting it. The user merely enters all the addresses as instructed by the computer. The computer automatically enters the sender's electronic address, making response easy. An "electronic mailbox" at each computer address stores the mail.

To send and receive e-mail, you need to have only two things: an e-mail account and an e-mail client. The account can be provided by a company, or it can be associated with your ISP account. Either way, you will have an address that looks like username@domain.com.

The last part of this address (after the @.) identifies the domain name of the company or ISP that provides you with your e-mail account. The part before the @ is your username. A

username must be unique on each domain. Two Bill the Cat users on a single network, for instance, might be billthecat@domain.com and billthecatl@domain.com.

As with other TCP/IP services, e-mail needs to be configured. (Nothing in TCP/IP networking ever just works by itself, it seems.) Windows provides a service called *Messaging Application Programming Interface (MAPI)* to make configuring e-mail easier; overall, configuring e-mail to relatively straightforward.

Your MAPI settings can be defined in Control Panel's Mail applet. Figure 1 shows just a few of the many Internet e-mail settings you can define. Among these are the *Post Office Protocol v3 (POPS)* and *Simple Mail Transport Protocol (SMTP)* server settings, which an administrator will give you. A POP3 server is a machine on the Internet that accepts and stores Internet e-mail and allows you to retrieve that mail when you are online. An SMTP server accepts mail you want to send and forwards it to the proper user. In order to send and receive mail, you need both.

Simple Mail Transfer Protocol (SMTP)   The protocol responsible for moving messages from one e-mail server to another. It is also the protocol used to send e-mail from a client to an e-mail server. Most e-mail servers run either Post Office Protocol (POP3) or Internet Mail Access Protocol (IMAP) to distribute e-mail messages to users. All e-mail servers that send e-mail to the Internet must be using TCP/IP and an e-mail program that can send e-mail using SMTP.

Post Office Protocol 3 (POPS)   Used to download mail from an Internee (SMTP) mail server. POP3 servers provide a storage mechanism for incoming mail. When a client connects to a POP3 server, all the messages addressed to that client are downloaded; messages cannot be downloaded selectively. Once the messages are downloaded, the user can delete or modify messages without further interaction with the server. In some locations, POP3 is being replaced by another standard, Internet Mail Access Protocol (IMAP).

The main transporting protocol of the Web is HTTP (Hyper Text Transfer Protocol), that is high level network protocol.

Every time you are surfing the internet, you use it to get web-pages with all it's content (images, animations, music, video, applets etc.).

FIGURE   1   Internet e-mail properties
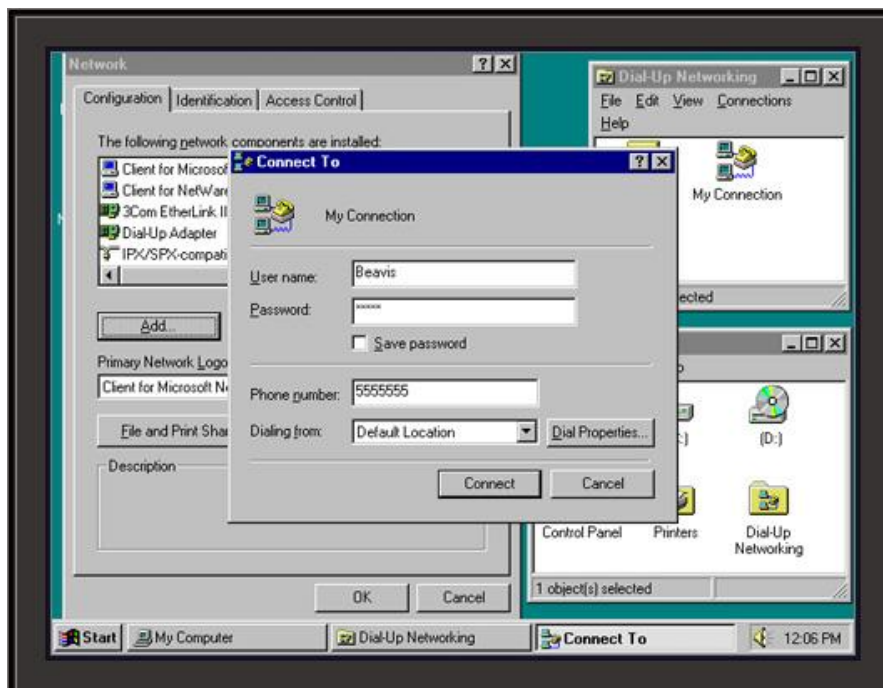
If you are using Windows XP and you have your Control Panel view set to Category View, you won't see the Mail applet as well as several others! Simply click the Switch to Classic View option in the task pane on the left to switch to Classic view so you can see the Mail applet.

Once you have configured the settings, you need to install an e-mail client or use the built-in client included with Windows 98/NT/2000/XP. That client is called Outlook Express, and it's a good basic e-mail application.

Glossary	
view – перегляд, вигляд	**inexpensively** – економно
an e-mail account – рахунок ел. пошти	**to transfer** – пересилати, передавати
an e-mail client – користувач ел. пошти	**the domain name** – послідовність імен в Інтернеті

Exercises

1. Learn the new words and use them in short phrases of your own.

_____
_____
_____
_____
_____
_____

2. Render the plot of the text:
   a) as it is,
   b) give a brief summary of the text.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

3. Render the following key terms into Ukrainian. Discuss the points with your colleagues. Use the following phrases:

I'd like to talk about…	*Я хотів би поговорити про…*
Talking about…	*Говорячи про…*
It is my belief that…	*Я впевнений, що…*

e-mail Electronic mail, generally sent across the Internet using protocols named SMTP (for sending) and P0P3 (for receiving).

_____
_____
_____
_____

Internet The global TCP/IP network that now extends into nearly every office and school. The World Wide Web is the most visible part of the Internet, but e-mail, newsgroups, and FTP (to name just a few) are also important parts of the Internet.

_____
_____
_____
_____
_____

network A group of computers and associated peripherals connected by a communications channel capable of sharing files and other resources between several users. A network can range from a peer-to-peer network (that connects a small number of users in an office or department) to a local area network (that connects many users over permanently installed cables and dial-up lines) or to a wide area network (that connects users on several different networks spread over a wide geographic area).

_____
_____
_____
_____
_____
_____
_____
_____

default gateway The path taken by all outgoing traffic unless another path is specified. If you need to communicate by TCP/IP with a computer that is not on your subnet (the local network segment), the computer needs to use a gateway to access this remote network.

_____
_____
_____
_____
_____
_____

file sharing   In networking, the sharing of files via the network file server. Shared tiles can be read, reviewed, and updated by more than one individual. Access to the file or files is often regulated by password protection, account or security clearance, or file locking, to prevent simultaneous changes from being made by more than one person.

_____
_____
_____
_____
_____
_____

host   The central or controlling computer in a networked or distributed processing environment, providing services that other computers or terminals can access via the network. Computers connected to the Internet are also described as hosts, and can be accessed using FTP, Telnet, Gopher, or a browser.

_____
_____
_____
_____
_____
_____

Speaking Task

4. Working with a partner read, translate and discuss the information given below. Then write your story based on the information gained.

Client-side applications run in the web-browser.

There is a big variety of web-browsers. Mobile browsers, browsers for handheld devices, browsers for embedded computers, browsers for desktops, text browsers and others.

There are 4 most popular browsers: Opera, Internet Explorer, Firefox and Safari.

Opera browser is considered to be the most secured browser over the web.

Opera was developed by the Norwegian Opera Software company. It supports many additional features as torrent client and e-mail client. It is on the 3rd place by popularity among browsers, but it's popularity is growing up.

Internet Explorer is the most popular browser in the world. It is so not because it is the best, but because it is integrated in Windows, that is the most popular operating system. A lot of Windows users even don't know that there are other browsers, that are better than IE. IE is considered to be the most unsecured and not very fast browser. Today, more people begin to use alternative browsers as Opera or Firefox.

Mozilla Firefox is a free and open-source web-browser developed by Mozilla corporation. Firefox is the most convenient browser for web developers because of it's various developer tools that can be installed as add-ons. It is the most customizable browser among all, and it takes 2nd place by popularity in the world.
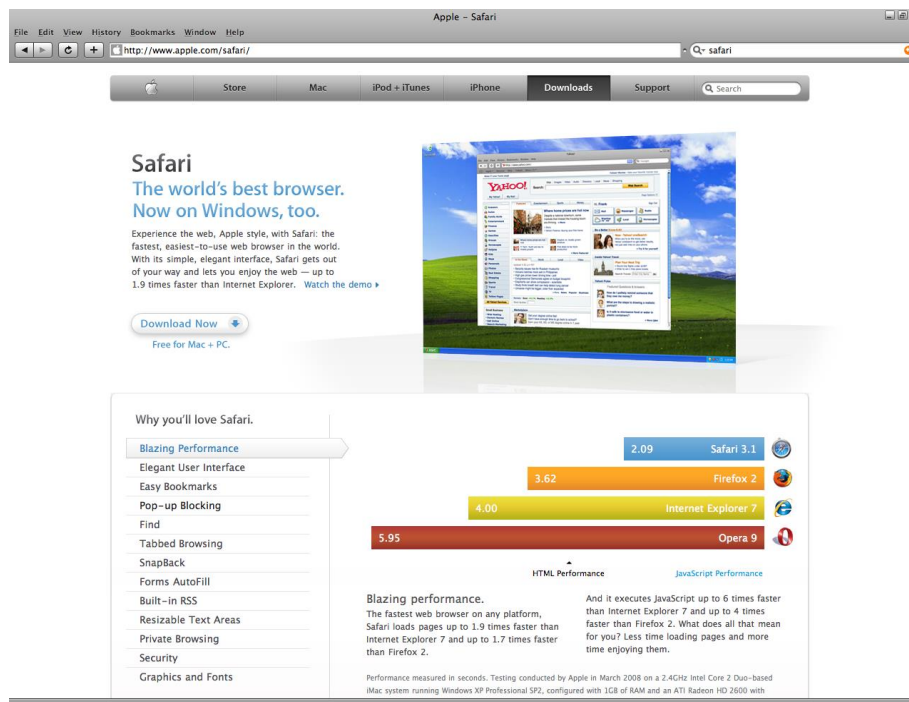
Safari takes the last place by popularity, but it doesn't mean that Safari is the worst. It is not so popular, because the only platform it was supported was Mac. Now Safari is also available for Windows.

Safari is a fast browser with good standards support.

_____
_____
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_____
_____

5. Review questions:

1. Sending and receiving electronic mail (e-mail) is a common benefit of the Internet. Assuming a user has access to the Internet on a properly configured PC, which of the following items are required before a user can begin using e-mail?
   a. An e-mail account and a domain
   b. An e-mail account and an e-mail client
   c. An e-mail account and e-mail permissions
   d. None of the above

2. Which of the following TCP/IP protocols is used to send mail on the Internet?
   a. HTTP
   b. SMTP
   c. P0P3
   d. FTP

Words that go together.

6. Look at the following groups of words. Which of the surrounding words cannot go with the noun in the centre? Give your reasons.
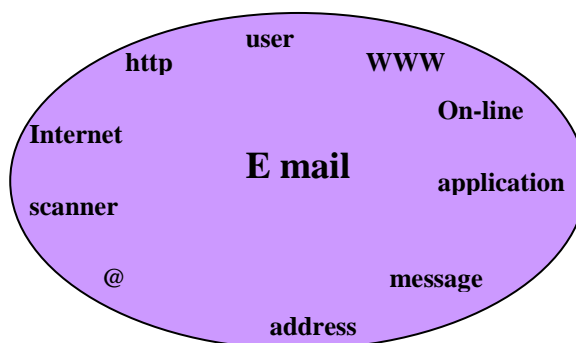
7. Put the words in the right order to form a sentence.
   1. the operation, that, computer software, of, instructions, the computer, consists of, control.

