Англійська мова

**Методичні вказівки до практичних занять
та самостійної роботи
для студентів першого та другого курсів денної форми навчання
напряму підготовки
6.050102 «Комп'ютерна інженерія»**

Обговорено і рекомендовано

на засіданні кафедри іноземних мов

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ЗМІСТ

ВСТУП

Методичні вказівки з англійської мови розраховані на студентів напрямів підготовки 6.050102 «Комп'ютерна інженерія», які володіють англійською мовою в межах нормативної граматики і соціально-побутової лексики. Методичні вказівки призначені для навчання англійської мови програмістів, операторів ЕОМ та інших фахівців, пов'язаних з інформатикою та обчислювальною технікою.

Метою даних методичних вказівок є допомога студентам в оволодінні професійної лексики за спеціальностю за освітньо-кваліфікаційним рівнем «бакалавр». Представлені тексти та вправи містять інформацію науково-популярного характеру, досить цікаву і доступну для розуміння студентами 1-2-х курсів, сприяють підготовці їх до сприйняття вузькоспеціальної іноформації на наступних ступенях навчання. Тематика текстів сучасна та актуальна. Лексичний і граматичний матеріал є частотно-значущим для підмови науково-технічної літератури.

Методичні вказівки містять достатню кількість різноманітних вправ, побудованих за принципом зростання складності і попередження лексичних та граматичних труднощів, сприяння збагаченню словникового запасу.

Методичні вказівки складаються з тринадцяти розділів, тексти для позааудиторного читання та додатки з деяких граматичних питань. Вони можуть бути використані як для роботи в аудиторії під керівництвом викладача, так і для самостійного вивчення англійської мови студентами.

1 UNIT № 1. PARTS AND MEASUREMENTS

1.1 Vocabulary. Translate the words into Ukrainian

to compute	RAM – Random Access	to move
computer	Memory	to remove
PC – Personal	ROM – Read Only	movement
Computer	Memory	software
desktop	unit	program
part	to measure	to program
device	measurement	programmer
hardware	bit – binary digit	to operate
drive	byte	operation
hard drive	kilobyte, Megabyte,	OS – operating /operation
floppy disk drive	Gigabyte	system
CD-ROM drive	hertz	to display
CD-rewriter	megahertz, gigahertz	display
CD – Compact Disk	inch	to monitor
DVD – Digital	speed	monitor
Versatile Disk	size	screen
tower	rate	to print
mouse	to process	printer
key	processor	to type
keyboard	CPU – central processing	type
peripherals	unit	character
to store	to control	letter
storage	to perform	graphics
storage device	performance	image
memory	to run	picture

1.1.1 Choose the correct translation:

1) to measure

   a) обробляти   b) виконувати   c) виміряти   d) запускати

2) device

   a) екран   b) пристрій   c) дисковод   d) пам'ять

3) to run

   a) обробляти   b) виконувати   c) виміряти   d) запускати

4) screen

   a) екран   b) пристрій   c) дисковод   d) пам'ять

5) drive

   a) екран   b) пристрій   c) дисковод   d) пам'ять

6) size

   a) розмір   b) швидкість   c) пам'ять   d) дисковод

7) to perform
     a) обробляти   b) виконувати   c) виміряти   d) запускати

8) to process
     a) обробляти   b) виконувати   c) виміряти   d) запускати

9) speed
     a) розмір   b) швидкість   c) пам'ять   d) дисковод

10) storage
     a) екран   b) пристрій   c) дисковод   d) пам'ять

1.1.2 Match the words with their meanings:

a) keyboard   1) друкувати
b) desktop   2) пристрій
c) unit   3) працювати
d) performance   4) обробляти
e) operate   5) клавіатура
f) device   6) зберігати
g) type   7) блок
h) process   8) деталь
i) store   9) настільний
j) part   10) швидкодія

1.1.3 Match the words with their definitions:

a) character   1) how well or badly a computer, machine, etc. works or does smth

b) hardware   2) the programs used by a computer

c) megabyte   3) a single letter, number or space that is typed in a computer document

d) performance   4) a copy or picture of sth seen on a computer

e) process   5) the machinery and electronic parts of a computer system that you can touch

f) software   6) to keep information or data in a computer's memory

g) store   7) a unit for measuring the speed of a CPU.

h) image   8) a tool or a piece of equipment made for a particular purpose

i) device   9) a unit for measuring computer memory

j) megahertz   10) (used about a computer) to read data and use it to perform a series of tasks (operations)

1.1.4 Make up two-word expressions:

to process   movies
to control   a program
to watch   games
a binary   data

an operation	hardware
to type	device
to measure	digit
to play	system
to run	size
a storage	letters

1.1.5 Make up three-word expressions:

Central	Access	Disk
Random	Versatile	Drive
Read	Only	Memory
Hard	Processing	Memory
Digital	Disk	Unit

1.1.6 Find synonyms:

character	picture
speed	machine
device	work
keep	rate
image	component
software	store
storage	letter
operate	program
part	hardware
computer	memory

1.1.7 Complete the sentences with the words from the box:

> measure, CPU, graphics**,** movies, run, processes, RAM

1) Most computers ___ the Microsoft Windows OS.
2) We ___ the size of the hard disk in gigabytes.
3) Watching ___ on the Internet needs a faster ___.
4) The CPU controls how fast the computer ___ data.
5) Programs with a lot of ___ need a large ___to run well

1.1.8 Guess what it is:
1) a device that can read and write to writable disks
2) a tool or a piece of equipment made for a particular purpose
3) the part of the computer that reads and stores information on disks
4) a machine that is connected to a computer and that prints on paper
5) the set of buttons (keys) that you press to operate a computer
6) a separate part of a PC with a large screen that shows information from the computer

7) a small device that you move across a surface with your hand to control the movement of the cursor

8) the general term used for a computer, which usually consists of a monitor, a tower, a keyboard and a mouse

9) any piece of hardware (= machinery, etc. that forms part of or is connected to a computer) apart from the CPU and the working memory (RAM)

10) a metal box that contains the CPU, hard disk drive and power supply for a PC

1.2 Reading

1.2.1 Read the text quickly. Match the headings (a-d) with the paragraphs (1-4):

a Memory   **b** Speed   **c** PCs and Notebooks   **d** Hardware/ Software

1. The parts of a computer you can touch, such as the monitor or the Central Processing Unit (CPU) are hardware. All hardware except the CPU and the working memory are called peripherals. Computer programs are software. The operating system (OS) is software that controls the hardware. Most computers **run** the Microsoft Windows OS. MacOS and Linux are other operating systems.

2. The CPU controls how fast the computer **processes** data, or information. We measure its speed in megahertz (MHz) or gigahertz (GHz). The higher the speed of the CPU, the faster the computer will run. You can type letters and play computer games with a 500 MHz CPU. Watching movies on the Internet needs a faster CPU and a modem.

3. We measure the Random Access Memory (RAM) of the computer in megabytes (MB). RAM controls the **performance** of the computer when it is working and moves data to and from the CPU. Programs with a lot of **graphics** need a large RAM to run well. The hard disk **stores** data and software programs. We measure the size of the hard disk in gigabytes (GB).

4. Computer technology changes fast, but a desktop PC (Personal Computer) usually has a tower, a separate monitor, a keyboard and a mouse. The CPU, modem, CD-ROM and floppy disk drives are usually inside the tower. A notebook is a portable computer with all these **components** inside one small unit. Notebooks have a screen, not a monitor, and are usually more expensive than desktops with similar **specifications.**

1.2.2 Look at these words. Write H (hardware), P (peripheral), S (software) or M (measurement) next to each one:

1 CPU   2 MacOS   3 megabyte (MB)   4 printer   5 RAM   6 megahertz (MHz) 7 mouse   8 modem 9 Linux   10 scanner 11 gigabytes (GB) 12 floppy disk

1.2.3 Match the highlighted words and phrases in the text with the definitions (1-7):

1. parts
2. pictures and images
3. reads and uses data
4. measurements
5. use a computer program
6. keeps data in the memory
7. how well a computer does something

Найменування десяткових кратних і дольних одиниць утворюються приєднанням нижчезазначених приставок до найменувань вихідних одиниць.

Таблиця 1.1 - Приставки для утворення кратних і дольних одиниць

da – deca (дека – да) = 10^1	d – deci (деци – д) = 10^{-1}
h - hecto (гекто – г) = 10^2	c – centi (санти – с) = 10^{-2}
k – kilo (кіло – к) = 10^3	m – milli (мілі – м) = 10^{-3}
M – mega (мега – М) = 10^6	- micro (мікро – мк) = 10^{-6}
G – giga (гіга – Г) = 10^9	n – nano (нано - н) = 10^{-9}
T – tera (тера – Т) = 10^{12}	p – pico (піко – п) = 10^{-12}
P – peta (пета – П) = 10^{15}	f – femto (фемто – ф) = 10^{-15}
E – exa (екса – Е) = 10^{18}	a – atto (атто – а) = 10^{-18}

2 UNIT № 2. WHAT IS A COMPUTER?

2.1 Vocabulary. Translate the words into Ukrainian

to accept	main memory	socket
step	influence	to connect
to involve	to influence	connection
to feed (fed)	influential	handle
set	to execute	to handle
to set	executive	able
set-up	to hold (held)	to enable
to put	to hold down	common
to input	current	to extract
to output	currently	means
to make	to attach	by means of
to make up	attachment	to plug
make-up	to provide	range
to call	permanent	general
to consist	to equip	generally
main	equipment	

2.1.1 Choose the correct translation:

1) consist
   a) приєднувати   b) складатися   c) вилучати   d) складати
2) extract
   a) приєднувати   b) складатися   c) вилучати   d) складати
3) step
   a) крок   b) набір   c) вплив   d) засіб
4) involve
   a) забезпечувати   b) включати   c) встановлювати   d) робити
5) set
   a) крок   b) набір   c) вплив   d) засіб
6) influence
   a) крок   b) набір   c) вплив   d) засіб
7) attach
   a) приєднувати   b) складатися   c) вилучати   d) складати
8) provide
   a) забезпечувати   b) включати   c) встановлювати   d) робити
9) means
   a) крок   b) набір   c) вплив   d) засіб
10) make up
   a) приєднувати   b) складатися   c) вилучати   d) складати

2.1.2 Match the words with their meanings:

a) main	1) обладнання
b) execute	2) називати
c) enable	3) головний
d) hold	4) в даний час
e) equipment	5) робити можливим
f) connect	6) діапазон
g) common	7) тримати
h) call	8) розповсюджений
i) range	9) з'єднувати
j) currently	10) виконувати

2.1.3 Match the words with their definitions:

a) able	1) clever, having or showing knowledge or skill
b) execute	2) now passing, of the present time
c) influence	3) have or keep in one's possession
d) general	4) one action in a series of actions
e) current	5) carry out
f) hold	6) make a connection
g) permanent	7) not special or particular
h) step	8) through, with the help of
i) by means of	9) not expected to change, going for a long time
j) plug	10) power to affect, action of some force

2.1.4 Make up two-word expressions:

to accept	data
main	devices
storage	units
optical	product
input	drive
physical	system
computer	storage
to process	memory
finished	data
permanent	devices

2.1.5 Find synonyms:

a) set up	1) connect
b) hold	2) input
c) step	3) chief
d) feed	4) contain
e) execute	5) by means of
f) via	6) give

g) currently   7) now
h) attach   8) install
i) provide   9) perform
j)main   10) operation

2.2 Reading

2.2.1 Read and translate the text:

What is a Computer?

Computers are electronic machines which can accept data in a certain form, process the data and give the results of processing in a specified format as information.

Three basic steps are involved in the process: First, data is fed into the computer's memory. Then, when the program is run, the computer performs a set of instructions and processes the data. Finally, we can see the results (the output) on the screen or in printed form.

Information in the form of data and program is known as **software**, and the electronic and mechanical parts that make up a computer system are called **hardware**. A standard computer system consists of three main sections: the Central Processing Unit (CPU), the main memory and the peripherals.

Perhaps the most influential component is the **Central Processing Unit**. It is to execute program functions and to coordinate the activities of all the other units. In a way, it is the 'brain' of the computer. The **main memory** holds the instructions and data which are currently being processed by the CPU. The **peripherals** are the physical units attached to the computer. They include storage devices and input/ output devices.

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

On the rear panel of the computer there are several ports into which we can plug a wide range of peripherals – modems, fax machines, optical drives and scanners.

These are the main physical units of a computer system, generally known as the **configuration.**

2.2.2 Use the information in the text to help you match the terms (a-i) with the appropriate explanation or definition below:

a) software;   d) peripheral devices;   g) monitor;
b) floppy disk;   e) hardware;   h) input;
c) output;   f) Central Processing   i) port.
                       Unit
1. The brain of the computer.

2. Physical parts that make up a computer system.

3. Programs which can be used on particular computer system.

4. The information which is presented to the computer.

5. Results produced by a computer.

6. Hardware equipment attached to the CPU.

7. Visual display unit.

8. Small device used to store information. Same as 'diskette'.

9. Any socket or channel in a computer system into which an input/output device may be connected.

2.2.3 Complete the sentences with the words from the box:

software	process	type	hardware	output	operate

1) Computers are electronic machines that … information.
2) Computers … quickly and accurately in solving problems.
3) After processing the information, they … the results.
4) You can … and print any kind of document – letters, memos, or legal documents.
5) … is a set of devices and … is a set of programs.

2.3 Summing-up

1. What do we mean when we say "a computer"?
2. What parts make up a computer system?
3. What are the main units of measurement in computer science?
4. What is hardware?
5. What is software?
6. Why is the central processor called "a brain of a computer"?
7. What do we use to input data?

2.4 Speaking: Now you can tell what a computer is.

3 UNIT № 3. DESKTOP

3.1 Vocabulary. Translate the words into Ukrainian

desktop	control panel	box
to appear	to turn on\off	to save
icon	to boot up	screen saver
background	to click	person
picture	to double-click	to personalize
colour\color	folder	to restore
number	file	to allow
a number of	to contain	to locate
to include	to add	location
recycle bin	to delete	

3.1.1 Choose the correct translation:

1) to include
 a) вмикати b) вимикати c) з'являтися d) включати
2) a number of
 a) номер b) декілька c) піктограма d) заставка
3) to turn off
 a) вмикати b) вимикати c) з'являтися d) включати
4) folder
 a) робочий стіл b) заставка c) шпалери d) папка
5) background picture
 a) робочий стіл b) заставка c) шпалери d) папка
6) to turn on
 a) вмикати b) вимикати c) з'являтися d) включати
7) to add
 a) вмикати b) видаляти c) додавати d) вимикати
8) desktop
 a) робочий стіл b) заставка c) шпалери d) папка
9) to appear
 a) вмикати b) вимикати c) з'являтися d) включати
10) screen saver
 a) робочий стіл b) заставка c) шпалери d) папка

3.1.2 Match the words with their meanings:

1) control a) робочий стіл
2) number b) людина
3) person c) додавати
4) boot up d) містити
5) appear e) управляти
6) add f) папка
7) include g) завантажувати

8) folder	h) число
9) contain	i) включати в себе
10) desktop	j) з'являтися

3.1.3 Match the words with their definitions:

1) background	a) to remove smth that has been stored on a computer
2) delete	b) a place where a number of computer files or documents can be stored together
3) double-click	c) a program that runs a moving image on a computer screen when the keyboard and the mouse are not being used
4) file	d) to design or change smth so that it is suitable for the needs of one particular person
5) folder	e) the first screen that appears when you turn on your computer and which displays icons that represent files, folders, documents, etc
6) icon	f) picture or colour on the first screen that appears when you turn on the computer
7) Recycle Bin	g) the folder in Microsoft Windows where files or programs that have been deleted or removed are stored
8) Screensaver	h) to press one of the buttons on a mouse twice quickly in order to start an action on screen
9)personalize	i) a small symbol on a computer screen which represents a program, or a file
10) desktop	j) a collection of information, such as a Word document or a picture, which is stored in a computer, under a particular name

3.1.4 Make up two-word expressions:

| 1. background | a) the icon |
2. screen	b) document
3. control	c) screen
4. recycle	d) picture
5. to double-click	e) the desktop
6. to press	f) saver
7. to run	g) a program
8. computer	h) bin
9. to personalize	i) the button
10.Word	j) panel

3.2 Speaking

What do you see first when you turn on a computer? How do you open a program?

3.3 Reading

3.3.1 Read the text quickly and match the headings (a-d) with the paragraphs (1-4):

a The control panel **b** The drives **c** The desktop **d** Using icons
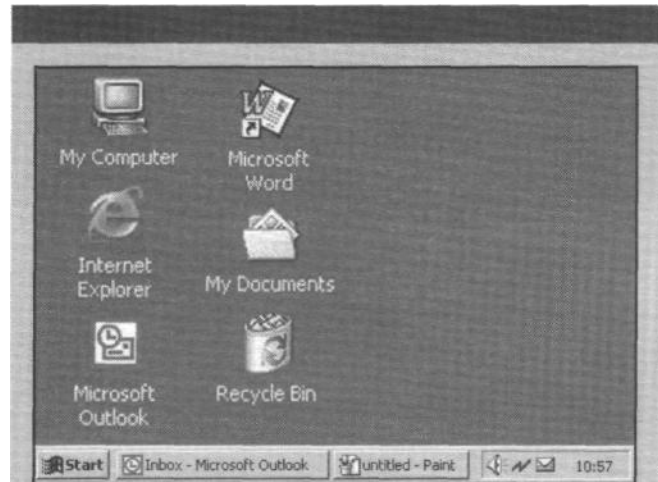
1. The desktop is the screen that appears after you boot up, or turn on, your computer. It shows a number of icons on a background picture or colour. When you buy a new computer and boot up for the first time, the desktop will only show a small number of icons. In the Windows operating system, these usually include My Computer and the Recycle Bin.

