

BỘ NÔNG NGHIỆP VÀ PHÁT TRIỂN NÔNG THÔN
TRƯỜNG CAO ĐẲNG LƯƠNG THỰC – THỰC PHẨM

GIÁO TRÌNH

MÔN HỌC: TIẾNG ANH CHUYÊN NGÀNH CNTT
NGÀNH/NGHỀ: CÔNG NGHỆ THÔNG TIN (ỨNG DỤNG PHẦN MỀM)
TRÌNH ĐỘ: CAO ĐẲNG

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TUYÊN BỐ BẢN QUYỀN

Tài liệu này thuộc loại sách giáo trình nên các nguồn thông tin có thể được phép dùng nguyên bản hoặc trích dùng cho các mục đích về đào tạo và tham khảo.

Mọi mục đích khác mang tính lệch lạc hoặc sử dụng với mục đích kinh doanh thiếu lành mạnh sẽ bị nghiêm cấm.

LỜI GIỚI THIỆU

Giáo trình “Tiếng Anh chuyên ngành Công nghệ thông tin” là tài liệu được biên soạn để phục vụ cho việc giảng dạy, học tập của giáo viên và học sinh - sinh viên ngành Công nghệ thông tin (Ứng dụng phần mềm). Tài liệu cung cấp những kiến thức tổng hợp về 8 nội dung trải dài trong nhiều chủ đề khác nhau trong từng lĩnh vực hẹp của ngành Công nghệ thông tin. Giáo trình được biên soạn theo đề cương môn học “Tiếng Anh chuyên ngành Công nghệ thông tin” ở bậc Cao đẳng ngành Công nghệ thông tin (Ứng dụng phần mềm). Giáo trình được chia làm tám đơn vị bài học:

Unit 1 – Cung cấp các từ vựng cơ bản về các ứng dụng của máy tính trong đời sống hằng ngày, hướng dẫn cách phát âm chuẩn xác đối với các thuật ngữ chuyên môn cùng những bài tập giúp cho người học phát triển các kỹ năng đọc hiểu, dịch thuật.

Unit 2 – Đề cập đến chủ đề các thiết bị phần cứng và các bài tập phát triển kỹ năng có liên quan đến chủ đề này.

Unit 3 – Đề cập đến chủ đề Các hệ điều hành và các bài tập liên quan giúp phát triển kỹ năng.

Unit 4 – Cơ sở dữ liệu, đây là chủ đề mà bất kỳ một sinh viên chuyên ngành Công nghệ thông tin nào cũng cần phải nắm vững.

Unit 5 – Thiết kế đồ họa – đây là chủ đề nóng trong những năm gần đây, cung cấp cho người học 1 khối lượng từ vựng học thuật theo chủ đề này.

Unit 6 – Chủ đề về truyền thông đa phương tiện.

Unit 7 – Chủ đề về Lập trình và các ngôn ngữ lập trình.

Unit 8 – Chủ đề về mạng máy tính.

Giáo trình không những phục vụ cho việc giảng dạy, học tập môn học “Tiếng Anh chuyên ngành Công nghệ thông tin” mà còn là tài liệu tham khảo cho sinh viên trong quá trình học chuyên ngành cũng như cho những người đi làm trong lĩnh vực này. Mặc dù đã cố gắng tóm gọn đầy đủ trong một giáo trình, song không thể tránh khỏi những thiếu sót. Kính mong đồng nghiệp và bạn đọc đóng góp ý kiến để giáo trình được hoàn thiện hơn.

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**GIÁO TRÌNH MÔN HỌC TIẾNG ANH CHUYÊN NGÀNH
CÔNG NGHỆ THÔNG TIN**

Mã môn học: 1010005

UNIT 1: COMPUTER APPLICATIONS

Introduction:

As computer systems become more intelligent, they are used in a wider variety of work situations where previously it was necessary to employ people. One of the uses considered in this unit is police speed traps used to catch drivers that are breaking the official speed limit.

Objectives:

- Ignoring irrelevant information when they read
- Describing a process
- Coping with not understanding and not being understood
- Writing a description of a process

A. CONTENTS

1. Warm up

1.1. Work in groups. List as many uses as you can for computers in one of these areas.

- ✓ Supermarket
- ✓ Hospitals
- ✓ Airports
- ✓ Police headquarters

Supermarkets: *identifying items; pricing; stock control; checking cash cards; checking sell-by dates; tracking customer buying habits; monitoring and controlling freezer temperatures.*

1.2. Match these words (1-8) to the correct locations (a-d).

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

2. Reading

2.1. Reading Task 1

Computers are part of our everyday lives. They have an effect on almost everything you do. When you buy groceries at a supermarket, a computer is used with laser and barcode technology to scan the price of each item and present a total. Barcoding items (clothes, food and books) requires a computer to generate

the barcode labels and maintain the inventory. Most television advertisements and many films use graphics produced by a computer. In hospitals, bedside terminals connected to the hospital's main computer allow doctors to type in orders for blood tests and schedule operations. Banks use computers to look after their customers' money. In libraries and bookshops, computers can help you to find the book you want as quickly as possible.

Tick (v) the computer uses mentioned in the following article:

- | | |
|--|-----------------------------------|
| <input type="radio"/> Home | <input type="radio"/> art |
| <input type="radio"/> hospitals | <input type="radio"/> banking |
| <input type="radio"/> Engineering | <input type="radio"/> libraries |
| <input type="radio"/> shopping | <input type="radio"/> film-making |
| <input type="radio"/> television advertising | <input type="radio"/> schools |

2.2. Reading Task 2

2.2.1. Read the text and find the answers to these questions.

1. What tool is often used in data mining?
2. What AI method is used for the following processes?
 - a. Separate data into subsets and then analyze the subsets to divide them into further subsets for a number of levels.
 - b. Continually analyze and compare data until patterns emerge.
 - c. Divide data into groups based on similar features or limited data ranges.
3. What term is used for the patterns found by neural networks?
4. When are clusters used in data mining?
5. What types of data storage can be used in data mining?
6. What can an analyst do to improve the data mining results?
7. Name some of the ways in which data mining is currently used.

Data mining is simply filtering through large amounts of raw data for useful information that gives businesses a competitive edge. This information is made up of meaningful patterns and trends that are already in the data but were previously unseen.

The most popular tool used when mining is artificial intelligence (AI). AI technologies try to work the way the human brain works, by making intelligent guesses, learning by example, and using deductive reasoning. Some of the more popular

AI methods used in data mining include neural networks, clustering, and decision trees.

Neural networks look at the rules of using data, which are based on the connections found or on a sample set of data. As a result, the software continually analyzes value and compares it to the other factors, and it compares these factors repeatedly until it finds patterns emerging. These patterns are known as rules. The software then looks for other patterns based on these rules or

sends out an alarm when a trigger value is hit.

Clustering divides data into groups based on similar features or limited data ranges. Clusters are used when data isn't labeled in a way that is favorable to mining. For instance, an insurance company that wants to find instances of fraud wouldn't have its records labeled as fraudulent or not fraudulent. But after analyzing patterns within clusters, the mining software can start to figure out the rules that point to which claims are likely to be false.

Decision trees, like clusters, separate the data into subsets and then analyze the subsets to divide them into further subsets, and so on (for a few more levels). The final subsets are then small enough that the mining process can find interesting patterns and relationships within the data.

Once the data to be mined is identified, it should be cleansed. Cleansing data frees it from duplicate information and erroneous data. Next, the data should be stored in a uniform format within relevant categories or fields. Mining tools can work with all

types of data storage, from large data warehouses to smaller desktop databases to flat files. Data warehouses and data marts are storage methods that involve archiving large amounts of data in a way that makes it easy to access when necessary.

When the process is complete, the mining software generates a report. An analyst goes over the report to see if further work needs to be done, such as refining parameters, using other data analysis tools to examine the data, or even scrapping the data if it's unusable. If no further work is required, the report precedes to the decision makers for appropriate action.

The power of data mining is being used for many purposes, such as analyzing Supreme Court decisions, discovering patterns in health care, pulling stories about competitors from newswires, resolving bottlenecks in production processes, and analyzing sequences in the human genetic makeup. There really is no limit to the type of business or area of study where data mining can be beneficial.

2.2.2. Match the terms in Table A with the statements in Table B.

Table A	Table B
1. Data mining	a. Storage method of archiving large amounts of data to make it easy to access
2. AI	b. Data free from duplicate and erroneous information
3. Cleansed data	c. A process of filtering through large amounts of raw data for useful information
4. Data warehouse	d. A computing tool that tries to operate in a way similar to the human brain.