   _____
   2. general kinds, application software, and, there are, operating system software, two, software, of.

   _____
   _____

3. languages, many, programming, high-level, there are.

_____

4. reads, executes, each, and, instruction, the microprocessor, translated.

_____

5. objects, programmers, many, use, programming.

_____

8. Complete the sentences with one of the words in the box. Careful! They are not all used.

```
   hardware        market        method              software

   Operating system    Graphical User Interface          elements

                 icons                     application
   Basic language
                        graphic environment
```
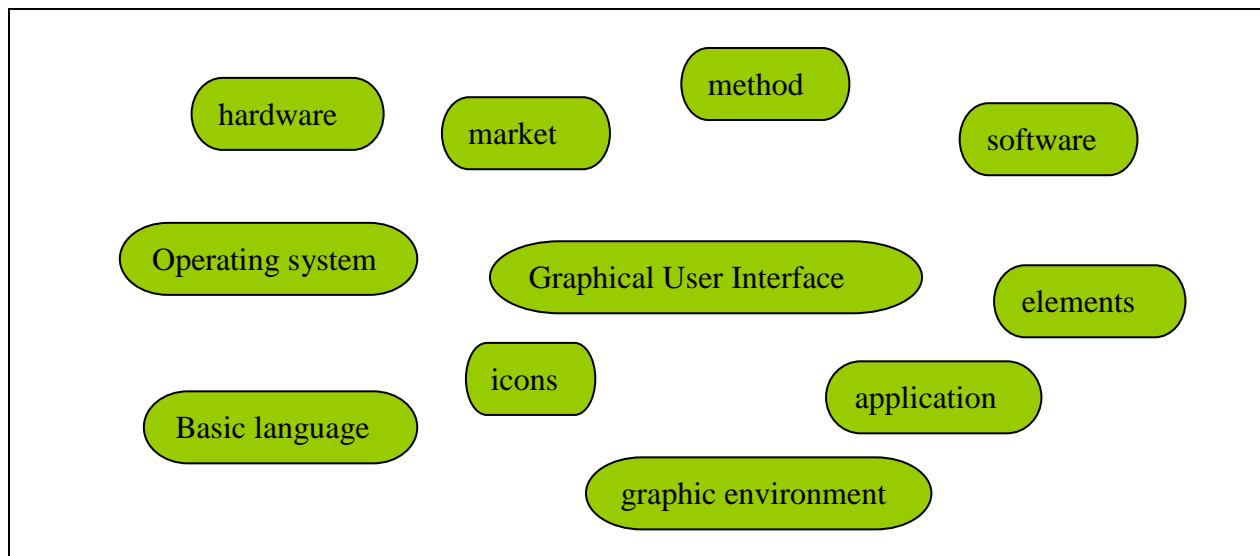
1. The _____gives users an interface with the computer.
2. Each_____is specifically configured for the OS on which it will run.
3. Intel/Windows machines dominate the corporate _____almost completely.
4. Gates and Allen created the _____in 1976.
5. _____is the method by which a person communicates with a computer.
6. The smallest element (pixel) that display _____can use to create text or graphics.
7. _____are on-screen graphics that act as doors through which programs are started.
8. Desktop contains the visible elements of Windows and defines the limits of the_____ .

9. Read the text and fill in the gaps from below. Render it into Ukrainian. Give it a head-line. Discuss with your partner the importance of computer security.

Many people fear that their right to privacy is threatened by the possible misuse or unauthorized disclosure of information in computer databases. Certain databases hold private and _____, such as medical, banking, or tax records. Others contain business plans or inventions that a company wishes to conceal from competitors. Still others store top-secret military information and other kinds of data important to a nation's security.

Laws limit the disclosure of information in databases, and operating systems are designed to prevent unauthorized entry into a computer. Many computers require a user to enter a secret password. In addition, some computer systems _____scramble information so that the information can be decoded only by authorized personnel. Nevertheless, _____sometimes occur. Industrial spies and thieves often use telephone lines to gain access to computers. Some of these criminals steal or change the information in a_____. Others steal money by transferring funds electronically.

(computer database, automatically, personal information, computer crimes)

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_____

Test your grammar

1. Put the words in the right column according to the pronunciation of –s at the end of the word.

modems, hours, keys, graduates, messages, computers, places, minutes, bits, printers, displays, interfaces, cables, circuits, sockets, methods, wants, desks, commands, desktops, resources, processors, features, tasks, versions, users

/ IZ /	/S /	/ Z /

2. Correct the mistakes if any (pay attention to the verb forms):

1. Has you got a computer?

   _____

2. The incredible global computer revolution are not due just to hardware.

   _____

3. The OS perform many different tasks.

   _____

4. Graphical User Interface is the method by which a person communicate with a computer.

   _____
   _____

5. The Control Program for Microcomputer is an OS you may never has heard of.
_____

6. Gary Kildall has written this OS in 1973.
_____

7. All application programs uses the operating system to gain access to the system resources which are needed.
_____
_____

8. The introduction of Windows XP come in two versions: XP Home and XP Professional.
_____
_____

9. They did not wanted to edit batch files or hunt through directories using CD or DIR commands.
_____
_____

10. Windows have always include a very good Help system.
_____
_____

3. Put all types of questions to the following sentences:
1. Windows provides a service called Messaging Application Programming Interface to make configuring e-mail easier.
_____
_____
_____
_____

2. The Control Program for Microcomputer ran on the Intel 8008 initially.
_____
_____
_____
_____

3. E-mail has allowed you to transfer messages to other people.
_____
_____
_____
_____

4. Computers require special hardware and software to connect to the Internet.
_____
_____
_____
_____

5. Internet resources grow larger every day.
_____
_____
_____
_____

6. Web sites generally consist of several displays called pages.
_____
_____
_____
_____

4. Translate the following International words:

Nouns	Verbs
system	optimize
computer	organize
interface	activate
command	maximize
code	minimize
program	coordinate
Windows	
Internet	
cursor	
function	
protocol	
document	
file	
version	

5. Look at the picture. Can you understand it? Why is it funny? Make up the story of your own.

_____
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Project Work
1. Prepare a multimedia presentation on the topic "Internet". Use Power Point.
2. Write your e-mail address.
3. Design your own web site.

Notes on the topic studied:

Notes on the topic studied:

Notes on the topic studied:
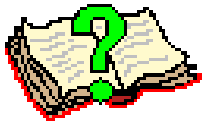
Unit 1

Task 1. Think and answer such questions:
- What is a window? What shape has it?
- Has it anything similar with a window of a room?

Task 2. Read the text and study the basic elements of a window.

What's in a Window?

A program *window* is a rectangular area created on the screen when an application is opened within Windows. Most windows include at least a few basic elements.

Elements of a Window

Several basic elements are present in a standard window. Figure 1 shows the control box, title bar» Minimize button. Restore button. Close button, and resizable border in a text editor called Notepad (NOTEPAD. EXE) that has all the basic window elements – and little else.

FIGURE   1   The basic elements of a window
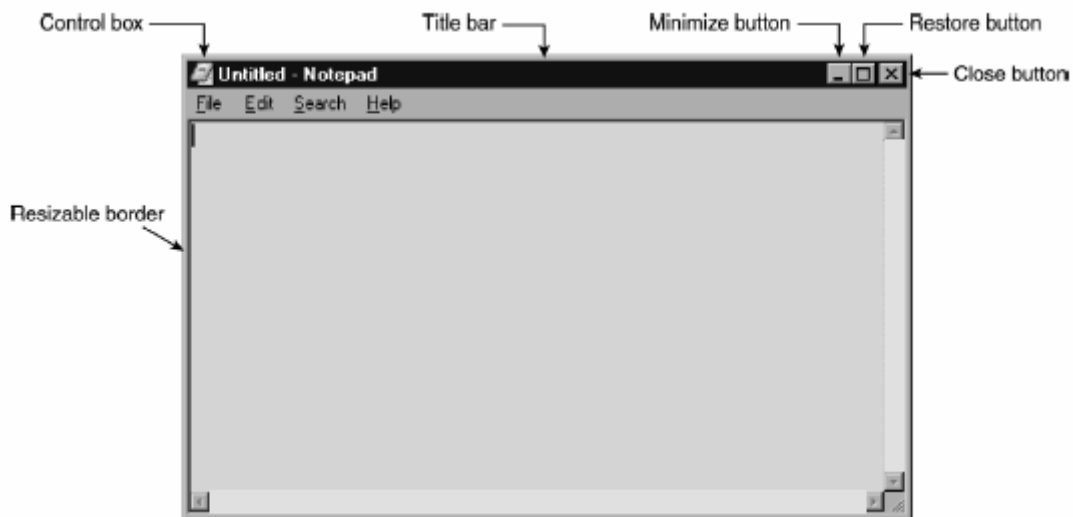
The basic window elements are as follows: Control Box   In the upper-left corner of the window. Used to control the state of the application. It can be used to maximize, minimize, and close the application. Clicking it once brings into view a selection menu. Double-clicking it closes the window and shuts down the application.

Minimize and Restore Buttons Used to change the state of the window on the Desktop. They are discussed in the "States of a Window" section later in this chapter.

Close **Button** Used to easily end a program and return any resources it was using to the system. It essentially does the same thing as double-clicking the control box, but with one less click.

Title Bar The area between the Control box and the Minimize button. It states the name of the program and m some cases gives information about the particular document being accessed by that program. The color of the Title bar indicates whether a particular window is the active window.

Menu Bar Used to present useful commands in *im* easily accessible format. Clicking one of the menu choices displays a list of related options you may choose from.

Active Window   The window that is currently being used. It has two attributes. First, any keystrokes that are entered are directed there by default. Second, any other windows that overlap the active window are pushed behind it.

Border   A thin line that surrounds the window in its restored state and allows it to be resized.

These elements are not all found on every window, because programmers can choose to eliminate or modify them.

Figure 1 shows a Microsoft Word window. Both Word and Notepad are used to create and edit documents, but Word is far more configurable and powerful and therefore has many more optional components available within its window.

FIGURE   1   A window with more components

Answer the following questions in writing:
1. What basic elements are presented in a standard window?

_____
_____
_____
_____
_____

2. What is the difference between Word and Notepad?

_____
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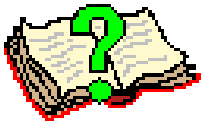
Unit 2

Task 1. Answer the following questions:
- Do you know any text commands?
- Which command do you consider to be the most useful? Is *DEL* your favourite one?
- Study text commands proposed in the text below and name such commands:
  - ❖ *prepares a drive for use - ...*
  - ❖ *displays the contents of text files - ...*
  - ❖ *duplicates floppy disks - ...*

Issuing Text Commands

In general, older versions of Windows, such as Windows 98, use more *text-based commands* than newer versions, such as Windows 2000/XP. Look for a number of standard commands in the \\Windows\Command or \\Windows\System32 or \\WINNT\System32 directory, depending on the OS version. See Table 1 for a list of some of the available Windows text commands. Note that some of the commands are not available in Windows 2000 or XP and others are not available in earlier versions of Windows, such as Windows 98.

TABLE 1   Windows Text Commands

Command	Purpose
ATTRIB	Allows the user to set or remove file attributes.
CD	Changes your current folder to another folder.
CHKDSK	Examines the machine's hard drives.
CLS	Clears the screen.
COPY	Copies a file into another directory.
DEFRAG	Defragments (reorganizes) the files on your machine's hard drives, which can result in better performance.
DEL	Deletes a file from the folder.
DELTREE	Deletes files and subdirectories. A more powerful extension of the DEL command.
DIR	Displays the contents of the current folder.
DISKCOPY	Duplicates floppy disks.
DISKPART	Manages partitions on the computer's hard drives.
DOSKEY	Lists recently issued commands with a prompt session.
ECHO	Repeats typed text back to the screen. Can be used to send text to a file or device using redirection.
EXTRACT	Extracts data from Cabinet (. CAB) files.
FDISK	Creates, deletes, and manages hard-disk partitions.
FORMAT	Prepares a drive for use.
MD	Creates a new folder.