2. Double-clicking on an icon with the mouse opens a computer program, a folder or a file. Folders usually contain other files. You can move icons around the desktop, add new ones or remove them by deleting them. Deleted files go to the Recycle Bin. People usually put the programs they use most often on the desktop to find them quickly.

3. When you double-click on My Computer another screen appears. This screen shows the A: drive icon, for floppy disks; the C: drive icon, which usually contains all of the main programs and folders on your computer; the D: drive icon, which is usually the CD-ROM drive, and the Control Panel folder.

4. When you double-click on Control Panel, another screen appears that shows many other icons, such as the Display icon and the Date/Time icon. Double-clicking on Display opens a box that lets you personalize your desktop by changing the screen saver (the moving image that appears when no one is using the computer) or the background picture.

3.3.2 Decide if the sentences are true (T) or false (F):

1 The desktop appears before you boot up.

2 Files are usually inside folders.

3 People usually put their favorite programs on the desktop.

4 Use the C: drive to open floppy disks.

5 You cannot change the background picture of the desktop.

6 The Control Panel folder contains the   Date/Time icon.

3.3.3 Find the words in the text that mean:

1 comes into view so you can see it (paragraph 1)
2 the picture or colour on your screen (1)
3 clicking the mouse two times quickly (2)
4 something that holds documents or files (2)
5 most important (3)
6 make something the way you want it (4)

3.3.4 Match the icons with their descriptions:

Common icons on the Microsoft Windows desktop include:

1) Microsoft Outlook	a) a feature that stores deleted files and allows the user to restore them to their original location i.e. the equivalent to the trashcan on an Apple Mac system
2) Network Neighbourhood or My Network Places	b) a messaging program
3) My Computer	c) a browser program that allows the user to view webpages on the Internet
4) Internet Explorer	d) a feature that displays the names of other computers networked with yours
5) Recycle Bin	e) a feature that lets you see the resources on your computer

3.4 Speaking

What icons do you have on your desktop? Explain your choice.

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4 UNIT № 4. GRAPHICS USER INTERFACE

4.1 Vocabulary. Translate the words into Ukrainian

user interface	basic	relation
to represent	button	relative
to point	item	to search
point	dialog box	search
pointer	step	to reverse
cursor	font	to cut
to select	date	clipboard
to hover	bar	to paste
to cause	task bar	to insert
cause	title bar	resident
to interact	scroll bar	to reside
interaction	tool bar	to touch
interactive	drop-down	touch screen
to press	list	touch pad
pressure	to list	available
to release	to choose (chose, chosen)	to relate
compatible	choice	
to base on/upon	related	

4.1.1 Choose the correct translation:

1) to allow
    a) натискати   b) дозволяти   с) відпускати   d) перераховувати

2) to release
    a) натискати   b) дозволяти   с) відпускати   d) перераховувати

3) relation
    a) причина   b) відношення   с) пошук   d) список

4) to represent
    a) стосуватися   b) представляти   с) вказувати   d) вставляти

5) to press
    a) натискати   b) дозволяти   с) відпускати   d) перераховувати

6) cause
    a) причина   b) відношення   с) пошук   d) список

7) to list
    a) натискати   b) дозволяти   с) відпускати   d) перераховувати

8) search
    a) причина   b) відношення   с) пошук   d) список

9) to point
    a) стосуватися   b) представляти   с) вказувати   d) вставляти

10) list
    a) причина   b) отношение   с) поиск   d) список

4.1.2 Match the words with their meanings:

1) select	a) вирізати
2) point	b) вибирати
3) choice	c) викликати
4) cut	d) розповсюджений
5) step	e) крок
6) basic	f) торкатися
7) common	g) точка
8) touch	h) відносний
9) relative	i) основний
10) cause	j) вибір

4.1.3 Match the words with their definitions:

1) button — a) connected with smb/smth
2) drop-down menu — b) a list of possible choices that appears on a computer screen when you click on a title at the top
3) font — c) to put smth into sth or between two things
4) insert — d) to examine smth carefully because you are looking for smth
5) interact — e) to find the exact position of smb/smth
6) locate — f) a tool on a computer screen that you use to move the text up and down or left and right
7) paste — g) to communicate directly with each other
8) related — h) a small box that a user clicks, using a mouse, to tell the computer to do smth.
9) search — i) to copy or move text or graphics into a document from somewhere else
10) scroll bar — j) the particular style of a set of letters that are used in printing

4.1.4 Make up two-word expressions:

user	bar
dialog	program
scroll	button
tool	bar
touch	bar
drop-down	box
start	devices
compatible	interface
task	menu
resident	screen

### 4.1.5 Complete the sentences with the words from the box:

taskbar, buttons, allows, to hover, choosing, represent, resident, user interfaces, touchscreen, Start button

1) A mouse also has left and right ….
2) A bar, known as a …, is displayed along the bottom of the desktop showing what programs, files and folders are currently open.
3) A … allows the user to select icons and commands by touching the display screen with their finger instead of using a mouse.
4) At the far right of the taskbar is a special area called the **system tray** where icons are displayed showing what … programs are continuously running in the background e.g. the system clock or a sound volume control.
5) Graphical … were first introduced with the Apple Mac OS.
6) **My Briefcase** is a program that … the user to exchange files with a portable computer and to synchronise the files on each computer.
7) There is a … at the far left of the taskbar.
8) The user can close down the operating system by … the **Shut Down** option on the Start Menu.
9) Icons are pictures which … programs, folders, and files.
10) … is to hold the pointer over an icon.

4.2 Speaking

A Graphical User Interface (GUI) makes computers easier to use. A GUI uses icons. Icons are pictures which represent programs, folders, and files.

4.2.1 Can you identify any of these icons?
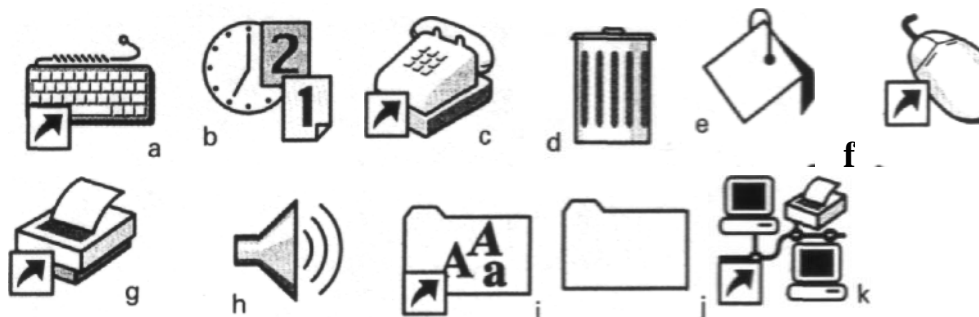
4.2.2 Find the icons for the software which controls these items:

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

4.3 Reading

4.3.1 Read the text and find out the definitions:

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

A Window is an area of the computer screen where you can see the contents of a folder, a file, or a program. Some systems allow several windows

on the screen at the same time and windows can overlap each other. The window on the top is the one which is 'active', the one in use.

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

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

The pointer is the arrow you use to select icons or to choose options from a menu. You move the pointer across the screen with the mouse. Then you click a button on the mouse to use the object selected by the pointer.

4.3.2 Read the terms, make sure that you now their meanings:

window	pointer	program icons
scroll bar	toolbar buttons	document icons
menu bar	disk icons	printer icon
pull-down menu	folders	dock icon

4.3.3 Read the definitions to check your answers:

- **Window**: a viewing area less than or equal to the screen size. By using different windows you can work on several documents simultaneously.
- **Scroll bar:** the area, usually around two sides of a window in a graphical user interface, that allows the user to move around a document.
- **Menu bar**: the area at the top of the screen which allows access to various menus.
- **Pull-down menu**: a menu that the user 'pulls down' from a name in the menu bar at the top of the screen by selecting the name with the mouse.
- **The pointer**: an arrow, controlled by the mouse, that allows you to move around the screen.
- **Toolbar buttons**: found at the top of a window, they take you to the Home folder and others.
- **Icons**: graphic images (or intuitive symbols) used to represent an object or task.
- **Folders**: containers for documents and applications.
- **Dock**: set of icons at the bottom of the screen that give you instant access to the things you use most.

4.3.4 Read the article below and decide which of the expressions in the box best describe a graphical user interface (GUI):

user-friendly slow attractive text-based complex graphics-based

GUIs

The term user interface refers to the standard procedures the user follows to interact with a particular computer. A few years ago, the way in which users had access to a computer system was quite complex. They had to memorize and type a lot of commands just to see the content of a disk, to copy files or to respond to a single prompt. In fact, only experts used computers, so there was no need for a user-friendly interface. Now, however, computers are used by all kinds of people and as a result there is a growing emphasis on the user interface.

A good user interface is important because when you buy a program you want to use it easily. Moreover, a graphical user interface saves a lot of time: you don't need to memorize commands in order to execute an application; you only have to point and click so that its content appears on the screen.

Macintosh computers – with a user interface based on graphics and intuitive tools – were designed with a single clear aim: to facilitate interaction with the computer. Their interface is called WIMP: Window, Icon, Mouse and Pointer and software products for Macintosh have been designed to take full advantage of its features using this interface. In addition, the ROM chips of a Macintosh contain libraries that provide program developers with routines for generating windows, dialog boxes, icons and pop-up menus. This ensures the creation of applications with a high level of consistency.

Today, the most innovative GUIs are the Macintosh, Microsoft Windows and OS/2's graphical Presentation Manager. These three platforms include similar features: a desktop with icons, windows and folders, a printer selector, a file finder, a control panel and various desk accessories. Double-clicking a folder opens a window which contains programs, documents or further nested folders. At any time within a folder, you can launch the desired program or document by double-clicking the icon, or you can drag it to another location.

The three platforms differ in other areas such as device installation, network connectivity or compatibility with application program.

These interfaces have been so successful because they are extremely easy to use. It is well known that computers running under an attractive interface stimulate users to be more creative and produce high quality results, which has a major impact on the general public.

4.3.5 *Find answers to these questions:*

1) What does the abbreviation 'GUI' stand for?
2) What is the contribution of Macintosh computers to the development of graphic environment?
3) What does the acronym 'WIMP' mean?
4) What computing environments based on graphics are mentioned in the text?
5) How do you run a program on a computer with a graphical interface?
6) Can you give two reasons for the importance of user-friendly interfaces?

5 UNIT № 5. KEYS AND BUTTONS

5.1 Vocabulary. Translate the words into Ukrainian

alternate	description	option
alternative	to state	optional
to let	statement	to highlight
sign	to fix	shift
to sign	case	capital
signature	brief	to lock
next	kind	to adjust
next to	arrow	adjustment
below	blank	table
between	space	
above	blank space	
on the left/right	to confirm	
/top/bottom	confirmation	
to the left/right	line	
to arrange	to lose (lost)	
arrangement	to depend on	
like	dependent	
ordinary	independent	
same	dependence	
order	independence	
to order	to apply	
in order to	application	
to vary	to affect	
variant	affection	
various	layout	
to switch on/off/from	entry	
switch	margin	
to edit	previous	
edition	to cancel	
editor	to change	
word processing	change	
word processor	access	
within	to access	
to issue	accessible	
issue	to follow	
to produce	following	
production	approximate	
to combine	approximately	
combination	approximation	
for example	to recognize	
to describe	recognition	

5.1.1 Choose the correct translation:

1) ordinary
    a) незалежний   b) звичайний   c) короткий   d) попередній

2) table
    a) таблиця   b) стрічка   c) розпізнавання   d) опис

3) independent
    a) незалежний   b) звичайний   c) короткий   d) попередній

4) line
    a) таблиця   b) стрічка   c) розпізнавання   d) опис

5) brief
    a) незалежний   b) звичайний   c) короткий   d) попередній

6) recognition
    a) таблиця   b) стрічка   c) розпізнавання   d) опис

7) previous
    a) незалежний   b) звичайний   c) короткий   d) попередній

8) description
    a) таблиця   b) стрічка   c) розпізнавання   d) опис

9) to follow
    a) запирати   b) виробляти   c) слідувати   d) підписувати

10) to lock
    a) запирати   b) виробляти   c) слідувати   d) підписувати

5.1.2 Match the words with their meanings:

1) produce	a) організувати
2) combination	b) стрілка
3) arrange	c) виробляти
4) sign	d) підтвердження
5) arrow	e) між
6) confirmation	f) приблизний
7) approximate	g) знак
8) between	h) наприклад
9) same	i) однаковий
10) for example	j) поєднання

5.1.3 Match the words with their definitions:

a) access	1. to stop smth before it happens or before it is complete
b) adjust	
	2. a type of computer application program used for typing and editing text documents
c) application	3. to be able to open a file, website, program, database, etc.
d) cancel	4. to leave an operation, command or program, etc.
e) edit	5. that you can choose to do or not do

f) escape   6. a computer program or set of programs designed for a particular type of real world job

g) highlight   7. the spaces at the side of a printed page that do not contain text

h) margin   8. to change smth slightly

i) optional   9. to mark part of a text with a special coloured pen, or to mark an area on a computer screen to emphasize it or make it easier to see

j) word processor   10. o prepare a piece of text to be published, making sure that it is correct, the right length, etc.

5.1.4 Make up two-word expressions:

1) capital	processing
2) brief	a document
3) word	data
4) keyboard	space
5) to access	layout
6) application	letter
7) to cancel	character
8) to sign	program
9) alternative	an instruction
10) blank	description

5.2 Reading

About the Keyboard

The keyboard is where the data or information is input into the computer. It is usually arranged like an ordinary typewriter keyboard with a number of other keys added which carry out special functions.

1. Alphanumeric keys: arranged in the same order as a typewriter.
2. Function keys: used by various programs to instruct the PC to perform specific tasks, such as Save, Copy, Paste, Help, etc.
3. Numeric keypad: set of numeric or editing keys. The NumLock key is used to switch from numbers to editing functions.
4. Editing keys: cursor and other keys usually used within word processors to page up and down in a long document or to edit text (using Insert or Delete keys).
5. Special keys: used to issue commands or to produce alternative characters in key combinations, for example, the Alt key.

5.2.1 Match these descriptions with the names of the keys in the box:

> **Arrow Keys, Return/Enter, Backspace, Caps Lock, Shift, Tab, Escape, Space Bar, Delete, Alt**

1) A long key at the bottom of the keyboard. Each time it is pressed, it produces a blank space (…).

2) It moves the cursor to the beginning of a new line. It is also used to confirm commands (…).
3) It stops the program without losing the information from the main memory. Sometimes its use depends on the application (…).
4) It works in combination with other keys to produce special characters or specific actions (…).
5) It removes the character on the right of the cursor or any selected text (…).
6) It produces UPPER-CASE characters or the upper-case character of the key (…).
7) It produces the upper-case letters but it does not affect numbers and symbols (…).
8) It moves the cursor horizontally to the right for a fixed number of spaces (in tabulations and data fields) (…).
9) They are used to move the cursor as an alternative to the mouse (…).
10) It removes the character on the left of the cursor (…).

5.2.2 Match these key abbreviations with their full names:

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

5.2.3 Look at the notebook keyboard below. Answer the questions:

1 Which key is between G and J?
2 Which key is to the left of Y?__
3 Which key lets you type in capital letters?
4 Where are the arrow keys?_____
5 Where is the multiplication sign?

*5.2.4 **Work in pairs. Choose a letter or key from the keyboard and describe where it is. Do not say which key you have chosen. Use** next to, above, below, between, on the right/left/top/bottom.*

5.3 Reading

5.3.1 There is some more information about the keyboard layout:

Keyboard Layout and Data Entry

ENTER or **RETURN** - Moves the cursor down one line and to the left margin. Enter also process commands such as choosing an option in a dialog (message) boxes and submitting a form.

DEL or **DELETE** - Deletes the character at cursor and/or characters to the right of the cursor and all highlighted (or selected) text.

BKSP or **BACKSPACE** - Deletes the character to the left of cursor and all highlighted text.

SPACE BAR - Moves the cursor one space at a time to the right.

SHIFT KEY - Use the shift keys to type capital letters and to type the upper character on keys with two characters on them.