2.2.3. Mark the following as True or False:

- a. Data mining is a process of analyzing known patterns in data.
- b. Artificial intelligence is commonly used in data mining.
- c. In data mining, patterns found while analyzing data are used for further analyzing the data.
- d. Data mining is used to detect false insurance claims.
- e. Data mining is only useful for a limited range of problems.

2.2.4. Complete the following description of the data mining process using words from the text:

Large amounts of data stored in data (1)..... are often used for data first (2).....to remove (3).....and errors. The data is information is then analyzed using a tool such as analysis report is then analyzed by an who decides if the (4)..... need to be refined, other data (5)..... tools need to be used, or if the results need to be discarded because they are (6)The analyst passes the final results to the (7)makers who decide on the ... action.

3. Language work:

The Present Passive

Study these sentences.

1. The radar sends out of beam of radio waves
2. The information is stored on a smart card.

In 1 the verb is active and in 2 it is passive, the Present Passive. Why is it so? What difference does it make? In 1 the agent responsible for the action is included – the radar. In 2 the agent is not included though we know what it is – the microprocessor. *The passive is often used to describe the steps in a process where the action is more important than the agent and where the agent is already known to the reader.* If we need to add the agent, we can do so like this:

3. The information is stored on a smart card *by the microprocessor.*

3.1. Describe the operation of the new speed trap by converting each of these statements to the Present passive. Add information on the agent where you think it is necessary.

1. The first unit records the time each vehicle passes.
2. It identifies each vehicle by its number plates using OCR software.
3. It relays the information to the second unit.
4. The second unit also records the time each vehicle passes.
5. The microprocessor calculates the time taken to travel between the units.

6. It relays the registration numbers of speeding vehicles to police headquarters.
7. A computer matches each vehicle with the DVLC database.
8. It prints off the letter to the vehicle owners using mail merge.

3.2. Write a description of its operation in the Present passive.

- a. The scanner converts the barcode into electrical pulses.
- b. The branch computer sends the price and description of the
- c. product to the EPOS till.
- d. The scanner reads the barcode.
- e. The branch computer records the sale of the product.
- f. The till shows the item and price.
- g. The checkout operator scans the item.
- h. The scanner sends the pulses to the branch computer.
- i. The till prints the item and price on the paper receipt.
- j. The branch computer searches the stock file for a product matching the barcode EAN.

4. Writing

4.1. Match the places in column A with the computer used in column B.

A	B
1. banks	a. control machines
2. factories	b. calculate the bill
3. homes	c. look after patient records and medicines
4. hospitals	d. provide entertainment and information
5. shops	e. control our money

4.2. Now fill in the gaps in this paragraph about computer uses.

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

B. PRACTICE

1. Match the pictures (a-f) to the correct user (1-6)

1. Students playing computer games while traveling:
2. Large company processing payroll data:
3. Traveling salesperson giving marketing presentations:
4. Large scientific organization processing work on nuclear research:
5. Businessperson keeping in touch with clients while traveling:
6. Secretary doing general office work:



2. Draw a line to match each item (1-4) to the correct definition (a-d).

1. Data Mining	a. Storage method of archiving large amounts of data to make it easy to access.
2. AI	b. Data free from duplicate and erroneous information
3. Cleansed Data	c. A process of filtering through large amounts of raw data for useful information
4. Data Warehouse	d. A computing tool that tries to operate in a way similar to the human brain.

3. Match each item in Column A with its function in Column B.

A Item	B Function
1. RAM	a. Controls 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. Flash memory	e. Reads and writes to electronic chips on a card
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	h. Provides extremely fast access for sections of a program and its data
9. Cache	i. Controls the timing of signals in the computer
10. ROM	j. Controls all the operations in a computer.

4. Complete the sentences with the appropriate form of the verb listed below.

1. To avoid losing data, you should.....your files regularly.

back up free up start up upload

2. Delete some files to.....space on your hard disk.
3. Data is.....from regional PCs to the company's mainframe each night.
4. The operating system boots up when you.....your computer.

5. 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 computers 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.

C. MEMORY

- Work out most of the stages in the operation of a system, use most of the terms you need to describe.
- Master the form and how to use Present Passive.

UNIT 2: HARD DRIVES

Introduction:

The electronic memory inside a computer is of limited capacity and can only hold data when the computer is switched on. A storage device is used to store data that is not being processed and to save data when the computer is switched off. There are a variety of storage devices and storage media available. These include magnetic devices, optical devices and magneto-optical drives.

Objectives:

- Understand the vocabulary used to refer to data storage devices
- Read and understand documents about data storage devices
- Be accurate in English pronunciation.
- Change the habit of using Vietnamese phonetics when calling out the names of storage devices

A. CONTENTS:

1. Warm up

Try to answer these questions.

1. What is the main function of a hard disk?
2. Which unit is used to measure hard disk capacity?
3. Can you think of one advantage that hard disks have over floppies?



A hard disk drive spins at about 7,200 revolutions per minute - 20 times the speed of a floppy disk drive.

2. Reading

2.1. 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.

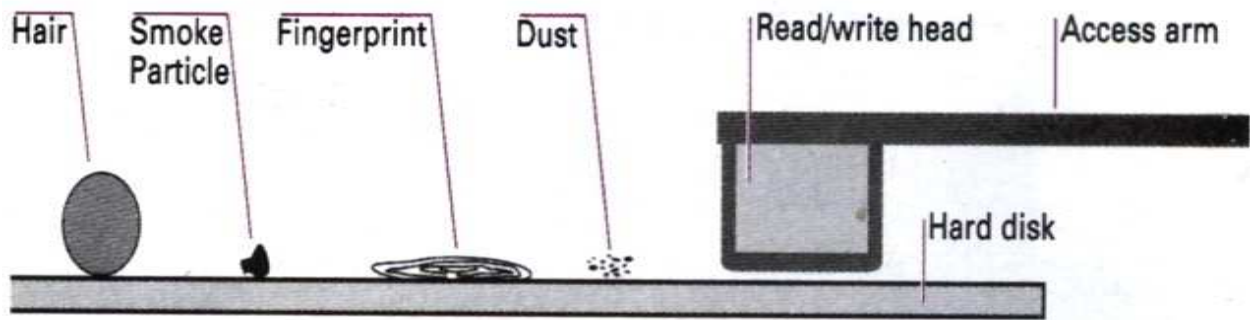
 <p>3.5-inch diskette <i>A big-density (HD) floppy disk can store 1.44 MB of information. A floppy drive uses 3.5-inch disks and it's called coffee drive A.</i></p>	 <p>Hard disk <i>Most PCs have one hard drive, called drive C. It's used to keep software and files organized in a convenient way. A hard disk can hold several gigabytes of data.</i></p>	 <p>Removable hard drive <i>Popular drives are the Zip and Jaz systems from Iomega. A Syquest cartridge can hold 1.5 GB.</i></p>
 <p>Tape drive <i>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.</i></p>	 <p>Pocket-sized drive <i>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.</i></p>	 <p>Microdrive <i>A Microdrive is the smallest hard drive for digital cameras, laptops, and audio players. It comes in 340 MB and 1 GB capacities. It uses a PC Card adapter.</i></p>

2.2. Study this diagram. Answer these questions.

1. What sort of things can damage a hard disk?
2. How big is the gap between the read/write heads and the disk?
3. How can we protect a disk drive from damage?

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

2.3. Work in groups of three. Read the text and complete your sections of the table.



Medium	advantages	disadvantages
Floppy disk
Fixed hard disk
Removable hard disk
CD-ROM disk
Magneto-optical disk
Magnetic disk

Storage devices

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

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

C. You can move data from place to place using removable hard disks. They are almost as fast as fixed hard disks and also have high capacities, but they are relatively expensive. They do not all conform to one standard and they are not very common.

D. CD-ROM disks are very common and conform to a standard. They are removable and can hold 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.

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

F. Magnetic tape is a cheap medium. You can use it to store very large 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.

2.4. Now exchange information with the other students in your group to complete all the sections of the table. Ask questions like these:

What are the advantages of floppy disks?

What are the advantages of magnetic tape?

Do CD-ROMs conform to a standard?

3. Language work: Linking words

Study these examples:

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

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.*

HELP BOX

Indicating addition: furthermore, in addition, besides, moreover, and.

Making contrasts: however, whereas, although, but, on the other hand.

Explaining the results or effects of something: therefore, as a result, so, thus, consequently, because.

Fill in the gaps in this summary of storage devices 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 data with removable hard disks, (4).....they are expensive. CD-ROMs 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.