MEM	Provides information about how much memory is available to the system.
MOVE	Moves files from one folder to another.
MSCDEX	Loads CD-ROM driver and configures DOS access to CD-ROM devices.
PING	Establishes a connection to the specified host.
REN	Renames a file.
RD	Deletes a directory.
SCANDISK	Similar to CHKDSK.
SCANREG	Scans the Registry by starting a Windows application that checks for errors, and allows you to back up the Registry files.
SET	Sets, displays, and removes DOS environment variables.
SETVER	Sets the version and reports the version numbers of DOS utilities.
SYS	Prepares a drive to be used to start a computer.
TYPE	Displays the contents of text files.
VER	Checks the current version of the OS.
XCOPY	Duplicates files and subdirectories. An extension of the COPY command.

To issue a command from the command prompt, you need to know the structure the command uses, generally referred to as its *syntax*. You should also be familiar with the command's available *switches*. Switches enable you to further configure the command's actions. The following exercise shows you how to learn about a command's syntax and available switches and then run that command. The command in the exercise is ATTRIB, which is used to allow a user to set one of four attributes on a file: Read Only, Archive, System, or Hidden.

Exercise for computer use:

Changing a File Attribute on Windows XP
1. Open a command prompt. To do this, click Start > Run, type and in the Open field and click OK.
2. In the command prompt window, type CD <u>C:\and</u> press Enter.
3. Type DIR and press Enter. A list of all the files in the root of C: is shown.
4. Type ATTRIB /? and press Enter. Examine the available options.
5. Type ATTRIB autoexec.bat and press Enter. The current attributes of the file are displayed.
6. Type ATTRIB autoexec.bat+R and press Enter.
7. Repeat step 5 to view the changed attribute, and then repeat step 6 with the -R switch to return the file to its original attributes.
8. Type Exit to close the command prompt window.

Notes on the topic studied:

Notes on the topic studied:
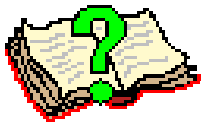
Unit 3

Task 1. Answer the following questions:

▪ Do you know any system tools? Will you name them?

_____
_____
_____
_____
_____
_____

Task 2. Read the text and match two columns:

1. Scandisk   makes archival copies of important files
2. Backup   checks a disc drive for errors or problems
3. Net Watcher   checks the performance of the network

System Tools

All versions of Windows include a number of applications you can run to check on and improve the health and performance of a Windows computer and perform other tasks, such as disk management. Later versions of Windows have more of these gadgets, but earlier versions also have a number of them. Typically, these utilities, if installed, can be found in a particular folder on the Start menu: Start ► Programs ► Accessories ► System Tools for pre—Windows XP versions except Windows NT, and Start ► All Programs ► Accessories ► System Tools for Windows XP. In Windows NT, look in Start ► All Programs ► Administrative Tools (Common). A sample System Tools folder is shown in Figure 1. The available programs can be very useful to a technician. Table 2 lists some common Windows utilities found there, along with their purpose. Not all tools are available in all versions of Windows.

FIGURE 1   The System Tools program group

TABLE 2 System Tools

System Tool	Function
Backup	Makes archival copies of important files.
Character Map	Determines which type of letters, numbers, and nonalphanumeric characters the machine will use.
Clipboard Viewer	Allows you to see what has been copied onto the system Clipboard.
Drive Space 3	Allows you to compress the files on a drive to get more information onto the drive (although compressing files makes them slower to access).
Compression Agent	Used with Drive Space 3. Allows you to set up parameters for automatically determining which files to compress.
Disk Cleanup	A utility that goes through the system and deletes unneeded files to free up drive space.
Disk Defragmenter (DEFRAG.EXE)	Arranges data on the computer's disk drives so it is more easily available.
Maintenance Wizard	Sets up a system maintenance plan.
Net Watcher	Checks the performance of the network.
Resource Meter	Gives a quick, graphical display of how heavily basic system resources are being used.
Scandisk	Checks a disk drive for errors or problems.
Scheduled Tasks	Enables recurring tasks to be run automatically.
System Information	Finds information about the hardware and software installed on a PC.
System Monitor	A more complex version of Resource Meter. Monitors specific resources and watches how they are used in real time.
System Restore	Enables you to restore the system to a previous point in time without losing personal files.

Exercise for computer use:

Scheduling a Disk Cleanup Task

1. In pre-Windows XP versions of Windows (except NT), click Start > Programs > Accessories > System Tools > Scheduled Tasks. In Windows XP, click Start > All Programs > Accessories > System Tools > Scheduled Tasks. In Windows NT, click Start > Programs > Administrative Tools (Common) > Scheduled Tasks.

2. In the Scheduled Tasks window that appears, double-click the Add Scheduled Task icon.

3. In the Scheduled Task Wizard, read the introduction screen, and then click Next. (After filling out any screen in a wizard, you must click Next to continue. At the end of a wizard, you need to click Finish.) In the next screen, choose Disk Cleanup as the application to run, as shown in the graphic.

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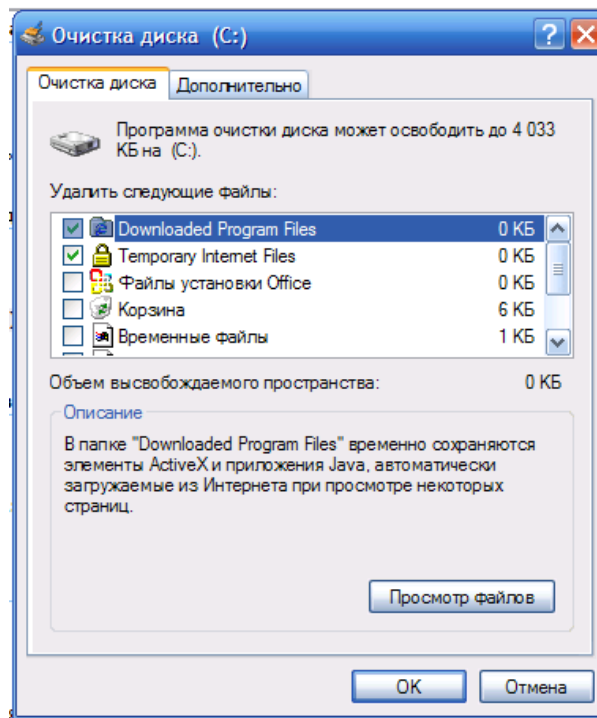
4.   Choose to run it monthly.

5.   Click the Day radio button and accept the default times.

6.   If prompted, enter a password for the username provided.

7.   Choose to view advanced properties, and click Finish.

8.   Under the Settings tab, check the Wake The Computer To Run This Task option and click OK. Your task will now run on the first day of each month with the options you have selected.

9.   If you do not want to keep this task, return to Scheduled Tasks {via the System Tools folder in the Start menu) and delete it.

Notes on the topic studied:

Notes on the topic studied:
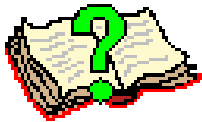
Unit 4

- What is an icon? What does the Internet icon look like? Do you remember? Let's draw it.

Task 2. Read the text and find some information about the My Computer icon.

Icons

Icons are shortcuts that allow a user to open a program or a utility without knowing where that program is located or how it needs to be configured. Icons consist of several major elements:

- ■ Icon label
- ■ Icon graphic
- ■ Program location

The label and graphic simply tell the user the name of the program and give a visual hint about what that program does. By right-clicking an icon once, you make that icon the active icon, and a drop-down menu appears. One of the selections is Properties. Clicking Properties brings up the icon's attributes and is the only way to see exactly which program an icon is configured to start and where the program's executable is located. You can also specify whether to run the program in a normal window or maximized or minimized.

The My Computer Icon

If you double-click the My Computer icon, it displays a list of all the disk drives installed in your computer.

In Windows XP, My Computer does nor by default display an icon for Control Panel (although you can configure it to do so by going to Tools > Folder Options and specifying to show Control Panel in My Computer on the View tab) or for printers; however, in addition to displaying disk drives, it also displays a list of other devices attached to the computer, such as scanners, cameras, mobile devices, and so on. In addition, in Windows XP, all the disk devices are sorted into categories such as Hard Disk Drives, Devices With Removable Storage, Scanners And Cameras, and so on. If you double-click a disk drive or device, you will see the contents of that disk drive or device.

You can delve deeper into each disk drive or device by double-clicking it. The contents are displayed in the same window. You can use Tools > Folder Options (View > Folder Options in Windows NT) to configure each folder to open in a new window. Having multiple windows open makes it easy to copy and move files between drives and between directories using these windows.

In addition to allowing you access to your computer's files, the My Computer icon lets you view your machine's configuration and hardware, also called the System Properties. The following exercise shows you how to view these properties.

Exercise for computer use:

Viewing System Properties

1. Right-click the My Computer icon (on the Desktop in pre-Windows XP versions of Windows and in the Stan menu in Windows XP}.
2. Choose Properties.
3. On the System Properties screen (General screen in Windows XP), look to see what type of processor your computer uses and how much RAM is installed. This screen also tells you what version of Windows is being used.

Notes on the topic studied:

_____
_____
_____
_____

Notes on the topic studied:

_____

Text 1

Computer history

The ideas and inventions of many engineers, mathematicians, and scientists led to the development of the computer. The first true calculating machines were developed in the 1600's. In 1642, the French mathematician, scientist, and philosopher Blaise Pascal invented the first automatic calculator. The device performed addition and subtraction by means of a set of wheels linked to each other by gears. The first wheel represented the numbers 1 to 10, the second wheel represented 10's, the third stood for 100's, and so on

During the early 1670's, the German mathematician Gottfried Wilhelm von Leibniz improved Pascal's calculator. Leibniz added gear and wheel arrangements that made multiplication and division possible. Leibniz also sought a counting system that would be easier for a machine to handle than the decimal system. He developed the binary numeration system.

An important contribution to the development of binary mathematics was made in the mid-1800's by George Boole, an English logician and mathematician. Boole used the binary system to invent a new type of mathematics. Boolean algebra and Boolean logic perform complex mathematical and logical operations on the symbols 0 and 1. Thus, a mechanical representation of binary mathematics would require the representation of only those two digits. This advance shaped the development of computer logic and computer languages.

Early punched-card computing devices. Joseph Marie Jacquard, a French weaver, made the next great contribution to the development of the computer. In the weaving process, needles directed thread to produce patterns. In 1801, Jacquard invented the Jacquard loom, which used punched cards to automate this process for the first time. The cards had patterns of holes punched in them and were placed between the rising needles and the thread. The presence or absence of a hole could be compared to the two digits of the binary system. Where there were holes, the needles rose and met the thread. Where there were no holes, the needles were blocked. By changing cards and alternating the patterns of punched holes, it became possible to mechanically create complex woven patterns.

The punched cards of the Jacquard loom inspired the English mathematician Charles Babbage. During the 1830's, Babbage developed the idea of a mechanical computer that he called an analytical engine. He worked on the machine for almost 40 years. When performing complex computations or a series of calculations, the analytical engine would store completed sets of punched cards for use in later operations. Babbage's analytical engine contained all the basic elements of an automatic computer--storage, working memory, a system for moving between the two, and an input device. But Babbage lacked funding to build the machine.

Text 2

The first electronic computers

The first special-purpose electronic digital computer was constructed in 1939 by John V. Atanasoff, an American mathematician and physicist. In 1944, Howard Aiken, a Harvard University professor, built another digital computer, the Mark 1. The operations of this machine were controlled chiefly by electromechanical relays (switching devices).