CAPS LOCK - Locks the keyboard so it types capital letters (a light goes on when caps lock is on)

TAB - Moves the cursor five spaces to the right (number of spaces are usually adjustable). Tab moves to the next field in a form or table (Shift-Tab for previous field).
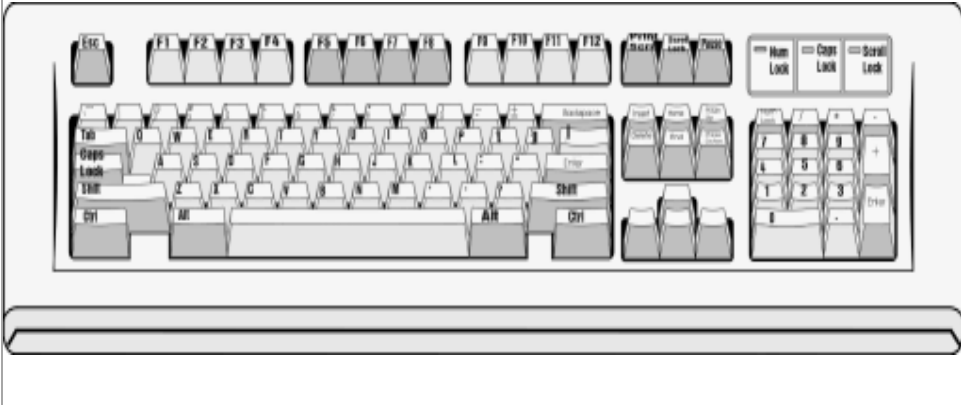
ESC or **ESCAPE** - Cancels a menu or dialog box.

ARROW KEYS - Moves the cursor around document without changing text.

FUNCTION KEYS or **F KEYS** - Access commands by themselves or in combination with the three **command** keys; CTRL, SHIFT, and ALT.

5.3.2 Keyboard Symbols

The following chart displays the character symbols, name and Latin-1 number on a standard keyboard in their approximate position on the keyboard. Most characters from any Roman based language can be created on any computer using the **American Standard Code for Information Interchange** or **ASCII**. Most computers and software also recognized **American National Standards Institute's (ANSI)** formatting standards as well. View the entire ISO Latin -1 Character Set.

~ Tilde	! Exclamation Point	@ At	# Number	$ Dollar	% Percent	^ Caret	& Ampersand	* Asterisk	(Open or Left Parenthesis	) Close or Right Parenthesis	_ Underscore or Horizontal Bar	+ Plus
` Acute											- Dash or Hyphen	= Equals
											{ Open or Left Curly Brace	} Close or Right Curly Brace
											[Open or Left Square Bracket	] Close or Right Square Bracket
										: Colon	" Quote	| Or or Vertical Bar
										; Semi Colon	´ Apostrophe or Single Quote	\ Reverse Solidus or Backslash
										< Less Than	> Greater Than	? Question Mark
										, Comma	. Dot, Period or Full Stop	/ Solidus or Forward Slash

5.3.3 *Before reading the text try to answer the question:*

Do you know what QWERTY stands for?

What is QWERTY?

The first modern typewriter was developed by Christopher Sholes and two of his friends, Carlos Glidden and Sam Soule. They worked on a newspaper in Milwaukee, Wisconsin, in the 1860s.

Sholes put each letter on the end of a metal bar. A key was pushed down and the end of the bar hit the paper. The typewriter keys were put in alphabetical order, but the alphabetical order caused a problem. Fast typing made some of the letter bars get caught on one another. The bars were too close together.

Sholes solved the problem. He found out the most-used letters in English. Then he put these letters far apart on the typewriter keyboard. The letter bars did not hit each other easily. The first six letters on the top of the keyboard are QWERTY!

5.3.4 Complete the sentences and word combinations using the text:

1. The first _____ typewriter
2. Sholes put _____ letter
3. were put in _____ order
4. were too close _____
5. he put _____ letters far apart
6. The first ____ letters on the top
7. the alphabetical order _____ a problem
8. the end of the bar _____ the paper
9. He found out the _____ letters in English
10. A key was pushed _____

5.3.5 Choose the correct variant to complete the sentences:

1. Sholes worked for____
   a) the government   b) a typewriter company   c) a newspaper
2. Letters were put on the end of metal ____
   a) bars   b) keys   c) alphabets
3. ____ caused the bars to get caught on one another.
   a) The metal   b) Fast typing   c) The letters
4. Sholes needed to know ____ to solve the problem.
   a) QWERTY   b) the most-used letters   Samuel Soule
5. Then he put these letters far ____ on the typewriter keyboard.
   a) behind   b) ahead   c) apart

6 UNIT № 6. CREATING, SAVING AND STORING FILES

6.1 Vocabulary. Translate the words into Ukrainian

to restore	to undo	to exist
to show	default	existence
to differ	advantage	easy
different	advantageous	to describe
difference	disadvantage	description
row	digit	exact
to highlight	digital	exactly
highlighted	word processing	
to flash on/off	word processor	

6.1.1 Choose the correct translation:

1) exact
  a) цифровий   b) точний   c) інший   d) виділений
2) to describe
  a) існувати   b) відновлювати   c) описувати   d) виділяти
3) digital
  a) цифровий   b) точний   c) інший   d) виділений
4) to exist
  a) існувати   b) відновлювати   c) описувати   d) виділяти
5) different
  a) цифровий   b) точний   c) інший   d) виділений
6) easy
  a) цифровий   b) точний   c) інший   d) легкий
7) to highlight
  a) існувати   b) відновлювати   c) описувати   d) виділяти
8) advantage
  a) опис   b) перевага   c) недолік   d) існування
9) description
  a) опис   b) перевага   c) недолік   d) існування
10) existence
  a) опис   b) перевага   c) недолік   d) існування

6.1.2 Match the words with their meanings:

1) to restore   a) текстовий редактор
2) default   b) блимати
3) exactly   c) ряд
4) word processor   d) відновити
5) row   e) існувати
6) digit   f) показувати
7) to flash   g) недолік
8) disadvantage   h) за замовчуванням

9) to exist   i) цифра
10) to show   j) точно

6.1.3 Match the icons (a-i) with the words (1-9) below:

1 pointer   2 cursor   3 C: drive icon   4 folder   5 close   6 drop-down menu
7 minimize   8 maximize   9 restore
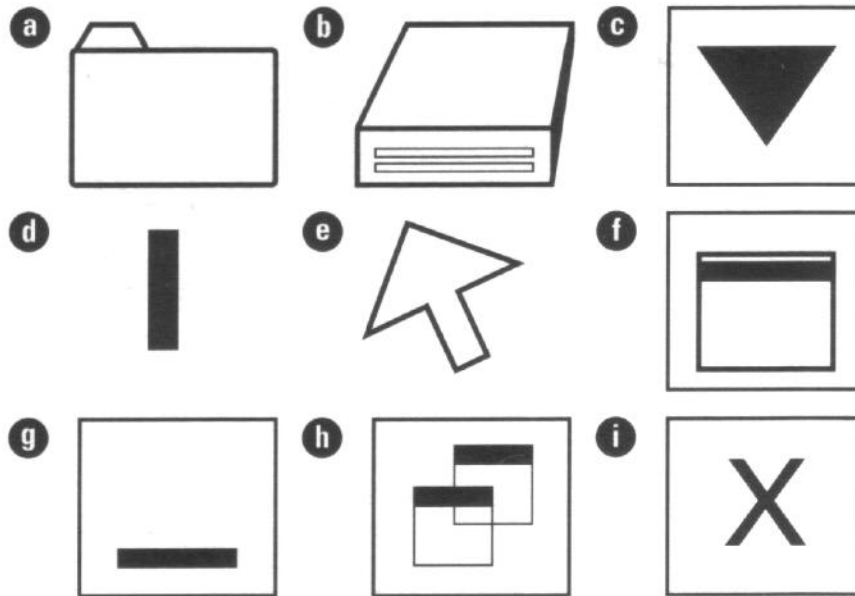
6.1.4 Complete the sentences with the words from the previous exercise:

1) Double-click the _____ to view a list of folders and files.
2) You will find the Undo command in the Edit _____ menu.
3) The _____ shows you where to type on the screen.
4) The mouse controls both the _____ and the cursor.
5) If you click _____, the window will cover all of the computer screen.
6) Clicking _____ changes the size and location of the window.

6.2 Reading

6.2.1 Read the text quickly and answer the question after it:

1. To make a new folder in the Windows OS, go to the desktop, find the **My Computer** icon with the pointer and double-click it using the left mouse button. The **My Computer** window appears, showing the different drives. Maximize the screen if necessary.

2. Double-click the **C: drive** icon. The **C: drive** window appears showing the folders in your C: drive, either in a row or in a list.

3. Move the pointer to the menu bar. Click on **File** and a drop-down menu appears. You can only click the words **New** or **Close**.

4. Move the pointer to the word **New**. Another menu appears with **Folder** at the top of the list.

5. Click on **Folder**. This creates a new folder that appears at the end of the list of folders on the C: drive. The words **New Folder** are highlighted. The cursor also flashes on and off to show you where to type.

6. Click on **New Folder** and type the name you want in the box. This can be up to 250 characters long, but you cannot use the characters '/ \ : * ? < > |' in your folder name.
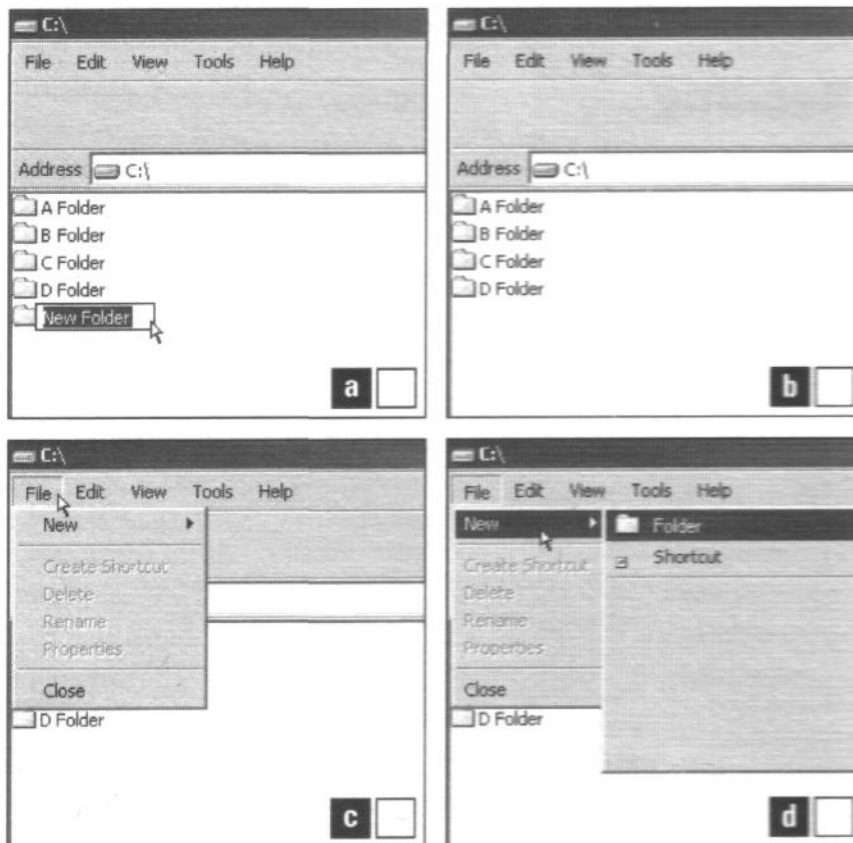
7. Click anywhere on the window to see your new folder name. If you do not click on the window, you will save your new folder as **New Folder**, not with the name you want.

8. Close the window.

9. Your new folder is now listed in the C: drive in alphabetical order.

Do you know any other way of creating a folder?

6.2.2 Match the diagrams (a-d) with the instruction numbers from Exercise 6.2.1:

6.2.3 Before reading the text below, try to answer the questions:

How is it possible to lose files on a computer?
Have you ever lost your information? Why?

6.2.4 Read the text quickly and match the headings (a-e) with the paragraphs (1-5):

a Saving existing files   **b** Naming files   **c** Saving new files   **d** Defaults

1. Programs that let you create files or save data have a *Save* command, usually in the *File* menu. When you save a new file, the *Save As* dialog box appears (see below). You can let the computer decide the location, the file name and the format, or you can choose these settings yourself. There are many different file formats and they all have advantages and disadvantages. You can save a word-processing document as a web page, for example, or you can save **digital** photographs in a JPEG format, a TIFF format or many others.
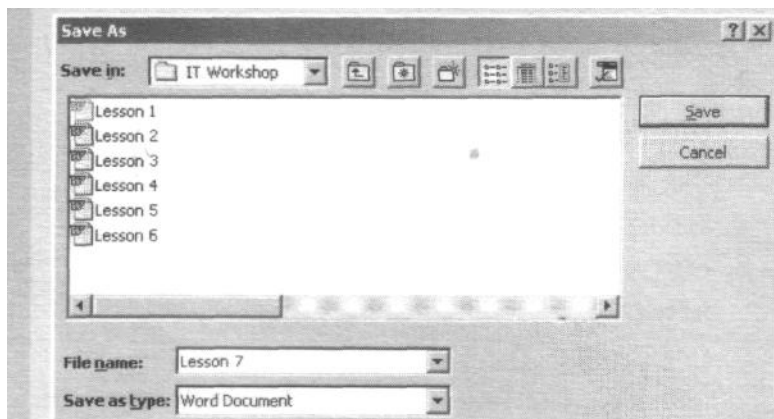
2. The *Save As* command is the **default** command for any new document so the *Save As* dialog box appears even if you click *Save*. If you do not give a new document a file name in a word-processing program, the file name will usually default to the first line in the document. The default file name in graphics programs is usually **'Untitled'.**

3. If you work on an **existing** file and want to save changes, click *Save*, not *Save As*. You can use *Save As* to save an existing file in a different location, for example, in another drive or folder (using **Save in**) with a new name (using File name) or in a different format (using **Save as type**).

4. Having different folders helps you organize your files, but naming all the different files in one folder is not always easy. You should give files names that describe exactly what they contain so that you can find them easily.

6.2.5 Decide if the sentences are true (T) or false (F):

1 If you do not choose a location, a name, or a format when you save a new file, the computer will do it for you. — T/F

2 If you click **Save** on a new file, the **Save As** dialog box appears. — T/F

3 You can save files in one format only. — T/F

4 You can save existing files in more than one place on your computer. — T/F

5 The **Save** command only saves existing documents. — T/F

6 Most word-processing documents use **'Untitled'** as the default name. — T/F

7 The **Save As** command cannot save existing documents.   T/F

8 Thinking of names for your files is easy.

6.2.6 Complete the sentences (1-6) with the words in bold and phrases in the text:

1 You can make back-up copies of_____ files on a floppy disk by using **Save As**.

2 I need a_____ camera because I want to save my pictures on my computer.

3 Graphics programs save files without names as _____by default.

4 Clicking _____will let you go to the A: drive, C: drive or D: drive.

5 Programs have _____ settings for all kinds of functions.

6 Click_____ in the **Save As** dialog box to change the file format.

6.3 Summing-Up

What steps do you follow to create and save a file?

7 UNIT № 7. DEVELOPMENT OF COMPUTING

7.1 Vocabulary. Translate the words into Ukrainian

chip	to decide	interface
microchip	decision	graphics interface
silicon chip	to make a decision	mainframe
circuit	to develop	minicomputer
integrated	developer	microcomputer
circuit	development	menu
data	initial	
database	initially	

7.1.1 Choose the correct translation:

1) performance
   a) виконання   b) сумісність   c) розвиток   d) наявність
2) compatible
   a) наявний   b) сумісний   c) початковий   d) поширений
3) to set up
   a) поміщати   b) розвивати   c) встановлювати d) виконувати
4) mainframe
   a) піктограма   b) миша   c) продуктивність d) велика ЕОМ
5) availability
   a) встановлення b) сумісність   c) наявність   d) продуктивність
6) decision
   a) рішення   b) розвиток   c) ланцюг   d) набір
7) set
   a) набір   b) встановлення c) сумісність   d) наявність
8) initial
   a) сумісний   b) наявний   c) початковий   d) поширений
9) data
   a) рішення   b) інформація   c) сумісність   d) розвиток
10) chip
   a) інформація   b) мікросхема   c) встановлення d) розвиток

7.1.2 Match the words with their meanings:

a) decide   1) миша
b) mouse   2) піктограма
c) compatible   3) мікросхема
d) performance   4) інформація
e) chip   5) эфективність
f) developer   6) набір
g) data   7) вирішувати
h) mainframe   8) велика ЕОМ
i) set   9) розробник

j) icon   10) суміснийй

7.1.3 Make up meaningful word combinations:

to click on …   to develop …
… interface   to set up …
to perform …   … click

7.1.4 Complete the sentences with the words from the box:

click   develop   processor   microchip   memory

a) In 1991 IBM were making PCs with 16Mb of …, expandable to 64Mb, running with a … speed of 33MHz.
b) The company set up a special team to … the first IBM PC.
c) It was the … technology that made a PC possible.
d) To run the program you should … on the corresponding button or icon.

7.2 Reading

7.2.1 Read and translate the word combinations from the text:

put together   processor speed
whole world   microchip technology
initial research   to make possible
for ever   world-wide scale
command-based operating system   to make information available
to perform a function

7.2.2 Read and translate the sentences from the text:

a) Using a mouse, the user clicks on icons and buttons.
b) The computers have changed the world for ever.
c) The microchip technology made PC possible.
d) MS/DOS is the initial operating system for the IBM PC.
e) Different kinds of applications are run on modern PCs.

