ỦY BAN NHÂN DÂN THÀNH PHỐ HÀ NỘI
TRƯỜNG CAO ĐẲNG NGHỀ CÔNG NGHIỆP HÀ NỘI

Chủ biên: Ths. Hứa Thị Mai Hoa

Đồng tác giả: Nguyễn Thị Minh Hạnh

                  Ths.Nguyễn Thị Thu Hồng

GIÁO TRÌNH
TIẾNG ANH CHUYÊN NGÀNH CÔNG NGHỆ THÔNG TIN
ENGLISH FOR INFORMATION TECHNOLOGY
Mã số môn học: MH 30

Hà nội 11/2012

LỜI NÓI ĐẦU

Giáo trình "TIẾNG ANH CHUYÊN NGÀNH CÔNG NGHỆ THÔNG TIN" được biên soạn theo chương trình đào tạo nghề công nghệ thông tin của Tổng cục nghề, giảng dạy cho sinh viên hệ Cao đẳng nghề của trường Cao đẳng Nghề Công nghiệp Hà nội.

Để đáp ứng yêu cầu trên các bài trong giáo trình vừa tuân theo chương trình vừa có những chủ đề gần gũi với sinh viên ngành công nghệ thông tin. Khi các em học đến phần tiếng Anh chuyên ngành thì các em cũng đã có những kiến thức nhất định về nghề cũng như có một số kiến thức tiếng Anh cơ bản, do đó mục tiêu của giáo trình là:

- Phát triển những kỹ năng như: đọc hiểu, dịch các tài liệu tiếng Anh chuyên ngành công nghệ thông tin;

- Phát triển các kỹ năng theo một hệ thống các chủ điểm gắn liền với các hoạt động chuyên ngành công nghệ thông tin, đặc biệt phát triển kỹ năng đọc, dịch hiểu;

- Xây dựng và rèn luyện các kỹ năng học tập ngoại ngữ đồng thời hình thành và phát triển khả năng độc lập suy nghĩ và sáng tạo trong giao tiếp bằng tiếng Anh cho sinh viên;

- Đây là giáo trình mang tính chuyên ngành nên tranh ảnh nhiều, chúng tôi đề nghị giáo trình được in mầu để sinh viên dễ dàng hơn trong việc hiểu các khái niệm chuyên ngành bằng tiếng Anh thông qua hình ảnh.

Để hoàn thành việc biên soạn giáo trình, chúng tôi luôn được sự giúp đỡ của các giáo viên trong trường. Chúng tôi xin chân thành cám ơn các giáo viên tổ môn Tiếng Anh và Công nghệ thông Tin của nhà trường đã nhiệt tình giúp đỡ chúng tôi trong quá trình biên soạn.

Chắc chắn giáo trình không tránh khỏi thiếu sót. Chúng tôi mong nhận được ý kiến đóng góp để giáo trình được chỉnh sửa và ngày càng hoàn thiện hơn.

Xin trân trọng cám ơn

Hà Nội,ngày 1 tháng 12 năm 2012
Tham gia biên soạn giáo trình
1. Ths. Hứa Thị Mai Hoa - Chủ biên
2. Nguyễn Thị Minh Hạnh
3. Ths. Nguyễn Thị Thu Hồng

CONTENTS

TỪ VIẾT TẮT DÙNG TRONG GIÁO TRÌNH

Tên đầy đủ	Viết tắt
Arithmetic logic unit	ALU
Asymmetric Digital Subscriber Line	ADSL
Control unit	CU
Digital versatile disk	DVD
Fibre distributed data interface	FDDI
Graphic user interface	GUI
Intergrated services digital network	ISDN
Local area network	LAN
Magneto-optical drives	MOD
Musical Instrument Digital Interface	MIDI
Personal computers	PC
Personal digital assistant	PDA
Random access memory	RAM
Read only memory	ROM
Secue electronic transactions	SET
Television	TV
Virtual	VR
Wide area network	WAN
Window, Icon, Mouse, and Pointer	WIMP
Wireless Application Protocol	WAP

CHƯƠNG TRÌNH MÔN HỌC ANH VĂN CHUYÊN NGÀNH

Mã số môn học: MH 30

Thời gian môn học: 75h   (Lý thuyết: 30h; Thực hành: 45h)

I. VỊ TRÍ, TÍNH CHẤT CỦA MÔN HỌC

- Vị trí của môn học: Môn học được bố trí sau khi học xong các môn học chung, trước các môn học, module đào tạo chuyên môn nghề.

- Tính chất của môn học: Là môn học cơ sở chuyên ngành bắt buộc

II. MỤC TIÊU MÔN HỌC

- Phát triển những kỹ năng như: đọc hiểu, dịch các tài liệu tiếng Anh chuyên ngành Công nghệ thông tin.

- Đọc hiểu các thông báo của hệ thống và các phần mềm ứng dụng khi khai thác và cài đặt.

- Đọc hiểu các tài liệu đọc thêm bằng tiếng Anh và tóm tắt nội dung chính của tài liệu.

- Nắm được vốn từ vựng và ngữ pháp cơ bản của tiếng Anh chuyên ngành CNTT.

III. NỘI DUNG MÔN HỌC

1. *Nội dung tổng quát và phân phối thời gian*

STT	Tên chương mục	Thời gian			
		Tổng số	Lý thuyết	Thực hành Bài tập	Kiểm tra* (LT hoặc TH)
I	**Computers applications**	**10**	**3**	**7**	
	- Computers in everyday life	3	1	2	
	- Configuration	3	1	2	
	- Inside the system	4	1	3	
II	**Input/output devices**	**10**	**3**	**7**	
	- Mouse and keyboard	4	1	3	
	- Image/monitor	6	2	4	
III	**Storage devices**	**10**	**3**	**6**	*
	Hard drives	5	2	3	
	Optical breakthrough	4	1	3	
IV	**Basic software**	**15**	**6**	**9**	
	Operating systems	5	2	3	

	The graphical user interface	5	2	3	
	Databases	5	2	3	
V	**Creative software**	**10**	**3**	**6**	*
	Graphics and design	4	1	3	
	Multimedia	5	2	3	
VI	**Programming**	**10**	**3**	**7**	
	Program design	4	1	3	
	Languages	6	2	4	
VII	**Computers tomorrow**	**10**	**3**	**6**	*
	Internet issues	3	1	2	
	LANs and WANs	3	1	2	
	New technologies	3	1	2	
	Cộng	**75**	**24**	**48**	**3**

*Ghi chú: *Thời gian kiểm tra lý thuyết được tính vào giờ lý thuyết, kiểm tra thực hành được tính vào giờ thực hành.*

2. Phương pháp và nội dung đánh giá:

   - Được đánh giá qua bài viết, kiểm tra vấn đáp hoặc trắc nghiệm, tự luận, thực hành đạt các yêu cầu

   - Nói và viết về ứng dụng máy tính trong cuộc sống hàng ngày.

   - Trình bày được cấu trúc của máy tính và các chức năng của nó để có thể mua máy tính tại cửa hàng kinh doanh máy tính.

   - Sử dụng các từ viết tắt khi nói về máy tính.

   - Xây dựng các từ mới bằng cách sử dụng tiếp đầu ngữ, đuôi từ và ghép từ

   - Đánh giá kỹ năng thực hành của sinh viêntrong bài thực hành Anh văn đạt được các yêu cầu sau:

   - Phân biệt các thiết bị ngoại vi (vào ra): Bàn phím, màn hình, máy in, ổ đĩa, và các thành phần bên trong máy tính.

   - Nói về mạng máy tính và ứng dụng của INTERNET

   - Đọc hiểu được một số tài liệu chuyên ngành CNTT

   - Diễn tả cho khách hàng hiểu được cấu hình máy khi khách mua máy tính

CHAPTER I. COMPUTER APPLICATIONS
UNIT 1
COMPUTER IN EVERYDAY LIFE

I. VOCABULARY

administrative	thuộc về hành chính
automatic	tự động
availability	có hiệu lực, có giá trị
carry out	thực hiện
client	khách hàng (đối tác)
competition	cuộc thi đấu
consummption	sự tiêu tốn
connect	kết nối với cái gì
current	hiện tại
database	cơ sở dữ liệu
dispense	phân phối
financial transaction	giao dịch tài chính
fuel	nhiên liệu
mathematical operation	phép tính
overall	toàn bộ
particular stage	thời điểm cụ thể
perform	thực hiện
provive	cung cấp cho ai cái gì
rely on	dựa vào

staff	nhân viên
stopover	trạm dừng
store	lưu, giữ
to access	truy cập
word processor	chương trình xử lý văn bản
workstation	máy tính nối mạng

II. LANGUAGE WORK

THE PASSIVE VOICE

Passive are very common in technical writing where we are more interested in facts processes and and event than in people.We form the passive by using the appropriate tenses of the verb "to be" followed by the past participle of the werb we are using.

Example

Active

- We *sell* computers. *(The simple present)*

- Babbage *invented* "The Analytical Engine". *(The simple past)*

- Computers *can help* students perform mathematical operations.

- In the pressroom several PCs *give* real- time information on the stata of the race.

Passive

- Computers *are sold* *(simple present)*

- "The Analytical Engine" *was invented* in 1830.*(simple past)*

- They *can be used* to access the Internet.

- Computer databases *are also used* in the drug – detecting tests for competitors.

Facts and processes

When we write or talk about facts or processes that occur regularly, we use the present passive

Example

1.   Data is transferred from the internal memory to the arithmetic-logical unit along channel known as buses.

2.   The other users are automaticalyy denied access to that record.

3.   Distributed systems are built using networked computers.

III. READING COMPREHENSION

Task 1. *Match the pictures*

Computers have many applications in a great variety of fields. Look at these photographs of different situations and match them with captions below.

a

c

b

d

* Picture ---------- Using an automatic cash dispenser.

* Picture ---------- In education, computers can make all the difference.

*Picture ---------- Organizing the *Tour de France* demands the use of computer technology.

* Picture ---------- Controlling air traffic.

Task 2. *Read the text and give the main idea of each paragraph (suggestion from 1- 4 captions above)*

1. Computers can help students perform mathematical operations and solve difficult questions. They can be used to access the Internet, teach courses

such as computer- aided design, language learning, programming, mathematics, etc.

PCs (personal computers) are also used for administrative purposes: for example, school use databases and word processors to keep records of students, teachers and materials.

2. Race organizers and jounalists rely on computers to provide them with the current positions of riders and teams in both the particular stages of the race and in the overall competition.

Workstations in the race buses provide the timing system and give up to the minute timing information to TV stations. In the pressroom several PCs give real- time information on the stata of the race. Computer databases are also used in the drug – detecting tests for competitors.

3. Computers store information about the amount of money held by each client and enable staff to access large databases and to carry out financial transactions at high speed. They also control the automatic cash dispensers which, by the use of a personal coded card, dispense money to clients.

4. Airlines pilots use computers to help them control the planes. For example, monitors display data about fuel consumption and weather conditions.

In airport control towers, computers are used to manage radar systems and regulate air traffic. On the ground, airlines are connected to

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

IV. PRACTICE

Exercise 1. *Match the words in column A with the same meaning in column B*

A	B
1. workstation	a. information
2. data	b. execute(do)
3. perform	c. connected with money
4. automatic	d. keep (save)
5. monitor	e. massive
6. financial	f. linked
7. store	g. self- acting, mechanical
8. connected	h. screen
9. word processor	i. poweful computer usually connected to a network.
10. large	j. program used for text manipulation.

Exercise 2. *Read the text below, which describes the insurance company's procedure for dealing with PC-user's problem. Fill in the gaps using the correct form of the verb in brackets*

All call [1]………………… (register) by the Help Desk staff . Each call [2]………………… (evaluate) and then [3]………………… (allocate) to the relevant support group. If ao visit [4]…………………(require) the user [5]

………………… (contact) by telephone, and an appointment [6]…………………(arrange). Most calls [7]………………… (deal with) within one working day. In the event of a major problem requiring the removal of a user's PC, a replacement can usually [8]………………… (supply).

Exercise 3. *Fill in the gaps in the following sentences using the appropriate form of the verb in brackets*

1. The part of the processor which controls data transfers between the various input and output devices …………… (call) the control unit.
2. The address bus …………… (use) to send address details between the memory and the address register.
3. The pixel postions …………… (pass on) to the computer's pattern recognition software
4. An operating system …………… (store) on disk.
5. Instructions written in a high-level language …………… (transform) into machine code
6. In the star configuration, all processing and control functions …………… (perform) by the central computer.
7. When a document arrives in the mail room, the envelope …………… (open) by a machine
8. Once the index …………… (store), a temporary key number …………… (generate) and …………… (write) on the document.

Exercise 4. *Fill in the gaps in the following sentences using the appropriate form of the verb in brackets*

1. Microsoft …………….……… (found) by Bill Gates.
2. C language ……………..……… (develop) in the 1970s.
3. During that period enormous advances ………….……… (make) in computer technology.
4. The following year,twice as many PCs ………..……… (sell)
5. In the 1980s, at least 100,000 LANs……………...……… (set up) in laboratories and offices around the world.
6. The first digital computer …………………… (build) by the University of Ppennsylvannia in 1994

11

7. Last year, more software companies ……………………… (launch) than ever before.
8. IBM's decision not to continue manufacturing mainframes ……………… (reverse) the year after it …………………… (take).

Exercise 5. *Fill in the blanks with the correct form of the verbs in the brackets*

1. Houses (design) .... with the help of computers.
2. The Web (use) ....to search for information and buy products online.
3. The drug – detecting test in the Tour de France (support)......................... by computers.
4. In some modern systems information (hold)............................ in optical disks.
5. Programs and data usually (store) .... on disks.

Exercise 6. *Translate the sentences into Vietnamese*

1. Computers can help students perform mathematical operations and solve difficult questions. They can be used to access the Internet, teach courses such as computer- aided design, language learning, programming, mathematics, etc.

……………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………

2. Workstations in the race buses provide the timing system and give up to the minute timing information to TV stations. In the pressroom several PCs give real- time information on the stata of the race.

……………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………

3. Computers store information about the amount of money held by each client and enable staff to access large databases and to carry out financial transactions at high speed.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

4. On the ground, airlines are connected to travel agencies by computer. Travel agents use computers to find out about the availability of flights, prices, times, stopovers and many other details.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

V. FURTHER READING

Personal computer

A **personal computer** (**PC**) is any general-purpose computer whose size, capabilities, and original sales price make it useful for individuals, and which is intended to be operated directly by an end-user with no intervening computer operator. This contrasted with the batch processing or time-sharing models which allowed larger, more expensive minicomputer and mainframe systems to be used by many people, usually at the same time. Large data processing systems require a full-time staff to operate efficiently.

Software applications for personal computers include, but are not limited to, word processing, spreadsheets, databases, Web browsers and e-mail clients, digital mediaplayback, games, and myriad personal productivity and special-purpose software applications. Modern personal computers often have connections to the Internet, allowing access to

the World Wide Web and a wide range of other resources. Personal computers may be connected to a local area network (LAN), either by a cable or a wireless connection. A personal computer may be a desktop computer or a laptop,tablet, or a handheld PC.

UNIT 2
CONFIGURATIONS

www.shutterstock.com · 14697139

I. VOCABULARY

activity	hoạt động
attach	gắn, đính kèm
central processing unit (CPU)	bộ xử lý trung tâm
Certain	nhất định
component	thành phần
Configuration	cấu hình
consist of	bao gồm
coordinate	phối hợp
disk drive	ổ đĩa
enable	cho phép
extract	rút ra
function	chức năng
generally	nói chung
hardware	phần cứng
hold (held)	giữ
include	chứa, bao hàm, bao gồm
influential	có ảnh hưởng
Involve	bao hàm
keyboard	bàn phím

modem	thiết bị kết nối internet
mouse	chuột
optical disk	đĩa quang học
panel	bảng
perhaps	có thể, có lẽ
permanent	vĩnh viễn, lâu dài
peripheral	thiết bị ngoại vi
plug	cắm
port	cổng
printed form	biểu mẫu in
rear	bộ phận phía sau
software	phần mềm
section	loại, mục
storage device	thiết bị lưu trữ

II. LANGUAGE WORK

Relative clauses

We can define people or things with a restrictive (defining) clause.

Example:

- The teacher **who is responsible for the computer centre** has just arrived.

We use the relative pronoun "who" because it refers to a person. We could also use "that"

Example:

- The microprocessor is a chip **which processes the information provided by the software.**

We use the relative pronoun "which" because it refers to a thing, not a person. We could also use "that".

Example:

- The computer we saw at the exhibition runs at 2.5 GHz.

- The computer runs at 2.5

- We saw it at the exhibition.

Relative pronouns can be let out when they are not the subject of the relative clause.

III. READING COMPREHENSION

16

Task 1. *In pairs, label the elements of this computer system. Then read the text below and check your answers.*

Computers are electronic machines which can accept data in a certain form, process the data and give the results of the 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 of in printed form.

Information in the form of data and programs 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 units (CPU), the main memory and the peripherals.

Perhaps the most influential component is the **<u>central processing unit</u>**. Its function is to execute program instructions and 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, hard or optical disks) provide a permanent storage of both data and programs. **Disk drives** are used to handle one or more floppy disks. **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**.