In 1946, two engineers at the University of Pennsylvania, J. Presper Eckert, Jr., and John William Mauchly, built the first general-purpose electronic digital computer. They called it ENIAC (Electronic Numerical Integrator And Computer). ENIAC contained about 18,000 vacuum tubes instead of relays. The machine occupied more than 1,500 square feet (140 square meters) of floor space and consumed 150 kilowatts of electric power during operation. ENIAC operated about 1,000 times as fast as the Mark 1. It could perform about 5,000 additions and 1,000 multiplications per second. ENIAC also could store parts of its programming.

Although ENIAC worked rapidly, programming it took a great deal of time. Eckert and Mauchly next worked on developing a computer that could store even more of its programming. They worked with John von Neumann, a Hungarian-born American mathematician. Von Neumann helped assemble all available knowledge of how the logic of computers should operate. He also helped outline how stored programming would improve performance. In 1951, a computer based on the work of the three men became operational. It was called EDVAC (Electronic Discrete Variable Automatic Computer). EDVAC strongly influenced the design of later computers.

Also in 1951, Eckert and Mauchly invented a more advanced computer called UNIVAC 1 (UNIVersal Automatic Computer). Within a few years, UNIVAC 1 became the first commercially available computer. Unlike earlier computers, UNIVAC 1 handled numbers and alphabetical characters equally well. It also was the first computer system in which the operations of the input and output devices were separated from those of the computing unit. Like ENIAC, UNIVAC 1 used vacuum tubes.

The first UNIVAC 1 was installed at the U.S. Bureau of the Census in June 1951. The following year, another UNIVAC 1 was used to tabulate the results of the United States presidential election. Based on available data, UNIVAC 1 accurately predicted the election of President Dwight D. Eisenhower less than 45 minutes after the polls closed.

Miniaturization

The invention of the transistor in 1947 led to the production of faster and more reliable electronic computers. Transistors soon replaced the bulkier, less reliable vacuum tubes. In 1958, Control Data Corporation introduced the first fully transistorized computer, designed by American engineer Seymour Cray. IBM introduced its first transistorized computers in 1959.

Miniaturization continued with the development of the integrated circuit (a complete circuit on a single chip) in the early 1960's. This device enabled engineers to design both minicomputers and high-speed mainframes with huge memories.

By the late 1960's, many large businesses relied on computers. Many companies linked their computers together into networks, enabling different offices to share information.

Computer technology improved rapidly during the 1960's. By the early 1970's, the entire workings of a computer could be placed on a handful of chips. As a result, computers became smaller.

The first personal computer, the Altair, was introduced in 1975. Only electronics hobbyists bought these computers.

In 1977, two young American computer enthusiasts, Steven P. Jobs and Stephen G. Wozniak, founded Apple Computer, Inc., and introduced the Apple II personal computer. The Apple II was much less expensive than mainframes. As a result, computers became available to people other than computer specialists and technicians. Personal computers were purchased by small and medium-sized businesses that could not afford mainframes or did not need the immense computing power the mainframes provided. Millions of individuals, families, and schools also bought personal computers.

In 1975, college students Bill Gates and Paul Allen founded Microsoft Corporation to develop programs for the Altair. In 1981, IBM entered the personal computer market with its PC. The machine was even more successful than the Apple II. Microsoft soon was developing programs for the PC. Gates and Allen went on to become two of the world's wealthiest men. Apple scored another success in 1984 with the introduction of its Macintosh, a powerful, easy-to-use desktop computer.

Appendix I

1. Software is…
   a) a kind of a processor;
   b) a hard disk;
   c) programmed code that a computer requires to run;
   d) memory of the computer.
2. Users can give the computer instructions through…
   a) a keyboard;
   b) a monitor;
   c) a keyboard and a mouse;
   d) a mouse.
3. Gary Kildall wrote…   in 1973.
   a) DOS OS;
   b) CP/M OS;
   c) Linux;
   d) Windows XP.
4. DOS is an acronym for…
   a) developed operating system;
   b) disk operating system;
   c) desktop operating system;
   d) drive operating system.
5. There are two versions of Windows XP: …
   a) XP Home and XP Millenium;
   b) XP Home and XP Professional;
   c) XP Professional and XP Millenium;
   d) XP Professional and XP New Technology.
6. The latest release of Windows is…
   a) Windows 2000;
   b) Windows Me;
   c) Windows NT;
   d) Windows XP.
7. Double-click is used …
   a) to place a cursor;
   b) to open a program through an icon;
   c) to select an object;
   d) to view object properties.
8. The System Tray is located…
   a) in the middle of the Taskbar;
   b) on the left side of the Taskbar;
   c) on the right side of the Taskbar;
   d) in the Start menu.
9. There is … in Windows XP OS.
   a) no Help system;
   b) a good Help system;
   c) an updated Help system;
   d) a powerless Help system.

10. Icons are on-screen graphics that act as doors through which programs are …
   a) started;
   b) closed;
   c) started and closed;
   d) changed.
11. The basic window elements are:
   a) control box and title bar;
   b) minimize button and restore button;
   c) resizable border and close button;
   d) all suggested elements.
12. CD-ROM stands for:
   a) compact drive read-only memory;
   b) complex disk read-only memory;
   c) compact disk read-only memory;
   d) compact device read-only memory.
13. Higher version numbers mean …
   a) older versions;
   b) newer versions;
   c) newer and improved versions;
   d) better versions.
14. A swap file may be …
   a) permanent;
   b) temporary;
   c) permanent or temporary;
   d) fixed.
15. The size of a swap file cannot be too …
   a) large;
   b) small;
   c) big;
   d) tiny.
16. Nowadays Internet is …
   a) a buzzword;
   b) unknown for the majority of people;
   c) our reality;
   d) known only to 10% of the people of our country.
17. ISP is an acronym for…
   a) Internet System Protocol;
   b) Internet System Provider;
   c) Internet Service Provider;
   d) Internet Service Protocol.
18. Browser is a piece of … used to access the Internet.
   a) hardware;
   b) software;
   c) protocol;
   d) CD-ROM.
19. The abbreviation www stands for …
   a) Windows Wide Web;
   b) Windows World Web;
   c) World Wide Web;
   d) World Windows Web.

20. An Internet address of a user looks like …
    - e) domain.com.username@
    - f) username@   domain.com.
    - g) username@domain.com.
    - h) username.domain.@com.
21. In all versions of Windows, the My Computer icon displays which of the following?
    - a. All the disk drives installed in your computer
    - b. Control Panel
    - c. Dial-up Networking
    - d. Printers
    - e. Modems
22. What is the Desktop?
    - a. The top of the desk where the computer sits.
    - b. The virtual desk upon which all of your other programs and utilities run.
    - c. A tool that keeps track of all the data on disk
    - d. Where all of a computer's memory is stored

Appendix II

1. What is a graphical user interface (GUI)?

2. How do linked cells work together in a spreadsheet program?

3. What is the Internet? The World Wide Web?

4. What is a computer virus?

5. How are computer screens used in a virtual reality system?

6. How does an expert system help solve a problem?

7. What are two ways to connect a computer to the Internet?

8. The main three technologies that are used for client-side development are: (X)HTML, CSS and JavaScript. Describe them.

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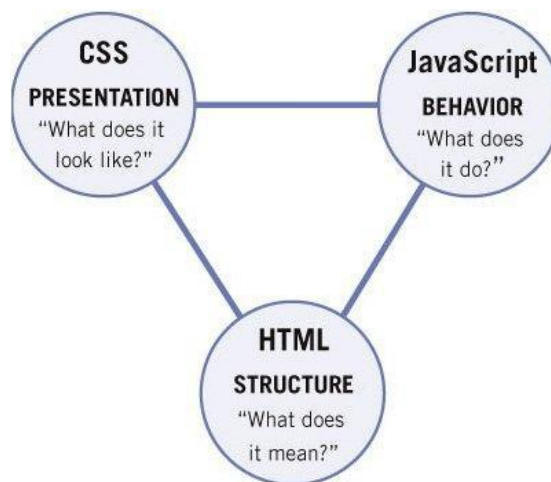
Appendix III

Glossary of Internet terms

Bulletin board is an electronic message center. Most bulletin boards serve specific interest groups. They allow users to read messages left by others and to leave their own as well.

Chat room is a location on the Internet where users can discuss topics of common interest by sending typed messages back and forth. The messages appear to other users as soon as they are typed.

Client is a user's computer.

Cookie is a piece of data placed on a client's hard drive by a server. It can be used for a variety of purposes. One such purpose would be to store a name and password so that a user would not have to enter this information every time he or she returned to the same Web site.

Download is to receive data or software over the Internet and store it so that it may be used later.

E-mail, or electronic mail, is a way of sending a message over the Internet to another specific user or group of users.

Firewall is a combination of hardware and software that prevents a visitor to an organization's Web site from gaining access to other information stored on the organization's computer network, such as corporate records or employee information.

Forum , or newsgroup, is an on-line discussion group in which participants with a common interest can exchange open messages.

Home page is the starting page of a Web site. It generally includes tools and indexes to help visitors navigate through the rest of the site. In many ways, a home page functions as an electronic table of contents.

Hyperlink is a programmed connection from one Web site to another. It usually appears on a Web site as a highlighted or underlined word or phrase. When a user clicks a mouse on the passage, the client connects to the related Web site.

Hypertext markup language , or HTML, is the programming language most commonly used by the World Wide Web.

Hypertext transfer protocol, or HTTP, is the set of rules governing the transfer of files between a server and a client. HTTP electronically oversees the connection of clients to Web sites.

Internet service provider is a business that provides a client with the means to connect to the Internet and maintains exchanges of information between clients and servers.

Modem is a device that converts a computer's digital information to signals that can be transmitted over telephone lines. It also converts signals it receives back to digital information.

Net is a common abbreviation for Internet.

Network is a communication system that links two or more computers.

On-line service is a business that provides Internet access plus a wide range of exclusive content and features, such as chat rooms, games, and news reports.

Search engine is a program that allows a user to locate information on the Internet by typing in key words or phrases. The search engine then returns addresses of Web sites that most closely match the request.

Server, or host, is a computer that provides requested resources, such as information or software, to a client via a modem or network connection.

Syntax   The proper way of forming a next command for entry into the computer. Many commands have a number of different options, each of which requires a particular format.

Surfing is the process of visiting a number of Web sites in rapid succession.

Uniform resource locator, or URL, is an electronic address that identifies a Web site.

Web browser , or simply browser, is a piece of software that allows a user to access Web sites.

Web site is a collection of information at a specific address on the World Wide Web.

World Wide Web , or WWW for short, is a part of the Internet that includes text, graphics, video, animation, and sound.

Appendix IV

Computer terms

Binary numeration system is a system of number symbols used by computers. The system uses only the numerical symbols 0 and 1.

Bit may be either the digit 0 or the digit 1. The term bit is an abbreviation of binary digit.

Byte is a combination of eight bits used to represent a single unit of information, such as a letter or numeral.

CD-ROM is a disc, much like an audio compact disc, that stores computer programs and files.

CD-ROM (compact disc read-only memory) A high-capacity optical storage device that uses compact disc technology to store large amounts of information, up to 650MB (the equivalent of approximately 300,000 pages of text), on a single 4.72-mch disk.

Database is a large body of information that can be searched in several ways.

File is the smallest unit in which processed information is stored. There are text files and sound files, for example.

Floppy disk is a small disk that stores information. The disk can be removed from the computer.

Hard disk consists of one or more platters that store information. The hard disk is built into the computer.

Hardware refers to the physical parts of a computer system.

Internet is a worldwide computer network to which tens of millions of computers are linked.

Memory chip is a part of a computer that stores information for immediate use by a microprocessor.

Microprocessor is the part of the computer that does the actual computing. Some computers have more than one microprocessor.