B. PRACTICE

burn	capacity	card	drawer
eject	free space	hard drive	stick

1. Fill in the gaps in each sentence using the correct word from this list

- The data and applications on your computer are stored on the
- To run this application you need at least 50MB ofon your hard drive.
- My computer's hard drive has aof 120GB.
- Do you like this CD? I canyou a copy if you want.
- The opposite of "Insert the DVD" is "..... the DVD".
- I can't eject the CD. I think the 's stuck.
- Digital cameras usually store pictures on a memoryor a memory

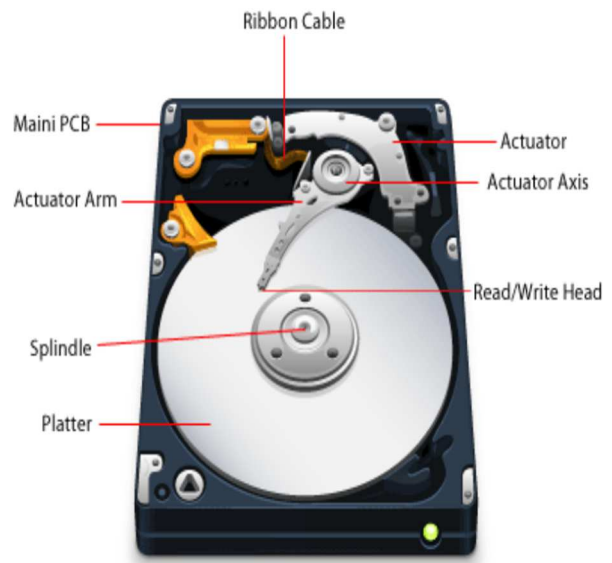
2. Read the text below and decide whether these sentences are true or false.

Correct the false ones:

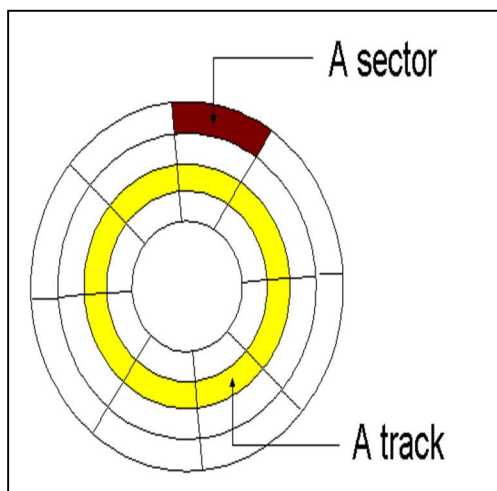
- A hard drive spins at the same speed as a floppy disk drive.
- If you format a hard drive that has files on it, the files will be deleted.
- Hard drives cannot be partitioned to run separate operating systems on the same disk.
- Seek time and transfer rate mean the same thing.

e. Disk drives are not shock resistant, especially in operating mode.

A floppy disk is so called because it consists of a flexible sheet of plastic, coated with iron oxide—a magnetizable material. A floppy disk drive spins at 360 revolutions per minute (rpm), so it's relatively slow. However, a hard drive spins at over 7,200 rpm and stores data on a stack of metal rotating disks called platters. This means you can store much more data and retrieve information much faster.



New disks need to be formatted before you can use them, unless they come preformatted from the manufacturer. When the disk is formatted, the operating system (OS) organizes the disk surface into circular tracks and divides each track into sectors. The OS creates a directory which will record the specific location of files. When you save a file, the OS moves the read/write head of the drive towards empty sectors, records the data and writes an entry for the directory. Later on, when you open that file, the OS looks for its entry in the directory, moves the read/write heads to the correct sector, and reads the file in the RAM area. However, formatting erases any existing files on a disk, so do not format disks on which data that you don't want to lose is stored.



Toshiba hard disk

A track and a sector in hard disk

The OS allows you to create one or more partitions on your hard drive, in effect dividing it into several logical parts. Partitions let you install more than one operating system (e.g., Windows and Linux) on your computer. You may also decide to split your hard drive because you want to store the OS and programs on one partition and your data files on another; this allows you to reinstall the OS when a problem occurs, without affecting the data partition, and it is measured in milliseconds (ms); most hard drives have a seek time of 7 to 14 ms. Don't confuse this with transfer rate - the average speed required to transmit data from the disk to the CPU, measured in megabytes per second.

3. Choose the correct word in brackets to complete these sentences:

- a. (*Although/Consequently*) CDs and DVDs are similar in size and shape, their data structure is very different.
- b. DVDs hold more data than CDs. The pits burnt into the disc are smaller than on a CD, and the tracks are closer together. (*On the other hand, / As a result*), DVDs can have up to four recording layers.
- c. A Blu-ray disc drive costs a lot of money (*but/so*) you should use it carefully.
- d. Blu-ray is expected to replace DVD over the coming years (*because/besides*) it offers much greater storage capacity.
- e. Both Blu-ray (*and / in addition*) HD-DVD devices are backward compatible with current CDs and DVDs, meaning you can play your old discs on the new players.
- f. Sony has invested millions of dollars in the development of Blu-ray technology. The success of Blu-ray is (*whereas/ therefore*) vital for the company's future.

C. MEMORY

- Master the vocabulary used to refer to data storage devices.
- Know how to use linking words to connect sentences.

UNIT 3: OPERATING SYSTEMS

Introduction:

The OS (Operating Systems) is the set of computer programs that allow the user to perform basic tasks like copying, moving, saving and printing files. It also provides an interface between applications programs and the computer hardware. As a user interacts with an application program communicates with the computer hardware. The work of the operating system takes place in the background and is not always obvious to the user.

Objectives:

- Learn about the function of the operating system.
- Learn about the features of graphical user interface (GUI), or GUI
- Practice using the correct determiners with countable and uncountable nouns
- Learn how to summarize a written text
- Learn about the basic features and application of word processors.
- Learn how to give and follow instructions
- Study the basic features and applications of spreadsheets and databases
- Practice forming and pronouncing plurals.

A. CONTENTS:

1. Warm up

1.1. Translate these terms and expressions into your own language. Use a dictionary or the Internet to help you.

- 1 User Interface:
- 2 procedures:
- 3 commands:
- 4 Tools:
- 5 desktops:
- 6 nested folders:
- 7 launch a program:
- 8 source code:

1.2. Label the interface features (a-j) on the screenshot of Apple's Mac OS X operating system with words in bold from this list.

- **Desktop**: the background screen that displays icons and folders
- **Window**: a scrollable viewing area on screen; it can contain files and folders
- **Icon**: a picture representing an object; for example, a **document**, **program**, **folder** or **hard driver icon**.

- **Folder:** a directory that holds data, programs and other folders
- **Menu bar:** a row of words that open up menus when selected.
- **Drop-down (pull-down) menu:** a list of options that appears below a menu item when selected
- **Scroll bar:** a horizontal or vertical bar that is clicked and dragged in the desired direction.
- **Dock:** set of icons at the bottom of the screen that give you access to the things you use most.



2. Reading:

2.1 The operating system

2.1.1. Translate these terms and expressions into Vietnamese:

The OS (operating system) is the set of computer programs that allow the user to perform basic tasks like copying, moving, saving and printing files. It also provides an **interface** between (i.e., provides communication between) **applications programs** (e.g., word processors or spreadsheets) and the computer hardware. As a user interacts with an applications program on the screen, the applications program communicates with the operating system and the operating system communicates with the computer hardware. The work of the operating system takes place in the background and is not always obvious to the user.

The most important program in an OS is the **supervisor program**. It remains in memory all the time that the computer is operating, and manages the OS. It loads other parts of the OS into memory when they are needed. Programs that remain in memory while the computer is in use are known as **resident programs**. Programs that only stay in memory while they are being used are known as **non- resident programs**.

Some operating systems are command driven (i.e., the user runs a program by typing a command). The screen is usually blank except for a symbol (e.g., \$) which acts as a **command prompt**. When the command is typed at the prompt and the Enter key is pressed, the command is processed and the output is displayed on the screen. OS commands are usually short words or abbreviations (e.g., date, logout, passwd, ls).

Unix is a command driven operating system used on all sizes of computers, but mostly large multi-user, multi-tasking mainframe computers. It is available in many versions, such as Linux, Mimix, HP-UX, Xenix, Venix, Ultrix, A/UX, AIX, Solaris, and Power Open. Other command driven operating systems mentioned in this unit include: VAX/VMS, MVS VM OS/390, NetWare, MS- DOS and PC-DOS.

Some operating systems have a GUI (pronounced like 'goo-ey' - **graphical user interface**) that allows the user to use a mouse to click on icons on the screen or choose commands from a list of choices known as a **menu**. Operating systems with graphical interfaces mentioned in this unit include: MacOS, OS/2, Penpoint, Windows NT, Windows 3.x, Windows 9X and Windows 2000.