Task 2. *Answer the question*

1. What is the software?

……………………………………………………………………………………

…..……………………………………………………………………………

2. What is the hardware?

……………………………………………………………………………………

…..……………………………………………………………………………

3. What are the functions of CPU?

……………………………………………………………………………………

…..……………………………………………………………………………

4. What does the main memory do?

……………………………………………………………………………………

…..……………………………………………………………………………

5. What are the peripherals?

…………………………………………………………………………………

…..………………………………………………………………………………

6. What is the function of storage devices?

…………………………………………………………………………………

…..………………………………………………………………………………

7. What is disk drive used for?

…………………………………………………………………………………

…..………………………………………………………………………………

8. What is the input device used for?

…………………………………………………………………………………

…..………………………………………………………………………………

9. What are they included?

…………………………………………………………………………………

…..………………………………………………………………………………

10. Where can the peripherals attach to the computer?

…………………………………………………………………………………

…..………………………………………………………………………………

IV. PRACTICE

Exercise 1. *Use the information in the text above and the diagram to help you match the terms in the box with appropriated explanation or definition below.*

a) Software	b) Peripheral devices	c) Monitor
d) Floppy disk	e) Hardware	f) Input
g) Port	h) Output	i) Central processing unit

1. The brain of the computer	(i)
2. Physical parts that make up a computer system	☐
3. Programs which can be used on a 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	☐

Exercise 2. *Read these slogans or quotations, and say what computer element they refer to. (is done for you)*

1. a) Point and click here for power
    b) Obey every impulse as if it were an extension of your hand. (mouse)

2. a) Display your ideas with perfect brilliance
    b) See the difference – sharp images and a fantastic range of colors _____

3. a) I love this drive. It's quiet and fast.
    b) With this it's easy to back up your data before it's too late _____

4. a) Power and speed on the inside
    b) Let your computer's brain do the work _____

5. a) … a big impact on the production of text and graphics. _____
    b) Your choice: a laser powerhouse

Exercise 3. *Using "which", "who"…*

1) That's the CPU ………… I'd like to buy.

2) The microprocessor is a chip ……………… processes data and instructions.

3) The microprocessor coordinates the activities ……………. take place in the computer system.

4) Last night, I met someone ………… works for GM as a computer programmer.

5) A co-processor is a silicon chip ………… carries out mathematical operations at a very high speed.

6) A megahertz is a unit of frequency …………… is used to measure processor speed.

7) Here's the floppy disk …………… you lent me!

Exercise 4. *Translate the sentences into Vietnamese*

1. 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 of in printed form.

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

2. Perhaps the most influential component is the **central processing unit**. Its function is to execute program instructions and coordinate the activities of all the other units. In a way, it is the "brain" of the computer.

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

3. **Storage devices** (floppy, hard or optical disks) provide a permanent storage of both data and programs. **Disk drives** are used to handle one or more floppy disks. **Input devices** enable data to go into the computer's memory. The most common input devices are the **mouse** and the **keyboard**.

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

4. 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.

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

V. FURTHER READING

Input device

In computing, an **input device** is any peripheral (piece of computer hardware equipment) used to provide data and control signals to

aninformation processing system such as a computer or other information appliance. Input and output devices make up the hardware interface between a computer and a scanner or 6DOF controller.

Many input devices can be classified according to:

- Modality of input (e.g. mechanical motion, audio, visual, etc.)

- The input is discrete (e.g. key presses) or continuous (e.g. a mouse's position, though digitized into a discrete quantity, is fast enough to be considered continuous)

- The number of degrees of freedom involved (e.g. two-dimensional traditional mice, or three-dimensional navigators designed for CADapplications)

Pointing devices, which are input devices used to specify a position in space, can further be classified according to:

- Whether the input is direct or indirect. With direct input, the input space coincides with the display space, i.e. pointing is done in the space where visual feedback or the pointer appears. Touchscreens and light pens involve direct input. Examples involving indirect input include the mouse and trackball.

- Whether the positional information is absolute (e.g. on a touch screen) or relative (e.g. with a mouse that can be lifted and repositioned)

UNIT 3
INSIDE THE SYSTEM

I. VOCABULARY

a clock	đồng hồ đo
acronym	cấu tạo bằng những chữ đầu
activated	kích hoạt
adapter	thiết bị tiếp hợp
arithmetic logic unit (ALU)	đơn vị số học logic

be deleted	bị xoá
be expanded	mở rộng, phát triển
cache memory	bộ nhớ truy cập nhanh
cell	ô, ngăn, khối
Consequently	do đó, vì vậy, cho nên
control unit (CU)	đơn vị điều khiều
demanding	đòi hỏi
distinct	riêng, khác biệt
equivalent	tương đương
emitted	phát ra
extra	thêm
expansion slots	khe cắm mở rộng
examine	kiểm tra
erase	xoá
firmware	chương trình cơ sở
fixed	cố định
frequency	tần số
high-resolution graphic board	bo mạch đồ hoạ phân giải cao
immediate	tức thời
imply	gợi ý
internal modem	modem trong
install	cài đặt
instruction register	thanh ghi cấu trúc
Instead of	thay vì
internal architecture	kiến trúc trong
interval	khoảng thời gian
interpret	giải thích
integrated circuit	mạch tích hợp
measure	đo lường
motherboard	bo mạch chủ
module	mô đun
Nerve	bộ phận chủ yếu, bộ phần đầu
não	
optical	quang học

pass through	vượt qua
program counter	bộ đếm chương trình
pulse	xung
RAM (Random access memory)	bộ nhớ truy cập ngẫu nhiên
rate	tỷ lệ
ROM (Read only memory)	bộ nhớ chỉ đọc
register	thanh ghi
Sequential	tuần tự
supervise	giám sát, quản lý
specified	lý thuyết, chỉ định(v).
stand for	thay thế cho, viết tắt của
synchronize	sự đồng bộ
thus	theo cách đó

II. READING COMPREHENSION

Task 1. *Read the advertisement and translate the technical specifications and into your own language.*


What's inside a microcomputer?

The nerve center of a microcomputer is the central processing unit or CPU. This unit is built into a single microprocessor chip – an integrated

circuit, which executes program instructions and supervises the computer's overall operation. The unit consists of three parts:

1) **the control unit,** which examines the instructions in the user's program interprets each instructions and causes the circuits and the rest of the components – disk drives, monitor, etc. – to be activated to execute the functions specified;

2) **The arithmetic logic unit** (ALU), which performs mathematical calculations (+, -, etc,) and logical operations (and, or, etc);

3) **The register**, which are high-speed units of memory used to store and control information. One of these registers is the **program counter** (PC) which keeps track of the next instruction to be performed in the main memory. Another is the instruction register (IR), which holds the instruction that is currently being executed.
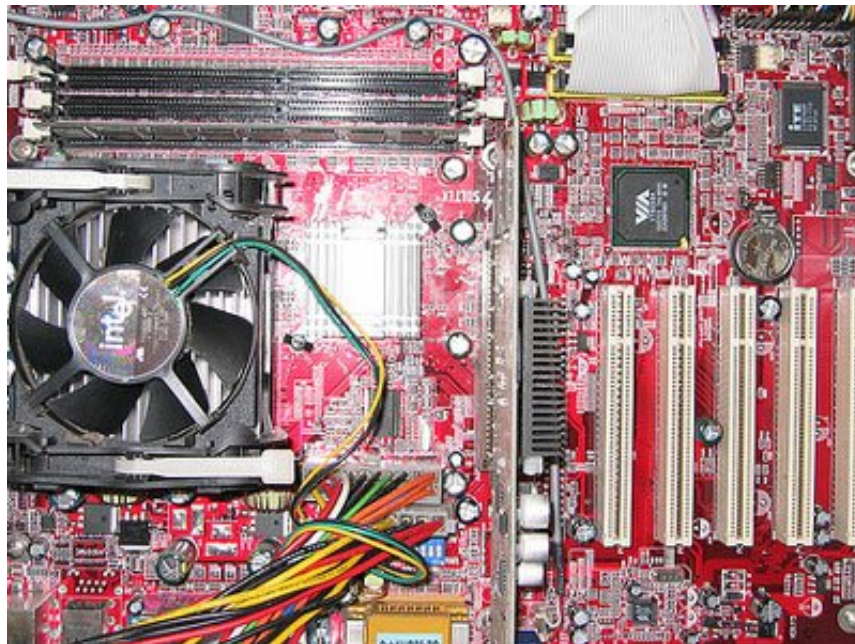
One area where microprocessors differ is in the amount of data – the number of bits – they can work at a time. There are 8, 16, 32 and 64-bit processors. The computer's internal architecture is evolving so quickly that the new 64-bit processors are able to address 4 billion times more information than a 32-bit system.

The programs and data, which pass through the central processor, must be loaded into the **main memory** (also called the **internal memory**) in order to be processed. Thus, when the user run an application, the microprocessor looks for it on secondary storage devices (Disks) and

transfers a copy of the application into the RAM area. RAM (random access memory) is temporary, i.e. its information is lost when the computer is turned off. However, the ROM section (read only memory) is permanent and contains instructions needed by the processor.

Most of today's computers have internal **expansion slots** that allow users to install adapters or expansion boards. Popular adapters include high-resolution graphics boards, memory expansion boards, and internal modems.

The power and performance of a computer is partly determined by the speed of its microprocessor. A **clock** provides pulses at fixed intervals to measure and synchronize circuits and units. The clock speed is measured in MHz (megahertz) and refers to the frequency at which pulse are emitted. For example, a CPU running at 500 MHz (500 million cycles per second) is likely to provide a very fast processing rate and will enable the computer to handle the most demanding applications.

Figure I

Organization of a simple computer
The CPU is built into a single microprocessor chip

Microprocessor chip
Popular chips:
- Intel's Pentium (as shown)
- AMD's Athlon
- Apple and IBM's PowerPC
- Sun's UltraSPARC

A RAM chip

The RAM capacity can sometimes be expanded by adding extra chips. These are usually contained in small circuit boards called single in-line memory modules (SIMMs). Modern Pentium processors also accept dual in-line memory modules (DIMMs), which allow for a wider data path.

Task 2. *Answer the questions*

1) What are the main parts of CPU?

………………………………………………………………………………………

……..……………………………………………………………………………

2) What is RAM?

………………………………………………………………………………………

………………………………………………………………………………………

3) What memory section is also known as "firmware"?

………………………………………………………………………………………

……..……………………………………………………………………………

4) What information is lost when the computer is switched off?

………………………………………………………………………………………

……..……………………………………………………………………………

5) What is the typical unit used to measure RAM memory and storage memory?

………………………………………………………………………………………

………………………………………………………………………………………

6) What is the meaning of the acronym SIMM?

………………………………………………………………………………………

……..……………………………………………………………………………

7) What is a megahertz?

………………………………………………………………………………………

………………………………………………………………………………………

8) What is the ALU? What does it do?

………………………………………………………………………………………

……..……………………………………………………………………………

9) What is the abbreviation for "binary digit"?B

………………………………………………………………………………………

……..……………………………………………………………………………

10) How can we store data and programs permanently?

………………………………………………………………………………………

……..……………………………………………………………………………

III. PRACTICE

Exercise 1. *Contextual reference*

What do the words in bold print refer to?

1) …. **Which** executes program instructions and supervises… (line...)

2) .… the instruction **that** is currently being execute. (line …)

3) …. the amount of data – the number of bits - **they** can work with at a time. (line ….)

4) .… the microprocessor looks for **it** on .… (line ….)

5) …. **its** information is lost when a computer is turned off. (line ….)

6) …. expansion slots **that** allow users to install adapters or expansion boards (line ….)

Exercise 2. *Match a word in A to the appropriate phrase in B*

A	B
1. The clock speed	a. instruction register
2. RAM	b. read only memory
3. ROM	c. measured in MHz (megahertz)
4.The register	d. examines the instructions
5. PC	e. random access memory
6. IR	f. pass through the central processor
7. ALU	g. program counter
8. the control unit	h. arithmetic logic unit
9. internal expansion slots	i. allow users to install adapters
10. programs and data	k. high-speed units of memory

Exercise 3. *Translate the sentences into Vietnamese*

1. The control unit, which examines the instructions in the user's program interprets each instructions and causes the circuits and the rest of the components – disk drives, monitor, etc. – to be activated to execute the functions specified.

……………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………

2. The register, which are high-speed units of memory used to store and control information. One of these registers is the **program counter** (PC) which keeps track of the next instruction to be performed in the main

memory. Another is the instruction register (IR), which holds the instruction that is currently being executed.

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

3. The programs and data, which pass through the central processor, must be loaded into the **main memory** (also called the **internal memory**) in order to be processed.

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

4. Most of today's computers have internal **expansion slots** that allow users to install adapters or expansion boards. Popular adapters include high-resolution graphics boards, memory expansion boards, and internal modems.

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

5. The clock speed is measured in MHz (megahertz) and refers to the frequency at which pulse are emitted. For example, a CPU running at 500 MHz (500 million cycles per second) is likely to provide a very fast processing rate and will enable the computer to handle the most demanding applications.

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

IV. FURTHER READING

What is control unit?

A **control unit** is circuitry that directs operations within the computer's processor by directing the input and output of a computer

system. The processor then controls how the rest of the computer operates (giving directions to the other parts and systems). A control unit works by gathering input through a series of commands it receives from instructions in a running programs and then outputs those commands into control signals that the computer and other hardware attached to the computer carry out.

The control unit is basically circuitry inside the CPU, controlling the operations inside the CPU and "directing traffic" in a sense. The functions a control unit performs can depend on the type of CPU, since the varying degrees of architecture between all the different CPUs will determine the functions of the control unit.

CHAPTER 2: INPUT/ OUTPUT DEVICES
UNIT 4
MOUSE AND KEYBOARD

I. VOCABULARY

Activated	kích hoạt
appropriate software	phần mềm thích hợp
Beneath	ở bên dưới
Convert	chuyển đổi
Digitize	số hoá
digital camera	máy quay phim
Generate	tạo ra
graphics tablet	bảng đồ hoạ
flatbed scanner	máy quét hình phẳng
image	ảnh
joystick	cần điều khiển
Manipulated	thao tác
measurement	sự đo lường
rotate	quay
series of dots	chuỗi điểm
touchscreen	màn hình cảm ứng
tracker	rãnh

II. LANGUAGE WORK

Describing function

To be able to

- Derive describing functions for an item in a number of ways
- Predict stability and existence of periodic solutions through

describing function analysis

Using the present simple

- ROM holds instructions which are needed to start up the computer.

Used to – infinitive, Used for + " ing" form

- ROM is used to hold instructions which are needed to start up the computer.

- ROM is used for holding instructions which are needed to start up the computer.

Emphasizing the function

- The function of ROM is to hold instructions which are needed to start up the computer.

Questions

- How do we derive the describing function N (A)?
- Does the ROM predict to start up the computer?
- Is ROM to hold instructions?

III. READING COMPREHENSION

Task 1. *Interacting with your computer*

Input devices are the pieces of hardware which allow us to enter information into the computer. The most common are the keyboard and mouse. We can also interact with a computer by using one of these: **a lightpen, a scanner, a trackball, a graphics tablet, a joystick or a voice rcognition device.**
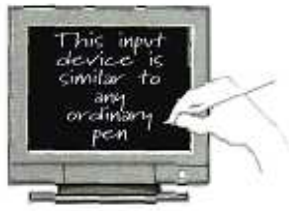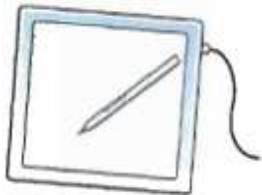
1 ....

2 ....

3 ....

4 ....

5 ....

6 ....

7 ....

8 ....

Task 2. *Read the text to check your answer or to find the right answwers.*

The Mouse

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

The mouse contains a rubber – coated ball that rests on the surface of your working area or a mousemat, when the mouse is moved on that surfacem the ball is rolls.

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

Task 3. *Answer these questions.*

1   How is the mouse connected to the computer?

……………………………………………………………………………

…..…………………………………………………………………………

What does the mouse pointer look like on the screen?

……………………………………………………………………………

…..…………………………………………………………………………

What are the functions of the mouse button?

……………………………………………………………………………

…..…………………………………………………………………………

What are the advantages of a computer mouse over a keyboard?

……………………………………………………………………………

…..…………………………………………………………………………

IV. PRACTICE
 About the keyboard

Exercise 1. *Look at the picture of a PC – compatible keyboard below and identify these groups of keys.*

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

Exercise 2. *Match these keys abbreviations with their full names.*

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

Exercise 3. *Now, match each item in Column A with its function in Column B. Then describe its function in two ways.*

A Item	B Function
1. RAM	a. control the cursor
2. processor	b. inputs data through keys like a typewriter.
3. mouse	c. displays the output from a computer on a screen,
4. clock	d. reads DVD – ROMs.
5. floppy drive	e. reads and write to removable magnetic disks.
6. monitor	f. holds instructions which are needed to start up the computer
7. keyboard	g. holds data read or written to it by the processor.
8. DVD – ROM drive its data	h. provides extremely fast access to sections of a program and
9. cache	i. controls the timing of signals in the computer.
10. ROM	k. controls all the operations in a computer.

…………………………………………………………………………

…..………………………………………………………………………

………..…………………………………………………………………

…………………..………………………………………………………

……………….…..………………………………………………………

…………………………………………………………………………

………………………………………..…………………………………

…………………………………..………………………………………

……………………………………..……………………………………

…………………………………………………………………………

…..………………………………………………………………………

…………..………………………………………………………………

Exercise 4. *Translate the sentences into Vietnamese*

1. The mouse contains a rubber – coated ball that rests on the surface of your working area or a mousemat, when the mouse is moved on that surfacem the ball is rolls.

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………………

2. A color scanner operates by using three rotating lamps, each of which has a different coloured filter: red, green and blue. The resulting three seperate images are combined into one by appropriate software.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

3. A digital camera takes photos electronically and converts them into digital data. It doesn't use the film found in a nomal camera; instead it has a special light – sensitive silicon chip.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

4. A camcorder, or digital video camera, records moving pictures and converts them into digital data that can be stored and edited by a computer with special video editing software.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

IV. FURTHER READING

What does a scanner do?

A scanner "see" images and converts the printed text or pictures into electronic codes that can be understood by the computer.With a flatbed scanner, the paper with the image is placed face down on a glass screen similar to a photocopier. Beneath the glass are the lighting and measurement devices. Once the scanner is activated, it reads the image as a series of dots and then generates a digitized image that is sent to the computer and stored as a file. A color scanner operates by using three rotating lamps, each of which has a different coloured filter: red, green and blue. The resulting three seperate images are combined into one by appropriate software.

What does a digital camera do?

A digital camera takes photos electronically and converts them into digital data. It doesn't use the film found in a nomal camera; instead it has a special light – sensitive silicon chip. Photographs are stored in the camera's memory before sending to the computer. Some cameras can be also connected to a printer or a TV set, to make viewing images easier.

What does a camcorder do?

A camcorder, or digital video camera, records moving pictures and converts them into digital data that can be stored and edited by a computer with special video editing software.