Modem is a device that enables computers to communicate with one another over telephone lines.

Network is a system of two or more computers connected by high-speed communications lines.

On-line service is a commercial computer network to which a subscriber pays a monthly or hourly fee.

Operating system is software that controls the operation of the entire computer system.

Program is a set of instructions to be carried out by a computer.

Software consists of instructions that control the operation of the computer.

Version A number used by computer programmers to tell modified programs apart. Each time computer software is modified, new features are added and old problems are fixed. The version is incremented by one digit (for example, from 1.0 to 2.0) for major revisions, or by a tenth of a digit (for example, from 2.0 to 2.1) for minor modifications. Higher version numbers mean newer versions.

World Wide Web is a part of the Internet that includes text, graphics, video, animation, and sound.

Appendix V

Operating System Terms and Concepts

Version A particular revision of a piece of software, normally described by a number, which tells you how new the product is in relation to other versions of the product. MS-DOS, for instance, is currently in its sixth major version. Major revisions are distinguished from minor ones in this manner: DOS 5.0 to 6.0 was a major revision, whereas 6.0 to 6.2 was a minor revision. This way of marking changes is now relatively standard for other OS and application software. Very minor revisions are indicated with an additional decimal point. Upgrading from DOS version 6.21 to 6.22 involved only a few new files, but it was still an upgrade.

Source The actual code that defines how a piece of software works. Computer operating systems can be *open source,* meaning the OS can be examined and modified by users, or they can be *closed source,* meaning users cannot modify or examine the code.

Shell A program that runs on top of the OS and allows the user to issue commands through a set of menus or some other graphical interface. Shells make using an OS easier to use by changing the user interface. The two shells we will look at most closely are Microsoft's DOS Shell (a menuing system) and Windows (a fully graphical user interface).

Graphical User Interface (GUI) The method by which a person communicates with a computer. GUIs use a mouse, touch pad, or another mechanism (in addition to the keyboard) to interact with the computer to issue commands.

Network Any group of computers that have a physical communication between them. Networks allow computers to share information and resources quickly and securely.

Cooperative Multitasking A multitasking method that depends on the application itself to be responsible for using and then freeing access to the processor. This is the way Windows 3.1 managed multiple applications. If any application locked up while using the processor, the application was unable to properly free the processor to do other tasks, and the entire system locked, usually forcing a reboot.

Preemptive Multitasking A multitasking method in which the OS allots each application a certain amount of processor time and then forcibly takes back control and gives another application or task access to the processor. This means that if an application crashes, the OS takes control of the processor away from the locked application and passes it on to the next application, which should be unaffected. Although unstable programs still lock, only the locked application will stall—not the entire system.

Multithreading The ability of a single application to have multiple requests in to the processor at one time. This results in faster application performance, because it allows a program to do many things at once. Only 32-bit or higher OSs support multithreading.

Appendix VI

Professionally made Web Sites

nodethirtythree design.

coming soon. ∧∧∧∧
(no, really)

n33 @ deviantART | zeroweb.org | 4templates

questions or comments? contact us | read this if you have questions about my free website templates

other interesting sites: free css templates | wordpress themes

samrayner.com

Home | Archives | Portfolio | Sandbox

Blogging with Coda

Soon after the latest version was released, I downloaded the 30 day trial of **MarsEdit**, the desktop blogging app from **Red Sweater**. Whilst I didn't use it enough to warrant buying a copy (I'm quite picky with posting quicklinks and blog entries and have my EE admin panel set up *just right*) I found the live previews really useful, letting me see what a post would look like in context before publishing. So, when my trial was up, I decided to try and replicate the feature in **Coda**, my web development app of choice.

Almost two months later, I've finally got round to recording a screencast on how I did it.

Blogging with Coda
from Sam Rayner

13:10 | vimeo

To really see what's going on, head over to the **Vimeo page** and watch it in all its HD glory. If your resolution is big enough you might want to disable scaling. I'm sorry it turned out so long, I didn't intend to burble on for 13 minutes.

If you want to set up the system for yourself, you can **grab include.js here**. Credit goes to **Boutell.com** for the bulk of the script. Of course, the same…

Continued… | May 24, 08 | How-To's | 1 Comment

Older Posts

Archives

Too Little, Too Soon

The first post in the **Life** category, touching on the lack of posts the site has seen recently and what I aim to do about it.

Read Post | Apr 1, 08 | Life | 5 Comments

Anticipating ExpressionEngine 2.0

I share my excitement about the approaching release of **ExpressionEngine 2.0**, the next version of the fantastic CMS that drives this site.

Read Post | Mar 16, 08 | ExpressionEngine | 5 Comments

Changing the Boot Camp Drive Icon

A quick guide to customising the icon of your Boot Camp volume (in Leopard) with **my alternative** available for download.

Read Post | Mar 1, 08 | OS X | 3 Comments

About

Go

Sam is a 17 year old **web developer** from Birmingham, UK. When he's not pushing pixels or grumbling about IE Sam enjoys music, sport, **photography** and writing about himself in third person. You can reach him at sam@samrayner.com.

Quicklinks

MuxFind

Search for muxtapes based on a particular artist or song, or match them to another muxtape. Playlists of new music hand-picked by people with similar tastes to me? Yes please.

May 30

Ironic Sans

David is one of the unsung heroes of the web. Not only has he given the world Pre-Pixelated Clothes and The Bulbdial Clock but he comes across as a straight-up nice bloke.

May 29

Max Barrett

Max is a graduate graphic designer based in Birmingham. I love his dissection of the £20 note.

May 24

Khula Happy Singers

I could not stop smiling whilst watching this; hopefully it will make you smile too. Make sure you click the button in the bottom right to see it in all its glory. Vimeo's HD support is just fantastic.

May 18

Créer une Liste de Texte Survolable et Cliquable

My article Building a Better Blocklist has been translated into French by the fine folks at Developpez. It's available on-site or as a PDF. Amuses toi bien!

May 14

Quicklinks Archive

Flickr Feed

Popular Posts

Span-Free Gradient Text Effect

A slightly cleaner method of achieving **Nick La's gradient text effect**, removing the need for extra markup whilst unfortunately…

Jan 17, 08 | CSS | 15

First Edition

Unfortunately, sale of a printed version of this post is unlikely to fetch you much at auction. That is, unless…

Jan 1, 08 | Site News | 9

Flying Visits with Boot Camp: The Switcheroo

The first in a series of posts on minimising your time spent in Windows doing those things you just can't…

Jan 12, 08 | Windows | 6

Archives

Latest Comments

Sam Rayner on
Too Little, Too Soon
2 days ago

Thanks a lot Richard. Glad you like the site :)

Richard Angstmann on
Anticipating ExpressionEngine 2.0
2 days, 2 hours ago

I am a recent Expression Engine convert. Every other system I look at now just can't seem to compete with…

Richard Angstmann on
Too Little, Too Soon
2 days, 2 hours ago

Blimey… just stumbled across your site and I have to say I am VERY impressed. The design, the use of…

Most Recent Project

r3new.com

Home Photography Web Design Contact

◉ Introduction

Welcome to r3new! After a lot of late nights and a stupid amount of testing, I think I'm finally happy with it. Be sure to take a good look around before you continue on your travels and perhaps drop me an email to let me know what you think of it all.

FEELING GENEROUS?
GIVE SOMETHING
amazon.co.uk WISHLIST

Worth Checking Out

More from the portfolio »

More recommendations in the archives »

Мы создаем силуэт Москвы

In English

О компании
Объекты
Виды деятельности
Трудовой коллектив
Пресс-центр
Акционерам и инвесторам
Заказчикам и партнерам
Конкурсы

поиск | Найти

Панорамой   По высоте   По году постройки

Останкинская башня
и телецентр

Главное здание МГУ
им. М. В. Ломоносова

Дом Правительства
Российской Федерации

Президент-отель

Музей А. С. Пушкина
реставрация

Храм Христа
Спасителя

Крытый конькобежный центр
в Крылатском

От конькобежного центра   *до Поклонной горы*

Новости

Моспромстрой помогает детям жить лучше

Детский сад откроется к женскому дню

Московский градоначальник «Хилтон» принял

Весной откроется «Москва Ленинградская-Хилтон» — первая гостиница сети «Хилтон» в России

На протяжении 35 лет Моспромстрой является лидером строительного рынка Москвы — свыше 2000 построенных и реконструированных объектов самого различного назначения, миллионы квадратных метров жилья. На долю Моспромстроя приходится треть строительного рынка столицы.

Совет молодых специалистов

При генеральном директоре создан совет молодых специалистов. Целью работы совета является адаптация и повышение профессиональной подготовки молодых специалистов, развитие трудовой инициативы и активности, помощь в решении социальных проблем.

1937 год

Президиум Моссовета принял решение об учреждении Треста передвижки и разборки зданий, которому предстояло выровнять улицу Горького (Тверскую), переместив 20 домов, в том числе и здание столичной мэрии.

2005 год

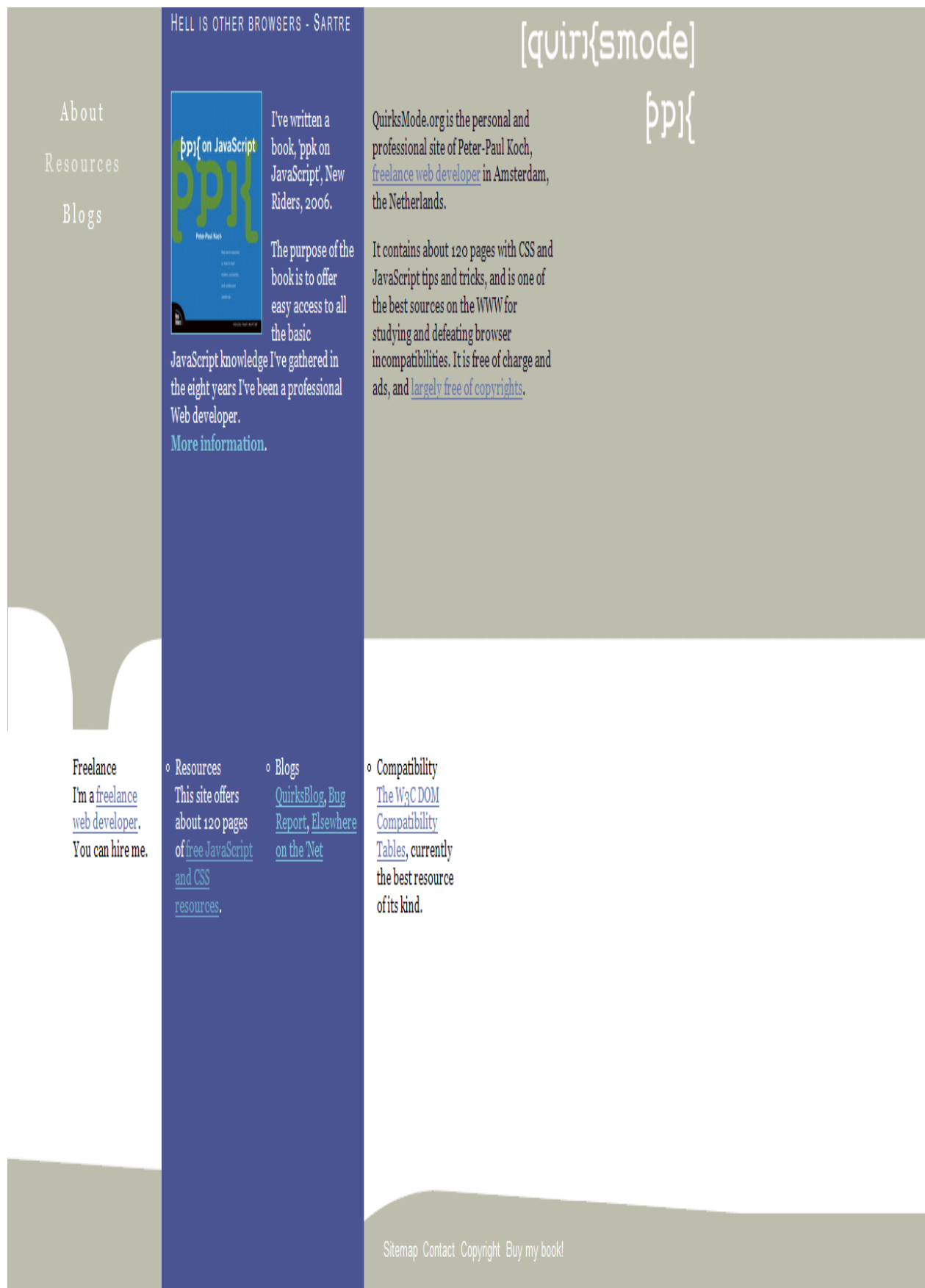Сверхсложная конструкция подвесной крыши конькобежного центра в Крылатском.