GUI OPERATING SYSTEM

The term **user interface** refers to the standard procedures that a user follows in order to interact with a computer. In the late 1970s and early 80s, the way users accessed computer systems was very complex. They had to memorize and type a lot of commands just to see the contents of a disk, to copy files or to respond to a single prompt. In fact, it was only experts who used computers, so there was no need for a user-friendly interface.

In 1984, Apple produced the Macintosh, the first computer with a mouse and a **graphic user interface (GUI)**. Macs were designed with one clear aim: to facilitate interaction with the computer. A few years later, Microsoft launched Windows, another operating system based on graphics and intuitive tools.

Nowadays, computers are used by all kinds of people, and as a result there is growing emphasis on accessibility and user-friendly systems.

A GUI makes use of a **WIMP** environment: **w**indows, **i**cons, **m**enus and **p**ointer. The background of the screen is called the **desktop**, which contains labeled pictures called **icons**. These icons represent **files** or **folders**. Double-clicking a folder opens a window which contains **programs**, **documents**, or more nested folders. When you are in a folder, you can launch a program or document by double-clicking the icon, or you can drag it to another location. When you run a program, your PC opens a window that lets you work with different tools. All the programs have a high level of consistency, with similar toolbar, menu bars, buttons and dialog boxes. A modern OS also provides access to networks and allows multitasking, which means you can run several programs – and do various tasks – at the same time.

The most popular operating systems are:

- ✓ The **Windows** family – designed by Microsoft and used on most PCs. The most recent version is Windows 10.
- ✓ **Mac OS** – created by Apple and used on Macintosh computers.
- ✓ Unix – a multi-user system, found on mainframes and workstations in corporate installations.
- ✓ **Linux** – open-source software developed under the GNU General Public License. This means anybody can copy its source code, change it and distribute it. It is used in computers, appliances and small devices.
- ✓ Window mobile – used on most PDAs and smartphones (PDAs incorporation mobile phones)
- ✓ **Palm OS** – used on Palm handheld devices
- ✓ **RIM** – used on BlackBerry communication devices. Developed by Research in Motion.
- ✓ **The Symbian OS** – used by some phone makers, including Nokia and Siemens. These computer platforms differ in areas such as device installation, network connectivity or compatibility with application software.

2.1.2. Compare the Mac OS X user interface with a Windows or Linux interface.

What are the similarities and differences?

Which features do you prefer from each interface?

2.1.3. Read the text and find the answers to these questions

1. What is the difference between applications software and operating systems?
2. Why is the supervisor program the most important operating system program?
3. What is the difference between resident and non-resident programs?

4. What are the main functions of an operating system?

2.2. Reading Task 2

Complete the gaps in this summary of the text on operating systems using these linking words and phrases:

although	because	but	in addition,	such as	therefore
-----------------	----------------	------------	---------------------	----------------	------------------

The user is aware of the effects of different applications programs (1)..... operating systems are invisible to most users. They lie between application programs, (2).....word processing, and the hardware. The supervisor program is the most important. It remains in memory, (3)..... it is referred to as resident. Others are called non-resident (4)they are loaded into memory only when needed. Operating systems manage the computer's resources, (5).....the central processing unit. (6).....They establish a user interface, and execute and provide services for applications software. (7)..... input and output operations are invoked by application programs, they are carried out by the operating system.

When a brand-new computer comes off the factory assembly line, it can do nothing. The hardware needs software to make it work. Are we talking about applications software such as word processing or spreadsheet software? Partly, but an applications software package does not communicate directly with the hardware. Between the applications software and the hardware is a software interface - an operating system. An operating system is a set of programs that lies between applications software and the computer hardware. The most important program in the operating system, the program that manages the operating system, is the supervisor program, most of which remains in memory and is thus referred to as resident. The supervisor controls the

entire operating system and loads into memory other operating system programs (called nonresident) from disk storage only as needed. An operating system has three main functions: (1) manage the computer's resources, such as the central processing unit, memory, disk drives, and printers, (2) establish a user interface, and (3) execute and provide services for applications software. Keep in mind, however, that much of the work of an operating system is hidden from the user. In particular, the first listed function, managing the computer's resources, is taken care of without the user being aware of the details. Furthermore, all input and output operations, although invoked by an applications program, are actually carried out by the operating system.

3. Language work

We can use the **-ing** form of the verb as a noun. It can be the subject, object, or complement of a sentence. For example:

1. **Managing** the computer's resources is an important function of the operating system.
2. The operating system starts **running** the user interface as soon as the PC is switched on.
3. Another function of the operating system is **executing** and **providing** services for applications software.

This includes **"to"** when it is a preposition and not part of the infinitive. For example:

4. **Without** the user **being** aware of the details, the operating system manages the computer's resources.
5. We begin **by focusing** on the interaction between a user and a PC operating system.
6. We look forward **to having** cheaper and faster computers.

3.1. Rewrite each of these sentences like sentence 0:

0. An important function of the operating system is to manage the computer's resources.

Managing the computer's resources is an important function of the operating system.

1. The role of the operating system is to communicate directly with the hardware.
2. One of the key functions of the operating system is to establish a user interface.
3. An additional role is to provide services for applications software.
4. Part of the work of mainframe operating systems is to support multiple programs and users.
5. One task of the supervisor program is to load into memory non- resident programs as required.
6. The task in most cases is to facilitate interaction between a single user and a PC.
7. One of the most important functions of a computer is to process large amounts of data quickly.
8. The main reason for installing more memory is to allow the computer to process data faster.

3.2. Complete these sentences with the correct form of the verb: infinitive or -ing form.

1. Don't switch off without (close down)..... your PC.
2. I want to (upgrade)my computer.
3. He can't get used to (log on)..... with a password.
4. You can find information on the Internet by (use) a search engine.
5. He objected to (pay) expensive telephone calls for Internet access.

6. He tried to (hack into) the system without (know) the password.
7. You needn't learn how to (program)in HTML before (design) webpages.
8. I look forward to (input)data by voice instead of (use)a keyboard.

B. PRACTICE

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

TABLE A	TABLE B
1. Kernel	a. A type of software development where any programmer can develop or fix bugs in the software.
2. Free software Foundation	b. The original systems program from which compiled programs are generated
3. Source code	c. A complete operating system kit with the utilities and applications you need to make it do useful things.
4. Open Source	d. A standard distributed windowing system on which people implement graphical interfaces.
5. A distribution	e. An organization of volunteers dedicated to making good software that anyone could use without paying.
6. X	f. The core of an operating system that handles memory allocation, talks to hardware devices, and makes sure everything keeps running.

2. Quiz: Work with a partner. Try to answer as many questions as possible.

Q1. OS stands for:.....

- a) Operating solve b) Open Source c) Open System d) Operating system

Q2. The World Wide Web is being standardized by:.....

- a) Worldwide corporation b) W3C
c) World Wide Web Standard d) World Wide Consortium

Q3. A co-processor.....

- a) Is relatively easy to support in software
b) Causes all processor to function equally
c) Works with any application
d) Is quite common in modern computer

Q4. A Microsoft Windows is a(n).....

- a) Operating system b) Graphic program
c) Word Processing d) Database program

Q5. Which of the following is the program group?

- a) Accessories b) Paint c) Word d) All of above

Q6. Which is not application software?

- a) Windows NT b) Page Maker c) WinWord XP d) Photoshop

Q7. The program compresses large files into a smaller file

- a) WinZip b) WinShrink c) WinStyle d) None of above

Q8. My computer was introduced from.....

- a) Windows 3.1 b) Windows 3.11 c) Windows 95 d) Windows 98

Q9. Which of the following is not an operating system?

- a) DOS b) Linux c) Windows d) Oracle

Q10. Linux is a(n) operating system

- a) Open source b) Microsoft c) Windows d) Mac

Q11. The most recent version of MAC OS is based on the operating system.

- a) Windows b) Linux c) Unix d) CMOS

Q12. In Windows, the start button is used to.....

- a) Run applications b) Device setting
c) Turn off the system d) All of above

Q13. The date and time displays on.....

- a) Taskbar b) Status bar c) System tray d) Launch pad

Q14..... runs on computer hardware and serves as a platform for other system to run on

- a) Operating system b) Application system
c) System software d) All of above

3. Work in pairs. Put these steps in reinstalling an operating system in the correct order.

- During the process, the computer will restart by itself several times.
- Near the end of the process, you can partition the hard drives.
- In the BIOS, set the first boot drive to DVD. Then reboot again.
- At the end of the process, the operating system will ask for the product key, time, date, network type and details for user accounts.
- First, put the installation DVD into the optical drive. Then reboot the computer while you press the 'F2' key. The BIOS will now start.
- This time, the computer will boot from the DVD and installation will begin.
- Before you start, back up everything.
- Near the start of the process, it will ask you to agree to the license terms.