7.2.3 Match the words with their definitions:

1 mainframe   a) the sort of software that controls a computer system
2 mouse   b) a very small piece of silicon carrying a complex electrical circuit
3 icon   c) a big computer system used for large-scale operations
4 operating system   d) the physical portion of a computer system
5 software   e) a device moved by hand to indicate position on the screen
6 hardware   f) a visual symbol used in a menu instead of natural language

7 microchip	g) data, programs, etc., not forming part of a computer, but used when operating it.

7.2.4 Read the text. How would you call it?

In 1952, a major computing company took a decision to get out of the business of making mainframe computers. They believed that there was only a market for four mainframes in the whole world. That company was IBM. The following year they reversed their decision.

In 1980, IBM decided that there was a market for 250,000 PCs, so they set up a special team to develop the first IBM PC. It went on sale in 1981 and set a world-wide standard for IBP-compatibility which, over the next ten years, was only seriously challenged by one other company, Apple computers. Since then, over seventy million PCs made by IBM and other manufacturers have been sold. Over this period, PCs have become commodity items. Since IBM made the design non-proprietary, anyone can make them.

The history of the multi-billion dollar PC industry has been one of mistakes. Xerox Corporation funded the initial research on personal computers in their Palo Alto laboratory in California. However, the company failed to capitalize on this work, and the ideas that they put together went into the operating system developed for Apple's computers. This was a graphical interface: using a mouse, the user clicks on icons which represent the function to be performed.

The first IBM PC was developed using existing available electrical components. With IBM's badge on the box it became the standard machine for large corporations to purchase. When IBM were looking for an operating system, they went initially to Digital Research, who were market leaders in command-based operating systems (these are operating systems in which the users type in commands to perform a function). When the collaboration between IBM and Digital Research failed, IBM turned to Bill Gates, then 25 years old, to write their Operating system. Bill Gates founded Microsoft on the basis of the development of MS/DOS, the initial operating system for the IBM PC. Digital Research have continued to develop their operating system, DR/DOS, and it is considered by many people to be a better product than Microsoft's. However, without an endorsement from IBM, it has become a minor player in the market.

The original IBM PC had a minimum of 16K of memory, but this could be upgraded to 512K if necessary, and ran with a processor speed of 4.77MHz. Ten years later, in 1991, IBM were making PCs with 16Mb of memory, expandable to 64Mb, running with a processor speed of 33MHz. The cost of buying the hardware has come down considerably as the machines have become commodity items. Large companies are considering running major applications on PCs, something which, ten years ago, no one would have believed possible of a PC. In contrast, many computers in people's homes are just used to play computer games.

The widespread availability of computers has in all probability changed the world for ever. The microchip technology which made the PC possible has put chips not only into computers, but also into washing-machines and cars. Some books may never be published in paper form, but may only be made available as part of public databases. Networks of computers are already being used to make information available on a world-wide scale.

7.2.5 Answer the questions using the facts from the text:

1. How many mainframes did IBM think it was possible to sell in 1952?
2. How many PCs have now been sold?
3. Who paid for the initial research into PCs?
4. Which company later used the results of this research to develop their operating system?
5. What are command-based operating systems?
6. DR/DOS is an acronym. What does it stand for?
7. Since the invention of the IBM PC, many of its features have been improved.
Which of the following features does the text not mention in this respect:
   a memory
   b speed
   c size
   d cost
8. Give three examples from the text of how the availability of computers has 'in all probability changed the world for ever'.

7.2.6 Look through the text and find synonyms for the words:

international	paid for	recommendation
contested	buy	improved
errors	first	

8 UNIT № 8. HISTORY OF COMPUTERS

8.1 Vocabulary. Translate the words into Ukrainian

to calculate	to sum up	dependable
calculation	to solve	to design
calculus	solution	design
to count	to solve a problem	designer
countable	figure	to invent
uncountable	to figure out	inventor
to add	approximate	invention
addition	approximation	to remove
in addition	approximately	transistor
to subtract	to complete	vacuum tube
subtraction	conductor	due to
to divide	semiconductor	except
division	to depend (on)	except for
to multiply	dependent	exception
multiplication	independent	instead of
sum	dependence	
to do sums	independence	

8.1.1 Choose the correct translation

1) to invent
   a) множити   b) обчислювати c) конструювати   d) винаходити
2) to save
   a) зберігати   b) переміщати   c) віднімати   d) додавати
3) to calculate
   a) додавати   b) обчислювати c) множити   d) зберігати
4) dependence
   a) множення   b) обчислення   c) залежність   d) розвиток
5) provide
   a) переміщати b) завершувати c) забезпечувати   d) винаходити
6) design
   a) цифра   b) винахід   c) проект   d) обчислювання
7) multiply
   a) ділити   b) множити   c) додавати   d) віднімати

8.1.2 Match the words with their meanings:
a) complete   1) за винятком
b) calculation   2) приблизно
c) subtraction   3) забезпечувати
d) except for   4) цифровий
e) provide   5) зберігати
f) semiconductor   6) завершувати
g) approximate   7) віднімання

h) add   8) додавати
i) save   9) напівпровідник
j) digital   10) обчислення

8.1.3 *Complete the word combinations:*
to solve …
a digital …
… tube
addition and …
… and multiplication

8.2 Reading

8.2.1 *Read and translate the word combinations from the text:*

the very first   a million operations a second
calculating device   reduced in size
logarithm tables   the problem to be solved
digital computer

8.2.2 *Read the text, make notes of the main facts of the history of computers:*

History of Computers.

Let us look at the history of the computers that we know today. The very first calculating device used was the ten fingers of a man's hands. This, in fact, is why today we still count in tens and multiples of tens. Then the abacus was invented, a bead frame in which the beads are moved from left to right.

During the 17th and 18th centuries many people tried to find easy ways of calculating. J. Napier, a Scotsman, devised a mechanical way of multiplying and dividing, which is how the modern slide rule works. Henry Briggs and Napier's ideas were to produce logarithm tables which all mathematicians use today. Calculus, another branch of mathematics, was independently invented by both Sir Isaac Newton, an Englishman, and Leibnitz, a German mathematician.

The first real calculating machine appeared in 1820 as a result of several people's experiments. This type of machine, which saves a great deal of time and reduces the possibility of making mistakes, depends on series (ряд) of ten-toothed gear wheels (зубчатые колеса). In 1830 Charles Babbage, an Englishman, designed a machine that was called "The Analytical Engine". This machine, which Babbage showed at the Paris Exhibition in 1855, was an attempt to cut out the human being altogether, except for providing the machine with the necessary facts about the problem to be solved. He never finished this work, but many of his ideas were the basis for building today's computers.

In 1930, the first analog computer was built by an American named Vannevar Bush. This device was used in World War II to help aim guns. Mark

I, the name given to the first digital computer, was completed in 1944. The men responsible for this invention were Professor Howard Aiken and some people from IBM. This was the first machine that could figure out long lists of mathematical problems, all at a very fast rate.

In 1946 two engineers at the University of Pennsylvania, J.Eckert and J.Mauchly, built the first digital computer using parts called vacuum tubes. They named their new invention ENIAC. Another important advancement in computers came in 1947, when John von Newmann developed the idea of keeping instructions for the computer inside the computer's memory.

The first generation of computers, which used vacuum tubes, came out in 1950. Univac I is an example of this computers which could perform thousands of calculations per second. In 1960, the second generation of computers was developed and these could perform work ten times faster than their predecessors (предшественники). The reason for this extra speed was the use of transistors instead of vacuum tubes. Second-generation computers were smaller, faster and more dependable than first-generation computers. The third-generation computers appeared on the market in 1965. These computers could do a million calculations a second, which is 1000 times as many as first-generation computers. Unlike second-generation computers, these are controlled by tiny integrated circuits and are consequently smaller and more dependable. Fourth-generation computers have now arrived, and the integrated circuits that are being developed have been greatly reduced in size. This is due to microminiaturization, which means that the circuits are much smaller than before; as many as 1000 tiny circuits now fit onto a single chip. A chip is a square or rectangular piece of silicon, usually from 1/10 to 1/4 inch, upon which several layers of an integrated circuit are etched or imprinted, after which the circuit is encapsulated in plastic, ceramic or metal. Fourth-generation computers are 50 times faster than third-generation computers and can complete approximately 1,000,000 instructions per second.

At the rate computer technology is growing, today's computers might be obsolete in a couple of years. It has been said that if transport technology had developed as rapidly as computer technology, a trip across the Atlantic Ocean today would take a few seconds.

8.2.3 *Look through the text and decide if the sentences are true (T) or false (F). Change the false sentences to make them true:*

1. The slide rule was invented hundreds of years ago.
2. During the early 1880s, many people worked on inventing a mechanical calculating machine.
3. Charles Babbage, an Englishman, can well be called the father of computers.
4. The first computer was invented and built in the USA.
5. Instructions used by computers have always been kept inside the computer's memory.
6. Using transistors instead of vacuum tubes did nothing to increase the speed at which calculations were done.

7. As computers evolved, their size decreased and their dependability increased.

8. Today's computers have more circuits than previous computers.

9. Computer technology has developed to a point from which new developments in the field will take a long time to come.

8.2.4 Find synonyms:

machine, designed, a lot of, errors, solve

8.2.5 Find antonyms:

old, a few,to include, contemporaries, still in use

8.2.6 Match the words from A with the statements from B:

A	B
1) abacus	a) instrument used for doing multiplication and division
2) calculus	b) used in the first digital computers
3) analog	c) an instrument used for counting
4) digital computer	d) used in mathematics
5) vacuum tubes	e) circuitry of fourth-generation computers
6) transistors	f) invented by Americans in 1944
7) chip	g) made computers smaller and faster
8) microminiaturization	h) used to help aim guns
9) slide rule	i) the reduction of circuitry onto a chip
10) logarithm tables	j) a branch of mathematics.

8.2.7 Complete the table using the information from the text «History of Computers»:

Time	Event
Primitive times	
	Abacus invented
17th and 18th centuries	Henry Briggs produced logarithm tables
	Charles Babbage designed
1930	
	First use of vacuum tubes in
1947	
	Second-generation computers using

Now	
Future	

8.3 Speaking

There are some more facts about the development of computing:

Computer generation	Dates	Technology
First	1951-58	vacuum tubes (valves)
second	1958-64	transistors
third	1965-70	integrated circuits (ICs)
fourth	1971-	microprocessors

1942 First electronic computer built
1947 transistor invented
1954 First commercial computer out on sale
1960 First minicomputer
1965 ICs introduced
1971
1981
1984
1993
.
.
.

Add some more facts to this table and speak on the topic "History of Computing".

9 UNIT № 9. KINDS OF COMPUTERS

9.1 Vocabulary. Translate the words into Ukrainian

pocket	heavy	account
handheld	expensive	accountant
mainframe	cheap	network
power	fast	staff
powerful	to sell (sold, sold)	research
to suit	sale	entertainment
suitable	salesperson	tax
It suits me	custom	according to
fine.	customs	task
to improve	customer	multi-tasking
improvement	to carry	facility
to fit	to carry out	sophisticated
palm	record	to share
palmtop	to record	single
lap	to keep (kept, kept)	broad
laptop	diary	broadly speaking
cost	to appoint	tiny
to cost	appointment	to remind
light	to make an appointment with	reminder

9.1.1 Choose the correct translation:

1) pocket
    a) щоденник   b) кишеня   c) світло   d) дослідження
2) heavy
    a) відповідний   b) єдиний   c) важкий   d) легкий
3) research
    a) дослідження   b) щоденник   c) запис   d) потужність
4) suitable
    a) потужний   b) широкий   c) відповідний   d) єдиний
5) diary
    a) щоденник   b) кишеня   c) дослідження   d) вартість
6) single
    a) відповідний   b) єдиний   c) легкий   d) потужний
7) to improve
    a) коштувати   b) досліджувати   c) виконувати   d) покращувати
8) light
    a) легкий   b) єдиний   c) відповідний   d) потужний
9) to appoint
    a) підходить   b) призначати   c) коштувати   d) продавати
10) to carry out
    a) призначати   b) досліджувати   c) виконувати   d) нести

9.1.2 Match the words with their meanings:

1) power   a) митниця
2) entertainment   b) крихітний
3) customs   c) потужність
4) fast   d) запис
5) sale   e) податок
6) tiny   f) швидкий
7) staff   g) рахунок
8) record   h) продаж
9) tax   i) персонал
10) account   j) розвага

9.1.3 Match the words with their definitions:

1) according to   a) the largest and most powerful type of computer
2) custom   b) a way of behaving which a particular group or society has had for a long time
3) fit   c) a small portable computer that can be held in one hand
4) share   d) to divide smth between two or more people
5) palmtop   e) to change a system so that it works in the way the user wants
6) network   f) the largest type of portable computer
7) mainframe   g) in a way that matches, follows or depends on smth
8) laptop   h) the ability of a computer to work on more than one task at the same time
9) multitasking   i) a number of computers and other devices that are connected together so that equipment and information can be shared
10) customize   j) be the right size or shape for smb/smth

9.2 Comparing Computer Types

9.2.1 Match these names to the different types of computer:

1 mainframe   3 notebook   5 PC
2 laptop   4 handheld   6 minicomputer
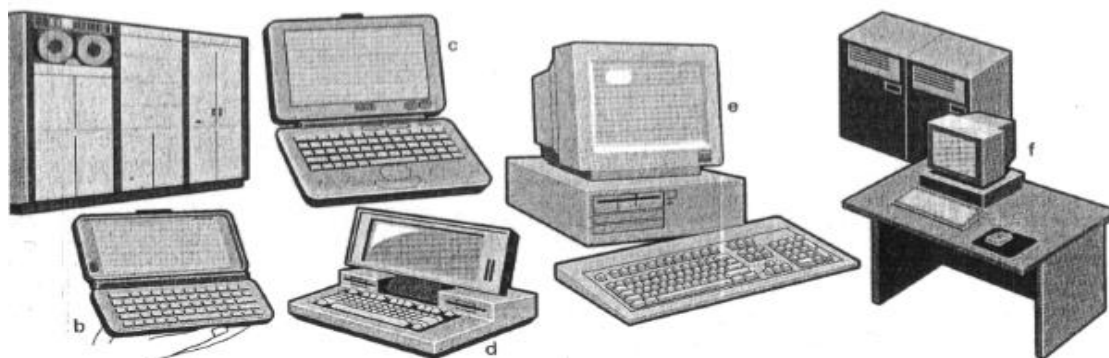
9.2.2 Study these details of different types of computer. Find the answers to these questions:

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

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

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

9.2.3 Grammar Revision: Comparison

Study this comparison of three types of computer.

	Mainframes	Minicomputers	Microcomputers
Size	+++	++	+
Power	+++	++	+

Cost	+++	++	+

1   We can compare one type of computer with another:

Minicomputers are bigger than microcomputers.
Mainframes are more expensive than microcomputers.
For negative comparisons, we can say:
Microcomputers are not as big as minicomputers.
Microcomputers are not as powerful as mainframes.

2   We can compare mainframes to all other types of computer:

Mainframes are the biggest computers.
Mainframes are the most powerful computers.
Mainframes are the most expensive computers.

With short adjectives *(big, small, fast),* we add *-er* and *-est (faster, fastest).*
With longer adjectives *(powerful, expensive),* we use *more/less* and *the most/the least* before the adjective *(more powerful, the most powerful).*

Remember these two exceptions:
good - better - the best   bad - worse - the worst

9.2.4 Choose the correct adjective. Then fill in the gaps with the correct form of the adjective:
1 *light/heavy*
 Laptops are 1___ than desktop computers, but 2___ than notebooks.
2 *large/small*
The mainframe is the 3___type of computer. A minicomputer is 4___ than a microcomputer.
3 *common/good*
Personal computers are 5___ than mainframes but mainframes are 6___ than personal computers at processing very large amounts of data.
4 *powerful/expensive*
 Minicomputers are 7___than mainframes but they are also 8___.
5 *fast/cheap*
New computers are 9___ and sometimes 10___than older machines.
6 *powerful/expensive*
Laptops are often 11___ than PCs but they are not as 12___.

9.2.5 In pairs, decide what sort of computer is best for each of these users:

1   John Wilmott is a salesperson and he spends a lot of time visiting customers. He wants a computer to carry with him so he can access data about his customers and record his sales.

2   Pat Nye is a personnel officer. She needs a computer to keep staff records and to keep a diary of appointments. She also needs a computer for writing letters.

3   The University of the North needs a computer to look after its accounts, its network, the records of all students and staff, and to help with scientific research.

4   The James family want a computer for entertainment, writing letters, the Internet, and for calculating tax.

9.2.6 Put the words in brackets into the correct form to make an accurate description of sizes of computers:

There are different types of computer. The *(large)1*___ and *(powerful) 2*___ are mainframe computers. Minicomputers are *(small) 3*___ than mainframes but are still very powerful. Microcomputers are small enough to sit on a desk. They are the *(common) 4*___ type of computer. They are usually *(powerful) 5*___ than minicomputers.