Digital video cameras are used by home users to create their own movies, or by professionals in computer art and video coferencing. They are also used to send live video images via the Internet. Then they are called Web cameras or webcams.

Answer the questions

1. Which device is used to input text and graphic images from a printed page?

……………………………………………………………………………………

…..………………………………………………………………………………

2. How does a colour scanner work?

……………………………………………………………………………………

…..………………………………………………………………………………

3. Do digital cameras use film? How do they store photographs?

……………………………………………………………………………………

…..………………………………………………………………………………

4. Which device would you use to take digital video?

……………………………………………………………………………………

…..………………………………………………………………………………

5. What kind of software is used to manipulate video clips on the computer?

…………………………………………………………………………………

….………………………………………………………………………

6. What did you think are the benefits of using scanners and cameras at home and in business?

…………………………………………………………………………

…..………………………………………………………………………

UNIT 5
THE MONITOR

I. VOCABULARY

be composed of	gồm có, soạn
cable	dây cáp
cathode ray tube	ống tia âm cực
cursor	con trỏ
display	hiển thị
dot	điểm
frequency	tần số
grid	khung lưới
horizontal	ngang
invisible	nhìn thấy được
line	đường thẳng
intensity	cường độ
mix	hỗn hợp
monitor	màn hình
monochrome	đơn sắc
output	xuất, đưa ra
pixel	điểm ảnh
record	ghi

rectangle	hình chữ nhật
square	hình vuông
resolution	độ phân giải
underline	gạch chân

II. LANGUAGE WORK

Pronunciation

1– Pronunciation of the inflection -S and –ES (the plural of nouns, the third person singular present tense of verbs)

A/ if S follow the final consonants /f/, /k/, /p/, /t/, /c/ it is pronounced as /s/

e.g: roofs, marks, shops, dots, graphics.

B/ the final consonant(s) s, ch, sh. Z, g, x is(are) followed by ES, it is then pronounced as /iz/

e.g: sizes, mixes, inches, closes, matches, slashes, languages.

C/ the rest are pronounced as /z/

e.g: squares, pixels, displays, characters.

2 – Contraction of a clause into an adjective phrase

This structure makes the sentence smoother and more direct.

A/ state: relative pronoun (which, who…) + to be + past participle → past participle (i.e the *relative nouns + to be* is omitted)

e.g: the information held in RAM is lost.(The information which is held in RAM is lost.)

B/ action: relative pronoun + verb → verb-ing (i.e the relative pronoun is omitted, and the verb is replaced by its present participle)

e.g: the chip which stores the user's data is called RAM → the chip storing the data is called RAM.

III. READING COMPREHENSION

Task 1. *WARM – UP*

After the information has been processed by the CPU, we can see the results on the screen. This is also called a monitor or visual display unit (VDU).

Describe the monitor of your computer to another student. Use these questions to help you.

45

- Is it a monochrome or a colour monitor?

  ………………………………………

- What size is the screen?

  ………………………………………..

- Does it have a cathode ray tube or a flat LCD screen?

  ………………………………………..

- How can you change the picture using the controls?

  ……………………………………….

- Does it produce a high quality image?

  ……………………………………….

Task 2. *Read the passage*

The screen (usually referred to as monitor) is the most common output device through which your micro can communicate with you and it also display a record of the information you have typed on the keyboard.

A monitor is a cathode ray tube, like a television. It displays information sent along a cable from your PC at low frequency. Monitors are available in several different sizes, but the 14-inch ones are the most commonly used. The amount of information appeared on the screen is

46

controlled by the software the computer is running, not by the monitor. Most display 24 lines, each with 40 or 80 characters.

A color monitor builds your picture of any color by mixing different intensities of three colors: red, green and blue. So it is much more expensive than a monochrome monitor. A micro divides the screen into a grid of invisible square. Each of these squares is composed of tiny dots, called pixels. The more pixels a monitor can display the higher the resolution, and thus the better appearance of characters or graphics. Most computers can display a cursor, a small rectangle, or a horizontal underline, that marks the place where the next character will appear.

Low resolution display   High resolution display
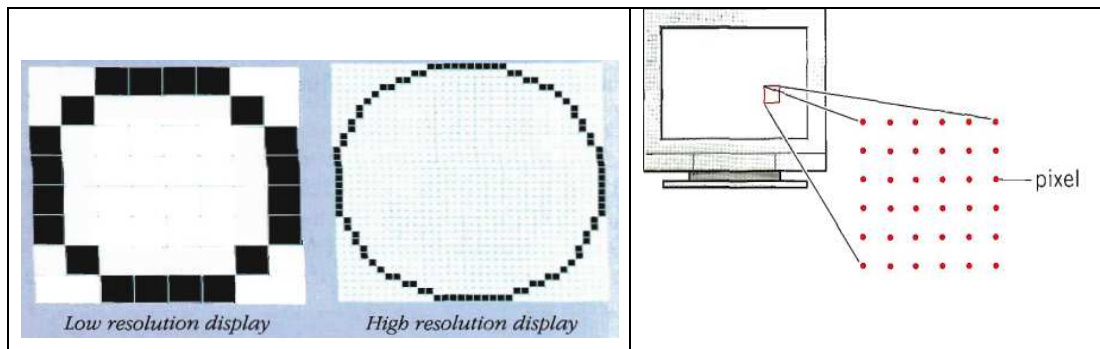
Task 3. *Answer the questions*

1) What are the basic colors, which make up the color monitor?

……………………………………………………………………………

……………………………………………………………………………

How many lines of characters are there on the monitor?

……………………………………………………………………………

……………………………………………………………………………

What is the commonest size of the monitor?

……………………………………………………………………………

……………………………………………………………………………

What controls the information appearing on the screen?

……………………………………………………………………………

……………………………………………………………………………

What is a cursor?

……………………………………………………………………………

……………………………………………………………………………

What does pixel stand for?

………………………………………………………………………………

………………………………………………………………………………

What is the cathode ray?

………………………………………………………………………………

………………………………………………………………………………

Is the monitor an input device?

………………………………………………………………………………

………………………………………………………………………………

What gives rise to the better appearance of the graphics?

………………………………………………………………………………

………………………………………………………………………………

10) At what frequency does the computer send the information to the monitor?

………………………………………………………………………………

………………………………………………………………………………

IV. PRACTICE

Exercise 1. *Match the words or phrases in column A with the words or phrases in column B.*

A		B
1) Data	…… …….	a) Each of these squares us composed of tiny dots
2) Cursor	…… …….	b) Refers to a black and white screen
3) Grid	…… …….	c) Is also called screen
4) Pixel	…… …….	d) The amount of information appears on the monitor
5) Monitor	…… …….	e) When there are more pixels
6) High resolution	…… …….	f) Consists of invisible squares

7) Monochrome	…… ……	g) A horizontal underline where the next character will appear on the screen
8) Cathode ray	…… ……	h) A stream of electrons

Exercise 2. *Think about a typical workstation. Match the items (1-7) to the guidelines (a-g).*

1) Keyboard   2) Monitor screen   3) Lamp
4) Copyholder   5) Chair   6) Footrest
7) Printer

a. This should be adjustable and provide good back support.   ………….

b. This should be more than a meter away from you and as   ………….
quiet as possible.

c. Keep this level with your eyes. Don't have it level with the   ………….
desk. Make sure it is flicker-free, and that you can read
everything easily. Avoid any glare from the window.

d. Use this if your feet do not rest flat on the floor.   ………….

e. Make sure this light your work and not the screen.   ………….

f. Don't get a stiff neck. Use this when you enter a lot of data.   ………….

g. Keep this directly in front of you and within easy reach.   ………….

Exercise 3. *Translate the sentences into Vietnamese*

1. The screen (usually referred to as monitor) is the most common output device through which your micro can communicate with you and it also display a record of the information you have type on the keyboard.

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

2. Monitors are available in several different sizes, but the 14-inch ones are the most commonly used. The amount of information appeared on the screen is controlled by the software the computer is running, not by the monitor. Most display 24 lines, each with 40 or 80 characters.

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

3. A micro divides the screen into a grid of invisible square. Each of these squares is composed of tiny dots, called pixels. The more pixels a monitor can display the higher the resolution, and thus the better appearance of characters or graphics.

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

V. FURTHER READING

Monitor

A **monitor** or a **display** (also called **screen** or **visual display unit**) is anelectronic visual display for computers. The monitor comprises the display device, circuitry and an enclosure. The display device in modern monitors is typically a thin film transistor liquid crystal display (TFT-LCD) thin panel, while older monitors use a cathode ray tube (CRT) about as deep as the screen size.

Originally, computer monitors were used for data processing while television receivers were used for entertainment. From the 1980s onwards, computers (and their monitors) have been used for both data processing and entertainment, while televisions have implemented some computer functionality. The common aspect ratio of televisions, and then computer monitors, has also changed from 4:3 to 16:9 (and 16:10).

CHAPTER III. STORAGE DEVICES
UNIT 6
MAGNETIC DRIVES

I. VOCABULARY

Advantage	lợi thế, điểm mạnh
Amount	khối lượng
Conform	tuân theo một tiêu chuẩn, quy tắc
Desktop	màn hình
Disadvantage	bất lợi, điểm yếu
do back up	sao lưu lại dữ liệu
excessive	quá mức, thái quá
edge	lợi thế, lưỡi (dao), rìa
Fixed	cố định
floppy disk	đĩa mềm
force	lực, trường
magneto-optical disk	đĩa quang từ
magnet	từ trường, nam châm
removable	tháo rời được
suitable	thích hợp
transfer	chuyển

II. LANGUAGE WORK

<div align="center">

Linking words

</div>

Study this example

- *Magnetic tape is cheap but it is very slow **because** tape drives are slow, so we only use it for   .*

    We use *but* to show a contrast, *because* to show that the next idea is a reason, and *so* to show a result. Other words and phrases used in this way are: *however* (contrast), *therefore* (result), and *for this reason* (result).

- *Magnetic tape is cheap. **However**, it is slow to use.*

- *Magnetic tape is slow. **Therefore** we use it only for backups.*

- *Magnetic tape is slow. **For this reason**, we use it only for backups.*

III. READING COMPREHENSION

Task 1. *WARM - UP*   **Types of drives**

Look at the illustrations and find out:

1 the size of a floppy disk
2 the storage capacity of a high density diskette
3 the name of a hard drive on a PC platform
4 the storage capacity of a SyQuest cartridge
5 the system that can hold 10 GB tapes
6 a type of drive used by digital cameras and music players.

3.5-inch diskette
A high-density (HD) floppy disk can store 1.44 MB of information. A floppy drive uses 3.5-inch disks and it's called drive A.

Hard disk
Most PCs have one hard drive, called drive C. It's used to keep software and files organized in a convenient way. A hard disk can hold several gigabytes of data.

Removable hard drive
Popular drives are the Zip and Jaz systems from Iomega. A Syquest cartridge can hold 1.5 GB.

Tape drive
A tape drive stores data on tape cartridges. It's used for backup purposes. A Digital Audio Tape drive can hold up to 10 GB of data.

Pocket-sized drive
Ultra portable drives are used with mobile computers. They hold 40 MB disks. The Peerless system can hold 20 GB disks, which allows you to store thousands of MP3s and video games.

Microdrive
A Microdrive is the smallest hard dri[ve] for digital cameras, laptops, and au[dio] players. It comes in 340 MB and 1 G[B] capacities. It uses a PC Card adapter.

Task 2. *Reading the pasage*

    Most computers use floppy disks. Floppies conform to a standard and you can use them to carry data from one place to another. They are also very cheap, but they are slow and have a limited capacity.

<div align="center">

53

</div>

Almost all desktop computers have hard disks. They are fast and can store much greater amounts of data than floppies, but they are fixed inside the computer and you cannot use them to transfer data.

You can move data from place to place using removable hard disks. They are almost as fast as fixed hard disks and also have high capacities, but they are relatively expensive. They are used very popularly nowadays.

CD-ROM disks are very common and conform to a standard. They are removable and can hold large amounts of data. They are also cheap to make. However, they are usually read-only. You cannot change the information on them. They are also slow compared to hard disks.

Magneto-optical disks are like CD-ROM but you can write data on to them. They are removable, have large capacities, and last for a long time, but they are expensive and do not all conform to one standard. For this reason they are not very common.

Magnetic tape is a cheap medium. You can use it to store very large amounts of data, but it does not allow random access. Every time you read or write a piece of data, you start at the beginning of the tape. Tape drives are slow. Therefore, it is only suitable for doing backups.
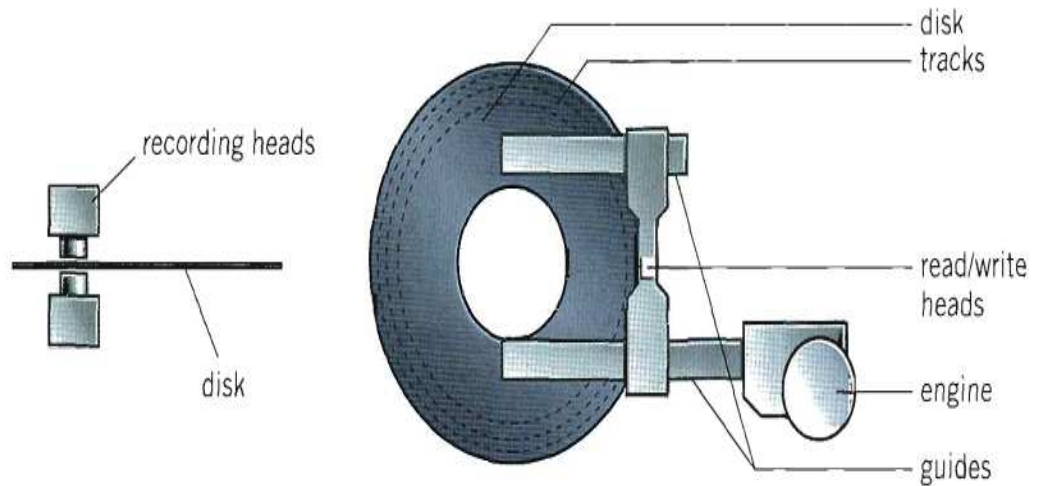
IV. PRACTICE

Exercise 1. *Works in groups of three. Read the above text and complete your sections of the table*

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

Exercise 2. *Study these rules for CD-ROM and floppy disk care. Tick (✓) things to do and cross (x) things not to do.*

1	☐	Hold a CD-ROM by the edges.
2	☐	Keep the optical/silver side of a CD-ROM clean.
3	☐	Smoke when you use your CD-ROM clean.
4	☐	Put floppy disks near a magnet.

5	☐	Keep disks away from the sun and excessive heat.
6	☐	Write the contents one label on your floppy disks.
7	☐	Put extra labels on floppy disks.
8	☐	Remove by force a disk stuck in the drive.
9	☐	Remove a disk when the drive light is on.

Exercise 3. *Fill in the gaps in this summary using the correct word from this list.*

> **but   however   because   so   therefore   for this reason**

Floppies are very cheap, [1]_____they are slow and have a limited capacity. Hard disks are fast and can store large amounts of data [2]_____ they are fixed inside the computer, [3]_____ you cannot use them to transfer data. You can transfer a data with removable hard disks, [4]_____they are expensive. CD-ROM disks can hold quite large amounts of data. [5]_____they are usually read-only [6]_____you cannot change the information on them. Magneto-optical disks are like CD-ROMs [7]_____ you can write data on to them. They are removable and have large capacities, [8]_____ they are expensive and do not conform to a standard, [9] _____they are not very common. Magnetic tape is cheap and has a large capacity. [10]_____it does not allow random access and drives are slow. [11]_____ it is only suitable for backups.

Exercise 4. *Translate the sentences into Vietnamese*

1. Most computers use floppy disks. Floppies conform to a standard and you can use them to carry data from one place to another. They are also very cheap, but they are slow and have a limited capacity.

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

2. You can move data from place to place using removable hard disks. They are almost as fast as fixed hard disks and also have high capacities, but they are relatively expensive. They are used very popularly nowadays.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

3. CD-ROM disks are very common and conform to a standard. They are removable and can hold large amounts of data. They are also cheap to make. However, they are usually read-only. You cannot change the information on them. They are also slow compared to hard disks.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

4. Magnetic tape is a cheap medium. You can use it to store very large amounts of data, but it does not allow random access. Every time you read or write a piece of data, you start at the beginning of the tape. Tape drives are slow. Therefore, it is only suitable for doing backups.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

V. FURTHER READING

Compact Disc

The **Compact Disc**, or **CD** for short, is an optical disc used to store digital data. It was originally developed to store and play back sound recordings only, but the format was later adapted for storage of data (CD-ROM), write-once audio and data storage (CD-R), rewritable media (CD-RW), Video Compact Discs (VCD), Super Video Compact Discs (SVCD), PhotoCD, PictureCD, CD-i, and Enhanced CD. Audio CDs and audio CD playershave been commercially available since October 1982.

Standard CDs have a diameter of 120 millimetres (4.7 in) and can hold up to 80 minutes of uncompressed audio or 700 MB (700×10^6 bytes) of data. The Mini CD has various diameters ranging from 60 to 80

millimetres (2.4 to 3.1 in); they are sometimes used for CD singles, storing up to 24 minutes of audio or delivering device drivers.