4. Find words in 3 that match these definitions.

1. start again.....
2. split a hard drive into parts that act like separate drives.....
3. software built into a computer that controls how it starts up.....
4. the drive that the computer reads first when starting up.....
5. software comes with this to show you are the owner.....
6. settings for a user.....

7. switch a computer off and on again.....
8. a series of actions to do something.....
9. copy data to another place so that you don't lose it.....
10. rules about how you can use software.....

C. MEMORY

- Learn vocabulary and master the function of the operating system.
- Use the -ing form of the verb.

UNIT 4: DATABASES

Introduction:

A database is used to store information so that it can be searched and sorted in various ways. Each item of information is stored in a field. A collection of related fields forms a record. Simple searches can often be created by allowing the user to type the required field information into a blank record, and pressing a search button. More advanced database programs usually use a query language known as SQL.

Objectives:

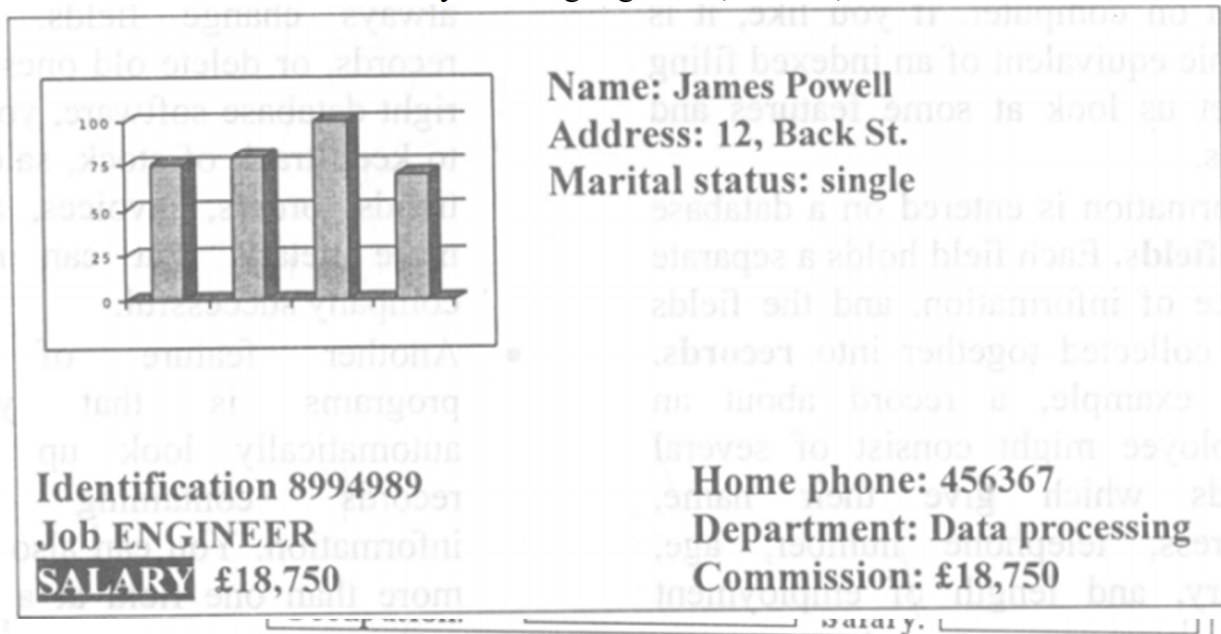
- Understand some common terms used for databases
- Read, understand, look up documents about the database
- Train accuracy in English pronunciation.

A. CONTENTS:

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 database?
2. Which tasks can be performed by using a database? Make a list of possible applications.
3. What do the terms mean in your language: file, record, field?



A database file stores information in fields grouped on records

2. Reading Databases

A database is a collection of related data, and the software uses databases to store, organize and retrieve the data is called the **database management system**, or **DBMS**. However, we often use the word database to cover both meanings. A database can manage any type of data, including text, numbers, images, sound, video and hyperlinks (links to websites).

Information is entered into the database via **fields**. Each field holds a separate piece of information, and the fields are grouped together in **records**. Therefore, a record about an employee might consist of several fields which give their name, address, phone number, date of birth, salary and length of employment with the company.

Records are grouped together into files which hold large amounts of information. Files can easily be **updated** – you can always change fields, add new records or delete old ones. An electronic database is much faster to consult and update than a card index system and occupies a lot less space. With the right software, you can keep track of stock, sales, market trends, orders and other information that can help your company stay successful.

A database program lets you create an **index** – a list of records ordered according to the content of certain fields. This helps you to **search** the database and **sort** records into numerical or alphabetical order very quickly. Modern databases are relational – that is, they are made up of related files: customers and orders, vendors and purchases, students and tutors, etc. Two database files can be related as long as they have a common field. A file of students, for example, could include a field called Tutor ID and another file with details of the tutors could include the same field. This key field can be used to relate the two files. Databases like Oracle, DB2 and MySQL can manage these relationships.

A **database query** function allows you to extract information according to certain conditions or criteria. For example, if a managing director wanted to know all the customers that spend more than \$8000 per month, the program would search on the name field and the money field simultaneously.

The best database packages also include **network** facilities, which can make business more productive. For example, managers of different departments can have direct access to a common database. Most aspects of the program can be protected by user-defined passwords and other **security devices**. For example, if you wanted to share an employee's personal details but not their commission, you could protect the commission field.

2.1. Complete these statements about databases using information from the text.

- 1 A database management system is used to.....
- 2 Information is entered into the database via.....
- 3 Each field holds
- 4 *Updating* a file means.....
- 5 Some advantages of a database program over a manual filing system are:
.....
- 6 Access to a common database over a network can be protected by using.....

2.2. Read this article about data storage. Complete the sentences with the words in the box

Cloud	contents	emerging	encrypt	flash	loss
Magnetic	offsite	protect	security	theft	volumes

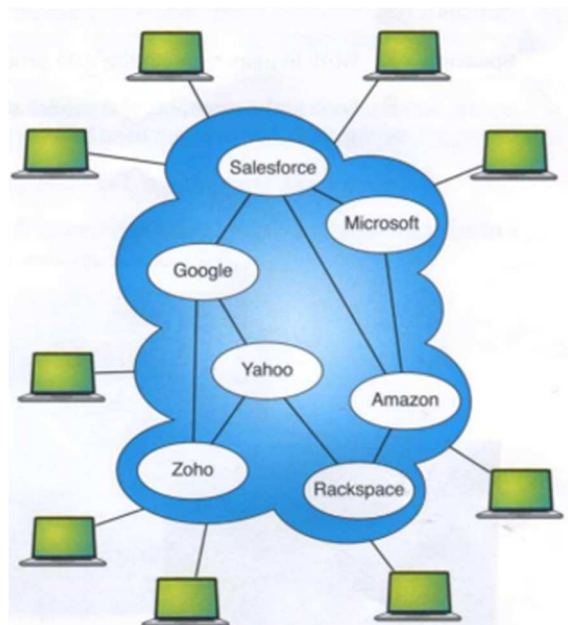
Data storage

Online storage is an (1) *emerging* method of data storage and back-up. A remote server with a network connection and special software backs up files, folders, or the entire (2)..... of a hard drive. There are many companies that provide a web-based backup.

One (3)..... technology in this computing. This area is (4).....computing. This allows colleagues in an organization to share resources, software and information over the Internet.

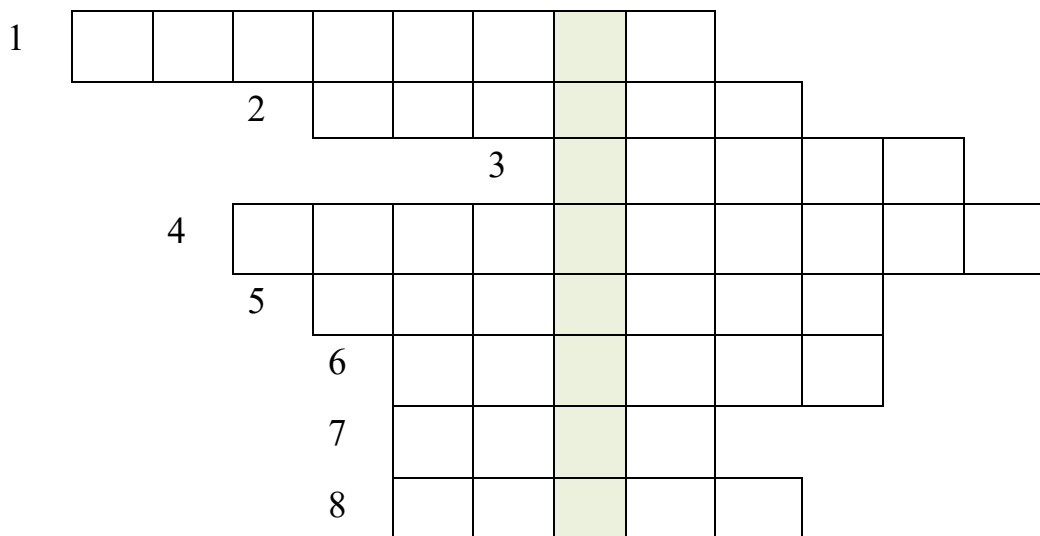
Continuous backup and storage on a remote hard drive eliminates the risk of data (5)..... or (6)..... as a result of fire, flood Remote data storage and back-up providers (7)..... the data and set up password protection to ensure maximum (8).....