Portable computers are *(small) 6*___ than desktops. The *(large) 7*___ portable is a laptop. *(Small) 8*___ portables, about the size of a piece of writing paper, are called notebook computers. Subnotebooks are *(small) 9*___ than notebooks. You can hold the *(small)10*___ computers in one hand. They are called handheld computers or palmtop computers.

9.3 Reading

Read the extract from Dan Gooking's book 'Buying a Computer for Dummies'. Give a good translation of the extract; try to keep to the style of the author:

The traditional desktop computer

The original IBM PC is the prototype for all *desktop* computers. The main box, the *console,* sits flat and square on the desktop. The monitor perches on top of the console, and the keyboard sits in front. Despite this historical tradition, most PCs no longer resemble the IBM desktop original.

The most popular computer configuration now is the minitower model, which is like a desktop model turned on its side (see Figure 3-2). The minitower is more versatile than the old desktop style; you can set the console right next to the keyboard and monitor (as shown in Figure 3-2), or you can set the minitower on the floor and out of view.

PC is an acronym for *personal computer.* This name comes from the first IBM model, the IBM PC (International Business Machines Personal Computer).

- Before the IBM PC, personal computers were called *microcomputers.* It was a disparaging term because other computers of the day were much larger. They were called minicomputers and mainframes. Powerful things.

- The minitower is named that way because the original on-its-side PC was dubbed the *tower* model. Minitowers are more compact than full-size towers, and they lack much of the internal expansion room in larger models.

- Smaller desktop models are still available. They're usually called *smallfootprint* computers. The footprint in this case is the amount of space the computer occupies on your desk.

- Small-footprint computers lack expandability options. For example, if you want AGP graphics, you may not find that expansion option in a small-footprint computer case.

- Some new-model PCs have both the console and the monitor in the same box. These systems don't yet have an official nickname.

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Mainframes

The final computer category I describe is the most ancient, but not gone or forgotten: the mainframe, or "big iron," that used to do all the computing work before personal computers became popular in the late 1970s — and again at the turn of the 21st century.

Though mainframe computers were once thought to be doomed relics of the past, they're now in high demand and selling better than some home-model computers.

Of course, as with high-end workstations and file servers, you probably won't be purchasing a mainframe to help you send e-mail or balance your checkbook.

But, it's a category of computer, so I had to list it here. Consider the term fodder for your next cocktail party.

- Actually, it would be kind of cool to have a mainframe, although I don't know anyone on my street whom I could impress with the thing.

- Mainframes are also known as *big iron*.

- Supercomputer is another classification of computer, although it's really like a mainframe. A *supercomputer* is specifically designed to do many tasks quickly. To create a supercomputer, a series of desktop computers are linked together so that they operate as one unit.

10 UNIT № 10. PORTABLE COMPUTERS

10.1 Vocabulary. Translate the words into Ukrainian

template	reference book	rechargeable
to clip	to convert	to launch
clipboard	conversion	feature
pattern	primary	advice
to recognize	transmit	to advise
recognition	transmission	advisable
pixel	charge	survey
to refer	free of charge	similar
to be referred	to charge	
reference	to recharge	

10.1.1 Choose the correct translation:
1) advice
   a) заряд   b) порада   c) запуск   d) огляд
2) charge
   a) заряд   b) порада   c) запуск   d) огляд
3) to convert
   a) обрізати   b) перетворювати   c) належати   d) радити
4) to clip
   a) обрізати   b) перетворювати   c) належати   d) радити
5) reference book
   a) заряд   b) огляд   c) довідник   d) шаблон
6) primary
   a) розпізнавання   b) первинний   c) довідковий   d) огляд
7) pattern
   a) заряд   b) огляд   c) довідник   d) шаблон
8) recognition
   a) розпізнавання   b) заряд   c) порада   d) запуск
9) launch
   a) заряд   b) порада   c) запуск   d) огляд
10) survey
   a) заряд   b) порада   c) запуск   d) огляд

10.1.2 Match the words with their meanings:
1. to recognize   a) посилатися
2. to convert   b) запускати
3. to launch   c) заряджати
4. to advise   d) подібний
5. to refer   e) первинний
6. to recharge   f) перетворювати
7. template   g) шаблон

8. similar   h) особливість
9. feature   i) розпізнати
10. primary   j) радити

10.1.3 Match the words with their definitions:

1) clipboard   a) the smallest single point on a visual display screen
2) feature   b) wise, sensible, recommended
3) template   c) a file or memory area where computer data is kept for a short time while the user cuts or copies sth from an open document
4) transmission d) something important, interesting or typical of a place or thing
5) pixel   e) like, of the same sort
6) reference   f) a data item that contains information such as an address or index which shows where another data item may be found
7) conversion   g) a change, especially from one system to another, or from one form to another
8) rechargeable h) the action of sending sth out from one person, machine or thing to another
9) advisable   i) that is able to be filled with electricity each time the electricity it contains is used
10) similar   j) a plan of sth that is used as a model for producing other similar examples

10.2 Reading

10.2.1 Before reading the text, match the words with their definitions:

a clipboard   1 surface on which pictures or data are shown
b stylus   2 electrical force
c screen   3 pattern used as a guide for creating letters
d grid   4 individual dot on a computer screen
e voltage   5 network of lines crossing at right angles
f pixel   6 pointed implement for drawing or writing
g template   7 portable board with a clip at the top for holding papers

10.2.2 Read the text and try to explain the heading:

Delete Keys – Clipboard Technology

For the last generation, Silicon Valley and Tokyo have been working to design computers that are ever easier to use. There is one thing, however, that has prevented the machines from becoming their user-friendliest: you still have to input data with a keyboard, and that can require you to do a lot of typing and to memorize a lot of elaborate commands.

Enter the clipboard computer, a technology that has been in development for the last 20 years but took hold in the mass market only this year. Clipboard PCs - which, as their name suggests, are not much bigger than an actual clipboard - replace the keyboard with a liquid crystal display (LCD) screen and an electronic stylus. Users input data by printing individual letters directly on the screen.

There are two technologies at work in a clipboard PC: one allows raw data to get into the computer and the other allows the computer to figure out what that data means. The first technology relies principally on hardware and varies depending on the particular computer. In one system, marketed under the name GRIDPad, the computer's LCD screen is covered by a sheet of glass with a transparent conductive coating. Voltage is sent across the glass in horizontal and vertical lines forming a fine grid; at any point on the grid, the voltage is slightly different. When the stylus - which is essentially a voltmeter – touches the screen, it informs the computer of the voltage at that point. The computer uses this information to determine where the stylus is and causes a liquid crystal pixel to appear at those coordinates. The position of the stylus is monitored several hundred times a second, so as the stylus moves across the glass, whole strings of pixels are activated.

'What we do is sort of connect the dots,' says Jeff Hawkins, the creator of GRIDPad. `Users can then write whatever they want on the screen with a kind of electronic ink.'

Making that writing comprehensible to the computer, however, requires the help of some powerful software. When the stylus is being used, the computer is programmed to look for moments when the tip does not touch the screen for a third of a second or more. Every time this happens - and it happens a lot when somebody is printing - the software assumes that one letter or number has been written. The pixel positions of this fresh character are then passed on to the computer's pattern recognition software, which instantly identifies the letter or number written.

The software does this by first cleaning up the character - smoothing out crooked lines and removing errant dots. The remaining lines and curves are then compared with a series of templates in the computer's memory that represent hundreds of thousands of different versions of every letter in the English alphabet and all ten numerals. When the computer finds the closest match, it encodes the character in memory and displays it on the screen as if it had been typed. The entire process takes just a fraction of a second. To delete a word, you simply draw a line through it. To move to the next page, you flick the stylus at the bottom of the screen as if you're flicking the page of a book.

There are a handful of clipboard computers now on the market, including GRIDPad, which is sold in the US; Penvision, manufactured by NCR and sold around the world; and Sony's Palmtop and Canon's Al Note, both sold only in Japan. IBM and Apple are also pouring millions of dollars into the technology.

In addition to this hardware, a variety of software is also making its way to the market. Depending on the power of the computer and the sophistication of the software, clipboard systems can be programmed to understand the particular quirks of a particular user's printing[1]; this is an especially useful feature in Japan, where elaborate kanji[2] characters make up most of the written language. Improvements in software may soon allow machines sold in the US to understand not only printing but continuous script as well.

Given such flexibility, the designers of clipboard computers are predicting big things – and a big market – for their products. 'There's no doubt about it,' says an optimistic Hawkins. `You're going to own one of these things in the not-too-distant future'.

Notes:
[1]printing - (in this case) writing separated letters or numbers by hand
[2]kanji   - Japanese script which uses Chinese characters

10.2.3   Look through the text and decide if the sentences are true (T) or false (F). Change the false sentences to make them true:

☐1 The Americans and the Japanese are working together to produce user-friendlier computers.

☐2 The clipboard computer was first sold twenty years ago.
☐3 On a clipboard, an electronic pen replaces the traditional keyboard.
☐4 In the GRIDPad system, when the pen touches the screen, it informs the computer and a liquid crystal pixel appears at that point.
☐5 The software decides that one character or number is complete if the tip of the stylus is not in contact with the screen for more than half a second.

☐6 The whole process of recognizing letters or numbers and printing them on the screen takes very little time.
☐7 There are many clipboard computers sold today which are all available everywhere in the world.
☐8 Clipboard systems can be made to understand any kind of writing.

10.2.4 Find synonyms:

1.understand	6.making even
2.sold	7.not straight
3.covering	8.made by mistake
4.points	9.move quickly and sharply
5.join	10.unique features

10.2.5 Complete the dialog using the information from the text:

A How big is a clipboard PC?

B _____

A Does it have a keyboard?

B _____

A How does the stylus work?

B _____

A How does the computer know when one letter or number is complete?

B _____

A And how does the computer recognize different letters?

B _____

A Can you delete a word after you have written it?

B Yes. _____

A Are these systems capable of recognizing joined writing?

B _____

10.2.6 Read the extract from Dan Gooking's book 'Buying a Computer for Dummies'. Give a good translation of the extract, try to keep to the style of the author:

Laptops for every kind of lap

Portable computers are available for people on the go or anyone who wants a smaller computer than the traditional desktop model. For example, if you take your work home with you, it's just easier to have a laptop you can lug back and forth than to try to share information between home and office computers.

Laptops have the same features as desktop computers, but they're smaller. Figure 3-4 shows a typical PC laptop, which has everything a desktop computer has, but all shoved into the space of a typical three-ring binder. Because of laptops' smaller components, they usually run more than twice the cost of a comparable desktop system.

Be mindful of the case design!

Although some computer boxes look sleeker than others — and that's a purchase decision — you have to make more practical decisions in choosing a case — noise, for example.

Some case designs are quieter than others. Computers do make noise, mostly from their internal fans. Some manufacturers take care with their designs to make their computers quieter.

For example, most Macintoshes make hardly a sound, whereas some mom-'n'-pop custom computers tend to be noisier than a room full of 8-year-olds playing video games.

Another consideration is those translucent cases and colorful computers. You pay a premium for buying those types of cases with your computer. However, many after-market dealers sell fancy computer case upgrades, similar to the aftersale market for car accessories.

On the Macintosh side, the PowerBook G4 is the laptop of choice (see Figure 3-5). It's essentially a desktop Macintosh all crammed into a tiny space. Also, the iMac type of laptop is a lower-end model named the iBook.

Unlike desktop Macintoshes, the laptop versions are price-competitive with PC laptops.

- Laptop computers are also known as *notebooks.* (In the olden days, the term *notebook* implied a lightweight laptop, but all laptops are now light enough to be notebooks.)

- I don't generally recommend a laptop as your first computer purchase. Even so, in some circumstances, a laptop suits you far better than a desktop can.

- Also see Chapter 14, which covers the issues involved with buying a laptop computer.

The Tablet PC

The newest thing in computers is the Tablet PC, which mostly resembles a laptop computer minus the keyboard, as shown in Figure 3-6. The *Tablet PC* is basically one large monitor on which you write directly using a special pen, or stylus. The *stylus* controls the graphical gizmos displayed on the screen, and the Tablet PC's software translates your chicken scratches into readable text.

Though they've been available for some time now, Tablet computers really haven't taken off. Their relatively high price is an issue, and I believe that the lack of a keyboard is also holding back these unique and fun devices.

- Tablet PCs have an option to allow you to plug in an external keyboard, if you want.

- Some Tablet PCs are merely laptops where the flip-top screen can bend all the way around and the unit can be held like a clipboard.

Palmtop and handheld computers

A *palmtop,* or *handheld,* computer isn't really as much a computer as it is a data-gathering device. Basically, the system is about the size of a pad of paper, with a large screen and a few handy buttons, as shown in Figure 3-7. A stylus is used to write directly on the screen, which serves as both the display and the input device.

The palmtop computer is more ideally a replacement for the old organizer.

It's good for taking notes, scheduling, doodling, and playing games, plus some versions can play music or even take digital pictures. But, overall, this type of computer works best as an on-the-go extension of a desktop computer system.

- The most popular palmtop device is the Palm handheld computer. This fact leads some folks to refer to this category as "Palm" computers, although many other handheld computer brands, makes, and models are available.

- Unlike other, earlier small computers, the modern handheld system is revolutionary because it doesn't pretend to be a smaller version of a fullon computer. It serves as a notepad, address book, and scheduler, and it has lots of unique software. The handheld system does specialized tasks and does them well.

- Handheld computers can work with both Macintosh and PC computers, making them an ideal supplement to a desktop system.

10.2.7 *Read the extract from the interview and fill in the missing words. The first letter of each missing word is given:*

Interviewer: Some portable computers are referred to as laptops and others as (1)p___. Can you explain the difference?

Tom: Sure. Laptops are simply smaller versions of desktop PCs, but they can run similar applications. However, palmtops are (2)h___ computers and weigh less than 2 pounds; they are used as PC companions or as personal (3)d___ assistants.

Interviewer: And what are the basic features of palmtops?

Tom: Well, these handheld devices run on rechargeable alkaline batteries and have small (4)k___ and high-contrast LCD (5)s___. Sometimes they have buttons for launching applications and a stylus or (6)p___, which is used for interacting with a touch-sensitive screen.

Interviewer: Do they need special operating (7)s___?

Tom: Yes. They usually run Palm OS, from Palm Computing or Pocket PC OS, the system developed by Microsoft for mobile-computing devices. Some pen-based systems can also (8)r___ hand-written characters and convert them into editable text.

Interviewer: Right. What sort of things can you do with handheld computers?

Tom: They are usually designed to store personal (9)i___, for example, a calendar, an address book, a note pad, a calculator and a voice recorder. They can also come with built-in (10)m___ and Internet software, which lets you send and receive e-mail from a payphone, a hotel or even a plane.

10.3 *Summing- Up*

10.3.1 *Read the extract from Dan Gooking's book 'Buying a Computer for Dummies'. Give a good translation of the extract, try to keep to the style of the author:*

"Just Tell Me Which Type of Computer I Need!"

Sorry — can't do that. Everyone is different, so everyone needs something a little different in their computers. Although it's true that you could get by with just about any computer, why settle for something less than what you need? This book shows you how to find a computer especially for you.

Think of it like a car. You may say "I want a new car." Which type of car? A sedan? A truck? How big of an engine do you want? What about good gas mileage? Do you want to pay extra for power seats or heated outside mirrors? And — most important — what *color* do you want? Computers are more complex than cars, so you have even more personal decisions to make.

Figure out what you want to do with your computer

Believe it or not, knowing what you want to do with the computer before you buy it is really helpful. Even if your only reason for buying one is that it would match the décor of your high-tech office, that's a good enough reason. Other folks, though, usually have some inkling in mind about why the Emperor of All Gadgets would be useful to them.

The first step toward buying your own computer is to decide what you want to do with it. As with other handy devices you own — a telephone, a car, a refrigerator, and that lava lamp — you need a reason to have a computer. Well? What do you see yourself doing on a computer?

- The number-one reason to buy a computer now is "to do the Internet." With your computer, you can exchange e-mail, browse the Web, view news and sports, entertain yourself, chat, shop, trade stocks, mind your finances, or just plain goof off. Hey! That's a *great* reason to own a computer! If that's you, bravo!

- Some people know instantly what they want a computer to do. I want a computer to help me write. My son is into film, and he wants a digital video studio. My younger kids want to play games and send e-mail.

- If you ever work with lists, numbers, 3-x-5 cards, home finances, stocks, bonds, or Swiss bank accounts, or if you trade in plutonium from the former Soviet Union, you need a computer.

- If you're buying a computer to complement the one at your office, you probably need something similar at home.

- If you're buying a computer for your kids in school, ask their teachers what types of computers best run the software the school uses. Buy something similar for home.

- A survey was taken a while back to find out why some people do not yet own a computer. The number-one reason? (Can you guess?) No, it wasn't that computers are too expensive. The number-one reason that people don't buy computers is that they haven't yet figured out what to do with one!

- If you're really stuck, it helps to picture yourself in the future, working on a computer. What are you doing (besides swearing at it)?

10.3.2 You are going to buy a computer and you have already made your choice. Explain why this particular type of computer would be the best for you.