CD-ROMs and CD-Rs remain widely used technologies in the computer industry. The CD and its extensions are successful: in 2004, worldwide sales of CD audio, CD-ROM, and CD-R reached about 30 billion discs. By 2007, 200 billion CDs had been sold worldwide.[1]Compact Discs are increasingly being replaced or supplemented by other forms of digital distribution and storage, such as downloading and flash drives, with audio CD sales dropping nearly 50% from their peak in 2000.[2]

UNIT 7
OPTICAL BREAKTHROUGH

I. VOCABULARY

Affect	tác động, ảnh hưởng
Disadvantage	nhược điểm
Duplicate	nhân bản, sao y
Erase	tẩy, xóa
Limitation	hạn chế
Optical drive	đĩa quang
Occupy	chiếm
Rewritable drive	ổ ghi
Stable	ổn định
Shareware	phần mềm cổ đông
Version	phiên bản

II. READING COMPREHENSION

Task 1. *WARM UP*

Before reading, try to answer these questions

1   What is this a picture of?

……………………………………………………………………………………

2   What kind of technology is used by CD-ROM disks and drives?

……………………………………………………………………………………

3   What does 'CD-ROM' stand for?

……………………………………………………………………………………

4   How do you say these expressions in your language?

Compact disk   CD-Rom disk drive

Laser technology   erasable optical disk

Task 2. *What are the advantages and disadvantages of optical disks? Read the text to check your answer.*

Optical disks and drives

Optical disks can store information at much higher densities than magnetic disks. Thus, they are ideal for multimedia applications where images, animation and sound occupy a lot of disk space. Besides, they are not affected by magnetic fields. This means that they are secure and stable, e.g. they can be transpoted through airport metal detectors without damaging the data. However, optical drives are slower then hard drives. While there are hard drives with an average access time of 8 ms, most CD-ROM drives have an access time of 150 to 200 ms.

There are various types of optical drives:

‣ **CD-ROM** systems offer everything, from shareware programs to dictionaries and encyclopedias, from multimedia databases to 3-D games. A lot of institutions have discovered that CD-ROM is the most economical way of sharing information. In fact, one CD-ROM disk (650 MB) can

replace 300,000 pages of text (about 500 floppies), **which** represents lot of savings in distributing materials and corporate databases. In addition, CD-ROM drives can play music CDs while you work. Yet CD-ROM technology has one disadvantages: you cannot write anything onto a CD-ROM disk. You can only 'read' it, like a book.

▸ CD-Recorders come in two different forms: **CD-R** and **CD-RW**. CD-R machines record on CD-R write –once) disks, allowing you to create and duplicate CDs. They are used to back up hard disks or to distribute bad archive information. In fact, these systems are the modern version of old WORM (write once, read many) disks. CD-RW machines hold CD-RW (rewritable) disks that you can erase and re-use, just as you would do with a hard disk.

▸ The future of optical storage is called **DVD** (digital versatile disk). A DVD-ROM can hold 17 GB, about 25 times an ordinary CD-ROM. For this reason, it can store a large amount of multimedia software and complete Hollywood movies in different languages. They can also play music CDs and CD-ROMs. However, DVD-ROMs are 'read-only' devices. To avoid this limitation, companies also produce DVD rewritable drives.

▸ **Magneto-optical (MO) drives** use both a laser and an electromagnet to record information. Consequently, MO disks are rewritable, i.e. they can be written to, erased, and then written again. They usually come in two formats: (i) 5.25" cartridges can hold more than 2 GB; (ii) 3.5" floptical

disks have capacity of 230 to 640 MB. They are ideal for back-up and portable mass storage.

III. PRACTICE

Exercise 1. *Reference signals. Read these sentences and clauses and look back at the text to find out what the words in bold italics refer to.*

1   …**they** can are secure and stable…

2   … **which** represents a lot of saving in distributing materials.

3   …**you** cannot write anything into a CD-ROM disk.

4   You can only 'read' **it**…

5   CD-RW (rewritable) disks that you can erase and re-use…

Exercise 2. *Connectors and modifiers. Look at the expressions in italics in these sentences and clauses.*

1   Thus, they are ideal for multimedia applications.

2   Besides, they are not affected by magnetic fields.

3   However, optical drives are slower than hard drives.

4   In addition, CD-ROM drives can play music CDs while you work.

5   Yet, CD-ROM technology has one disadvantages:…

6   For this reason, it can store a large amount of multimedia software.

Exercise 3. *Put each expression (1 to 6) into right category: a, b or c.*

a   to show contrast

b   to explain causes and results

c   to add new ideas.

Exercise 4. *Read the text again and summarize in the table the most relevant information.*

	Technical specifications	Use
CD-ROM		
CD-Recorder		
DVD		
Magneto-optical		

Exercise 5. *Translate the sentences into Vietnamese*

1. Optical disks can store information at much higher densities than magnetic disks. Thus, they are ideal for multimedia applications where images, animation and sound occupy a lot of disk space.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

2. A lot of institutions have discovered that CD-ROM is the most economical way of sharing information. In fact, one CD-ROM disk (650 MB) can replace 300,000 pages of text (about 500 floppies), **which** represents lot of savings in distributing materials and corporate databases. In addition, CD-ROM drives can play music CDs while you work.

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

3. CD-RW machines hold CD-RW (rewritable) disks that you can erase and re-use, just as you would do with a hard disk.

…………………………………………………………………………………

…………………………………………………………………………………

4. The future of optical storage is called **DVD** (digital versatile disk). A DVD-ROM can hold 17 GB, about 25 times an ordinary CD-ROM. For this reason, it can store a large amount of multimedia software and complete Hollywood movies in different languages.

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

5. **Magneto-optical (MO) drives** use both a laser and an electromagnet to record information. Consequently, MO disks are rewritable, i.e. they can be written to, erased, and then written again.

…………………………………………………………………………

…………………………………………………………………………

…………………………………………………………………………

IV. FURTHER READING

DIGITAL VERSATILE DISC

Digital versatile disc or **digital video disc** (DVD), a small plastic disc used for the storage of digital data. The successor media to the compact disc (CD), a DVD can have more than 100 times the storage capacity of a CD. When compared to CD technology, DVD also allows for better graphics and greater resolution. In the case of an audio recording, where the data to be stored is in analog rather than digital form, the sound signal is sampled at a rate of 48,000 or 96,000 times a second, then each sample is measured and digitally encoded on the 43/4-in. (12-cm) disc as a series of microscopic pits on an otherwise polished surface. The disc is covered with a protective, transparent coating so that it can be read by a laser beam. As with other optical disks nothing touches the encoded portion, and the DVD is not worn out by the playing process. Because DVD players are backward compatible to existing technologies, they can play CD and CD-ROM discs; however, CD players cannot play DVD and DVD-ROM discs.

CHAPTER IV. BASIC SOFTWARE
UNIT 8
OPERATING SYSTEMS
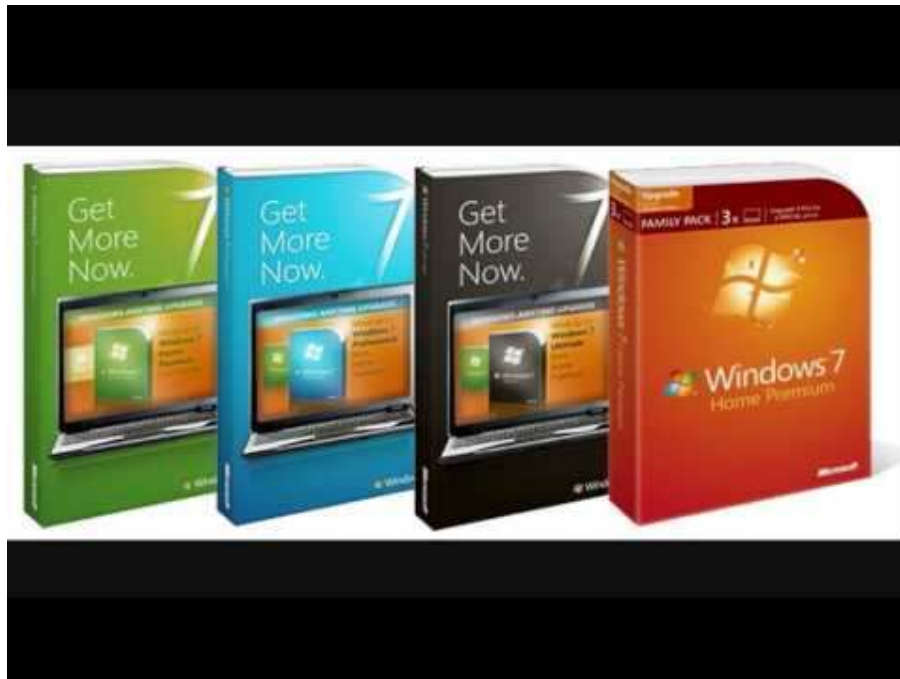
I. VOCABULARY

Bootable	có thể khởi động
Button	nút
Clone	nhái, bắt chước
Compatible	tương thích
Conferencing software	phần mềm hội thảo
Directory	thư mục
General public license	bản quyền dung chung (mở)
Java virtual machine	máy ảo Java
Multitasking	xử lý đa nhiệm
Numerous	vô số, nhiều
Open source	nguồn mở
Routines	chương trình con
Scroll-bar	thanh cuộn
Sequence of instructions	dãy lệnh
Simultaneously	một cách đồng thời

Supercomputer	siêu máy tính
Three-dimensional	(không gian) ba chiều
Thread	chuỗi, mạch, dòng
Voice recognition technology	công nghệ nhận dạng giọng nói

II. LANGUAGE WORK

REVISION OF THE PASSIVE

The present simple passive

We form the present simple passive with am/is/are + past participle

Example:

This program is written in a special computer language.

Program and data are usually stored on disks.

Remember that the word data takes a singular verb (3ʳᵈ person singular) when it refers to the information operated on in a computer program.

The data is ready for processing.

III. READING COMPREHENSION

Task 1. *WARM – UP*

Look at the diagram. What is the function of the operating system.
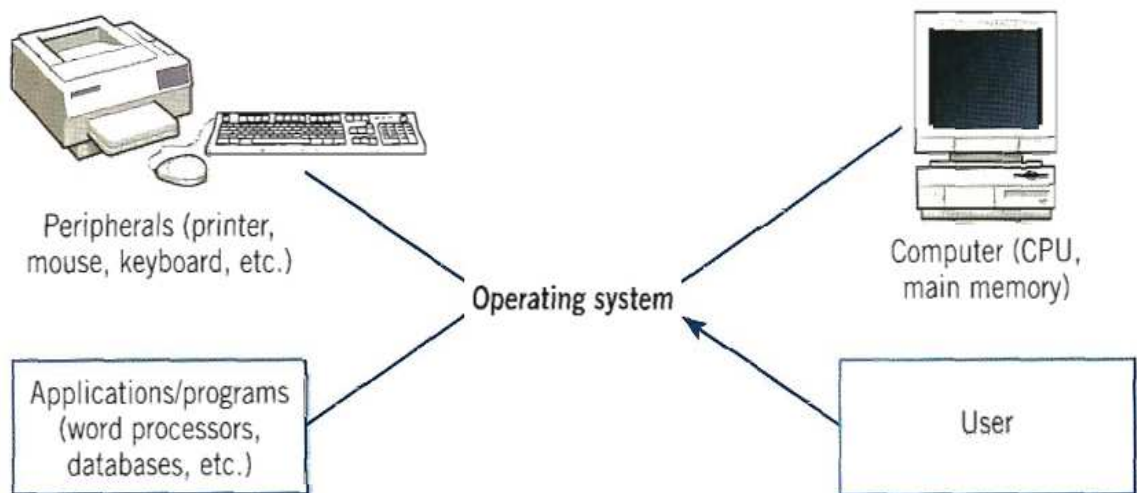
Task 2. *Read the text below and complete it with the phrases in the box.*

Applications software   operating system software   system software

Information provided by programs and data is known as (1) .... Programs are sets of instructions that make the computer execute operations and tasks. There are two main types of software:

The (2) ....   refers to all the programs which control the basic functions of a computer. They include operating systems, system utilities (e.g. an anti-virus program, a back-up utility) and language translators (e.g. a compiler – the software that translates instructions into machine code).

The(3) .... refers to all those applications – such as word processors and spreadsheets – which are used for specific purposes. Applications are usually stored on disks loaded into the RAM memory when activated by the user.

The (4) .... is the most important type of system software. It is usually supplied by the manufacturers and comprises a set of programs and files that control the hardware and software resources of a computer system. It controls all the elements that the user sees, and it communicates directly with the computer. In most configurations, the OS automatically loaded into the RAM section when the computer.

Task 3. *Read the text and find*

1   the text-based operating system delivered with most PCs

2   the mail package included with Window '98

3   the function of the Finder in Macintosh computers

4   the meaning of 'multitasking'

5   the operating system which is written ic C language and has been
    adopted   by many corporate installations as standard

6   the OS that is freely redistributable under the GNU general public
    license

7   the OS used by Digital computers

8   the OS created to run Java applications

<div align="center">

Operating system

</div>

MS-DOS	This is the disk operating system developed in 1981 by Microsoft Corp. It is the standard OS for all IBM PC compatibles or clones. In this text-based operating

<div align="center">

68

</div>

	system, you communicate with the computer by typing commands that exist within its library. For example, some basic DOS commands include DIR (shows a list of all the files in a directory), COPY (makes a duplicate of a file), DEL (deletes files)
Windows 's95, '98 **Window 2000**	Window '95 is a bootable operating system in its own right. It has a graphical interface with many Macintosh-like features. It supports multimedia applications and comes with Internet software. The program manager is called Windows Explorer. Buttons and scroll-bars have an attractive, three-dimensional look. With Window '98, Internet access becomes part of the user interface. Its active desktop lets you find information easily with the same view of content on your PC, network or the Web. The system includes Outlook Express for e-mail, NetMeeting conferencing software, a char program, and a Web-page editor. It offers support for new technologies like DVD, and it also enables you to watch TV on your PC. This OS is an update to all Windows versions, including Windows NT.
Macintosh Apple 	Most of the Mac OS code is in the ROM chips. These contain hundred of routines (sequences of instructions) which perform such tasks as starting up the computer, transferring data from disks to peripherals, and controlling the RAM space. Large parts of the Mac OS are also inside the System file and the Finder, kept in the System folder. The content of the System file is loaded automatically at start-up and contains information which modifies the routines of the OS in the ROM chips. The Finder displays the Macintosh's desktop and enables the user to work with disks, programs, and files. It allows

	multitasking. It has an Internet set-up assistant, an e-mail program, and a Web browser.
OS/2 Warp (IBM) 	This is the PC world's most technically sophisticated operating system. It provides true multitasking, allowing a program to be devided into 'threads', many of which can be run at the same time. Thus, not only can numerous tasks at the same time. The IBM OS/2 Warp includes easy access to networks via modem, support for Java applications and voice recognition technology.
UNIX 	This operating system, designed by Bell Laboratories in the USA for minicomputers, has been widely adopted by many corporate installations. From the very first, is designed to be a multitasking system. It is written in C language.
Linux 	Protected under the GNU general public license, Linux is the open source, cooperatively-developed POSIX-based, multitasking operating system. Linux is used as a high value, fully-functional UNIX workstation for applications ranging from Internet Servers to reliable work group computing. Linux is available for Intel®, Alpha™, and Sun SPARC® platforms.
Open VMS	The Open VMS operating system is Digital's popular general purpose OS for all VAX computers. It provides data and access security. Open VMS supports all types of Digital and multivendor networks.
Java OS 	This is designed to execute Java programs on Web-based PCs. It's written in Java, a programming language that allows Web pages to display animation, play music, etc. The central component of Java Os is known as the Java Virtual Machine.

IV. PRACTICE

Exercise 1. *Match the DOS commands on the left with the explanations on the right. Some commands are abbreviations of English words.*

1	FORMAT	a	Erases files and programs form your disk
2	CD (or CHDIR)	b	Copies all files from one floppy disk to another
3	DIR	c	Changes your current directory
4	MD (or MKDIR)	d	Initializes a floppy disk and prepares it for use
5	DISKCOPY	e	Displays a list of the files of a disk or directory
6	BACKUP	f	Changes names of your files
7	REN (RENAME)	g	Creates a subdirectory
8	DEL	h	Saves the contents of the hard disk on floppy disk for security purpose

Exercise 2. *Fill in the blanks with the correct form of the verbs in brackets.*

1　Various terminals (connect)…………….to this workstation.
2　Microcomputers (know)……………as 'PCs'.
3　Magazines (typeset)　……………by computers.
4　When a particular program is run, the data (process) .... by the computer very rapidly.
5　Hard disks (use)……………for the permanent storage of information.
6　 The drug-detecting test in the Tour de France (support) …………… by computers.
7　All the activities of the computer system (coordinate)……………by the central processing unit.

8 In some modern systems information (hold)……………in optical disks.

Exercise 3. *Quiz:*

Work with a partner. Try to answer as many question as possible.

1. What name is given to the set of programs that interface between the user, the applications programs, and the computer?

…………………………………………………………………………………

…………………………………………………………………………………

2.What types of programs are designed for particular situations and specific purposes?

…………………………………………………………………………………

…………………………………………………………………………………

3. What does 'MS-DOS' stand for?

…………………………………………………………………………………

…………………………………………………………………………………

4. What is the basic DOS command for copying a file?

…………………………………………………………………………………

…………………………………………………………………………………

5. The Macintosh operating system is kept in various locations. Where exactly are these?

…………………………………………………………………………………

…………………………………………………………………………………

6. Can you give synonym for the term 'routine'?

…………………………………………………………………………………

…………………………………………………………………………………

7. What is the abbreviation for 'International Business Machines'?

…………………………………………………………………………………

…………………………………………………………………………………

8. Which company developed UNIX?

…………………………………………………………………………………

…………………………………………………………………………………

9. Which programming language allows you to play animations on the Web?…………………………………………………………………………

…………………………………………………………………………………

10. What are the effects of computer viruses?

………………………………………………………………………………………

………………………………………………………………………………………

V. FURTHER READING

MacOS

Apple deliberately sought to minimize the user's conceptual awareness of the operating system: Tasks which required more operating system knowledge on other systems would be accomplished by intuitive mouse gestures and simple graphic controls on a Macintosh, making the system more user-friendly and easily mastered. This would differentiate it from then current systems such asMS-DOS which were more technically challenging to operate.

The core of the system software was held in ROM, with updates provided free of charge by Apple dealers (on floppy disk). The user's involvement in an upgrade of the operating system was also minimized to running an installer, or simply replacing system files, the simplicity of which again differentiated the product from others.