Small businesses and individuals choose to save data in a more traditional way. External drives, disks and (9)..... (10)..... tapes are very popular data storage solutions. USB or memories, DVDs and hard disks are cheap and widely accessible solutions. These methods are very practical with small (11)..... not very reliable and do not (12)..... of data storage and backup. However, they are the user in case of a disaster.



2.3. Puzzle: Solve the clues and complete the puzzle

- 1 A collection of data stored in a PC in a systematic way
- 2 A unit of a database file made up of related fields.
- 3 A single piece of information in a record.
- 4 A.....database maintains separate, related files, but combines data elements from the files for queries and reports.
- 5 Some companies have several computers sharing a database over a.....
- 6 To look for specific information, for example the name of an employee.
- 7 To classify records into numerical or alphabetical order.
- 8 A tool that allows you to extract information that meets certain criteria.



3. Language work

3.1. Requirements: *Need to, have to, must*

HELP BOX: Requirements: need to, have to, must, be + essential, critical	
<p>Note how we describe requirements for particular jobs:</p> <ol style="list-style-type: none"> 1. You <i>need to</i> be able to empathize with the person at the other end of the phone. 2. IT managers <i>have to</i> take responsibility for budgets. 3. You <i>must</i> be interested in your subject. 4. You <i>must</i> have worked for at least two years in systems analysis. 5. Experience with mainframes <i>is essential/critical</i>. <p>We can describe things which are not requirements like this:</p> <ol style="list-style-type: none"> 6. You don't need to have a degree in computing science. 	<p>We can also treat need as a modal verb and use the negative form needn't:</p> <ol style="list-style-type: none"> 7. You needn't have a degree in computing science. <p>Have to is an ordinary verb. Its negative form is made in the usual way:</p> <ol style="list-style-type: none"> 8. You don't have to be an expert in everything. <p>“Mustn't” has a quite different meaning. It means it is important not to do something. It is used for warnings, rules and strong advice.</p> <p>For example:</p> <ol style="list-style-type: none"> 9. You mustn't make unauthorized

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 at 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..... be able to use C++
10. These days you.....study BASIC.

3.2. Language work: Plurals

HELP BOX

• In most cases, we form the plural in English by adding-s.

Record → records

• If a word ends in -s, -sh, -x or -ch, we add-es.

Address → addresses

Index → indexes

• If a word ends in a consonant + y, they become I and we add-es.

Company → companies

Facility → facilities

• However, if the y follows a vowel, we add only -s.

Birthday → birthdays

There are several irregular plural forms:

man/woman ► men/women

child ► children

analysis ► analyses

formula ► formulae (or formulas)

criterion ► criteria

mouse ► mice

• The -s is pronounced as:

/s/ after one of these sounds: /p/, /t/, /k/, /f/ or /θ/

(e.g. amounts, hyperlinks)

/iz/ after one of these sounds: /s/, /z/, /ʃ/, /tʃ/ or

/dʒ/ (e.g. businesses, devices, images)

/z/ in most other cases (eg, files, fields, customers, columns)

Look at the HELP box and then write the plural of these words.

1. client

5. fax.....

2. key.....

6. salary.....

3. query.....

7. mouse.....

4. businessman.....

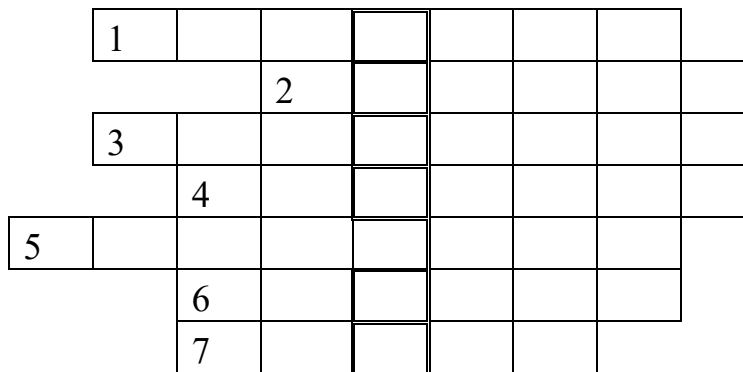
8. virus.....

B. PRACTICE

1. Complete the sentences by using a term from the 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 database 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



2. Here is a part of an article about databases.

2.1 First, read all the way through and underline the basic features of a database.

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

Information is entered on a database via fields. Each field holds a separate

piece of information, and the fields are collected together into records. For example, a record about an employee might consist of several fields which give their name, address, telephone number, age, salary, and length of employment with the company. Records are grouped together into files which

hold large amounts of information. Files can easily be updated: you can always change fields, add new records, or delete old ones. With the right database 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 programs is that automatically look up records containing databases you can and find 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 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 businesses. For example, managers of different departments can have direct access to a common database, which represents an enormous advantage. Thanks to security devices, you can share part of your files on a network and control who sees the information. Most aspects of the program can be protected by user-defined passwords. 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 database manager helps you control the data you have at home, in the library or in your business.

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

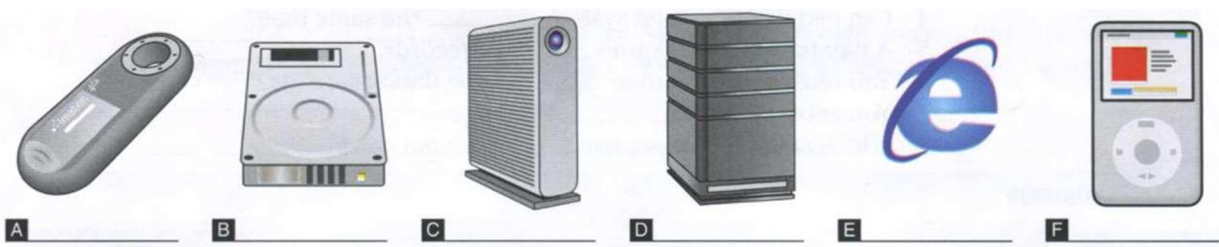
2.3. Using the information in the text, complete these statements.

1. A database is used to.....
2. Information is entered on a database via.....
3. Each field holds.....
4. "Updating" a file means.....
5. The advantages of a database program over a manual filing system are.....
6. Access to a common database can be protected by using.....

3. Match the data storage and backup solutions in the box to pictures A-F.

What other solutions are there?

external hard drive	hard disk	mp3 player	server	the Internet	usb flash drive
---------------------	-----------	------------	--------	--------------	-----------------



4. Match the company department 1-8 with the type of data it works with a- h.

1. Finance	a) data about employees, training, recruitment needs
2. Marketing	b) data about product specification, details and design
3. Human resources	c) data about profits, tax, loans, shares and cash
4. Customer relations	d) data about volume of products sold
5. Production	e) data about customers, satisfaction surveys, promotions
6. Technical support	f) data about product advertisements and competitors
7. Sales	g) data about quantity of product in storage
8. Stock management	h) information about the Help Desk, support calls, manuals, problem reports

C. MEMORY

- Learn by heart some common terms used for databases.
- Use Modal verbs *Need to, have to, must*

UNIT 5: GRAPHICS AND DESIGN

Introduction:

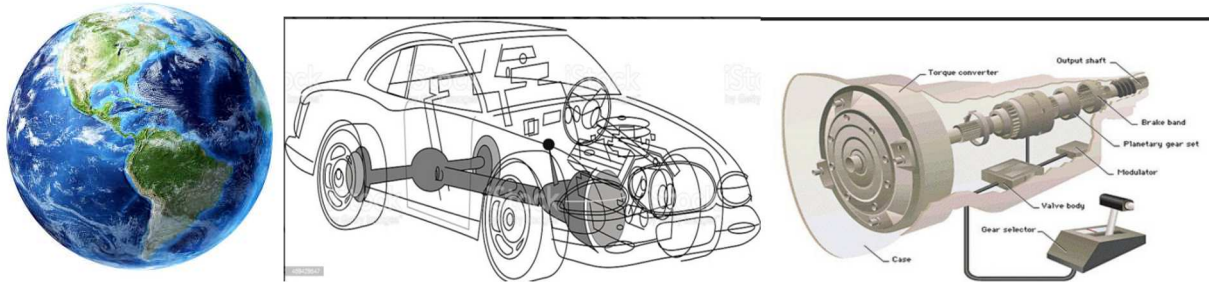
Graphic design is a craft where professionals create visual content to communicate messages. By applying visual hierarchy and page layout techniques, designers use typography and pictures to meet users' specific needs and focus on the logic of displaying elements in interactive designs, to optimize the user experience.