Вантовый метод позволяет удерживать купол весом 240 тонн.

© 2007 ЗАО «Моспромстрой»

2007
Сделано в Студии
Артемия Лебедева

[quirʁ{smode]

þp]{

I've written a book, 'ppk on JavaScript', New Riders, 2006.

The purpose of the book is to offer easy access to all the basic JavaScript knowledge I've gathered in the eight years I've been a professional Web developer. More information.

QuirksMode.org is the personal and professional site of Peter-Paul Koch, freelance web developer in Amsterdam, the Netherlands.

It contains about 120 pages with CSS and JavaScript tips and tricks, and is one of the best sources on the WWW for studying and defeating browser incompatibilities. It is free of charge and ads, and largely free of copyrights.

About

Resources

Blogs

Freelance
I'm a freelance web developer. You can hire me.

○ **Resources**
This site offers about 120 pages of free JavaScript and CSS resources.

○ **Blogs**
QuirksBlog, Bug Report, Elsewhere on the Net

○ **Compatibility**
The W3C DOM Compatibility Tables, currently the best resource of its kind.

Appendix VII

Irregular Verbs

Infinitive	Past Indefinite	Past Participle	
be	was,were	been	бути
bear	bore	borne	нести, переносити
become	became	become	ставати, робитися
begin	began	begun	починати
bind	bound	bound	зв'язувати
break	broke	broken	ламати
bring	brought	brought	приносити
broadcast	broadcast broadcasted	broadcast broadcasted	поширювати, передавати по радіо
build	built	built	будувати
burn	burnt	burnt	горіти
buy	bought	bought	купувати
catch	caught	caught	ловити
choose	chose	chosen	вибирати, обирати
come	came	come	приходити
cost	cost	cost	коштувати
cut	cut	cut	різати
deal	dealt	dealt	розглядати питання (with)
do	did	done	робити, виконувати
draw	drew	drawn	креслити,малювати, добувати (інформ.)
dream	dreamt	dreamed	мріяти, уявляти
drink	drank	drunk	пити
fall	fell	fallen	падати, спускатися
feed	fed	fed	годувати, постачати
feel	felt	felt	почувати, відчувати, вважати
fight	fought	fought	битися, боротися
find	found	found	знаходити, вважати
forbid	forbade	forbidden	забороняти, не дозволяти
forget	forgot	forgotten	забувати
forgive	forgave	forgiven	прощати
freeze	froze	frozen	заморожувати
get	got	got	одержувати, діставати
give	gave	given	давати, віддавати
go	went	gone	йти, ходити, рухатися
grow	grew	grown	рости, збільшуватися
have	had	had	мати, володіти
hear	heard	heard	чути, слухати
hide	hid	hid hidden	ховати, приховувати
hold	held	held	тримати, мати, володіти
keep	kept	kept	зберігати, берегти
know	knew	known	знати, уміти
lay	laid	laid	класти, покласти
lead	led	led	вести, керувати
learn	learnt learned	learnt learned	учитися, учити, навчатися

leave	left	left	залишати, покидати
let	let	let	дозволяти
lie	lay	lain	лежати, бути розташованим
light	lit	lit	запалювати, світити
	lighted	lighted	
lose	lost	lost	утрачати (властивість, якість), втратити
make	made	made	робити, виробляти, створювати
mean	meant	meant	мати намір, означати, значити
meet	met	met	зустрічати
pay	paid	paid	платити
put	put	put	класти, ставити
read	read	read	читати
ring	rang	rung	дзвонити
rise	rose	risen	піднімати
run	ran	run	бігти
say	said	said	сказати
see	saw	seen	бачити
seek	sought	sought	шукати
sell	sold	sold	продавати
send	sent	sent	посилати
set	set	set	ставити
shoot	shot	shot	стріляти
show	showed	shown	показувати
shut	shut	shut	закривати
sing	sang	sung	співати
sit	sat	sat	сидіти
sleep	slept	slept	спати
speak	spoke	spoken	говорити
speed	sped	sped	поспішати
spell	spelt	spelt	писати або вимовляти по літерах
	spelled	spelled	
spend	spent	spent	витрачати, проводити (час)
spoil	spoilt	spoilt	псувати
	spoiled	spoiled	
spread	spread	spread	розгортати, поширювати
stand	stood	stood	стояти, ставити
strike	struck	struck	ударяти, бити
swim	swam	swum	плавати
take	took	taken	брати
teach	taught	taught	учити, навчати, викладати
tell	told	told	говорити, повідомляти
think	thought	thought	думати, вважати
understand	understood	understood	розуміти, мати на увазі
wake	woke	woken	будити, прокидатися
	waked	waked	
win	won	won	виграти, перемогти
write	wrote	written	писати

English–Ukrainian Dictionary

Aa

acceleration [ək,selə'reɪʃən] *n* – прискорення, вдосконалення
acceptance [ək'septəns] *n* – прийняття запиту (системи); ухвалення (проекту)
access ['ækses] *n* – доступ; *v* – отримувати доступ
accessory [ək'sesərɪ] *n* – допоміжний пристрій

accomplish [ə'kʌmplɪʃ] *v* – завершувати, доробляти, удосконалювати
activate ['æktɪvəɪt] *v* – активувати, приводити в дію
active matrix screen *n* – рідкокристалічний екран (РК) – екран з активною матрицею (нова технологія формування зображення)
actuator ['æktjueɪtə] *n* – силовий привід, виконавчий механізм
adapter [ə'dæptə] *n* – адаптер, перехідний пристрій

adapter card [ə'dæptə kɑ:d] *n* – адаптерна плата
add [æd] *v* – додавати, приєднувати, підсумовувати, складати
advertisement [əd'və:tɪsmərən] *n* – оголошення, реклама
align [ə'laɪn] *v* – вирівнювати
allow [ə'lau] *v* – дозволяти, надавати можливість
analog ['ænələg] *n* – моделюючий пристрій або система
analog signal – аналоговий сигнал
angle ['æŋgl] *n* – кут, "уголок" – назва символу
apart [ə'pa:t] *adv* – осторонь, окремо
appear [ə'pɪə] *v* – показувати
appearance [ə'pɪərəns] *n* – зовнішній вигляд, поява

application [,æplɪ'keɪʃən] *n* – застосування, використання, додаток
apply [ə'plaɪ] *v* – застосовувати, додавати, прикладати

architecture ['a:kɪtektʃə] *n* – архітектура, будова
area ['eərɪə] *n* – площа, простір

argument ['a:gjumənt] *n* – аргумент, довід

arm ['a:m] *n* – плече, *v* – активізувати
arrange [ə'reɪndʒ] – класифікувати, упорядковувати
assembly [ə'semblɪ] *n* – механізм, агрегат, збирання. монтаж

attach [ə'tætʃ] *v* – прикріплювати, під'єднувати
automatically [,ɔ:tə'mætɪkəlɪ] *adv* – автоматично
available [ə'veɪləbl] *adj* – доступний
axe ['æks] *n* – вісь

Bb
back-lit ['bæklɪt] *n* – екран з підсвічуванням
backlit LCD *n* – рідкокристалічний екран з підсвічуванням

batch ['bætʃ] *v* – формувати (пакет), накопичувати; *n* – пакет, група, серія
battery ['bætərɪ] *n* – батарея, акумулятор
bay [beɪ] *n* – панель, рама
beam [bi:m] *n* – промінь, радіус дії (мікрофона, гучномовця)
bezel [bezl] *n* – віконце, панель, що прикриває дисковод чи будь-який інший пристрій
bidirectional *adj* – двонаправлений, реверсивний
binary ['baɪnərɪ] *adj* – двійковий, бінарний
BIOS [baɪəs] – БІОС, базова система вводу / виводу
bit [bɪt] *n* – мінімальна одиниця кількості інформації

Bluetooth ['blu:tu:ɵ] – нова універсальна технологія безпровідникового зв'язку мікропроцесорних пристроїв різного типу

board [bɔ:d] *n* – плата, пульт

boot [bu:t] *n* – початкове завантаження системи, самозавантаження

bootstrap [bu:tstræp] *n* – програма самозавантаження, ініціалізація

bracket ['brækɪt] *n* – дужка

brief [bri:f] *adj* – короткий, стислий

buffer ['bʌfə] *n* – буфер

bulky ['bʌlkɪ] *adj* – великий, об'ємистий

burner ['bə:nə] *n* – програматор

bus [bʌs] *n* – шина, канал (передачі інформації)

button ['bʌtn] *n* – кнопка(управляючий елемент інтерфейсу)

byte [baɪt] *n* – одиниця виміру пам'яті, одиниця інформації = 8 біт

Cc

cable [keɪbl] *n* – кабель

cache ['kæʃ] *n* – кеш (швидкодіюча буферна пам'ять великого об'єму)

cage [keɪdʒ] *n* – клітка

camera ['kæmərə] *n* – фотоапарат

capability [keɪpə'bɪlɪtɪ] *n* – здатність

capable [keɪpəbl] *v* – що піддається (чому-н.), що допускає (що –н.)

capacity [kə'pæsɪtɪ] *n* – потужність, об'єм

card [ka:d] *n* – карта

carriage ['kærɪdʒ] *n* – каретка, супорт

carry ['kærɪ] *v* – переносити, нести

case [keɪs] *n* – корпус, каркас

cassette [kə'set] *n* – касета

categorize ['kætɪg(ə)raɪz] *v* – класифікувати, розподіляти по категоріям

cathode ['kæɵəud] *n* – катод, *adj* – катодний

CD-ROM (Compact Disc Read-Only Memory) ['sɪ:dɪ: rɔm] – компакт-диск (призначений тільки для читання)

cease [si:s] *v* – припиняти

cell ['sel] *n* – елемент, клітинка

Central Processing Unit (CPU) – центральний процесор

charge [tʃa:dʒ] *n* – заряд

chip [tʃɪp] *n* – мікросхема

chipset – *n* набір мікросхем

chopper [tʃɔpə] *n* – переривник, тикер

chunk [tʃʌŋk] *n* – ділянка пам'яті

circuit ['sə:kɪt] *n* – коло, схема

circuitry ['sə:kɪtrɪ] *n* – схеми, схематика

click [klɪk] – *n* клацання по кнопці миші; *v* – клацати

clone [kləun] *n* – клон, *v* – забезпечувати абсолютну сумісність

code [kəud] – *n* код

combination [,kɔmbɪ'neɪʃ(ə)n] *n* – комбінація, поєднання

command [kə'ma:nd] *n* – команда

compact disc (CD) ['kɔmpækt dɪsk] *n* – компакт-диск, лазерний диск

compatible [kəm'pətəbl] *adj* – сумісний

compatibles [kəm'pətəblz] *n* – сумісні пристрої
compile [kəm'paɪl] *v* – компілювати
complex ['kɔmpleks] *adj* – комплексний, складний, складений
component [kəm'pəunənt] *n* – складова,компонент, частина, деталь

computation [,kɔmpju:'teɪʃ(ə)n] *n* – обчислення, розрахунок
computer [kəm'pju:tə] *n* – комп'ютер
computer - aided design *n* – автоматизоване проектування
computer case [keɪs] *n* – системний блок

configuration [kənfɪgju'reɪʃ(ə)n] *n* – форма, конфігурація
configure [kən'fɪgə] *v* – конфігурувати (змінювати існуючі установки клієнта, сервера чи мережі)
connect [kə'nekt] *v* – зв'язувати, з'єднувати, встановлювати зв'язок
connector [kə'nektə] *n* – з'єднувач, роз'єм, логічний блок з'єднання (на блоці схемі)

connexion [kə'nekʃ(ə)n] *n* – зв'язок, з'єднання
console [kən'səul] *n* – пульт, пульт оператора, консоль
contact ['kɔntækt] *n* – контакт, зв'язок
control unit [kən'trəul] *n* –пристрій керування, блок контролю
controller [kən'trəulə] *n* – контролер (виділений комп'ютер в мережі), регулятор
convert [kɔn'və:t] *v* – перетворювати
cooler ['ku:lə] *n* – охолоджувальний пристрій
cooling ['ku:lɪŋ] *n* – охолодження
co-ordinate [kəu'ɔ:dnɪt] *v* – погоджувати, координувати
core ['kɔ:] *n* – ядро (операційної системи)
critical ['krɪtɪkəl] *adj* – критичний, небезпечний
cursor [kə:sə] *n* – курсор