10.3.3 Make up a dialogue between a computer salesperson and a customer choosing a computer.

11 UNIT № 11. WHAT CAN COMPUTER DO?

11.1 Vocabulary. Translate the words into Ukrainian

bill	to pick up	shape
to prepare	flight	to forgive
preparation	flight reservation	sophisticated
instant	appropriate	to expect
instantly	to advertise	expectation
cabinet	advertisement (ad)	familiar
memo (memorandum)	medicine	to be/get familiar with
gadget	to take medicine	familiarity
to entertain	patient	package
entertainment	to introduce	spreadsheet
wage	introduction	to imagine
barcode	introductory	imagination
barcode reader	to encourage	imaginary
schedule	courage	off-the-shelf
scheduler	to convert	to require
to link	conversion	requirement
link	subject	desktop publishing

11.1.1 Choose the correct translation:

1) shape
   a) форма   b) зв'язок   c) введення   d) очікування
2) familiar
   a) моментальний   b) уявний   c) складний   d) знайомий
3) link
   a) форма   b) зв'язок   c) введення   d) очікування
4) imaginary
   a) моментальний   b) уявний   c) складний   d) знайомий
5) require
   a) очікувати   b) запроваджувати   c) розважати   d) вимагати
6) sophisticated
   a) моментальний   b) уявний   c) складний   d) знайомий
7) introduction
   a) форма   b) зв'язок   c) введення   d) очікування
8) entertain
   a) очікувати   b) запроваджувати   c) розважати   d) вимагати
9) instant
   a) моментальний   b) уявний   c) складний   d) знайомий
10) expectation
   a) форма   b) зв'язок   c) введення   d) очікування

11.1.2 Match the words with their meanings:

1) forgive   a) електронна таблиця
2) courage   b) уява
3) spreadsheet   c) вимога
4) medicine   d) ліки
5) convert   e) прощати
6) imagination   f) запроваджувати
7) flight   g) перетворювати
8) requirement   h) мужність
9) subject   i) рейс
10) introduce   j) предмет

11.1.3 Match the words with their definitions:

1) memo   a) a list of times of recurring events, projected operations, arriving and departing trains, etc.; timetable

2) prepare   b) especially suitable or compatible, assigned to a particular purpose or use

3) gadget   c) the action of calling something to the attention of the public especially by paid announcements

4) schedule   d) a short note written to help one remember something or remind one to do something

5) bar code   e) to take hold of and lift up

6) pick up   f) any interesting but relatively useless or unnecessary object

7) link   g) a code consisting of a group of printed and variously patterned bars and spaces and sometimes numerals that is designed to be scanned and read into computer memory and that contains information (as identification) about the object it labels

8) appropriate h) a connecting structure

9) patient   i) bearing pains or trials calmly or without complaint

10) advertising j) to make ready, usually for a specific purpose; make suitable; fit; adapt; train

11.2 Reading

11.2.1 Read the text and write a list of uses of the computer, or computer applications, add as many as you can think of. Discuss them with other students.

What can computers do?

Computers and microchips have become part of our everyday lives: we visit shops and offices which have been designed with the help of computers, we read magazines which have been produced on computer, we pay bills prepared by computers. Just picking up a telephone and dialling a number involves the use of a sophisticated computer system, as does making a flight reservation or bank transaction.

We encounter daily many computers that spring to life the instant they're switched on (e.g. calculators, the car's electronic ignition, the timer in the microwave, or the programmer inside the TV set), all of which use chip technology. What makes your computer such a miraculous device? Each time you turn it on, it is a tabula rasa (нечто чистое, нетронутое) that, with appropriate hardware and software, is capable of doing anything you ask. It is an electronic filing cabinet which manages large collections of data such as customers' lists, accounts, or inventories. It is a magical typewriter that allows you to type and print any kind of document – letters, memos, or legal documents. It is a personal communicator that enables you to interact with people around the world. If you like gadgets and electronic entertainment, you can even use your PC to relax with computer games.

11.2.2 Tick (√) the computer uses mentioned in the following article:

[ ] home   [ ] libraries
[ ] art   [ ] shopping
[ ] hospitals   [ ] film-making
[ ] banking   [ ] television advertising
[ ] engineering   [ ] schools

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

11.2 Writing

11.2.1 Match the places in column A with the computer uses in column B:

A	B
Banks	Control machines
Factories	Calculate the bill
Homes	Look after patient records and medicines
Hospitals	Provide entertainment and information
shops	Control our money

11.2.2 Now fill in the gaps in the paragraph about computer uses:

Computers are now part of our everyday life. In shops, they 1 _____. In factories, they 2_____. In 3_____, they look after patient records and medicines. When we have a bank account, a computer 4_____. In our homes, computers 5_____.

11.3 Summing-Up

Speaking

What do you use your computer for?
What features are the most important for you?

14 UNIT № 12. WORD PROCESSING

14.1 Vocabulary. Translate the words into Ukrainian

superior	to invite	to underline
fashion	invitation	to notify
fashionable	hide (hid, hidden)	notification
old-fashioned	to prefer	to define
significant	preference	definition
significance	preferable	proof
intellectual	to split	to proof-read
intelligence	amount	to prove
artificial	to correspond (with, to)	pronunciation
intelligence	corresponding	to pronounce
(AI)	to substitute	obvious
to forget	substitution	typeface
(forgot,	to retrieve	plain
forgotten)	retrieval	italics
age	to recover	bold
to spell	recovery	to strike
spelling	shadow	to strike through
neat	to outline	

12.1.1 Choose the correct translation:

1) fashion
    a) вимова   b) написання   c) мода   d) визначення
2) spelling
    a) вимова   b) написання   c) мода   d) визначення
3) neat
    a) акуратний   b) переважний   c) очевидний   d) звичайний
4) to define
    a) приховати   b) замінювати   c) визначити   d) відповідати
5) to substitute
    a) приховати   b) замінювати   c) визначити   d) відповідати
6) pronunciation
    a) вимова   b) написання   c) мода   d) визначення
7) to hide
    a) приховати   b) замінювати   c) визначити   d) відповідати
8) obvious
    a) акуратний   b) переважний   c) очевидний   d) звичайний
9) to correspond
    a) приховати   b) замінювати   c) визначити   d) відповідати
10) plain
    a) акуратний   b) переважний   c) очевидний   d) звичайний

12.1.2 Match the words with their meanings:

1) notification	a) перевага
2) age	b) підкреслювати
3) prove	c) сповіщення
4) shadow	d) значний
5) preference	e) доказувати
6) underline	f) запрошення
7) fashionable	g) кількість
8) invitation	h) вік
9) amount	i) модний
10) significant	j) тінь

12.1.3 Match the words with their definitions:

1) significance	a) a regaining of something lost or stolen
2) recovery	b) the process of searching for and obtaining data from a computer system
3) bold	c) put a line through (e.g. a word)
4) outline	d) the power of learning, understanding and knowing; mental ability
5) spell	e) darker than other text on the printed page
6) strike through	f) show shapes or boundaries
7) typeface	g) ask to come or to go somewhere
8) intelligence	h) importance
9) invite	i) the design of letters and characters
10) retrieval	j) name or write the letters of a word

12.1.4 Find synonyms:

important –
to divide –
to report –
evidence –
to hit –

12.2 Reading and Discussion
Word Processing: For and Against

12.2.1 Discuss the questions:

1) Do you like writing by hand? Why? / Why not?
2) What is a word processor?
3) What is the difference between handwriting, typing and word processing?
4) Have you ever used a typewriter or word processor? Which word processor?
5) What makes word processor superior to traditional typewriters?
6) Make a list of the most important features offered by word processors.

12.2.2 Read and translate the sentences from the text:

1) By this time millions of typewriters were in use, and in countries using Roman alphabet, very few official letters and documents were still being handwritten.

2) Some people remain nostalgic for the old-fashioned typewriter, though.

3) Most significantly, perhaps, with no easy correction, sentences have to be fully thought – just before they are committed to paper – an intellectual discipline perhaps in danger of being forgotten in the age of cut, copy, paste and delete.

4) You have more formatting choices with a word processor, and the spelling, grammar and language tools are useful, too.

5) Many people use a text editor for the Internet, which is similar to a word processor but has fewer formatting features and cannot use graphics.

12.2.3 Read the text about typewriters and find out their advantages and disadvantages:

The earliest recorded attempt to produce a mechanical writing device was in 1714, but the first useable typewriter was produced by Remington in 1873. It had most of the features of later machines, except that it typed only in capital letters. With the addition of lower case ("small") letters in 1878, the basic design was in place.

Portable typewriters appeared in 1912, and electric machines became available in 1925. By this time millions of typewriters were in use, and in countries using Roman alphabet, very few official letters and documents were still being handwritten.

Although typewriters are still manufactured in small quantities, they have largely been replaced by computer word-processing applications. Some people remain nostalgic for the old-fashioned typewriter, though. It requires no electricity, no separate printer and no expensive ink cartridges (a single ribbon will type hundreds of pages, and is quick and cheap to replace). Most significantly, perhaps, with no easy correction, sentences have to be fully thought – just before they are committed to paper – an intellectual discipline perhaps in danger of being forgotten in the age of cut, copy, paste and delete.

12.2.4 Read the text about word processors and find their advantages in the first paragraph and disadvantages in the second:

The case for and against WORD PROCESSING

People use word processors for writing all kinds of documents, such as letters, school papers and reports. Word processors have many advantages over handwriting and manual typewriters. Word processing is faster and easier than writing by hand and you can store documents on your computer, which you cannot usually do on a typewriter. This makes it easier to review and rewrite your documents. You have more formatting choices with a word processor, and

the spelling, grammar and language tools are useful, too. You can also print copies of your documents, which look neater than handwritten ones. Many language students use word processors to improve their writing skills and because they help them feel proud of their work.

Word processors do have disadvantages, however. First, it is not easy to read long documents on a computer screen. Second, sometimes the printer does not print an exact copy of what you see on the screen. Not all word processors can red each other's files, which is another disadvantage. Finally, word processors do not always work well with e-mail. If you paste a word processed letter into an e-mail it may lose a lot of its formatting. Many people use a text editor for the Internet, which is similar to a word processor but has fewer formatting features and cannot use graphics. Text editors, such as Notepad, use a simple coding system called ASCII (American Standard Code for Information Interchange), as does e-mail.

14.1.1 ecide if the sentences are true (T) or false (F). Change the false sentences to make them true:

1. You can store letters on a manual typewriter.
2. You can change your documents easily on a word processor.
3. Printed documents look better than handwriting.
4. Improving your writing is more difficult with a word processor.
5. Word processors work well with e-mail.

14.1.2 Match the words and phrases in the text with their definitions:

1. by hand, not electronic ___
2. the way a program organizes data ___
3. a program used for simple text files ___
4. the code that e-mail uses ___
5. things that a program has, or can do ___
6. a program used for text and graphics ___

14.1.3 Which of these documents would you write by hand and which on a word processor?

> a formal letter, an informal letter, an invitation to a party, a birthday card, a shopping list, an application form, a note to your friend, a school report, a 'for sale' notice

14.1.4 There are some advantages of writing with pen and paper. Do you agree or disagree with them? Add any other ideas you may have:

pen and paper – cheaper
you can write anywhere (don't need electricity, etc.)
don't need to learn to type
handwritten papers – friendly and more personal.

14.2 Reading

14.2.1 Read the text about word-processing:

Word-Processing Facilities

Writing letters, memos or reports are the ways most people use computers. They manipulate words and text on a screen – primarily to print at some later time and store for safe keeping. Computers alleviate much of the *tedium*[1] associated with typing, proofing, and manipulating words. Because computers can store and recall information so readily, documents need not be retyped *from scratch*[2] just to make corrections or changes. The real strength of word processing lies in this ability to store, retrieve and change information. Typing is still necessary (at least for now) to put the information into the computer initially, but once in, the need to retype only applies to new information.

Word processing is more than just typing, however. Features such as Search and Replace allow users to find a particular phrase or word no matter where it is in a body of text. This becomes more useful as the amount of text grows.

Word processors usually include different ways to view the text. Some include a view that displays the text with editor's marks that show hidden characters or commands (spaces, returns, paragraph endings, applied styles, etc.). Many word processors include the ability to show exactly how the text will appear on paper when printed. This is called WYSIWYG (What You See Is What You Get, pronounced 'wizzy-wig'). WYSIWYG shows **bold**, *italics,* underline and other type style characteristics on the screen so that the user can clearly see what he or she is typing. Another feature is the correct display of different typefaces and format characteristics (margins, *indents*[3], super- and subscripted characters, etc.). This allows the user to plan the document more accurately and reduces the *frustration*[4] of printing something that doesn't look right.

Many word processors now have so many features that they approach the capabilities of *layout*[5] applications for desktop publishing. They can import graphics, format multiple columns of text, run text around graphics etc.

Two important features offered by word processors are automatic *hyphenation*[6] and *mail merging*[7]. Automatic hyphenation is the splitting of a word between two lines so that the text will fit better on page. The word processor constantly monitors words typed and when it reaches the end of the line, if a word is too long to fit, it checks that word in a hyphenation dictionary. The dictionary contains a list of words with preferred places to split them. If one of these cases fits part of the word at the end of the line, the word processor splits the word, adds a hyphen at the end and places the rest of the word on the

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[1]Нудьга, втома
[2] Починати спочатку
[3] Відступи, абзаци
[4] поломка
[5] Макет, компоновка, формат
[6] Перенесення слова, розподіл на склади
[7] Постановка поштових реквізитів, програма пересилання-злиття

next line. This happens extremely fast and gives the text a more polished and professional look.

Mail merging applications are largely responsible for explosion of 'personalized mail'. Form letters with designed spaces for names and addresses are stored as documents with links to lists of names and addresses of potential buyers or clients. By designating what information goes into which blank space, a computer can process a huge amount of correspondence substituting the 'personal' information into a form letter. The final document appears to be typed specifically to the person addressed.

Many of word processors can also generate tables of numbers or figures, sophisticated indexes and comprehensive tables of contents.

14.2.2 Complete the sentences with the words from the box:

> **type style,   WYSIWYG, format, indent, font menu,
> justification, mail merging**

1. _____ stands for 'What You See Is What You Get'. It means that your printout will precisely match what you see on the screen.
2. _____ refers to the process by which the space between the words in a line is divided evenly to make the text flush with both left and right margins.
3. You can change font by selecting the font name and point size from the _____.
4. _____ refers to distinguished visual characteristic of a typeface; 'italic' for example is a _____ that may be used with a number of typefaces.
5. The _____ menu of a word processor allows you to set margins, page numbers, spaces between columns and paragraph justifications.
6. _____ enables you to combine two files, one containing names and addresses and the other containing a standard letter.
7. An _____ is the distance between the beginning of a line and the left margin, or the end of the line and the right margin. Indented text is usually narrower than text without it.

14.2.3 Match the words with their definitions:

1)	retrieve	a)	a text printed in the top margin
2)	typeface	b)	recover information from a computer system
3)	header	c)	letter, number or symbol that appears below the baseline of the row of type; commonly used in maths formulas
4)	footer	d)	a text printed in the bottom margin
5)	sub-scripted character	e)	division of words into syllables by a short dash or hyphen
6)	hyphenation	f)	styles for a set of characters; sometimes called 'fonts'

14.2.4 Match the words with the types of lettering:

> bold,   bold italic,   italic,   lower case,   outline,   plain text,   shadow,   strikethrough,   underline,   upper case

1. _____ WORD-PROCESSING
2. _____ word-processing
3. _____ Word-processing
4. _____ **Word-Processing**
5. _____ *Word-Processing*
6. _____ ***Word-Processing***
7. _____ <u>Word-Processing</u>
8. _____ ~~Word-Processing~~
9. _____ Word-Processing
10. _____ **Word-Processing**

14.2.5 Read the text and describe the major features of the word processor:

Writing Tools

Three major features that word processors offer are spell checkers, online thesauruses and grammar checkers. Read the descriptions of these features.

1. <u>Spell checkers</u> can be used to compare words in the program's dictionary to those used in the user's document. The spell checker points to any words it cannot match, notifies the user, and allows him or her to make any changes; it sometimes even suggests possible correct spellings. Like a conventional thesaurus, this database of words contains definitions and suggestions of words with similar and opposite meanings. A word may be spelled correctly but still be wrong (*too* instead of *two*). This is a good first step at proofing a document because it can find many common errors, but will still need to proofread documents to ensure complete accuracy.

2. Many word processors include an <u>on-line thesaurus</u> with which the users can look up different words to use in similar instances. Their power comes not from knowing every grammatical rule, but from the questioning the writer about certain parts of the text. Some even include information about pronunciation and histories of evolving meaning.

3. <u>Grammar checkers</u> are applications that attempt to check more than just spelling. They count words in sentences to flag possible run-on sentences. They look for words that show possible conflicts between verbs and subjects and they offer advice about corrections. Grammar checkers are a step beyond spell checkers, but they are still not a substitute for a human editor. However, this does not mean that all the words in the document are spelled correctly. This gives the writer another chance to think about what he or she has written; the computer can alert writers to problems that wouldn't be obvious to them otherwise.

14.3 Summing-Up

How often and how much do you write by hand?
Are there any situations when you MUST or SHOULD write by hand?