Objectives:

- Understanding vocabulary, terminology used to talk about graphic design
- Reading comprehension, looking up the instructional documents on graphic design in English
- Training the ability to read comprehension, translate, and accuracy in English pronunciation.
- Identifying the function of different graphics tools.

A. CONTENTS:

1. Warm up



1. Look at the pictures above, which were all created on a computer. Which ones are 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?

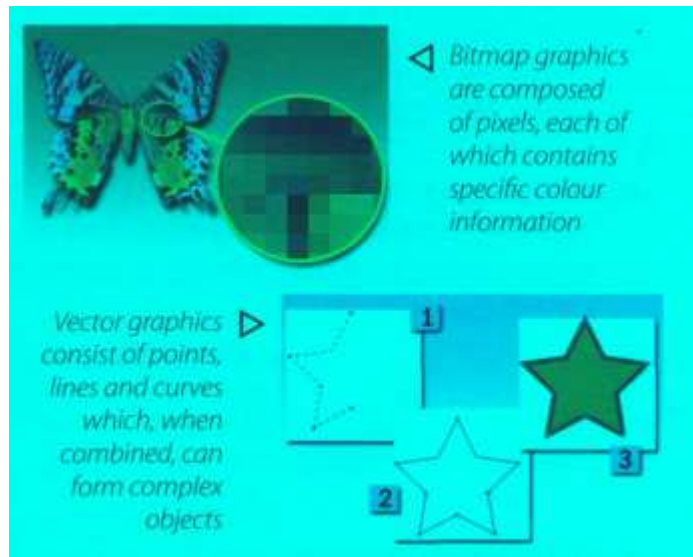
2. Reading

2.1. Read through the text and find the answers to these questions.

1. What are computer graphics?
2. What do the acronyms 'CAD', 'CAE', and 'CAM' stand 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'?

Computer graphics are pictures and drawings produced by computers. There are two main categories:

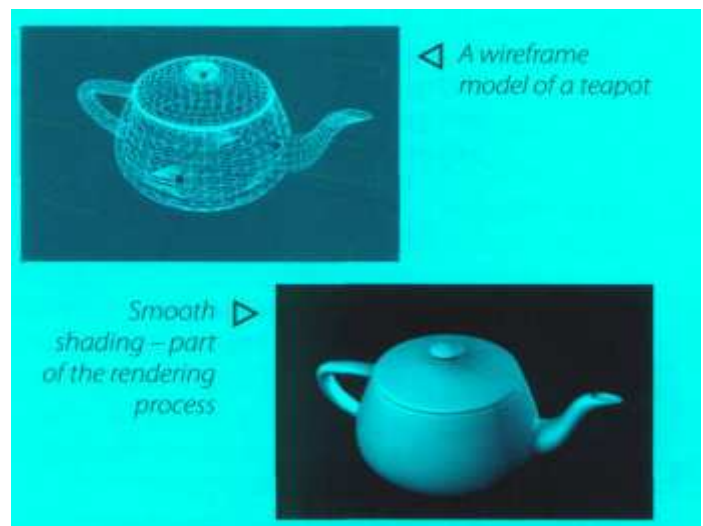
Raster graphics, or **bitmaps**, are stored as a collection of pixels. The sharpness of an image depends on the density of pixels, or resolution. For example, text or pictures that are scaled up – that is, made bigger – may show jagged edges (). Paint and photo-editing programs like Adobe Photoshop focus on the manipulation of bitmaps. Popular raster formats are JPEG (joint photographic experts' group), GIF (graphics interchange format) and TIFF (tagged image file format).



Vector graphics represent images through the use of geometric objects, such as lines, curves and polygons, based on mathematical equations. They can be changed or scaled without losing quality. Vector data can be handled by drawing programs like Illustrator, Corel Draw or Macromedia Freehand. EPS is the most popular file format for exchanging vector drawings.

Almost all computer users use some form of graphics. Home users and professional artists use image-editing programs to manipulate images. For example, you can add filters (special effects) to your favorite photos, or you can composite images. Compositing is combining parts of different images to create a single image.

Graphic artists and designers use drawing programs to create freehand drawings and illustrations for books or for the Web. Business people use presentation graphics to make information more interesting visually – graphs and diagrams can be more effective ways of communicating with clients than lists of figures. Electrical engineers use graphics to design circuits in order to present data in a more



understandable form. Mechanical engineers use CAD (Computer Aided Design) software to develop, model and test car designs before the actual parts are made. This can save a lot of time and money. CAD is also used in the aerospace, architecture and industrial sectors to design everything from aero planes and buildings to consumer products. Designers start a project by making a **wireframe**, a representation showing the outlines of all edges in a transparent drawing. They then specify and fill the surfaces to give the appearance of a 3-D solid object with volume. This is known as solid modeling. Next, they add paint, color and filters to achieve the desired “look and feel”: this is called texturing the object. Finally, they render the object to make it look real. Rendering includes lighting and shading as well as effects that simulate shadows and reflections.

Computer art, or **digital art**, is used in adverts and TV programmers. Artists and scientists use special graphic applets to create amazing **fractals**. Fractals are geometrical patterns that are repeated at small scales to generate irregular shapes, some of which describe objects from nature. Government agencies use **GIS** (Geographic Information System) to understand geographic data and then plan the use of land or predict natural disasters. Cartographers use GIS to make detailed maps. Animators use computer animation software to create animated cartoons or add effects in movies and video games.



2.2. Match the words (1-6) with the definitions (a-f)

1. resolution	a. Special effects that can be applied to pictures
2. jagged	b. A technique that generates realistic reflections, shadows and highlights
3. filters	c. Geometrical figures with special properties
4. wireframes	d. Irregular or uneven
5. rendering	e. The number of pixels in an image
6. fractals	f. The drawing of a model by using features like edges or contour lines

2.3. More about graphics.

Graphics programs have several options that work in conjunction with the tools menu to enable the user to manipulate and change pictures.

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 pictures 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 colors 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.

3. Language work: Gerunds (-ing nouns)

3.1. Look at the Help box and decide if the –ing forms in these sentences are gerunds, present participles or adjectives. Write g, pp or a.

The –ing form

We use the –ing form in three ways:

- 1 **Rendering** includes **lighting** and **shading**
- 2 We are **designing** a new car on computer
- 3 They use special applets to create **amazing** fractals

In 1, **rendering** is a gerund (see below), acting as the subject. **Lighting** and **shading** are also gerunds, acting as the objects. A gerund refers to an activity or process.

In 2, **designing** is a present participle. This is used in continuous tenses (in the above example, the present continuous) and reduced relative clause.

...a representation **showing** the outlines of all edges. (=which shows the outlines...)

In 3, **amazing** is an adjective.

We use gerunds in the following ways:

✓ As the subject of a verb

Compositing is combining parts of different images to create a single image.

✓ As the complement of the subject

Compositing is **combining** parts of different images...

✓ As the object of a verb

I **enjoy editing** pictures

✓ After a preposition

Designers start a project **by making** a wireframe

✓ As the complement of a verb

This course **involves painting** and **drawing** in various media.

✓ Some verbs are followed by the gerund, not by the infinitive (e.g. **avoid, fancy, finish, give up, hate, imagine, involve, keep, look forward to, mind, suggest, enjoy**)

1. PCs generate graphics by performing mathematical calculations on data.

.....

2. Businesspeople use graphics to make information more interesting visually.

.....

3. Graphs and diagrams can be more effective ways of communicating with clients than lists of figures.

.....

4. She is designing a logo for the company

.....

5. If you need to make a presentation, I suggest using PowerPoint.

.....

6. The Internet is a network linking other networks.

.....

3.2. Correct the mistakes in these sentences. There are seven mistakes in total.

1. Computer animation is the process of create objects which move across the screen

2. Texturing involves adding paint, color and filters to drawings and designs.

3. You can open the color palette by clicking on the corresponding icon.

4. CAD programs are very fast at to perform drawing functions

5. A lot of time and money is saved by testing a car design before making the product.

6. To render refers to the techniques used to make realistic images.

4. Speaking

Choosing graphics software

Work in pairs. Student A chooses a task from the list (1-6) and describes it.