Dd
data ['deɪtə] *n* – дані, інформація
database ['deɪtəbeɪs] *n* – база даних
data stream *n* – інформаційний потік
decimal ['desɪməl] *adj* – десятковий, десяткове число
default [dɪ'fɔlt] *n* – замовчення (оператор по замовченню)
delete [dɪ'li:t] *v* – видаляти, викреслювати, стирати
design [dɪ'zaɪn] *n* – план, розробка, проект, конструкція
desktop ['desktɔp] *adj* – настільний
detect [dɪ'tekt] *v* – виявляти
determine [dɪ'tə:mɪn] *v* – визначати, встановлювати
device[dɪ'vaɪs] *n* – пристрій, апарат, механізм
diagram [daɪəgræm] *n* – діаграма, графік, схема
digit ['dɪdʒɪt] *n* – цифра, однозначне число
digital ['dɪdʒɪtl] *adj* – цифровий
digital unit *n*– цифровий блок
digital video disk (DVD) *n*– цифровий відеодиск

dimension [dɪ'menʃən] *n* – величина, вимір
direct [dɪ'rekt] *v* – управляти, керувати, направляти, *adj* – прямий, безпосередній
directory [dɪ'rektərɪ] *n* – каталог, папка, довідник
disassembly [dɪsə'semblɪ] *n* – демонтаж (пристрою) на частини
disk [dɪsk] *n* – диск
disk drive ['dɪsk 'draɪv] *n* – дисковод, накопичувач на дисках
display [dɪs'pleɪ] *n* – показ; *v* – показувати, виводити дані на екран

domain [dəumeɪn] *n* – область, домен (в Інтернеті – частина ієрархії імен)

drawback ['drɔ:bæk] *n* – недолік

driver ['draɪvə] *n* – драйвер (програма, що керує пристроєм)

dual ['dju:əl] *adj* – подвійний

dual in-line memory modules (DIMMs) – модуль пам'яті з дворядним розташуванням виводів

duplex ['dju:pleks] *n* – дуплекс (двосторонній режим зв'язку), *adj* – дубльований, подвійний

dynamic [daɪ'næmɪk] *adj* – динамічний

dynamic random access memory (DRAM) – динамічний ОЗП

Ee

edit ['edɪt] *v* – редагувати

electronic [ɪlek'trɔnɪk] *adj* – електронний

embedded [ɪm'bedɪd] *adj* – вмонтований

enable [ɪ'neɪbl] *v* – давати право, можливість, полегшувати

enclosure [ɪn'kləuʒə] *n* – додаток, оболонка

encourage [ɪn'kʌrɪdʒ] *v* – заохочувати, підтримувати

enhancement [ɪn'ha:nsmənt] *n* – модернізація, вдосконалення, розширення (можливостей програмних засобів)

environment [ɪn'vaɪrənmənt] *n* – режим роботи, умови експлуатації, обладнання, зовнішні фактори

equal ['i:kwəl] *adj* – рівний, однаковий; v - вирівнювати

equipment [ɪ'kwɪpmənt] *n* – устаткування, апаратура

error ['erə] *n* – помилка, похибка

evolve [ɪ'vɔlv] *v* – розвивати

execute ['eksɪkju:t] *v* – виконувати

exist [ɪg'zɪst] *v* – існувати, знаходитися

existence [ɪg'zɪstəns] *n* – існування, наявність

expand [ɪksp'ænd] *v* – розширювати, розгортати (напр. структуру каталогів), збільшувати

expansion [ɪks'pænʃən] *n* – розширення, збільшення

expansion bus [ɪks'pænʃən bʌs] *n* – шина розширення

expansion card [ɪks'pænʃən ka:d] *n* – плата розширення

external [ɪks'tə:n)l] *adj* – зовнішній

Ff

factor ['fæktə] *n* – фактор, коефіцієнт, особливість

fan [fæn] *n* – вентилятор

fashion ['fæʃən] *n* – модель, форма

fiberglass ['faɪbəgla:s] *n* – скловолокно

figure ['fɪgə] *n* – малюнок, зображення, ілюстрація

file [faɪl] *n* – файл, картотека, архів

fit [fɪt] *v* – установлювати, монтувати

floppy ['flɔpɪ] *adj* – гнучкий

floppy disk *n* – гнучкий диск

floppy drive *n* – накопичувач на гнучких магнітних дисках, дисковод

form factor *n* – коефіцієнт

fragmentation [,frægmen'teɪʃən] *n* – фрагментація, поділ на фрагменти

function ['fʌŋkʃən] *n* – функція, призначення

Gg

gear [gɪə] *n* – знак, «зірочка»

general ['dʒenərel] *adj* – загальний, головний

generate ['dʒenəreɪt] *v* – викликати, робити, генерувати

go onward [gəu 'ɔnwəd] *v* – йти попереду

grid [grɪd] *n* – енергосистема, модулятор

gun [gʌn] *v* – переривати (процес)

Hh

hard disk ['ha:d 'dɪsk] *n* – жорсткий диск

hardware ['ha:d,weə] *n* – апаратне забезпечення

head ['hed] *n* – голівка, магнітна голівка

headphone ['hedfəun] *n* – навушники

heat pipe [hi:t paɪp] *n* – теплова труба

heat sink [hi:t sɪŋk] *n* – радіатор

hide ['haɪd] *v* – ховати, приховувати

hit [hɪt] *n* – елемент файла (що завантажується), звернення (в кеш-буфері), відповідь, співпадіння (під час пошуку), індекс популярності(в Інтернеті)

hole [həul] *n* – отвір, діра

host [həust] *n* – головна обчислювальна машина, хост (будь-який пристрій в мережі, що використовує протоколи TCP/IP)

host adapter *n* – хост-адаптер (контролер сервера)

hub ['hʌb] *n* – ядро (в мережі), концентратор (мережевий апаратний вузол), підбірка (веб-сторінки)

hunt ['hʌnt] *n* – пошук

hybrid ['haɪbrɪd] *adj* – гібридний, змішаний

Ii

identify [aɪ'dentɪfaɪ] *v* – установлювати тотожність (with), ототожнювати

illustrate ['ɪlə,streɪt] *v* – ілюструвати, пояснювати

image ['ɪmɪdʒ] *n* – образ, зображення; *v* – відображати, створювати зображення

implementation [,ɪmplɪmen'teɪʃən] *n* – виконання, реалізація, етап в технологічному процесі розробки

increase ['ɪnkri:s] *v* – збільшувати, підсилювати

information [,ɪnfə'meɪʃən] *n* – інформація, дані, повідомлення

infrared [,ɪnfrə'red] *adj* – інфрачервоний

input ['ɪnput] *n* – введення інформації, *v* - вводити інформацію

input device *n* – пристрій вводу

insert ['ɪnsət] *n* – вставка; *v* – вносити виправлення, доповнення

insertion point [ɪn'sə:ʃən pɔint] *n* – точка вводу (положення курсору в діалоговому вікні)

inside [ɪn'saɪd] *n* – внутрішня сторона; *adj* – внутрішній; *adv* – усередині

install [ɪn'stɔ:l] *v* – інсталювати, установлювати, монтувати

installation [,ɪnstə'leɪʃən] *n* – інсталяція, установка

instruction [ɪn'strʌkʃən] *n* – команда, інструкція, програма дій

instrument ['ɪnstrumənt] *n* – інструмент, прилад, апарат

integrated ['ɪntɪ,greɪtɪd] *adj* – складений, комплексний, об'єднаний

integrated system – інтегрована система

interact [,ɪntər'ækt] *v* – взаємодіяти

interface [,ɪntəfeɪs] *n* – інтерфейс (на мові програмування - видима користувачу частина модуля)

internal [ın'tə:nəl] *adj* – внутрішній
irreversibly [,ırı'və:səblı] *adv* – необоротно, нереверсивно
issue ['ısju:]] *v* – видавати
item ['aıtem] *n* – окремий предмет, елемент, одиниця

Jj
joystick ['dʒɔıstık] *n* – джойстік, важіль керування
jumper ['dʒʌmpə] *n* – навісний провідник, з'єднувальний дріт
jumper block ['dʒʌmpə blɔk] *n* – блок перемичок (для вибору необхідної конфігурації пристрою)

Kk
key ['kı:] *n* – клавіша, кнопка, перемикач
keyboard ['kı:,bɔ:d] *n* – клавіатура, комутаційна панель

L l
laptop [læptɔp] *n* – невеликий портативний комп'ютер
laser ['leızə] *n* – лазер, оптичний квантовий генератор (підсилювач)
layout ['leıaut] *n* – розташування, набір інструментів, устаткування
limit ['lımıt] *n* – границя, межа, *v* – обмежувати
liquid-crystal display (LCD) – рідкокристалічний дисплей (РКД)

location [lə'ukeıʃən] *n* – розміщення, комірка пам'яті

logic ['lɔdʒık] *n* – логіка, *adj* – логічна схема

Mm
mainframe ['meınfreım] *n* – універсальна обчислювальна машина (на відміну від міні-машин)
main frame – центральний блок обробки даних, (основний комплект ЄОМ, що включає оперативну пам'ять, центральний процесор та канали вводу/ виводу)

major ['meıdʒə] *adj* – головний

management ['menıdʒmənt] *n* – управління, уміння справлятися (з)

match [mætʃ] *v* – відповідати, підбирати під пару, поєднати
matrix ['meıtrıks] *n* – матриця, дешифратор

measure ['meʒə] *n* – міра, критерій, показник, масштаб, форма; *v* – вимірювати, оцінювати
memorize ['meməraız] *v* – запам'ятовувати
memory ['memərı] *n* – пам'ять, запам'ятовувальний пристрій, машинна пам'ять

message ['mesıdʒ] *n* – повідомлення; *v* – посилати повідомлення
microphone ['maıkrəfəun] *n* – мікрофон
microprocessor [,maıkrəu'prəusesə] *n* – мікропроцесор
modem ['məudem] *n* – модем, модулятор-демодулятор
module ['mɔdju:l] *n* – модуль
modular ['mɔdjulə] *adj* – модульний
monitor ['mɔnıtə] *n* – монітор, дисплей, програмний засіб синхронізації
motherboard ['mʌðə,bɔ:d] *n* – материнська плата, системна плата
mount [maunt] *v* – установлювати, закріпляти, монтувати
mouse [maus] *n* – миша (маніпулятор для управління курсором)
multimedia [,mʌltı'mi:dıə] *adj* – мультимедійний, з одночасним використанням різних засобів інформації