13 UNIT № 13. MACHINE TRANSLATION

13.1 Vocabulary. Translate the words into Ukrainian:

to investigate	composition	value
investigation	entire	valuable
to achieve	entirely	to evaluate
achievement	entirety	evaluation
trace	deep	to assess
to trace	depth	assessment
to trace back	in-depth	enormous
tongue	to deepen	enormously
to claim	challenge	immediate
claim	distinct	immediately
to fulfil	distinction	to adapt
fulfilment	distinctive	adaptable
to increase	to exploit	adaptation
to decrease	to offer	suite
to propose	offer	simultaneous
proposal	to approach	simultaneously
to compose	approach	to remain

13.1.1 Choose the correct translation:

1) achievement
    a) твір   b) досягнення   c) розслідування   d) середовище
2) increase
    a) виконувати   b) зменшувати   c) збільшувати   d) оцінювати
3) simultaneous
    a) цінний   b) виразний   c) одночасний   d) глибокий
4) investigation
    a) твір   b) досягнення   c) розслідування   d) середовище
5) valuable
    a) цінний   b) виразний   c) одночасний   d) глибокий
6) composition
    a) твір   b) досягнення   c) розслідування   d) середовище
7) distinct
    a) цінний   b) виразний   c) одночасний   d) глибокий
8) decrease
    a) виконувати   b) зменшувати   c) збільшувати   d) оцінювати
9) environment
    a) твір   b) досягнення   c) розслідування   d) середовище
10) deep
    a) цінний   b) виразний   c) одночасний   d) глибокий

13.1.2 Match the words with their meanings:

1) trace	a) язик
2) approach	b) оцінка
3) evaluation	c) залишатися
4) tongue	d) поглиблювати
5) offer	e) слід
6) enormous	f) негайно
7) remain	g) величезний
8) immediately	h) підхід
9) suite	i) комплект
10) deepen	j) пропозиція

13.1.3 Match the words with their definitions:

1) entire	a) decide or fix the amount of (a tax or a fine)
2) claim	b) point of difference
3) exploit	c) offer or put forward for consideration
4) assess	d) whole, complete
5) distinction	e) examine, make a careful study
6) enormous	f) make suitable for a new use, need, situation
7) adapt	g) perform or complete a task, a duty
8) propose	h) work, use or develop
9) investigate	i) very great, immense
10) fulfil	j) right to ask for

13.2 Reading and Discussion

13.2.1 Read and translate the text with the help of MT or CAT:

Machine translation, sometimes referred to by the abbreviation **MT**, is a sub-field of computational linguistics that investigates the use of computer software to translate text or speech from one natural language to another. At its basic level, MT performs simple substitution of words in one natural language for words in another.

Improved output quality can also be achieved by human intervention: for example, some systems are able to translate more accurately if the user has *unambiguously*[8] identified which words in the text are names. With the assistance of these techniques, MT has proven useful as a tool to assist human translators and, in a very limited number of cases, can even produce output that can be used as is (e.g., weather reports).

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[8] недвозначно

History of machine translation

The idea of machine translation may be traced back to the 17th century. In 1629, René Descartes proposed a universal language, with equivalent ideas in different tongues sharing one symbol. In the 1950s, The Georgetown experiment (1954) involved fully-automatic translation of over sixty Russian sentences into English. The experiment was a great success and *ushered*[9] in an era of substantial funding for machine-translation research. The authors claimed that within three to five years, machine translation would be a solved problem.

Real progress was much slower, however, and after the ALPAC report (1966), which found that the ten-year-long research had failed to fulfill expectations, funding was greatly reduced. Beginning in the late 1980s, as computational power increased and became less expensive, more interest was shown in statistical models for machine translation.

The idea of using digital computers for translation of natural languages was proposed as early as 1946 by A. D. Booth and possibly others. The Georgetown experiment was by no means the first such application, and a demonstration was made in 1954 on the APEXC machine at Birkbeck College (University of London) of a *rudimentary*[10] translation of English into French. Several papers on the topic were published at the time, and even articles in popular journals (see for example *Wireless World*, Sept. 1955, Cleave and Zacharov). A similar application, also pioneered at Birkbeck College at the time, was reading and composing Braille texts by computer.

Translation process

The translation process may be stated as:

Decoding the meaning of the source text; and

Re-encoding this meaning in the target language.

Behind this *ostensibly*[11] simple procedure lies a complex *cognitive*[12] operation. To decode the meaning of the source text in its entirety, the translator must interpret and analyse all the features of the text, a process that requires in-depth knowledge of the grammar, semantics, syntax, idioms, etc., of the source language, as well as the culture of its speakers. The translator needs the same in-depth knowledge to re-encode the meaning in the target language.

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[9] проводився
[10] елементарний
[11] очевидно
[12] пізнавальний

Therein lies the challenge in machine translation: how to program a computer that will "understand" a text as a person does, and that will "create" a new text in the target language that "sounds" as if it has been written by a person.

Machine Translation (MT) and Computer-Assisted Translation (CAT)

It is important to make a distinction between two terms that are closely related and that tend to confuse non-specialists: machine translation (MT) and computer-assisted translation (CAT). These two technologies are the consequence of different approaches. They do not produce the same results, and are used in distinct contexts.

MT aims at assembling all the information necessary for translation in one program so that a text can be translated without human intervention. It exploits the computer's capacity to calculate in order to analyze the structure of a statement or sentence in the source language, break it down into easily translatable elements and then create a statement with the same structure in the target language. It uses huge plurilingual dictionaries, as well as *corpora*[13] of texts that have already been translated.

CAT uses a number of tools to help the translator work accurately and quickly, the most important of which are terminology databases and translation memories. In effect, the computer offers a new way of approaching text processing of both the source and target text. Working with a digital document gives us non-sequential access to information so that we can use it according to our needs. It becomes easy to analyze the sentences of the source text, to verify the context in which a word or a text is used, or to create an inventory of terms, for example. Likewise, any part of the target text can be modified at any moment and parallel versions can be produced for comparison and evaluation. All these aspects have *profound*[14] *implications*[15] for translation, especially in terms of assessing the results, since the translator can work in a more relaxed way because of the greater freedom to make changes at any time while the work is in progress.

It is important to stress that automatic translation systems are not yet capable of producing an immediately useable text, as languages are highly dependant on context and on the different *denotations*[16] and *connotations*[17] of words and word combinations. It is not always possible to provide full context within the text itself, so that machine translation is limited to concrete situations and is considered to be primarily a means of saving time, rather than a

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[13] Мн. від corpus – звід, збори
[14] Базовий, глибокий
[15] Підтекст, сенс
[16] Точне значення
[17] Додаткове значення

replacement for human activity. It requires post-editing in order to *yield*[18] a quality target text.

Computer-Assisted Translation

In practice, computer-assisted translation is a complex process involving specific tools and technology adaptable to the needs of the translator, who is involved in the whole process and not just in the editing stage. The computer becomes a workstation where the translator has access to a variety of texts, tools and programs: for example, monolingual and bilingual dictionaries, parallel texts, translated texts in a variety of source and target languages, and terminology databases. Each translator can create a personal work environment and transform it according to the needs of the specific task. Thus computer-assisted translation gives the translator on-the-spot flexibility and freedom of movement, together with immediate access to an *astonishing*[19] range of up-to-date information. The result is an enormous saving of time.

The following are the most important computer tools in the translator's workplace, from the most elementary to the most complex:

Electronic Dictionaries, Glossaries and Terminology Databases

Consulting electronic or digital dictionaries on the computer does not at first appear radically different from using paper dictionaries. However, the advantages soon become clear. It takes far less time to type in a word on the computer and receive an answer than to look through a paper dictionary; there is immediate access to related data through links; and it is possible to use several dictionaries simultaneously by working with multiple documents.

Electronic dictionaries are available in several forms: as software that can be installed in the computer; as CD-ROMs and, most importantly, through the Internet. The search engine Google, for example, gives us access to a huge variety of monolingual and bilingual dictionaries in many languages, although it is sometimes necessary to become on-line subscribers, as with the Oxford English Dictionary. On-line dictionaries organize material for us from their corpus because they are not simply a collection of words in isolation. For example, we can ask for all words related to one key word, or for all words that come from a particular language. That is to say, they allow immediate cross-access to information.

For help with specific terminology there is a wide range of dictionaries, glossaries and databases on the Internet.

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[18] Виробляти, видавати
[19] дивовижний

13.2.2 Analyze the results and answer the questions:

1) Which way is more convenient? Why do you think so?
2) Which way is more accurate? Why?
3) What corrections and editing did you have to make?

13.2.3 Decide whether the following sentences are true (T) or false (F):

1 ☐ Some machine translation (MT) systems produce good translations.
2 ☐ It is difficult to compare different MT systems.
3 ☐ The easiest way to evaluate any machine translation of a given text is to compare it to a human translation of the same text.

13.2.4 Read the following text and check your answers to the previous task:

Lost in machine translation

You can go out right now and buy a machine translation system for anything between £100 and £100,000. But how do you know if it's going to be any good? The big problem with MT systems is that they don't actually translate: they merely help translators to translate. Yes, if you get something like Metal (very expensive) or GTS (quite cheap) to work on your latest brochure, they will *churn*[20] out something in French or whatever, but it will be pretty laughable stuff.

All machine-translated texts have to be extensively post-edited (and often pre-edited) by experienced translators. To offer a useful saving, the machine must make the time the translator spends significantly less than he or she would have taken by hand.

Inevitably, the MT manufacturers' glossies talk *blithely*[21] of 'a 100 percent increase in throughput' but skepticism remains. Potential users want to make their own evaluation, and that can tie up key members of the corporate language centre for months.

A few weeks ago, translators, system developers, academics, and others from Europe, the US, Canada, China, and Japan met for the first time in a Swiss hotel to *mull*[22] over MT matters. A surprisingly large number of European governmental and corporate organizations are conducting expensive and elaborate evaluations of MT, but they may not produce, 'buy or don't buy' results.

Take error analysis, a fancy name for counting the various types of errors the MT system produces. You might spend five months working out a suitable scoring scheme – is correct gender agreement more important than correct number? - and *totting*[23] up figures for a suitably large sample of text, but what

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[20] Масово виробляти
[21] Весело, життєрадісно
[22] обмірковувати
[23] підсумовувати

do those figures mean? If one system produces vastly more errors than another, it is obviously inferior. But suppose they produce different types of error in the same overall numbers: which type of error is worse? Some errors are bound to cost translators more effort to correct, but it requires a lot more work to find out which.

It isn't just users who have trouble with evaluation. Elliott Macklovitch, of Canada, described an evaluation of a large commercial MT system, in which he analysed the error performance of a series of software updates only to find - as the system's suspicious development manager had feared – that not only had there been no significant improvement, but the latest release was worse.

And bugs are still common. Using a 'test suite' of sentences designed to see linguistic weaknesses, researches in Stuttgart found that although one large system could cope happily with various complex verb-translation problems in a relative clause, it fell apart when trying to do exactly the same thing in a main clause. Developers are looking for bigger, better test suites to help to keep such bugs under control.

Good human translators produce good translations; all MT systems produce bad translations. But just what is a good translation? One traditional assessment technique involves a bunch of people scoring translations on various scales for intelligibility ('Does this translation into English make sense as a piece of English?'); accuracy ('Does this piece of English give the same information as the French original?'); style, and so on. However, such assessment is expensive, and designing the scales is something of a black art.

Properly designed and integrated MT systems really ought to enhance the translator's life, but few take this on trust. Of course, they do things differently in Japan. While Europeans are dabbling their toes and most Americans deal only in English, the Japanese have gone in at the deep End. The Tokyo area already sports two or three independent MT training schools where, as the eminent Professor Nagao casually noted in his presentation, activities are functioning with the efficiency of the Toyota production line. We're lucky they're only doing it in Japanese.

13.2.5 *Each of the sentences below (except one) summarizes an individual paragraph of the text. Order the sentences so that they form a summary of the text. One of the sentences contains information, which is not in the text. Which one?*

1 The developers of MT systems have also had problems evaluating their systems.

2 Many European organizations are evaluating MT, but the results may not be conclusive.

3 Assessing machine translations as good or bad is very difficult because such judgments cannot be made scientifically.

4 It is time-consuming for potential users to test the MT manufacturers' claims that their products double productivity.

5 Better tests are needed to monitor linguistic weaknesses in MT Systems.

6 All machine translations need to be edited by a human translator.

7 A reliable MT system is unlikely to be available this century.

8 The price of MT systems varies greatly and none actually translates.

9 The Japanese have a few independent MT training schools, which are said to be very efficient.

10 Analysing the errors made by MT systems is inconclusive because it may only show that different systems produce similar numbers of error types.

13.2.6 Match each of the following verbs from the text with the expression similar meaning:

1) churn out	a) add up
2) tie up	b) think carefully about
3) mull over	c) manage successfully
4) tot up	d) produce large amounts of
5) cope with	e) fail
6) fall apart	f) occupy the time of

13.2.7   Using the paragraph reference given, find words or phrases in the text which have a similar meaning to:

1 ridiculous (paragraph.l)

2 colour brochures (paragraph.3)

3 casually (paragraph.3)

4 sure to (paragraph. 5)

5 group (paragraph. 8)

6 mysterious ability (paragraph.3)

7 experimenting in a small way (paragraph.9)

8 invested heavily (paragraph.9)

13.2.8 Look at these sentences. Discuss why a machine might find them difficult to translate:

I bought a set of six chairs.   The sun set at 9 p.m.
He set a book on the table.   We set off for London in the morning.
She had her hair set for the party. The VCR is on the television set.

Can you think of other examples where this kind of problem occurs?

13.3 Summing-Up

Make a list of the main problems of machine translation and try to give some advice how to avoid them.

14 TEXTS FOR READING

TEXT № 1
When You Turn on your Computer.
Graphics User Interface

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

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

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

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

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

14.1 *The Very First Contacts with your Computer. Unit № 5 Keys and Buttons*

TEXT № 2
Keyboard

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

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

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

To the right of the main keyboard is a section known as the editing keys. This group includes keys which insert and delete data. It also includes the cursor keys, also called the arrow keys. These keys move the cursor around the screen. (pause)

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

14.2 Computer Types and Uses. Unit № 9. Kinds of Computers

TEXT № 3

Digital computers can be divided into five main types, depending on their size and power: they are mainframes, minicomputers, desktop PCs, laptops and handheld computers.

'Mainframes' are the largest and most powerful computers. The basic configuration of a mainframe consists of a central system which processes immense amounts of data very quickly. This central system provides data information and computing facilities for hundreds of terminals connected together in a network. Mainframes are used by large companies, factories and universities.

'Minicomputers' are smaller and less powerful than mainframes. They can handle multi-tasking, that is, they can perform more than one task at the same time. Minicomputers are mainly used as file servers for terminals. Typical applications include academic computing, software engineering and other sophisticated applications in which many users share resources.

PCs carry out their processing on a single microchip. They are used as personal computers in the home or as workstations for a group. Typical examples are the IBM PC, or the Apple Macintosh. Broadly speaking, there are two classes of personal computer: (a) desktop PCs, which are designed to be placed on your desk, and (b) portable PCs, which can be used as a tiny notebook. This is why they are called 'notebooks' or 'laptops'. The latest models can run as fast as similar desktops and have similar configurations. They are ideal for business executives who travel a lot.

The smallest computers can be held in one hand. They are called handheld computers or palmtops. They are used as PC companions or as electronic organizers for storing notes, reminders and addresses.

14.3 Read the dialogues and make up your own ones

Part 1

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

Part 2

A: What if I wanted... I travel a lot, if I wanted something smaller, what's available?

B: There are portable computers. A multimedia notebook is probably best.

A: Is a notebook the smallest kind you can get?

B: No, you can get subnotebooks and even smaller handheld devices. They're mostly used as organizers, as a diary, a 'to do' list, and that kind of thing. But for writing and general use a notebook is better.

A: OK, I think I'll go for a notebook. What other things do I need?

B: A printer... and for the Internet, make sure you have a modem.

A: A modem?

B: Yes, it's a device for connecting your computer to a telephone line. You need it to connect to the Internet.

TEXT № 4
Portable Computers

Interviewer: Some portable computers are referred to as laptops and others as palmtops. Can you explain the difference?

Tom: Sure. Laptops are simply smaller versions of desktop PCs, but they can run similar applications. However, palmtops are handheld computers and weigh less than 2 pounds; they are used as PC companions or as personal digital assistants.

Interviewer: And what are the basic features of palmtops?

Tom: Well, these handheld devices run on rechargeable alkaline batteries and have small keyboard and high-contrast LCD screens. Sometimes they have buttons for launching applications and a stylus or pen, which is used for interacting with a touch-sensitive screen.

Interviewer: Do they need special operating systems?

Tom: Yes. They usually run Palm OS, from Palm Computing or Pocket PC OS, the system developed by Microsoft for mobile-computing devices. Some pen-based systems can also recognize hand-written characters and convert them into editable text.

Interviewer: Right. What sort of things can you do with handheld computers?