UNIT 9
THE GRAPHICAL USER INTERFACE

I. VOCABULARY

Accessories (n)	phụ kiện
Consistency (n)	tính kiên định
Dialog box (n)	hộp thoại
Emphasis (n)	nhấn mạnh, tập trung
Facilitate (v)	làm cho dễ dàng, thuận tiện
Folder (n)	thư mục
Icon (n)	biểu tượng
Innovative (adj)	cải tổ, tiến hóa
Intuitive tool (n)	công cụ trực quan
Launch (v)	khởi động, chạy
Nested folder (n)	thư mục lồng nhau
Pop-up menu (n)	bảng chọn bật ra
Procedure (n)	thủ tục

Pull-down menu (n)	menu thả xuống
Single prompt (n)	dấu nhắc đơn
Stimulate (v)	kích thích
User interface (n)	giao diện người dùng
User-friendly (adj)	thân thiện với người dùng

II. LANGUAGE WORK
SHORT RELATIVE CLAUSES

We can join these sentences by using a relative clause.

1. Her house has a network.

2. It allows basic file-sharing and multi-player gaming.

(1 + 2) Her house has a network which allows basic file-sharing and multi-player gaming

Relative clauses with certain active verbs can be shortened by omitting the relative word and changing the verb to its '-ing' form. We can shorten the relative clause like this:

Her house has a network *allowing basic file-sharing and multi-player gaming* **Note how these two sentences are joined by a relative clause.**

3. The technology is here today.

4. The technology is needed to set up a home network.

(3 + 4) The technology which is needed to set up a home network is here today.

Relative clauses like this with passive verbs can be shortened by omitting the relative word and the verb 'to be'.

The technology **needed to set up a home network** is here today.

Using short relative clauses is one way of reducing sentences.

Other ways of reducing sentences are:

● taking out relative pronouns where possible

e.g. The software (that) we bought last year.

● omitting qualifying words (adjectives, or modifying adverbs)

e.g. (quite) complex/ (very) similar

● taking out that in reported speech or thoughts

e.g. It is well known (that) computers…

I think (that) there's something wrong with this program.

● cutting out unnecessary phrase

e.g. Macintosh computer were designed with a clear aim: to facilitate the user's interaction with the computer.

= Macintosh computers were designed to facilitate the user's interaction with the computer.

III. READING COMPREHENSION

Task 1. *A user friendly interface*

The picture below illustrates a user interface based on graphics.

Read the definitions in the HELP box and then find the following interface elements in the picture.

HELP box		
a. 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.	**1**	**window**
	2	**menu**
	3	**pointer**
	4	**icons**
	5	**folders**
b. are small picture on the screen. They present		

programs, folders, or files. For examples, 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.	
c. give the user a list if choice. You operate the menu by pressing and releasing one or more buttons on the mouse.	
d. 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.	
e. containers for documents and applications, similar to the subdirectories of a PC platform.	

Task 2. *Read the article below and dicide 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 terms **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 the 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 IBM OS/2 Warp. These three **platforms** include similar feature: 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 compability with application programs.

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.
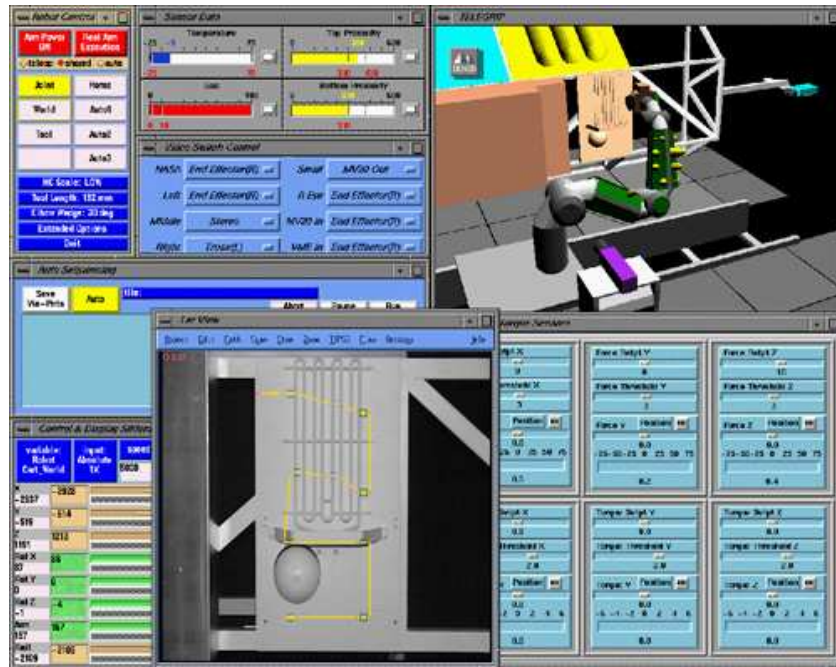
Task 3. *Look at the text again and guess the meaning of the words in bold and italics in your own language.*

Task 4. *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 environments?

……………………………………………………………………………………

….………………………………………………………………………………

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?

………………………………………………………………………………

IV. PRACTICE

Exercise 1. *Now link each group of sentences into one sentence using short relative clauses*

1 a   The technology is here today.

  b   It is needed to set up a home network.

2 a   You only need one network printer.

  b   It is connected to the server.

3 a   Her house has a network.

  b   It allows basic file-sharing and multi-player gaming.

4 a   There is a line receiver in the living room.

  b   It delivers home entertainment audio to speakers.

5 a   Eve has designed a site.

  b   It is dedicated to dance.

6 a   She has built in links.

  b   They connect her site to other dance sites.

7 a   She created the site using a program called Netscape Composer.

  b   It is contained in Netscape Communicator.

8 a   At the centre of France Telecom's home of tomorrow is a network.

  b   It is accessed through a Palm Pilot-style control pad.

9 a   The network can simulate the owner's presence.

  b   This makes sure vital tasks are carried out in her absence.

10 a   The house has an electronic door-keeper.

  b   It is programmed to recognize you.

  c   This gives access to family only.

Exercise 2. *Translate the sentences into Vietnamese*

1. 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.

………………………………………………………………………………

…..……………………………………………………………………………

………..………………………………………………………………………

2. 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.

……………………………………………………………………………………

……..………………………………………………………………………………

…………..…………………………………………………………………………

……………………..………………………………………………………………

3. 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 the Macintosh have been designed to take full advantage of its features using this interface.

……………………………………………………………………………………

……..………………………………………………………………………………

…………..…………………………………………………………………………

……………..………………………………………………………………………

4. Today, the most innovative GUIs are the Macintosh, Microsoft Windows, and IBM OS/2 Warp. These three **platforms** include similar feature: a **desktop** with icons, windows, and folders, a printer selector, a **file finder**, a control panel and various desk accessories.

……………………………………………………………………………………

……..………………………………………………………………………………

………..……………………………………………………………………………

5. 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.

……………………………………………………………………………………

……………………………………………………………………………………

……..………………………………………………………………………………

………..……………………………………………………………………………

V. FURTHER READING

MacBook Pro
with Retina display

Multimillion -pixel view.

When you pack so many pixels into a display — over 4 million on the 13-inch model and over 5 million on the 15-inch model — the results are positively stunning. The pixel density is so high, your eyes can't discern individual pixels. Images take on a new level of realism. Text is pin sharp. A spectacular 2560-by-1600 resolution on the 13-inch MacBook Pro and an equally impressive 2880-by-1800 resolution on the 15-inch MacBook Pro let you see more of your high-resolution images with pixel-for-pixel accuracy.

More color and contrast. Less glare.

The Retina display reduces glare up to 75 percent while maintaining incredible color and quality. In fact, it has a 29 percent higher contrast ratio than a standard MacBook Pro display. Blacks are blacker. Whites are whiter. And everything in between is rich and vibrant. IPS technology gives you a wide, 178-degree view of everything on the screen, so you'll see the difference at practically any angle. And you're going to love what you see.

UNIT 10
DATABASES

I. VOCABULARY

Database	cơ sở dữ liệu
Dimension	chiều
File	tệp
Index	bảng chỉ mục
Look up	tra cứu
Market trend	xu hướng thị trường
Password	mật khẩu
Productivity	năng suất
Record	bản ghi, mẫu tin
Updated	cập nhật
User – defined	(do) người dùng định nghĩa

II. LANGUAGE WORK
Requirement: Need to, have to, must, be + essential, critical

Note how we describe requirements of particular jobs:

1. You need to be able to empathise with the person at the other and of the phone.

2. IT managers have to take responsibility for budgets.

3. You must be interested in your subject.

4. You must have worked for at least two years in system analysis.

5. Experience with mainframes is essential critical.

We can describe things which are not requirements like this

6. You don't need to have a degree in computing science.

We can also treat need as a modal verb and use the negative form needn't :

7. You needn't have a degree in computing science.

Have to is an ordinary verb. Its negative form is made in the usual way:

8. You don't have to be an expert in everything.

Mustn't have a quite different meaning. It means it is important not to do something. It is used for warning, rules, and strong advice.

9. You mustn't make unauthorized copies of software.

III. READING COMPREHENSION

Task 1. *WARM - UP*

Companies often use databases to store information about customers, suppliers and their own personnel. Study the illustrations and then try to answer these questions.
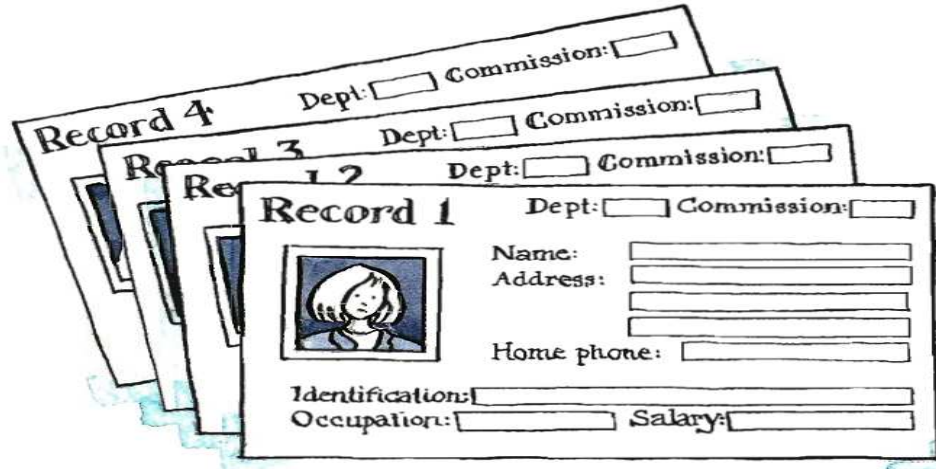
1. What is a databases ?

……………………………………………………………………………

2. Which tasks can be performed by using a databases ? Make a list of possible applications.

……………………………………………………………………………

3. What do the terms mean in your languages : file, record, field ?

……………………………………………………………………………

Name : James Powell	
Address: 12, Back St.	
Marital status : single	
Indentification 8994989	**Homephone : 456367**
Job ENGINEER	**Department : Data processing**
SALARY £18,750	**Commission : £18,750**

A database file stores information in fields grouped on records

Task 2. *Here is a part of an article about databases. First, read all the way through and underline the basic features of databases*

Basic features of databases programs

With a databases, you can store, organize, and retreve a large collection of related information on the computer. If you like, it is the electronic equipvalent of an indexed filing cabinet. Let us look at some features and applications.

- Information is entered on databases via fields. Each field holds a separates piece of information, and the fields are the collected together into records. For example, a record about an employee might consist of several fields which gives their names, address, telephone number, age, salary, and length of employment with the company. Records are grouped together into files which hold large amount of information. Files can easily be updated: you can always change fields, add new records, or delete old ones. With the right databases software, you are able to keep track of stock, sales, market trends, orders, invoices, and many more details that can make our company successful.

- Another feature of databases programs is that you can automatically look up and find records containing particular information. You can also search on more than one field at a time. For example, if a managing director wanted to know all the customers that spend more than £7,000 per

85

month, the program would search on the name field and the money field simultaneously.

-

- A computer database is much faster to consult and update than a card index system. It occupies a lot less space, and records can be automatically sorted into numerical or alphabetical order using any field.

- The best packages also include networking facilities, which add a new dimension of productivity to business. For example, managers of different departments can have direct access to common databases, which represents an enormous advantage. Thanks to security devices, you can share part of your files and a network and control who sees the information.

Most aspects of the program can be protected by user – defined password. For example, if you wanted to share an employee's personal details, but not their commission, you could protect the commission field.

In short, a databases manager helps you control the data you have at home, in the library or in your business.

IV. PRACTICE

Exercise 1. *Now make a list of the words you don't understand. Can you guess their meaning? Compare your ideas with other students.*

**Exercise 2.** *Using the information in the text to complete these statements.*

1. Adatabases is used to …

2. Information is entered on databases via….

3. Each field holds ….

4. "Updating" a file means….

5. The advantage of a databases program over a manual filing system are…

6. Access to common databases can be protected by using…

Exercise 3. *Puzzle*

 Complete the sentences by using a term from a list. Then write the words in the crossword to find the hidden message.

database   field   layout   merging   record   sorted   updated

1. In order to personalize a standard letter, you can use "mail …." (a technique which consists of combining a databases with a document made with a word processor) .

2. Records can be automatically … into any order.

3. You can decide how many fields you want to have on a …

4. Files can easily be…by adding new information or deleting the old one.

5. A … program can be used to store, organize and retrieve information of any kind.

6. The… of the records can be designed by the user.
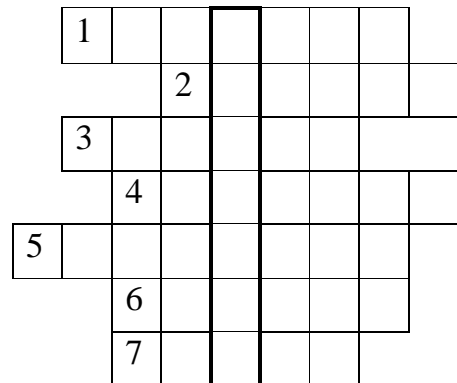
7. Each piece of information is given in a separate…

Exercise 4. *Now fill in the blanks with the appropriate form of the verbs, need to, have to, and must, to make sensible statements. More than one answer is possible in some examples.*

1. Technical qualifications ………… to be renewed a intervals to ensure they do not go out of date.
2. You …................. become an expert in too narrow a field.
3. You .... to have good communication skills to become an IT Manager.
4. You .... be an expert in hardware to become a programmer.
5. You ....… have worked with IBM mainframes for at least two years.
6. You …............. be able to show leadership.
7. You .... have a degree but it …be in computing science.
8. You .... to have experience in JavaScript
9. You …............. to be able to use C++
10. These days you …................. study BASIC.

V. FURTHER READING

What is a database?

A database is a collection of data. That may sound overly simplistic but it pretty much sums up what any database is.A database could be as simple as a text file with a list of names. Or it could be as complex as a large, relational database management system, complete with in-built tools to help you maintain the data.Before we get into dedicated database management systems, let's start with the basics - let's look at a simple text file example.

Text file

Imagine we have a text file called "Individual.txt", and that the contents look like this:

We could use this information to do things such as send an email to everyone on our list. We could do this because, due to the way we designed the list, we know that each *row* contains a different individual, and the information on that row is related to that individual. Also, the items in each row are separated by commas. Therefore, we know that the email address next to "Homer" is his email address. We could also call each row a *record*. Therefore, we currently have 4 records in our database.

With a small list like this, a text file may serve our purposes perfectly.

CHAPTER V. CREATIVE SOFTWARE
UNIT 11
GRAPHICS AND DESIGN

I. VOCABULARY

Interpret	Giải thích, làm sáng tỏ
Convert	Đổi, biến đổi
Precise	Chính xác, tỉ mỉ, rõ rang
Illustration	Được minh họa
Formula	Thể thức, cách thức
sophisticate	Làm thiết bị tinh vi, làm giả
manufacturing	Sự chế tạo, sản xuất
Industry	Công nghiệp, kỹ nghệ
Client	Khách hàng
Diagram	Biểu đồ
Effective	Có hiệu quả, có hiệu lực
Animation	Tính linh hoạt, sinh động
Academic	Trừu tượng, không thực tế, học thuật
Application	Trình ứng dụng, áp dụng
Primitive	Nguyên thủy, ban sơ
Attribute	Quy cho, thuộc tính
Manipulating	Thao tác, điều khiển bằng tay
Rotate	Làm quay, luân phiên nhau
Scale	Đĩa cân, theo tỷ lệ, địa vị
Axis (axes)	Trục

Rendering	Sự biểu diễn, dịch
Reflection	Sự phản chiếu, phản xạ
Corresponding	Thông tin, trao đổi, tương ứng

II. LANGUAGE WORK

Gerunds (_ing nouns)

HELP box

Gerunds

Gerunds are nouns formed by adding _ing to vebs. A gerund usually functions as:

- The subject of a verb, e.g. Smoking is bad for your health.
- The object of a verb, e.g. She has never done any computing
- The object of a preposition, e.g. CAD programs are very fast at performing drawing functions.
- The component of the subject, e.g. His favorite pastime is playing computer games.

III. READING COMPREHENSION

Task 1. *Warm- up*

1. Look at the pictures above, which all created on computer. Which ones are three-dimensional? What are the advantages of creating three-dimensional? What are the advantages of creating three- dimensional images?
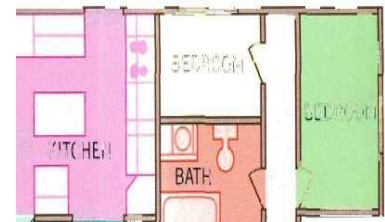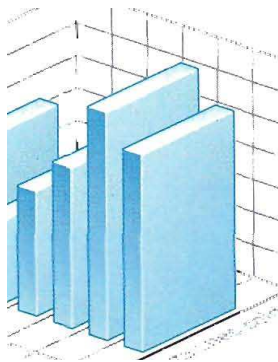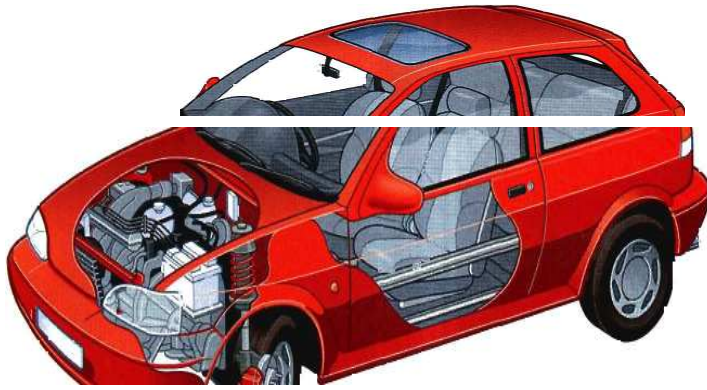
2. From the pictures, can you suggest which people might use computer graphics professionally? What would they use them for?