Nn

navigate ['nævɪɡeɪt] *v* – оперувати, керувати

need [ni:d] *n* – потреба; *v* – потребувати

network (net) ['net,wə:k] *n* – мережа, схема, мережевий графік

network interface card (NIC)– мережева інтерфейсна плата (мережевий адаптер)

notebook ['nəutbuk] *n* – ноутбук, портативний комп'ютер

notice ['nəutɪs] *v* – відзначати, повідомляти

nudge ['nʌdʒ] *v* – просувати, заставляти

number ['nʌmbə] *n* – число, кількість; *v* – нараховувати

Oo

on-screen [ɔn'skrɪ:n] *adj* – екранний

operate ['ɔpəreɪt] *v* – працювати, приводити у рух

operating system [,ɔpə'reɪtɪŋ'sɪstɪm] *n* – операційна система

operation [,ɔpə'reɪʃən] *n* – робота, експлуатація, приведення в дію, процес

optical ['ɔptɪkəl] *adj* – оптичний

optical disk drive (**ODD**) *n* – накопичувач на оптичних дисках

optimize ['ɔptɪmaɪz] *v* – оптимізувати

original [ə'rɪdʒənl] *adj* – справжній, новий, первісний

output ['autput] *n* – вихідні дані, пристрої виводу, вихідна потужність

output device *n* – пристрій виводу

outside ['aut'saɪd] *n* – зовнішня частина, поверхня; *adj* – зовнішній; *adv* – зовні

overclocking *n* – розгін процесора

Pp

packet ['pækɪt] *n* – пакет, блок інформації

palmtop [pa:mtɔp] *n* – кишеньковий комп'ютер

passive matrix display *n* – рідкокристалічний дисплей з пасивною матрицею (РДП)

path [pa:θ] *n* – траєкторія

pathway [pa:θweɪ] *n* – траєкторія

pattern ['pætən] *n* – модель, зразок, шаблон

perform [pə'fɔ:m] *v* – виконувати, робити

performance [pə'fɔ:məns] *n* – дія, виконання, продуктивність

peripheral [pə'rɪfərəl] *n* – периферійний пристрій

permanent ['pə:mənənt] *adj* – постійний, незмінний

personal ['pə:snl] *adj* – персональний

pick- up *n* – адаптер, звукознімач

pickup head *n* – голівка звукознімача

pixel ['pɪks(ə)l] *n* – піксель, мінімальний елемент зображення

planar board *n* – материнська плата

platter ['plætə] *n* – жорсткий диск

platter ['plætə] *n* – жорсткий диск

plug ['plʌg] *n* – штепсельна вилка

pointer ['pɔɪntə] *n* – покажчик, вказівка (ідентифікатор об'єкту в програмі)

port [pɔ:t] *n* – порт (багаторозрядний вхід чи вихід для пристрою)

portable ['pɔ:təbl] *adj* – портативний, переносний

portability [,pɔ:tə'bɪlɪtɪ] *n* – портативність

power ['pauə] *n* – потужність, енергія, здатність, сила

power connector ['pauə kə'nektə] *n* – силовий роз'єм, роз'єм живлення

power supply ['pauə sə'plaɪ] *n* – блок живлення, джерело живлення
primary ['praɪmərɪ] *adj* – первинний, головний
print [prɪnt] *v* – друкувати, відображати (інформацію на екрані дисплея)
printer [prɪntə] *n* – принтер, друкуючий пристрій
printhead (print(ing) head) *n* – друкуюча голівка, вузол
print out *v* – роздруковувати
process ['prəuses] *v* – обробляти
processor ['prəusesə] *n* – процесор
profile ['prəufaɪl] *n* – профіль, розріз, контур
program ['prəugræm] *n* – програма; *v* – програмувати
programmer ['prəugræmə] *n* – програміст, програмуючий пристрій (ПЗП)

protection [prə'tekʃən] *n* – захист
provide [prə'vaɪd] *v* – забезпечувати, надавати, постачати
purpose ['pə:pəs] *n* – намір, мета, призначення

R r
random access memory RA M ['ræm] *n* – оперативна пам'ять, ОЗП
rate [reɪt] *n* – коефіцієнт, ступінь, відсоток, частка; *v* – оцінювати, обчислювати, визначати
read-only memory ROM *n* – постійна пам'ять, ПЗП
receptacle [rɪ'septəkəl] *n* – патрон, штепсельна розетка
recorder [rɪ'kɔ:də] n – звукозаписуючий пристрій
rectangular [rek'tæŋgjulə] *adj* – прямокутний

reflection [rɪ'flekʃən] *n* – відображення

refresh [rɪ'freʃ] *v* – відновлювати
render [rendə] *v* – відтворювати, зображувати
replace [rɪ'pleɪs] *v* – заміняти, заміщати, відновити
require [rɪ'kwaɪə] *v* – вимагати, потребувати
reset [ri:'set] *v* – знову встановлювати
reside [rɪ'zaɪd] *v* – знаходитись, бути властивим (in)
respectively [rɪs'pektɪvlɪ] *adv* – відповідно, у зазначеному порядку
restore [rɪs'tɔ:] *v* – відновлювати
re-store *v* – переписувати в пам'ять заново
result
row [rəu] *n* – ряд
run [rʌn] *n* – запуск програми; *v* – запускати програму

Ss
scan ['skæn] *v* – сканувати
scanner ['skænə] *n* – сканер
scheme [sk:m] *n* – схема, план, програма
screen ['skri:n] *n* – екран; *v* – демонструвати на екрані
screensaver ['skri:nseɪvə] *n* – заставка екрану
scroll ['skrəul] *v* – прокручувати для перегляду

search [sə:tʃ] *v* – пощук

section ['sekʃən] *n* – частина, деталь, сегмент, секція
select [sɪ'lekt] *v* – відбирати, підбирати
self-destruct ['selfdɪs'trʌct] *v* – самоліквідуватися (про пристрій)
semiconductor [ˌsemɪkən'dʌktə] *n* – напівпровідник
sensor ['sensə] *n* – сенсор, датчик, чуттєвий елемент

server ['sɜ:və] *n* – сервер, пристрій для обслуговування ПК

setting ['setɪŋ] *n* – установка, запуск, параметри настройки

shader ['ʃeɪdə] *n* – програма – ретушер

shut off *v* – виключати

single in-line memory modules (SIMMs) – модуль пам'яті з однорядним розташуванням виводів

size [saɪz] *n* – розмір, величина

slot [sɔlt] *n* – область пам'яті, отвір

socket ['sɔkɪt] *n* – розетка, гніздо

software ['sɔ:ftweə] *n* – програмне забезпечення

sound [saund] *n* – звук; *v* – звучати, видавати звук

sound blaster *n* – саунд-бластер, звукогенератор

sound card [saund kɑ:d] *n* – звукова карта, звукова плата

speaker ['spi:kə] *n* – динамік ПК, гучномовець

speed [spi:d] *n* – швидкість, число обертів

spin [spɪn] (**spun** [spʌn]) *v* – обертатись

spindle [spɪndl] *n* – вісь, шпиндель (дисковода)

spreadsheet ['spredʃi:t] *n* – велика електронна таблиця

spur ['spə:] *v* – стимулювати, спонукувати

stand by *v* – виконувати

static ['stætɪk] *adj* – нерухомий

stemming – морфологічний пошук

storage ['stɔ:rɪdʒ] *n* – пам'ять, запам'ятовувальний пристрій

store [stɔ:] *v* – уміщати, зберігати, ЗП

storage device *n* – запам'ятовуючий пристрій (елемент), ЗП

subsequent [sʌbsɪkwənt] *adj* – наступний

subset [sʌbset] *n* – підмножина

success [sək'ses] *n* – успіх, досягнення

suitable ['sju:təbl] *adj* – придатний, відповідний

supplement ['sʌplɪmənt] *n* – додаток, доповнення

supply [sə'plaɪ] *n* – живлення; *v* – живити, подавати напругу струм

surface ['sə:fɪs] *n* – поверхня

Tt

tab [tæb] *n* – табуляція (вирівнювання тексту), клавіша

technology [tek'nɔlədʒɪ] *n* – техніка, технологія

tightly ['taɪtlɪ] *adj* – міцно, туго, щільно

theory ['θɪərɪ] *n* – теорія

through [θru:] *adv*– через, завдяки

thumb [θʌm] *n* – курсор

touchpad *n* – сенсорна панель

track [træk] *n* – доріжка, канал

trackball [trækbɔ:l] *n* – кульковий маніпулятор

tube [tju:b] *n* – електронна лампа

type [taɪp] *n* – тип, вид, символ

typical ['tɪpɪkəl] *adj* – типовий

U u

unavoidable [ˌʌnə'vɔɪd(ə)bl] *adj* – неминучий

unit ['ju:nɪt] *n* – одиниця, блок

universal [ˌjuːnɪˈvəːsəl] *adj* – загальний, універсальний

Universal Serial Bus (USB) – універсальна послідовна шина (канал)

update [ʌpˈdeɪt] *n* – оновлення, корегування; *v* – модернізувати

upgrade [ˈʌpgreɪd] *n* – засоби, що забезпечують збільшення обчислювальних можливостей

upgradable *adj* – розширений (по функціональним можливостям)

usage [ˈjuːsɪdʒ] *n* – коефіцієнт завантаження (ресурсу), частота використання

user [ˈjuːzə] *n* – користувач

utilities [ˈjuːtɪlɪtɪ] *n* – обслуговуюча програма, утиліт

Vv

version [ˈvəːʃən] *n* – версія, варіант

vertex [ˈvəːteks] *n* – вершина

vice versa [vaɪsɪ ˈvəːsə] *adv* – навпаки, обернено

video [ˈvɪdɪəu] *n* – зображення, відео

video card [ˈvɪdɪəu kɑːd] *n* – відеокарта

view [ˈvjuː] *v* – дивитися, переглядати

virtual [ˈvəːtjuəl] *adj* – віртуальний, дійсний

virtually [ˈvəːtjuəlɪ] *adv* – віртуально

virus [ˈvaɪərəs] *n* – вірус

visual [ˈvɪzjuəl] *adj* – візуальний, видимий

volt [vɔlt] *n* – вольт (одиниця виміру ел. напруги)

voltage [ˈvəultɪdʒ] *n* – напруга

Ww

watt [wɔt] *n* – ват

webcam [webkæm] *n* – веб-камера, мережева камера

wheel [ˈwɪːl] *n* – коліщатко, диск,що обертається

wire [ˈwaɪə] *n* – провід, дріт

wireless [ˈwaɪəlɪs] *adj* – бездротовий

within [wɪðˈɪn] *prep* – усередині, у межах

word – processing program [ˌwəːd ˈprəusesɪŋ ˈprəugræm] *n* – електронна обробка текстів (текстовий редактор)

word – processing software *n* – програмні засоби обробки текстів

Xx

Xerox [ˈzɪərɔks] *n* – ксерокс

X-line [ˈekslaɪn] *n* – вісь іксів

Zz

zip –[ɪp] *n* – zip-диск (дискета 100 і більше МГ байт), миттєво переміщати (напр., курсор з однієї точки екрана в іншу), файловий архів, *v* – заархівувати (файли)

**zero** [ˈzɪərəu] *n* – нуль, нульова точка

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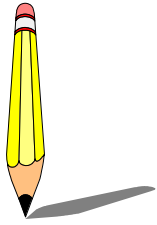
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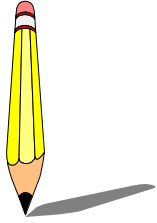
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Software
Програмне забезпечення

Навчальний посібник