Tom: They are usually designed to store personal information, for example, a calendar, an address book, a note pad, a calculator and a voice recorder. They can also come with built-in modem and Internet software, which lets you send and receive e-mail from a payphone, a hotel or even a plane.

Interviewer: Really? They are compatible with traditional PCs?

Tom: Yes, of course. They can transfer information to printers and PCs via cables or infrared link. The software lets you synchronize documents with your desktop PC.

Interviewer: and how do you see the future of palmtops? How will they develop, do you think?

Tom: Well, I think they'll become more and more popular with business executives who'll use them as a portable supplement to their desktop systems.

TEXT №5
Computers in everyday life

Extract 1

We use a PC for writing letters, for playing games, to calculate our bills, and to connect with the Internet. Extract 2

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

Extract 3

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

Extract 4

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

14.4 Unit № 12. Word Processing

TEXT № 6

The best way to learn about a word processor is to use it. However, I will briefly describe some of the main features.

You can use a word processor in any circumstances where you would otherwise use a typewriter. The two machines are very similar in function, although the word processor has many advantages that are not matched by a conventional typewriter. The most obvious difference is the ease of correcting mistakes. As the text is not printed as it is entered, corrections can be made at any time. Printing is carried out when the document is to your satisfaction.

When using a typewriter, it is necessary to press the carriage return key at the end of each line of text. A word processor carries out this function automatically; it is known as word-wrap. As a new line is started, the spacing of the text on the last line is adjusted so that the left and the right hand edges line up. This is known as justification and gives a professional appearance to the text. In most word processors, justification can be 'switched off' to give the text a ragged right-hand margin. On a word processor, the carriage return key is often referred to as the return or enter key. It is used to start a new line of text, for example the beginning of a paragraph.

Word processors make use of a cursor. This is usually a small flashing line or block and indicates the point at which text will be entered on the screen. Most keyboards have a group of four keys marked with arrows, each pointing in one of the following directions: left, right, up, down. These are known as the cursor keys and as the name suggests are used for moving the cursor around the text for editing purposes.

Cursor editing usually applies to the manipulation of smaller blocks of text, say a maximum of one line, and consists of inserting, deleting and replacing text. For example, to correct a spelling mistake, first of all use the cursor to the right of the incorrect letter and delete it using the delete key. This key is usually found above the enter key and is marked with an arrow pointing to the left. The required replacement letter is then simply typed from the keyboard and the rest of the text in the paragraph will simply re-align itself.

ADDITIONAL VOCABULARY

A
a number of – декілька, ряд
able – здатний
above – вище, над
accept – приймати
access – доступ; отримати доступ
accessible – доступний
according to – відповідно, згідно
account – рахунок
achieve – досягати
achievement – досягнення
adapt – пристосувати
add – додавати, складати
addition – додавання, складання
adjust – налаштувати
adjustment – налаштування
advantage – перевага
advantageous – вигідний, корисний
advertise – рекламувати
advertisement (ad) – реклама
advice – порада
advisable – рекомендований
advise – радити
affect – впливати
affection – вплив
age – вік, епоха
allow – дозволити
alternate – чергуватися
alternative – альтернативний
amount – кількість
appear – з'являтися
application – додаток, заява, застосування
apply – застосовувати, звертатися (напр., із заявою)
appoint – призначати
appointment – призначення
approach – підхід, наближення; наближатися
appropriate – відповідний
approximate – приблизний
approximately – приблизительно
approximation – наближення
arrange – влаштовувати, налагоджувати
arrangement – пристрій, розташування
arrow – стрілка, стріла

artificial intelligence (AI) – штучний інтелект
assess – оцінювати
assessment – оцінка
attach – приєднувати
attachment – прикріплення
available – наявний, доступний

B
background picture – фонове зображення
bar – брусок, панель
barcode – штрих-код
barcode reader – сканер штрих-кода
base on/upon – ґрунтуватися на
basic – основний
be referred – вважатись, називатися
be/get familiar with – бути знайомим/познайомитися з
below – нижче, під
between – між
bill – рахунок
bit (binary digit) – біт
blank – порожній, вільний
blank space – пробіл
bold – жирний (про шрифт)
boot up – завантажувати
bottom – дно, низ
box – коробка, корпус
brief – короткий
broad – широкий
broadly speaking – взагалі кажучи, вцілому
button – кнопка; ґудзик
by means of – шляхом, за допомогою
byte – байт

C
cabinet – шафка (з полицями, ящиками)
calculate – обчислювати
calculation – обчислення
calculus – числення
call – називати, дзвонити
cancel – відмінити
capital – капітал; столиця; велика літера
carry – нести
carry out – виконувати, проводити
case – випадок
cause – причина; викликати, бути причиною

challenge – виклик, складна задача
change – змінювати; здача
character – символ; характер, персонаж
charge – заряд; заряджати
cheap – дешевий
chip – чіп, мікросхема
choice – вибір
choose (chose, chosen) – вибирати
circuit – схема, коло
claim – вимагати
click – «клацнути»
clip – обрізати
clipboard – буфер обміну; планшет
colour\color – колір
combination – поєднання
combine – поєднувати
common – загальний, уживанний
compatible – сумісний
complete – повний, завершений; закінчити
compose – складати, створювати
composition – твір
compute – обчислювати
computer – ЕОМ
conductor – напівпровідник
confirm – підтверджувати
confirmation – підтвердження
connect – з'єднувати
connection – з'єднання, зв'язок
consist of – складатися з
contain – містити
control – керувати
control panel – панель управління
conversion – перетворення, переклад
convert – перетворювати
correspond (with, to) - відповідати
corresponding – відповідний
cost – коштувати; вартість
count – рахувати
countable – зчислюваний
courage – мужність
CPU – central processing unit – центральний процесор
current – струм, потік; поточний
currently – в даний час
cursor – курсор
custom – традиція

customer – клієнт
customize – налаштувати, виконувати у відповідності з вимогами замовника
customs – митниця
cut – вирізати

D
data – дані (в од. і мн.)
database – база даних
date – дата
decide – вирішувати
decision – рішення
decrease – зменшувати
deep – глибокий
deepen – поглиблювати
default – за замовчуванням
define – визначати
definition – визначення
delete – видалити
depend on – залежати від
dependable – надійний
dependence – залежність
dependent – залежний
depth – глибина
describe – описувати
description – опис
design – конструювати, проектувати
designer – конструктор
desktop – настільний; «робочий стіл»
desktop publishing – настільна видавнича система
develop – розвивати, розробляти
developer – розробник
development – розвиток, розробка
device – пристрій
dialog box – діалогове вікно
diary – щоденник
differ – відрізнятися
difference – різниця, відмінність
different – різний, другий, інший
digit – цифра
digital – цифровий
disadvantage – недолік
display – показувати, відображати
distinct – виразний
distinction – характерна риса
distinctive – відмінний, характерний

divide – ділити
division – ділення, підрозділ
do sums – виконувати приклади
double-click – подвійне клацання
drive – вести; привод, дисковод
drop-down – розкривається (про меню)
due to – через те що, завдяки
DVD – Digital Versatile Disk

E
easy – легкий
edit – редагувати
edition – видання, випуск, редагування
editor – редактор
enable – давати можливість, дозволяти
encourage – вдохновлять, воодушевлять
enormous – величезний
enormously – надзвичайно, вкрай
entertain – розважати
entertainment – розвага
entire – ціле, повнота
entirely – повністю
entirety – цілісність
entry – вхід, занесення, елемент (таблиці, даних)
equip – оснащувати, обладнати
equipment – обладнання, оснащення, спорядження
evaluate – оцінювати
evaluation – оцінка
exact – точний
exactly – точно
except – крім
except for – за виключенням
exception – виняток
execute – виконувати
exist – існувати
existence – існування
expect – очікувати
expectation – очікування
expensive – дорогий
exploit – експлуатувати, використовувати
extract – витягувати

F
facility – здатність
familiar – знайомий

familiarity – близьке знайомство
fashion – мода
fashionable – модний
fast – швидкий
feature – риса, особливість
feed (fed) – накормити, живити
figure – фігура; рисунок; цифра
figure out – обчислювати
file – файл, папка
fit – годитися
fix – зафіксовувати, ремонтувати
flash on/off – спалахнути, загорітися/згаснути
flight – політ, рейс
flight reservation – бронювання рейсу, авіаквитка
floppy disk drive – дисковод гнучких дисків
folder – папка
follow – слідувати
following – наступний
font – шрифт
for example – наприклад
forget (forgot, forgotten) – забувати
forgive (forgave, forgiven) – прощати
free of charge – безкоштовний
fulfill – виконувати, справджувати
fulfillment - виконання

G
gadget – технічна новинка
general – загальний
generally – зазвичай
graphics – графіка
graphics interface – графічний інтерфейс
handheld – ручний
handle – ручка, рукоятка; керувати, обробляти, робити
hard drive – жорсткий диск
hardware – апаратне забезпечення
heavy – важкий
hertz – герц
hide (hid, hidden) – приховувати
highlight – виділяти, яскраво освітлювати
highlighted – виділений, підкреслений
hold (held) – тримати
hold down – утримувати
hover – зависати
icon – значок, іконка

image – зображення

imaginary – уявний

imagination – уява

imagine – уявляти

immediate – негайний

immediately – негайно

improve – удосконалювати, поліпшувати

improvement – поліпшення

in addition – на додаток, крім того

in order to – для того щоб

inch – дюйм

include – включати до складу

increase – збільшувати

independence – незалежність

independent – незалежний

in-depth – поглиблений

influence – вплив; впливати

influential – впливовий

initial – первісний, початковий

initially – спочатку

input – інформація на вході; вводити дані

insert – вставити

instant – моментальний

instantly – негайно, миттю

instead of – замість

integrated circuit – інтегральна схема

intellectual – інтелектуальний, розумний

intelligence – розум, інтелект

interact – взаємодіяти

interaction – взаємодія

interactive – інтерактивний

interface – інтерфейс

introduce – представляти, вводити, запроваджувати

introduction – представлення, введення, запровадження

introductory – вступний

invent – винаходити

invention – винахід

inventor - винахідник

investigate – розслідувати, досліджувати

investigation – слідство, досліджування

invitation – запрошення

invite – запрошувати

involve – втягувати, включати

issue – випуск

It suits me fine. – Це мені підходить відмінно.

italics – курсив
item – пункт, окремий предмет

K
keep (kept, kept) – держати, зберігати
key – ключ; клавіша; вводити з клавіатури
keyboard – клавіатура
kind – вид; добрий
lap – коліно
laptop – портативний комп'ютер, ноутбук
launch – запускати
layout – влаштовування, вид
left – лівий, ліворуч
let – дозволяти
letter – лист; буква
light – світлий; легкий
like – подобатися, любити; подібний
line – лінія, рядок
link – зв'язок, посилання, ланка
list – список; перераховувати
locate –розмістити
location – місцеположення; розташування
lock – замок; замикати, блокувати
lose (lost) – втрачати

M
main – гоолвний
main memory – оперативна пам'ять
mainframe – велика ЕОМ; сервер; суперкомп'ютер
make – робити
make a decision – приймати рішення
make an appointment with – призначити зустріч, записатися на прийом до
make up – скласти
make-up – склад; макіяж
margin – поле
means – кошти (мн.)
measure – вимірювати; міра
measurement – вимірювання
medicine – медицина, ліки
memo (memorandum) – замітка, меморандум
memory – пам'ять
menu – меню
microchip – мікросхема
microcomputer – мікрокомп'ютер
minicomputer – мінікомп'ютер

monitor – контролювати, відслідковувати
mouse – миша
move – переміщати, рухати
movement – рух
multiplication – множення
multiply – множити
multi-tasking – багатозадачність

N
neat – акуратний, охайний
network – мережа
next – наступний
next to – сусідній, поруч з
notification – сповіщення
notify – повідомляти, сповіщати
number – номер, число

O
obvious – очевидний
offer – пропонувати; пропозиція
off-the-shelf – готовий
old-fashioned – старомодний
operate – працювати
operation – операція, робота
option – вибір, предмет вибору
optional – додатковий, необов'язковий
order – порядок, заказ, приказ, орден, ордер; замовити, наказати, розкладати в певному порядку
ordinary – звичайний
OS – operating /operation system – операційна система
outline – зробити начерк, накреслити контур
output – вихід; виводити інформацію

P
package – пакет, пакунок
palm – долоня
palmtop – кишеньковий персональній комп'ютер
part – частина, деталь
paste – клеїти, вставити
patient – терплячий; паціент
pattern – зразок, шаблон, узор
perform – виконувати, представляти
performance – виконання, швидкодія, вистава
peripherals – периферійні пристрої
permanent – постійний

person – людина
personalize – втілювати, уособлювати
pick up – підібрати, збирати
picture – картинка
pixel (picture element) – піксель
plain – простий, звичайний, невиставний
plug – вставляти, підключати
pocket – кишеня
point – точка; указувати
pointer – покажчик, стрілка
power – енергія, потужність, влада
powerful - потужний
prefer – віддавати перевагу
preferable – переважний
preference – перевага
preparation – підготовка
prepare – готувати(ся)
press – натискати, давити
pressure – тиск
previous – попередній
primary – первинний
print – друкувати
printer – принтер, друкувальний пристрій
process – обробляти; процес
processor – процесор
produce – виробляти
production – виробництво
program – програма; програмувати
programmer – програміст
pronounce – вимовляти
pronunciation – вимова
proof – доказ, підтвердження
proof-read – вичитування
proposal – пропозиція
propose – пропонувати
prove – доводити
provide – надавати, забезпечувати
put – класти

R
RAM – Random Access Memory – оперативна пам'ять
range – діапазон; класифікувати
rate – частота, швидкість
recharge – перезарядити
rechargeable – перезаряджати

recognition – розпізнавання, упізнавання
recognize – розпізнавати, упізнавати
record – запис; записувати
recover – відновлювати, повернути, видужати
recovery – відновлення, повернення, видужання
recycle bin – кошик
refer – ставитися, посилатися
reference – посилання, виноска
reference book – довідник
relate – ставитися
related – пов'язаний
relation – відношення
relative – відносний; родич
release – відпускати
remain – залишатися
remind – нагадувати
reminder – нагадування
remove – пересувати, видаляти
represent – представляти
require – вимагати
requirement – вимога
research – досліджувати; дослідження
reside – проживати, знаходитися
resident – постійний мешканець
restore – відновлювати
retrieval – пошук і вибірка
retrieve – шукати і вибирати
reverse – зворотний, протилежний
right – правий, правильний
ROM – Read Only Memory – постійна пам'ять
row – ряд
run – бігти; запустити

S
sale – продаж
salesperson – продавець
same – той самий
save – зберігати, економити
schedule – розклад
scheduler – планувальник
screen – екран
screen saver – екранна заставка
scroll bar – смуга прокрутки
search – пошук; шукати
select – вибирати

sell (sold, sold) – продавати
semiconductor – напівпровідник
set – набір, множина; установлювати
set-up – установка, настройка
shadow – тінь
shape – форма; надавати форми
share – поділити, спільно володіти, використовувати
shift – зсув; зсовувати
show – показ; показувати
sign – знак; підписувати
signature – підпис
significance – важливість, значення
significant – важливий, значний
silicon chip – кремнієвий чіп
similar – подібний
simultaneous – одночасний
simultaneously – одночасно
single – єдиний
size – розмір
socket – з'єднувач, розетка
software – програмне забезпечення
solution – рішення; розчин
solve – вирішити; розчинити
solve a problem – вирішити завдання, розв'язати проблему
sophisticated – складний
space – космос, простір, місце
speed – швидкість
spell – писати або вимовляти по літерах
spelling – написання
split – розщепити, розбивати
spreadsheet – електрона таблиця
staff – штат, персонал
state – штат, держава, стан; стверджувати
statement – твердження
step – крок; крокувати
storage – зберігання, пам'ять
storage device – пристрій зберігання, накопичувач
store – зберігати
strike – ударяти
strike through – закреслювати
subject – предмет; підвергати
substitute – замінити, заміщати
substitution – заміна, заміщення
subtract – віднімати
subtraction – віднімання

suit – костюм; годитися
suitable – підходящий
suite – набір; номер-люкс
sum – сума
sum up – підсумовувати
superior – той, хто перевершує іншого
survey – огляд
switch – перемикач; перемикати
switch on/off/from – вмикати/вимикати/перемикати з

T
table – стіл; таблиця
take medicine – приймати ліки
task – задача, завдання
task bar – панель задач
tax – податок
template – шаблон
tiny – крихітний
title bar – заголовок
tongue – язик
tool bar – панель інструментів
top – верх, вершина
touch – торкатися
touch pad – сенсорна панель (ноутбука)
touch screen – сенсорний екран
tower – вежа, системний блок
trace – слід
trace back – простежити
transistor – транзистор
transmission – передача
transmit – передавати
turn on\off – ввімкнути/вимкнути
type – тип; друкувати
typeface – шрифт

U
uncountable – незліченний
undo – відмінити
unit – одиниця, блок
user interface – інтерфейс користувача
vacuum tube – електронна лампа
valuable – цінний
value – цінність, значення
variant – варіант
various – різний

vary – відрізнятися

W
wage – заробітна плата
within – всередині
word processing – редагування тексту
word processor – текстовий процессор

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