3. Can you think of other professionals who use computer graphics? How do they use them?

Task 2. *Read through the text and find the answers to these questions.*

Computer graphics are pictures and drawings produced by computer. A graphics program interprets the input provided the user and transforms it into images that can be displayed on the screen, printed on paper or transferred to microfilm. In the process the computer uses hundreds of mathematical formulas to convert the bits of data into precise shapes and colors. Graphics can be developed for a variety of uses including presentations, desktop publishing, illustrations, architectural designs and detailed engineering drawings.

Mechanical engineers use sophisticated programs for applications in computer – aided design and computer-aided manufacturing. Let us take, for example, the car industry. CAD software is used to develop, model and test car designs before the actual parts are made. This can save a lot of time and money.

Computers are also used to present data in a more understandable form: electrical engineers use computer graphics to design circuits and people in business can present information visually to clients in graphs and diagrams. These are much more effective ways of communicating than lists of figures or long explanations.

Today, three-dimensional graphics, along with color and animation, are essential for such applications as fine art, graphic design, We-page design, computer-aided engineering and academic research. Computer

animation is the process of creating objects and pictures which move across the screen; It is used by scientists and engineers to analyse problems. With the appropriate software they can study the structure of objects and how it is affected by particular changes.

Basically, computer graphics help users to understand complex information quickly by presenting it in a clear visual form.
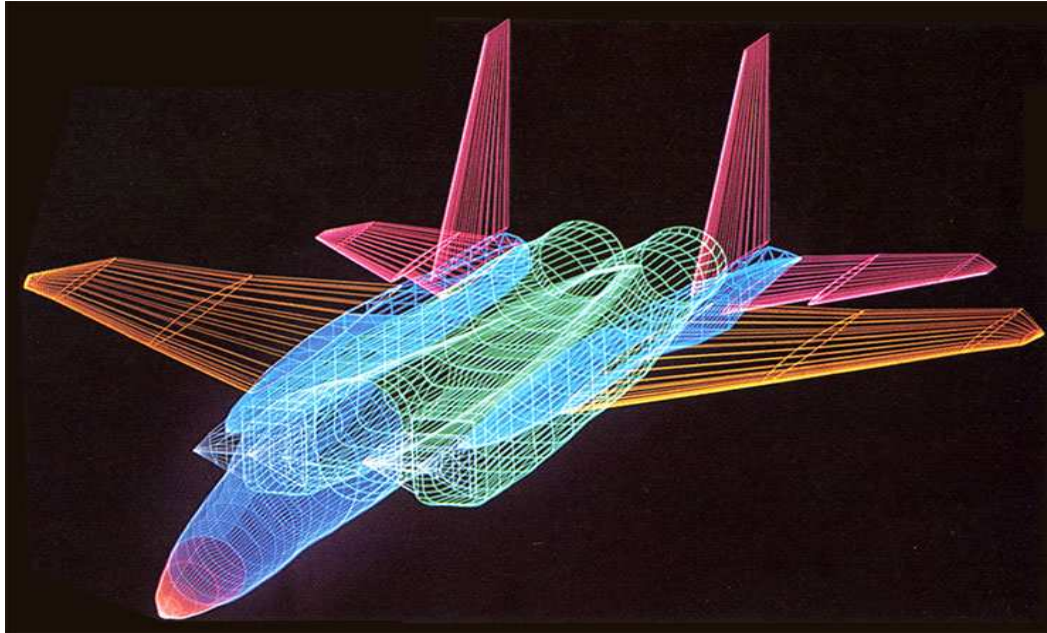
1. What are "computer graphics"?

…………………………………………………………………………………

……..……………………………………………………………………………

2. What do the acronyms "CAD", "CAE" and "CAM" stands for?

…………………………………………………………………………………

……..……………………………………………………………………………

3. What are the benefits of using computer graphics in the car industry?

…………………………………………………………………………………

……..……………………………………………………………………………

4. What are the benefits of using graphics in business?

…………………………………………………………………………………

……..……………………………………………………………………………

5. What is "computer animation"?

…………………………………………………………………………………

……..……………………………………………………………………………

IV. PRACTICE

Exercise 1. *Look at the facilities on the left and match them with the definitions on the right.*

1. Patterns menu	a. turning an image round
2. Scaling	b. A tool which lets you scale the "view" of a picture and edit a small portion of it as if you were working under a magnifying glass. It is very useful for doing detailed work as you can edit the picture one dot at a time.
3. rotating	c. Making the object larger or smaller in any of the horizontal, vertical or depth directions.
4. inverting	d. A shading technique where two different colors are placed next to each other; the human eye blends the color to form a third one, it is also used to show shading in black and white.
5. zoom	e. A palette from which you choose a design to fill in shapes.
6. slanting	f. Reversing the color of the dots in the selected part of a picture, so that white dots become black and black dots become white.
7. black and white dithering	g. inclining an object to an oblique position.

Exercise 2. *Complete the sentences by using an appropriate gerund from those in the box*

creating	adding	clicking	processing	printing	rendering

1. Graphic artists like…………..color and depth to their drawings and designs.
2. A 32-bit painting program has a complete palette of tools for………….images from scratch.
3. The speed of a microprocessor is important in ……….information.
4. Before………a document, the user should decide on the layout.
5. You can open the color palette by……..on the corresponding pop-up icon.

6. ………refers to the techniques used to make realistic images.

Exercise 3. *Read the passage below. Then look at the HELP box. Underline the gerund and decide whether they function as the subject, the subject complement, the object of a verb, or the object of a preposition.*

You cannot create a picture simple by specifying primitives. Instead, you must specify the primitives and their attributes, then transform them by specifying where and how you want them placed on the screen so they create your picture. Transformation means moving or otherwise manipulating the object by translating, rotating and scaling the object.

Translation is moving an object along an axis to somewhere else in the viewing area. Rotating is turning the object around an axis. Scaling is making the object larger or smaller in any of the horizontal, vertical or depth directions (corresponding to the x, y and z axes). The term rendering describes the techniques used to make your object look real. Rendering includes hidden surface removal, shading, light sources and reflections.

V. FURTHER READING
What is Computer Graphics?

The term **computer graphics** includes almost everything on computers that is not text or sound. Today almost every computer can do some graphics, and people have even come to expect to control their computer through icons and pictures rather than just by typing.

Here in our lab at the Program of Computer Graphics, we think of computer graphics as drawing pictures on computers, also called *rendering*. The pictures can be photographs, drawings, movies, or simulations -- pictures of things which do not yet exist and maybe could never exist. Or they may be pictures from places we cannot see directly, such as medical images from inside your body.

We spend much of our time improving the way computer pictures can simulate real world scenes. We want images on computers to not just look more realistic, but also to BE more realistic in their colors, the way objects and rooms are lighted, and the way different materials appear. We call this work "realistic image synthesis", and the following series of

95

pictures will show some of our techniques in stages from very simple pictures through very realistic ones.

UNIT 12
MULTIMEDIA

I. VOCABULARY

animate	Làm sinh động
band	Dải, đai, nẹp, ban nhạc
broadcast	Truyền hình, truyền thanh, quảng bá
compress	
dedicate	Ép, nén
download	Cống hiến, dành cho
emotion	Tải
effect	Sự xúc cảm, xúc động
extension	Tác động, hiệu ứng
format	Sự mở rộng
flaw	Định dạng, khổ
hypertext	Thiếu sót, khe hở

hypermedia	Siêu văn bản
manipulate	Siêu phương tiện truyền thông
multimedia	Thao tác, điều khiển bằng tay
inform	Đa phương tiện, đa truyền thông
interact	Khai báo, đưa ra bằng chứng
interface	Tương tác
interchange	Giao diện
instrument	Sự trao đổi, giao điểm
invest	Công cụ, dụng cụ, văn kiện
transmit	Đầu tư, phong tỏa
transition	Truyền, phát
record: ghi, bộ giữ liệu có liên quan	Chuyển tiếp, giao thời
	tạo thành 1 đvị trong hồ sơ MT
stream	dòng, luồng
synthesizer	tạo ra, tổng hợp
PC (Personal Computer)	MT cá nhân
MIDI (Musical Instrument Digital Interface)	Giao diện thiết bị âm nhạc số

II. LANGUAGE WORK

If - clauses

Help box

Conditional clauses

When you want to talk about a possible situation and its consequences, you use a conditional sentence. Here we examine two types of conditionals:

- *First conditional* (possible situation):

    If A happens   B will happen

    (present simple)   (will happen)

    e.g: If you click on the speaker icon, you'll get a piece of dialogue from the movie. In the main clause we can also have a modal (can), an imperative, or a present tense verb.

- *Second conditional* (unlikely situation)

    If A happened   B would happen

    (past simple)   (would + verb)

e.g: If I had the money. I would invest in a multimedia upgrade kit.
Other modals (could, should, might) may appear in the main clause.

III. READING COMPREHENSION

Task 1. *Warm-up*

Look at the cover for Encarta. What types of data are integrated in multimedia applications?

Encarta (reference Library 2002)

Task 2. *Read the texts and match them with the headings in the box on the next page*

- Sound, Music, MIDI
- CDs and DVDs full of pictures, action and sound
- Editing photos and making movies in a few minutes
- The potential of using multimedia

Multimedia magic!

Musicians can compose, mix and edit music electronically by connecting a computer to special MIDI instruments.

1………………………..…………………………………………………

Multimedia applications are used in all sorts of fields. For examples, some museums, banks and estate agents have information kiosks that use multimedia. Companies produce training programmes on optical disks, and marketing managers use presentation packages (e.g Microsoft PowerPoint) to make Multimedia programs to make video projects or to teach subjects such as music and languages. They have all found that moving images, sound and music involve viewers emotionally as well as inform them, and make their message more memorable.

The power of Multimedia resides in hypertext and hypermedia. If you click on a hypertext word, you jump to another screen with more information about that subject. Hypermedia is similar, but also works with sound, graphics and video.

2………………………………………………………………………

To capture sounds in digital format and play them back, modern PCs contain a sound card. This is a type of expansion card which offers two important capabilities: (i) a built-in stereo synthesizer and (ii) a system called Musical Instrument Digital Interface, or MIDI. This allows electric musical instruments to communicate with computers.

You can also listen to music on your PC. Many radio stations broadcast on the Web using a technique called "streaming". This lets you play an audio file in a continuous stream, while it's downloading, before the entire file is transmitted. Sometimes bands transmit concerts on the Web in a process called "webcast". To listen to online music you just need a plug-in like RealPlayer.

3………………………………………………………………………

There are two ways of storing photos on a computer. The first way is to use a digital camera. Photos are stored in a memory chip and then they're downloaded to the computer. The second way is to scan printed photos by using a scanner. With special software you can repair flaws, add effects and even save your photos on a CD.

Video is another important part of Multimedia. Video computing refers to recording, manipulating and storing video in digital format. In fact, today you can make your own movies on your PC. This is what you have to do: First capture images with a digital video camera and then

transfer the digital video to your computer. Next, with a video editing program (e.g iMovie) cut your favorite segments, re-sequency the clips and add transitions and other effects. Finally, save your movie on a video CD, a DVD or a videotape. You can also place your work on the Internet.

4………………………………………………………………………

Multimedia software is usually interactive and comes on CD-ROMs or DVDs. For example, the Compton's Encyclopedia enables you to read about whales, look at photos of whales, listen to whale songs, and view animated sequences. Similarly, the Grolier Encyclopedia lets you read about birds, view pictures of birds, and listen to recording of their songs. Other CD-ROMs include games, guides, dictionaries and educational courses about history, science, the human body, cinema, literature and foreign languages.

Task 3. *Read the text again and correct these statements. There is a technical mistaken in each of them*

1. Multimedia PCs cannot integrate text with graphics and video

2. You don't need to have a sound board on your PC to hear speech and music.

3. Most multimedia software is distributed on magnetic disks.

4. Digital cameras store photos in a roll of film.

5. There are no language courses available on CD-ROM.

Task 4. *Match these terms in the box with the explanations*

a hypertext   b MIDI interface   c Video editing   d streaming   e webcast

1. The process of manipulating video images.

2. A code for the exchange of information between PCs and musical instruments.

3. Text with hyperlinks, which take you to other pages.

4. A concert or other event that is transmitted over the Web.

5. A technique for playing sound and video files as a continuous stream, while they're downloading.

IV. PRACTICE

Exercise 1. *Look at the HELP box and then read these sentences. Identify the tenses used in the if-clause and in the main clause.*

1. If you upgrade your PC, you'll be able to run multimedia applications.

2. If the marketing manager has a multimedia system, she could make more effective presentations.

Exercise 2. *Put the verbs in brackets into the correct form*

1. If I (get)………..a sound card, I'll be able to create my own music with a MIDI.

2. If the system (have)………..a SuperVGA card, we would obtain a better resolution.

3. You won't be able to play CD=ROM disks if you (not have)……..a CD-ROM drive.

4. If you (come)…………to the annual computer exhibition, you could see the new Macs.

5. If you could afford it, I (buy)…………..a Multimedia PC.

Exercise 3. *Read the text and find*

1. The function of the extension that is usually added to a file name
2. The language used to create the majority of text files on the Web
3. The graphics interchange format created by CompuServe to compress images
4. The small program (plug-in) that lets you hear audio recording on the Net
5. The most popular video formats
6. The format created by the Moving picture Experts' Group to capture, store and play back movies.
7. The extension for the files that can be decompressed with a program like *Winzip.*

Multimedia on the Web

Recognizing file formats
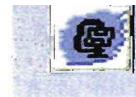
Web pages can contain different multimedia elements: text graphics, sounds, video and animation. To identify the format or type of file, an extension (a three-letter suffix) is usually added to the file name when it's saved on disk.

Text

The most common text extensions are .txt, .pdf, .doc and .htm (or .html). Most of the text files that you find on the Web have the extension .htm, created with the hypertext markup language.

Graphics

Graphics on the Web can include pictures, photos, paintings, image-maps and buttons. The most common formats are .gif (a standard image format developed by CompuServe) and .jpg or .jpeg (created by the Joint Photographic Experts' Group)

Sounds

The Internet is a great place to find and hear hit songs, movie soundtracks and recorded interviews. The most common formats are these:

- Wav: wav files can be played with Sound Recorder included with Windows
- .ra or .ram: RealAudio files can be heard with RealPlayer, a plug-in you can download from the Web.
- .mp3: compresses music files that can be played with an MP3 player

Video and animation

You can see cartoons and movie clips on the Web, but you need the appropriate software. Video files are usually stored in: .avi, .mov and .mpg (or .mpeg) formats. To view MPEG videos you just need Video for Windows. However, to create high-quality movie clips you need a dedicated MPEG expansion card. You can also find animation and 3-D words. The two standard tools to manipulated animated worlds are VRML and Java. To view a virtual animation you need a program like QuickTime VR.

Compressed files

When you download files, they're probably compressed. Windows files have a .zip extension. Macintosh files usually have a .sit extension and are opened with *StuffIt.*

V. FURTHER READING

Multimedia

Multimedia is media and content that uses a combination of different content forms. This contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material. Multimedia includes a combination of text, audio, still images, animation, video, or interactivity content forms.

Multimedia is usually recorded and played, displayed, or accessed by information content processing devices, such as computerized and electronic devices, but can also be part of a live performance. Multimedia devices are electronic media devices used to store and experience multimedia content. Multimedia is distinguished from mixed media in fine art; by including audio, for example, it has a broader scope. The term "rich media" is synonymous for interactive multimedia. Hypermedia can be considered one particular multimedia application.

CHAPTER 6.   **PROGRAMMING**
UNIT 13
PROGRAM DESIGN

I. VOCABULARY

Assembly language	hợp ngữ
Assembler	bộ dịch hợp ngữ
Associate	Kết hợp, cộng tác
binary code	Mã lưỡng phân (nhị phân)
complex	Phức tạp, rắc rối
convert	Biến đổi, chuyển đổi
Compiler	Bộ biên dịch, trình biên dịch
diagnosing	Chuẩn đoán, miêu tả đặc trưng
High – level language	ngôn ngữ lập trình bậc cao
mnemonic	Trí nhớ, giúp trí nhớ
Machine code	Mã máy
Problem – oriented	hướng vấn đề
Object program	chương trình đích
Source program	chương trình nguồn
symbolic	Tượng trưng, biểu tượng
version	Bản dịch

II. LANGUAGE WORK

Infinitive constructions

The infinitive is used:

- *after adjectives*
- It is *difficult to use* machine code.
- after modal verbs with to : *ought to, used to*
- I *ought to* make a back-up copy.
- Using a computer is much easier than it *used to be.*
- after modal and auxiliary verbs without to : *can, could, may, might, shall, should, will, would, would rather, would rather, would sooner*
- Unfortunately, computers *can't understand* English.
- I *'d rather buy* a game than a spreadsheet.

III. READING COMPREHENSION

Task 1. *Warm up*

In pairs, try to think of an answer for the question.

What is programming ?

Look at the definition in the Glosary. Is it similar to yours?

Task 2. *Complete the following definitions with the words and phrases in the box.*

| The various parts of the program | may occur in programs | |
| language | Binary numbers | a given problem |

1. **Algorithm**

    The step – by – step specification of how to reach the solution to…

2. **Flow chart**

    A diagram representing the logical sequence between…

3. **Coding**

    The translation of the logical steps into a programming…

4. **Machine code**

The basic instructions understood by computers. The processor operates on code which consists of ….

5. **Debugging**

The techniques of detecting, diagnosing, and correcting errors (or "bugs ") which….

Task 3. *Read the text and find answers to these questions.*

1. Do computers understand human languages?
2. What are the differences between low – level and high – level languages?
3. What is an assembler?
4. What is the function of compilers?
5. What do you understand by the terms source program and object program?
6. In the future, could computers be programmed in Spanish, French, or Japanese?

Programming languages

Unfortunately, computers cannot understand ordinary spoken English or any other natural language. The only language they can understand directly is called **machine code**. This consists of the 1s and 0s (binary code) that are processed by the CPU.

However, machine code as a means of communication is very difficult to write. For this reason, we use symbolic languages that are easier to understand. Then, by using a special program, these languages can be translated into machine code. For example, the so – called **assembly languages** use abbreviations such as ADD, SUB, MPY to represent instructions. These mnemonic codes are like labels easily associated with the items to which they refer.

Basic languages, where the program is similar to the machine code version, are known as **low – level languages**. In these languages, each instruction is equipvalent to a single machine code instruction, and the program is converted into machine code by a special program called an **assembler**. These languages are still quite complex and restricted to particular machines.

To make the programs easier to write and overcome the problem of intercommunication between different types of machines, higher – level languages were designed such as BASIC, COBOL, FORTRAN, or Pascal. These are all problem – oriented rather than machine- oriented. Program written in one of these languages (known as **source programs**) are converted into a lower- level language by means of a compiler (generating the **object- program**). On compilation, each statement in a **high – level language** is generally translated into many machine code instructions.

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

Instructions are written
In a high – level language
(e.g Pascal, BASIC, COBOL, Ada, C, Lisp)
This is known as the source program

▼

Compiler
Compilers translate the
original code into a lower-level
language or machine code so
that the CPU
can understand it

▼

Instructions are compiled and packaged
into a program. The software is ready to run
on the computer.

Task 4. *Make sentences as in the example.*
Example:
Not easy / write instructions in Pascal

It is not easy to write instructions in Pascal.

    1   Advisable / test the program under different conditions.

……………………………………………………………………………

    2   Expensive / set up a data – processing area.

……………………………………………………………………………

    3   Unusual for a program / Work correctly the first time it is tested.

……………………………………………………………………………

    4   Difficult for students / learn FORTRAN.

……………………………………………………………………………

    5   Important / consider the capabilities of the programming language.

……………………………………………………………………………

    6   Quite easy / write instructions in BASIC.

……………………………………………………………………………

IV. PRACTICE

Exercise 1. Now look again at the reading passage in Task 2. Underline the infinitive constructions after modal verbs.

Example:

Unfortunately, computers <u>cannot understand</u> ordinary spoken English…

Exercise 2. Look at these pairs of examples and decide where there is an "important "change in meaning.

1   a   I remember shutting down the computer before I left the room.

     b   Please, remember to buy the new program.

2   a   They stopped to look at the flowchart.

     b   They stopped looking at the flowchart.

3   a   I like studying C language.

     b   I like to study C language in the evening.

4   a   It has started to rain.

     b   It has started to raining.

5   a   He needs to work harder.

     b   This hard disk needs repairing.

V. FURTHER READING

Program Design Language

Program Design Language (or **PDL**, for short) is a method for designing and documenting methods and procedures in software. It is related to pseudocode, but unlike pseudocode, it is written in plain language without any terms that could suggest the use of any programming language or library.

PDL was originally developed by the company Caine, Farber & Gordon and has been modified substantially since they published their initial paper on it in 1975. It has been described in some detail by Steve McConnell in his book Code Complete.
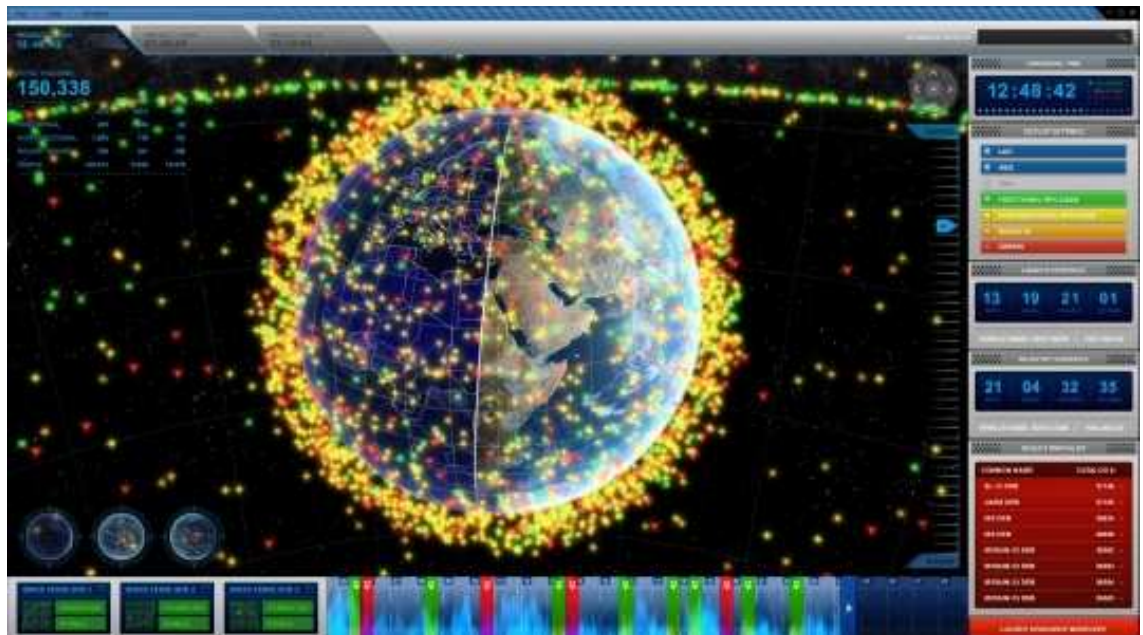
UNIT 14
LANGUAGES

I. VOCABULARY

Appliance	Thiết bị, dụng cụ
Extensible	Có thể mở rộng, kéo dài ra
Element	Yếu tố, nguyên lý cơ bản
Fetch	Tìm về, trào ra, bán được
Lucent	Sáng chói, sáng ngời
Manufacture	Sự chế tạo, sản xuất
Philosophy	Triết học, triết lý
Portals	Cổng, cửa
Recognition	Sự công nhận, thừa nhận, nhận ra
Synthesis	Sự tổng hợp
Toolbox	Hộp dụng cụ
Utility	Tính thiết thực, thực tiễn, tiện ích

II. LANGUAGE WORK

The passive

HELP box

The passive

The passive is formed with the verb to be in the correct tense and the

past participle of the main verb.

Instructions are processed by the CPU. The computer was invented by Charles Babbage.

III. READING COMPREHENSION

Task 1. *Warm-up*

1. Make a list of as many computer languages as you can think of.

2. Do you know any languages used to interact with the Internet through voice-recognition?

Task 2. *Read the voice XML language Study this table and answer the questions below.*

Language	Date	Characteristics	Uses
VXML or voice XML (Voice extensible markup language) Created by a Working Group of four companies- AT and T, lucent, Motorola and IBM	2000	Based on the XML language For input, Voice XML uses voice recognition. For output, it uses pre-recorded audio content and speech synthesis (text-to-speech) How do you access a voice web portal? First, you dial its phone number. Then the call is received by a telephone server and the Voice XML pages are fetched via HTTP. Finally, you get the required information. A typical Voice XML page could be "sports. vxml".	Used to create voice-user interfaces. Make Internet content accessible via voice and phone. Instead of using a web browser on a PC, you use the telephone to access voice-equipped websites via a Voice XML interpreter (a voice browser) Application: -Voice portals (telephone services where you can hear information about sports, news, traffic, ect. - Voice-enables intranets - Voice e-commerce - Home appliances controlled by voice.

1. What does VXML mean?

……………………………………………………………………………

2. Who created voice XML?

……………………………………………………………………………………

3. When was it developed?

……………………………………………………………………………………

4. What technologies does it use for input and output?

……………………………………………………………………………………

5. What are the most suitable applications for voice XML?

……………………………………………………………………………………

6. What do you think are the benefits of having a voice Web?

……………………………………………………………………………………

PRACTICE

Exercise 1. *Look at the HELP box and then complete these sentences with a suitable verb form.*

1. COBOL (use)……for business applications.
2. Original programs (write)……in a high-level language.
3. All computer languages (must translate)……into binary commands.
4. The ADA language (develop)……in 1979.
5. In the 1970s, new languages such as LISP and PROLOG
(design)….for research into Artificial Intelligence.
6. A new version of Turbo Pascal (release)…..just….
7. In the next century, computers (program)….in natural languages like English or French.

Exercise 2. *How do you make the passive in your language?*

Exercise 3. *Read the passage and complete it with the verbs in brackets in the correct form.*

<div align="center">

Visual BASIC

</div>

Visual BASIC is a programming language and an environment (develop)………by Microsoft in 1990. It (use) ……… to create applications for Windows operating systems.

The name "BASIC" (stand) …….. for Beginner's All-purpose Symbolic Instruction Code. The original BASIC language (create)……....in 1965 and adopted by many programmers and PC manufacturers because it was user-friendly and easy to learn.

The adjective "Visual" refers to the technique used to create a graphical user interface. Instead of (write)……… a lot of instructions to describe interface elements, you just (add)……….pre-defined objects such as buttons and dialog boxes, which can (choose)………from a toolbox. It (take) …….. only a few minutes to create a Visual BASIC program. Using the mouse, you simply (drag)………and drop controls (e.g. option buttons, text boxes, icons, menu bar, etc.) into the required position, and then define their color, size and behavior.

Thanks to its object-oriented philosophy and interactive nature, Visual BASIC (enable) ……… the programmer to quickly create all sorts of applications from small system utilities to database programs and Internet server applications.

IV.   FURTHER READING

Language

Language is the human capacity for acquiring and using complex systems ofcommunication, and a language is any specific example of such a system. The scientific study of language is called linguistics. It is impossible to know precisely how many languages there are in the world, and the number depends on a partly arbitrary distinction between languages and dialects. However, estimates vary between around 6,000 and 7,000 languages in number. Natural languages are spoken or signed, but any language can be encoded into secondary media using auditory, visual or

tactile stimuli, for example in graphic writing, braille, or whistling. This is because human language is modality-independent. When used as a general concept, "language" may refer to the cognitive ability to learn and use systems of complex communication, or to describe the set of rules that makes up these systems, or the set of utterances that can be produced from those rules.

CHAPTER VII. COMPUTERS TOMORROW
UNIT 15
INTERNET ISSUE

I. VOCABULARY

alert	Cảnh báo, báo động
attack	Tấn công, ăn mòn
attachment	Phụ tùng, đính/gắn kèm.
Break into	Đột nhập
Bulletin	Bản tin (trình bày ngắn gọn)
Certificate	Chứng nhận, chứng chỉ
Confidential	Bí mật, riêng tư
Consultant	Người tư vấn, cố vấn
Crucial	Quyết định, cốt yếu, chủ yếu
Decryption	Giải mã
Disable	Phá hỏng, mất khả năng hoạt động
Download	Tải xuống
encryption.	Mã khóa
encode	Mã hóa
Expose	Phơi, bày, vạch trần
Hacker	Người giỏi dùng, lập trình máy, tin tặc

Illegally	Bất hợp pháp, trái luật pháp
Intermediary	Trung gian
Infiltrated	Xâm nhập
Intruders	Kẻ xâm phạm, xâm nhập
Lock	khóa
Plain	Khu vực rộng, phẳng.
Private	Cá nhân, riêng tư
Propagate	Phổ biến, truyền bá, truyền
Protection	Bảo vệ
Security	Sự an ninh, sự bảo đảm
Solution	Giải pháp
Temporarily	Một cách tạm thời
Transaction	Giải quyết, thực hiện, giao dịch
(un)scrupulous	Cẩn thận, tỉ mỉ, chi tiết

II. LANGUAGE WORK

HELP box

- Hacker: a person who obtains unauthorized access to computer data
- Cookies: small files used by Web servers to know if you have visited their site before.
- Certificates: file that identify users and Web servers on the net, like digital identification cards.
- Encryption: the process of encoding data so that unauthorized users can't read it.
- Decryption: the process of decoding encrypted data transmitted to you

III. READING COMPREHENSION

Task 1. *Warm-up*

Try to answer these questions.

1. Is it technically possible for computer criminals to infiltrated into the Internet and steal sensitive information?

....

2. What is a hacker?

....

117

3. Can viruses enter your PC from the internet?

....

Task 2. *Read about security and privacy on the internet*

There are a lot of benefits from an open system like the internet, but we are also exposed to hackers who break into computer systems just for fun, as well as to steal information or propagate viruses. So how do you go about making online transactions secure?

Security on the Web

The question of security is crucial when sending confidential information such as credit card numbers. For examples, consider the process of bying a book on the Web. You have to type your credit card number into an order form which passes from computer to computer on its way to the online bookstore. If one of the intermediary computers is infiltrated by hackers, your data can be copied. It is difficult to say how often this happens, but it's technically possible.

To avoid risks, you should set all security alerts to high on your Web browser. Netscape communicator and Internet Explorer display a lock when the Web page is secure and allow you to disable or delete "cookies"

If you use online bank services, make sure your bank uses digital certificates. A popular security standard is SET (secue electronic transactions)

Email privacy

Similarly, as your e-mail message travels across the net, it is copied temporarily on many computers in between. This means it can be read by unscrupulous people who illegally enter computer systems.

The ony way to protect a message is to put it in a sort of "envelope", that is, to encode it with some form of encryption. A system designed to send e-mail privately is Pretty Good Privacy, a freeware program written by Phil Zimmerman.

Network security.

Private networks connected to the Internet can be attacked by intruders who attempt to take valuable information such as Social Security numbers, bank accounts or research and business reports.

To protect crucial data, companies hire security consultants who analyse the risks and provide security solutions. The most common methods of protection are passwords for access control, encyryption and decryption systems, and firewalls.

Virus Protection

Viruses can enter a PC through files from disks, the Internet or bulletin board systems. If you want to protect your system, don't open e-mail attachments from strangers and take care when downloading files from the Web. (Plain text e-mail alone can't pass a virus)

Remember also to update your anti-virus software as often as possible, since new viruses are being created all the time.

Task 3. *Read the text and find answers to these questions*

1. Why is security so important on the Internet?

....

....

2. What security features are offered by Netscape Communicator and Interner Explorer?

....

....

3. What security standard is used by most banks to make online transactions secure?

....

....

4. How can we protet and keep our e-mail private?

....

....

5. Which ways can a virus enter a computer system?

....

....

IV. PRACTICE

Exercise 1. *Match the sentences on the left with the explanations on the right*

A	B
1. update your anti-virus software	a. make sure your bank uses digital certificates.
2. protect your system	b. A popular security standard
3. The most common methods of protection	c. since new viruses are being created all the time.
4. to protect a message	d. don't open e-mail attachments from strangers
5. To avoid risks	e. passwords for access control, encyryption and decryption systems, and firewalls
6. If you use online bank services	f. to put it in a sort of "envelope"
7.SET (secue	g. you should set all security alerts to high on your

| electronic transactions) | Web browser. |

Exercise 2. *Translate the sentences into Vietnamese*

1. You have to type your credit card number into an order form which passes from computer to computer on its way to the online bookstore. If one of the intermediary computers is infiltrated by hackers, your data can be copied.

....
....
....
....

2. To avoid risks, you should set all security alerts to high on your Web browser. Netscape communicator and Internet Explorer display a lock when the Web page is secure and allow you to disable or delete "cookies"

....
....
....

3. A system designed to send e-mail privately is Pretty Good Privacy, a freeware program written by Phil Zimmerman.

....
....

4. Private networks connected to the Internet can be attacked by intruders who attempt to take valuable information such as Social Security numbers, bank accounts or research and business reports.

....
....
....

5. Viruses can enter a PC through files from disks, the Internet or bulletin board systems. If you want to protect your system, don't open e-mail attachments from strangers and take care when downloading files from the Web.

....
....
....

121

V. FURTHER READING

INTRODUCTION TO NETWORKING

A basic understanding of computer networks is requisite in order to understand the principles of network security. In this section, we'll cover some of the foundations of computer networking, then move on to an overview of some popular networks. Following that, we'll take a more in-depth look at TCP/IP, the network protocol suite that is used to run the Internet and many intranets.

Once we've covered this, we'll go back and discuss some of the threats that managers and administrators of computer networks need to confront, and then some tools that can be used to reduce the exposure to the risks of network computing.

UNIT 16
LANs AND WANs

Libraries use a WAN to keep records of loans and to supply information to library users who have modems

I. VOCABULARY

Backup device	thiết bị sao lưu
Desktop	màn hình nền
Enable	cho phép
Including	chứa, bao hàm, bao gồm
Intermediary device	thiết bị trung gian
Local area network – LAN	mạng cục bộ
Network	mạng máy tính, mạng
Network interface card	thẻ giao tiếp mạng
Posting	gửi thông báo
Resource	tài nguyên
Share	chia sẻ

Server	máy chủ
Via	Qua, theo đường, thông qua
Within	trong vòng
Wide area network – WAN	mạng diện rộng

II. LANGUAGE WORK

Ability: CAN

- Can is used to express possibility

E.g. You can buy a computer at the hardware store.

- Can is used to express ability:

E.g. Computer can save a lot of information.

- Can is used to express an acquired skill. In example *can use = knows how to use.*

E.g. Maria can use the computer. She has been taking lessons for many years

III. READING COMPREHENSION

LANs and WANs

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

Most networks link computers within a limited area – within a department, an office or a building. These are called Local Area Networks, or LANs. But networks can link computers across the world, so you can share information with someone on the other side of the world as easily as

sharing with a person at the next desk. When networks are linked together in this way they are called Wide Area Networks, or WANs.

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

Task 1. *Answer the questions*

1. What is a LANs?

....
....

2. What is a WAN?

....
....

3. What are the advantages of networks?

....
....

4. What is the difference between a Local Area Network and Wide Area Network?

....
....

5. What are its hardware components?

....
....

Task 2. *Now read the passage and find out if your answer were correct*

WANs AND WORLDWIDE COMMUNICATIONS

For long-distance or worldwide communications computers and LANs are usally connectec into a wide area network (WAN) to form a single intergrated network. The largest WAN in existence is the Internet.

Networks can be linked together by either Telephone lines or fibre-optic cables. For example, ISDN (intergrated services digital network) and ADSL (Asymmetric Digital Subscriber Line) are an international standard for transmitting digital text, sound, voice and video data over telephone lines. On the other hand, FDDI (fibre distributed data interface) is an optical- fibre network. It transmits data at great speed -100 magabits ore

second. A vaiation called FDDT transmits data at 200 Mbps. FDDI networks are typically used as backbones for wide area networks.

Modern telecommunications use fibre-optic cables because data can be transmitted at a very high speed through the extremely wide bandwidths of glass fibres. The fibre system operates by transmitting light pulses at high frequencies along the glass fibre. This offers considerables advantages (i) the cables require little physical space (ii) They are safe because they don't carry electricity; (iii) they avoid electromagnetic interference.

Networks on different continents can also be connected via Satelite. Computers are connected by a modem either to ordinary telephone wires or fibre-optic cables, which are linked to a dish aerial. This aerial has a large concave reflector for the reception and dending of signals. Then, when signals are received by the satellite, they are amplifieds and sent on to workstations in another part of the world.

Task 3. *Answer these questions*

1. How can computers be linked up over a long distance?

....

....

2. What are the advantages of optical- fibre cables over telephong lines?

....

....

3. What is the function of communications satellites?

....

....

IV. PRACTICE

Exercise 1. *Identify these hardware components of the network.*

a. _____ most networks have at least one central computer which all the desktop computers connect to. This is the most important computer on your network. It stores the data files and application software programs that the users need to access or share it with others.

b. _____ this is the desktop computer or notebook computer on your desk. It is linked to the server, and can access rules and applications on it. Each computer on the network has a device called a network interface card which connects the computer to the network. Many computers come with these cards fitted as standard.

c. _____ Once you have a network you can share any number of these, including printers, scanners, CD-ROM drives, and backup drives.

d. _____ Desktops typically connect via telephone-type cabling to this intermediary device, which enables communication between servers and desktops.

Exercise 2. *Match from (1-10) with (a-j).*

1. You place a floppy disk near a magnet	a. It is not lost when you switch off
2. You press Print Screen	b. The computer hang
3. You input the correct password	c. The cursor moves to the left
4. You add memory to a computer	d. You damage the drive
5. You move the mouse to the left	e. You copy the screen
6. You store data in RAM	f. You have access to the network
7. You use a faster modem	g. You destroy the data
8. There is a memory fault	h. It runs faster
9. You press the arrow key	i. Your phone bill are lower
10. You move a CD-ROM drive with the disk in place.	j. The cursor moves across the screen

Exercise 3. *Translate the sentences into Vietnamese*

1. Most networks link computers within a limited area – within a department, an office or a building. These are called Local Area Networks, or LANs. But networks can link computers across the world, so you can share information with someone on the other side of the world as easily as sharing with a person at the next desk.

…………………………………………………………………………………

….……………………………………………………………………………

…………..………………………………………………………………………

……………….…………………………………………………………………

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

…………………………………………………………………………………

….……………………………………………………………………………

…………..………………………………………………………………………

3. Networks can be linked together by either Telephone lines or fibre-optic cables. For example, ISDN (intergrated services digital network) and ADSL (Asymmetric Digital Subscriber Line) are an international standard for transmitting digital text, sound, voice and video data over telephone lines.

…………………………………………………………………………………

….……………………………………………………………………………

…………..………………………………………………………………………

……………..……………………………………………………………………

4. Modern telecommunications use fibre-optic cables because data can be transmitted at a very high speed through the extremely wide bandwidths of glass fibres.

…………………………………………………………………………………

….……………………………………………………………………………

5. Networks on different continents can also be connected via Satelite. Computers are connected by a modem either to ordinary telephone wires or fibre-optic cables, which are linked to a dish aerial.

……………………………………………………………………………………………………

…..…………………………………………………………………………………………

…………..……………………………………………………………………………………

V. FURTHER READING

Introduction to Network Types
LAN, WAN and Other Area Networks

One way to categorize the different types of computer network designs is by their scope or scale. For historical reasons, the networking industry refers to nearly every type of design as some kind of *area network*. Common examples of area network types are:

- LAN - Local Area Network
- WLAN - Wireless Local Area Network
- WAN - Wide Area Network
- MAN - Metropolitan Area Network
- SAN - Storage Area Network, System Area Network, Server Area Network, or sometimes Small Area Network
- CAN - Campus Area Network, Controller Area Network, or sometimes Cluster Area Network
- PAN - Personal Area Network

129

- DAN - Desk Area Network

LAN and WAN were the original categories of area networks, while the others have gradually emerged over many years of technology evolution.

Note that these network types are a separate concept from network topologies such as bus, ring and star.

UNIT 17
NEW TECHNOLOGIES

I. VOCABULARY

Authentication	xác thực, xác nhận là đúng
Deliver	Phân phối
Dialpad	Bàn phím
E-commerce	Thương mại điện tử
Eliminate	loại trừ, loại ra, rút ra
Flip up	Búng, khiếm nhã, bỡn cợt
Gadget	đồ dùng, bộ phận cải tiến
Handheld	xách tay
Head-mounted	Đội trên đầu
Headset	bộ ống nghe điện đài
Hybrid	Lai, ghép

Illusionary	ảo giác, ảo tưởng
Imaginary	ảo, tưởng tượng
Immersed	Ngâm, chìm
Incorporate	Hợp nhất, kết hợp chặt chẽ
Initiate	đề sướng, khởi nguồn, bắt đầu
Interact	Tương tác
Propelled	Đẩy đi, đẩy tới, chất nổ
Protocol	Giao thức
Pop up	Xuất hiện, xảy ra bất ngờ
Reluctant	Miễn cưỡng
Satellite	Vệ tinh nhân tạo
Simulation	Mô phỏng
Simultaneously	một cách đồng thời
Transmit	Truyền, phát
Vice versa	Ngược lại
Wireless	Không giây
3G (third- generation)	thế hệ thứ ba
3D (three-dimensional)	ba chiều
VR (virtual)	Ảo
WAP (Wireless Application Protocol)	Giao thức ứng dụng không dây
PDA (personal digital assistant)	Thiết bị hỗ trợ cá nhân kỹ thuật số

II. LANGUAGE WORK

Making predictions

HELP box

- Future with will/shall

A computer program will be the world chess champion.

- Future contuous (will be + present participle)
    In twenty years' time, some people will be living in space, inside a

> computerized colony.
>
> - Future perfect (will have + past participle)
>   By 2020, new technology will have revolutionized communications.
> - Special structures
> - Possibility (may/might/could)
>   Scientists may discover new electronic components.
> - Probability (likely to)
>   Talking machines are likely to be built
> - Certainly (certainly, definitely, certain to)
>   Working hours will definitely become shorter with the help of computers. Prices are certain to go up.

III. READING COMPREHENSION

Task 1. *Look at these pictures and match them with texts 1 to 4*
New product

1. Not long ago, mobile phones could just transmit voice and SMS messages. Now they can display Internet information thanks to the Wireless Application Protocol or WAP.

Some hybrid models combine a phone with a PDA. They look like a regular phone with a dialpad and a small screen on its front. But if you flip up the front cover you find a larger screen that is touch-sensitive. Some include a virtual keyboard which pops up when you want to enter email text or a WAP address.

But the future is called "third-generation" (3G) mobiles. They transmit a caller's picture and voice simultaneously. UMTS mobile phones deliver users information, e-commerce, games and videoconferencing via fixed, wireless and satellite networks.

2. Internet TV sets allow you to surf the Web and have email while you are watching TV, or vice versa. Imagine watching a film on TV and simultaneously accessing a Web site where you get information on the actors in the film. This is ideal for people who are reluctant to use PCs but are interested in the Internet.

Web TV was the first company which brought Internet services to TV viewers through a set – top computer box. Another option is WorldGate's technology, which offers the Internet through cable TV.

The model built by OEM Metec integrates a complete Windows PC in a TV set. The next generation of Internet – enabled televisions will incorporate a smart-card for home shopping, banking and other interactive services.

a
b

c
d

3. Virtual reality lets people interact with artificial objects and environments through three-dimensional computer simulation. In a VR system, you are hooked to a computer through a controlling device, such as a glove, and head-mounted displays give you the feeling of being propelled into an artificial three-dimensional world. The computer brings to life

events in a distant, virtual world using databases or real-time objects and sounds. Your senses are immersed in an illusionary, yet sensate, world.

VR can be applied to anything from video games, testing a motor vehicle, visiting a virtual exhibition, to checking out imaginary kitchen designs.

4. Bluetooth is a standard wireless technology designed to connect mobile phones computers and other devices, replacing direct cable links. Since it uses high-frequency radio waves, the transfer of data and voice is very fast. All data are protected by advanced methods of encryption and authentication.

Bluetooth was initiate by Ericsson and the objective was to eliminate cables between mobile phones, PC cards, headsets, ect. Today it is supported by companies such as Nokia, IBM, Toshiba and Intel.

With Bluetooth, a handheld computer can be used to surf the Internet wherever you are, or to transfer files with other participants in meetings. Mobile phones will soon be used to control all sorts of gadgets in the house, from TV sets to refrigerators.

> - **PDA** Personal Digital Assistant which includes an address book, a calendar, Internet access, ect.
> - **WAP** Wireless Application Protocol which enables mobile phones to access the Internet.
> - **IBM** International Business Machines.

Task 2. *Write a suitable caption under each picture.*

Task 3. *Look at the picture below and read the text. Then discuss these questions in small groups and prepare a short report for the class.*

1. What are the most important differences between handheld computers (eg. palmtops, PDAs, ect.) and traditional compters?

....

....

2. What are the advantages and limitations of handheld computers?

....

....

Psion Series 5mX handheld computers have a keyboard and a touch-sensitive screen. Although every light weight, they have one month battery capacity, 16 MB of RAM, a windowing OS, a microphone for sound recording and a full range of application which lets you sent e-mail and browse the web		

3. Should students be allowed to use handheld computers in class?

....

....

4. Do you agree with this statement: "Soon, handheld PCs will combine the functions of traditional PCs, cellular phones and pocket-size organizers?

....

....

IV. PRACTICE

Exercise 1. *Match the terms on the left with the explanations on the right.*

1	Internet – enabled TV	a	Location on the Internet where a company puts web pages
2	Website	b	Technology that allows users to see a computer simulated world in which they can move.
3	Virtual reality	c	TV set used as an Internet device
4	WAP	d	Device that can handle multiple data types including voice and video.
5	Wireless	e	Protocol that enables mobile phones to access Internet information.
6	3G mobile phone	f	Without the use of cables.

Exercise 2. *Look at the HELP box and then expand these sentences using the future perfect tense.*

1. In ten years time/a lot of people/connect their television to the telephone line.

…………………………………………………………………………

…………………………………………………………………………

2. Portable PCs/replace/desktop PCs/in a few years' time.

…………………………………………………………………………

…………………………………………………………………………

3. With the help of computers/doctors/find/cure/AIDS and cancer/by the year 2010.

…………………………………………………………………………

…………………………………………………………………………

4. By this time next year/software manufactures/make/hundreds of new programs.

…………………………………………………………………………

…………………………………………………………………………

5. by 2020/ post offices and bookshops/disappear.

…………………………………………………………………………

…………………………………………………………………………

6. By this time next year/I/Buy/handheld computer.

…………………………………………………………………………

…………………………………………………………………………

Exercise 3. *Here are some predictions made by an intelligent supercomputer. In small groups, write your own predictions.*

* Work/jobs

Eg. By the year 2030 human labour in industry will have been replace by robots.

Yours:

…………………………………………………………………………

…………………………………………………………………………

- **Homes**

Eg. Families will have robots to do the housework.
Yours:

…………………………………………………………………………………………….

…………………………………………………………………………………………….

Education/Schools

Eg. By the end of the next century, every student in every school in the
world will have a PC
Yours:

…………………………………………………………………………………………….

…………………………………………………………………………………………….

Money/Holidays

Eg. Cash will disapper
Yours:

…………………………………………………………………………………………….

…………………………………………………………………………………………….

Exercise 4. *Translate the sentences into Vietnamese*

1. Some hybrid models combine a phone with a PDA. They look like a
regular phone with a dialpad and a small screen on its front. But if you flip
up the front cover you find a larger screen that is touch-sensitive.

……………………………………………………………………………………

……………………………………………………………………………………

……………………………………………………………………………………

2. Internet TV sets allow you to surf the Web and have email while you are watching TV, or vice versa. Imagine watching a film on TV and simultaneously accessing a Web site where you get information on the actors in the film.

……………………………………………………………………………………

……………………………………………………………………………………

……………………………………………………………………………………

3. In a VR system, you are hooked to a computer through a controlling device, such as a glove, and head-mounted displays give you the feeling of being propelled into an artificial three-dimensional world.

……………………………………………………………………………………

……………………………………………………………………………………

……………………………………………………………………………………

4. Bluetooth is a standard wireless technology designed to connect mobile phones computers and other devices, replacing direct cable links. Since it uses high-frequency radio waves, the transfer of data and voice is very fast.

……………………………………………………………………………………

……………………………………………………………………………………

……………………………………………………………………………………

5. With Bluetooth, a handheld computer can be used to surf the Internet wherever you are, or to transfer files with other participants in meetings. Mobile phones will soon be used to control all sorts of gadgets in the house, from TV sets to refrigerators.

……………………………………………………………………………………

……………………………………………………………………………………

……………………………………………………………………………………

V. FURTHER READING

SPEED BOOST

Also pushing the wired-to-wireless envelope is the approval of the 802.11n wireless standard, coupled with capabilities that render it superior to 802.11a, 802.11b and 802.11g. "Ratification has made the standard mainstream, so end-users are comfortable going wireless even for mission-critical applications, like office videoconferencing and retail inventory management," asserts Dilip Advani,productmanager,AirMagnet

Vendors and VARs say customers in many vertical markets favor the improved throughput available with 802.11n Wi-Fi, which reportedly offers four to six times the bandwidth available under 802.11 a/b/g standards. Other advantages of 802.11n over its predecessors encompass enhanced efficiency bolstered by MIMO (multiple input and multiple output) technology, wherein multiple antennas are employed at the network's transmitter and receiver. MIMO accomplishes the boost via higher spectral efficiency, which yields more bits per second per hertz of bandwidth, and link reliability or diversity, which reduces fading. Additionally, 802.11n has the potential to support more users per single access point than its predecessors, with the extra promise of better

performance from less equipment, observes Joe Epstein, senior director of technology, Meru Networks

© ASUSTeK Computer Inc.

PHỤ LỤC

A central processing unit (CPU), also referred to as a central processor unit, is the hardware within a computer system or smartphone which carries out the instructions of a computer program by performing the basic arithmetical, logical, and input/output operations of the system: *Bộ xử lý trung tâm (CPU) là phần cứng trong một máy tính hoặc điện thoại thông minh thực hiện các hướng dẫn của chương trình máy tính bằng cách thực hiện các phép tính cơ bản, và nhập/ xuất dữ liệu của hệ thống*

A personal computer (PC) is a microcomputer designed for use by one person at a time: *máy tính cá nhân (PC) là máy vi tính được thiết kế để một người sử dụng tại một thời điểm.*

Bluetooth is a wireless technology standard for exchanging data over short distances (using short-wavelength radio transmissions in the ISM band from 2400–2480 MHz) from fixed and mobile devices, creating personal area networks (PANs) with high levels of security: *Bluetooth là một chuẩn công nghệ không dây để trao đổi dữ liệu trên một khoảng cách ngắn (bằng cách sử dụng truyền dẫn vô tuyến bước sóng ngắn trong băng tần ISM từ 2400-2480 MHz) từ các thiết bị di động và cố định, tạo ra các vùng mạng cá nhân (chảo) với mức độ bảo mật cao.*

Computer hardware equals the collection of physical elements that comprise a computer system*: Phần cứng máy tính là các yếu tố vật chất tạo nên một hệ thống máy tính.*

Computer software, or just software, is a collection of computer programs and related data that provides the instructions for telling acomputer what to do and how to do it: *Phần mềm máy tính thường gọi là phần mềm là các chương trình máy tính và dữ liệu liên quan cung cấp các hướng dẫn để máy tính phải làm gì và cách làm.*

Short Message Service (SMS) is a text messaging service component of phone, web, or mobile communication systems, using standardized communications protocols that allow the exchange of short text messages between fixed line or mobile phone devices: *Dịch vụ tin nhắn ngắn (SMS) là một tin nhắn văn bản của điện thoại, web, hoặc các hệ thống thông tin di*

142

động, bằng cách sử dụng giao thức truyền thông tiêu chuẩn cho phép việc trao đổi tin nhắn văn bản ngắn giữa điện thoại cố định hoặc các thiết bị điện thoại di động.

Storage Devices are the data storage devices that are used in the computers to store the data: *Thiết bị lưu trữ là thiết bị lưu trữ dữ liệu được sử dụng trong các máy tính để lưu trữ các dữ liệu.*

TÀI LIỆU THAM KHẢO

1. **Betty Schrampfer Azar** , 2001. *Understanding and using English Grammar*, The Youth Press

2. **Jesson, J & Peacock, G**, 2003, *Starter Award in ICT: Next Steps*, Cambridge University Press

3. **Meredith, S,** 2004, *Starting Computers*, Usborne Publishing Ltd

4. **Raymond Murphy**, 1994, *English grammar in use,* Nhà xuất bản Giáo dục.

5. **Randolph Quirk & Sydney Greenbaum**, 2008, *A university Grammar of English*, Nhà xuất bản Hải Phòng.

6. **Santiago Remacha Esteras**, 2003, *English for computer users*, Cambridge university press.

7. **Thac Binh Cuong** , 2000, *English for IT and computer users*, Ha Noi science and technology Press.

8. **Trần Hữu Mạnh,** 2008, *Fundamentals of English Traditional Syntax*, Nhà xuất bản Đại học Quốc Gia- Hà nội.

9. www.computerhope.com/jargon/.../contunit.ht...

10. www.apple.com/mac.

11. compnetworking.about.com/.../network_types