Student B chooses the most appropriate graphics software for the task (a-f) and gives reasons for his or her choice. Swap roles. Look at the Useful language box to help you.

1. to edit and retouch photos
2. to create illustrations and drawings for a magazine
3. to prepare slideshows for training sessions or conferences
4. to make mechanical designs and architectural plans
5. to create dynamic simulations and special effects for films, TV, advertisements and games
6. to analyze geographic data and make maps
 - a. Computer animation software, for example
 - b. GIS software, for example ArcView
 - c. Presentation software, for example PowerPoint
 - d. A CAD package, for example AutoCAD
 - e. Vector graphics software, for example Freehand
 - f. A paint and image-editing program, for example

Useful language

If I need to..... what software would you recommend?

For that kind of task, the best thing would be ...

It allows you to ... and...

I wouldn't recommend... because.....

A good program of this type is

5. Writing

Describing graphics

Look at the images (1-4), which show the stages involved in drawing a plane using computer software. Write a short description of stages 2, 3 and 4. Look at the Useful language box to help you.

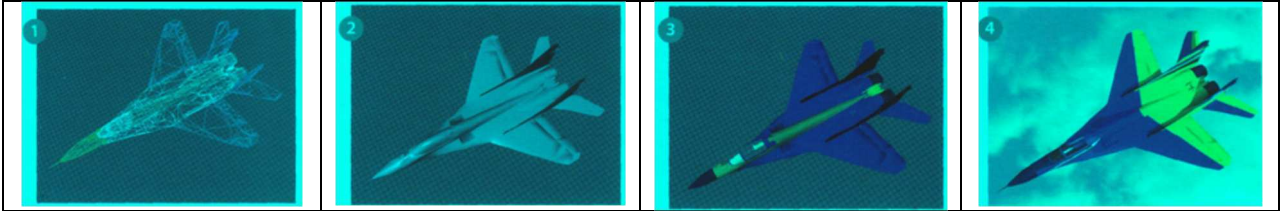
This first image shows a wireframe model, probably made using CAD software. A wireframe is a drawing with edges and contour lines. The parts of the plane are shown in different colors (violet, green, blue, etc.).

Useful language

This picture shows ...











In this (next) stage...

The designer has used...
 This stage is called ...
 Rendering techniques include...
 As a finishing touch, ...



B. PRACTICE

1. Match the tools from the Photoshop toolbox (1-10) with the functions (a-j).

 Marquee select tools	a. cut down the dimensions of a picture
 Move tool	b. selects a particular part of an image (you can choose different shapes for selection)
 crop tool	c. fill in an area with a color
 paint brush, pencil	d. control the foreground and background color
 eraser	e. select a specific color in a photo
 Paint bucket	f. magnify areas of an image when you are doing close, detailed work
 Type tool	g. delete the part of the picture you drag it over
 Color picker	h. insert text into your document
 Zoom	i. draw and paint in different shapes and patterns
 Color tools and palette	j. move a selection or entire layer by dragging it with your mouse

2. Complete each gap in these sentences with the -ing form of an appropriate verb from this list.

Back up	become	enter	find	keep up	learn
Link	receive	select	send	use	

-the latest news on your favorite team is easy on the web.
- One of the most useful features of the Internet is.....and.....email.
- The grandfather, father, son method is one way of.....your documents.

4. Fibre-optic cable can be used for.....computers in a network
5. Search engines are ways of.....information on the web.
6.a keyboard is the commonest way of.....data into a computer.
7.audio and video attachments is possible with email.
8.a programmer means.....a number of programming languages.
9. The White Pages are for.....email addresses.
10.an option in a menu is easy with a mouse.

C. MEMORY

- Learn by heart vocabulary, terminology used to talk about graphic design.
 - Know how to use Gerunds (-ing nouns)
-

UNIT 6: MULTIMEDIA

Introduction:

Multimedia is the term used to refer to a combination of text, graphics, animation, sound and video. By the end of this Unit, students should be better at reading for specific detail. They should understand and be able to use terms and abbreviations used in multimedia such as: MP3, MIDI, MPEG, DVD, WAW.

Objectives:

- Understanding the vocabulary used to talk about multimedia
- Reading and understanding materials about multimedia
- Training accuracy in pronunciation of specialized terms and vocabulary

A. CONTENTS

1. Warm up

1.1. In pairs, discuss these questions.

1. What different types of content are combined in multimedia applications?
2. How many products can you think of that are on corporate multimedia? Make a list.

1.2. Match the descriptions (1-5) with the pictures (a-e)

Media is here! Applications of multimedia

- | |
|---|
| <ol style="list-style-type: none">1. Virtual reality2. Distance learning3. A business presentation4. A touch screen information kiosk5. An MMS mobile phone |
|---|

a



b



c



d



e



2. Reading

2.1. Read the text and match the headings (1-4) with the gaps at the start of each paragraph (a-d)

1. Sound, Music, MIDI
2. Products full of pictures, action and sound

3. Creating and editing movies
4. The potential of multimedia

Multimedia magic!

A _____

Multimedia applications are used in all sorts of fields. For example, museums, banks and estate agents often have information kiosks that use multimedia; companies produce training programs on optical discs; businesspeople use Microsoft PowerPoint to create slideshows; and teachers use multimedia to make video projects or to teach subjects like art and music. They have all found that moving images and sound can involve viewers emotionally as well as inform them, helping make their message more memorable.

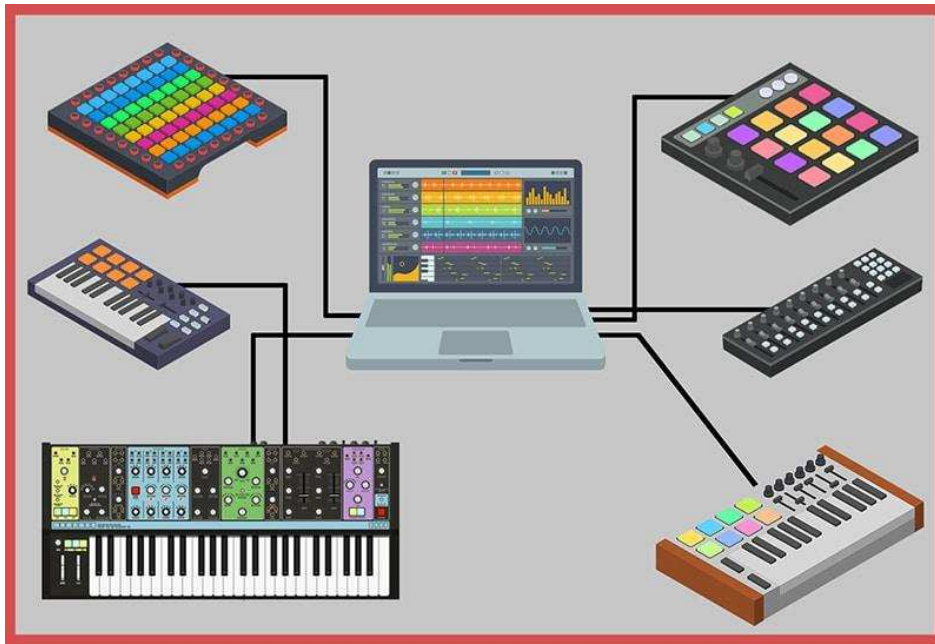
The power of multimedia software resides in hypertext, hypermedia and interactivity (meaning the user is involved in the programme). If you click on a hypertext link, you can jump to another screen with more information about a particular subject. Hypermedia is similar, but also uses graphics, audio and video as hypertext elements.

B _____

As long as your computer has a sound card, you can use it to capture sounds in digital format and play them back. Sound cards offer two important capabilities; a built-in stereo synthesizer and a system called MIDI, or Musical Instrument Digital Interface, which allows electronic musical instruments to communicate with computers. A digital Audio Workstation (DAW) lets you mix and record several tracks of digital audio.

You can also listen to music on your PC, or transfer it to a portable MP3 player. MP3 is short for MPEG audio player 3, a standard format that compresses audio files. If you want to create your own MP3 files from CDs, you must have a CD ripper, a program that extracts music tracks and saves them on disk as MP3s.

Audio is becoming a key element of the Web. Many radio stations broadcast live over the Internet using streaming audio technology, which lets you listen to audio in a continuous stream while it is being transmitted. The broadcast of an event over the Web, for example, a concert, is called a webcast. Be aware that you won't be able to play audio and video on the Web unless you have a plug-in like RealPlayer or QuickTime.



MIDI allows your computer to communicate with electronic keyboards and other devices

C _____

Video is another important part of multimedia. Video computing refers to recording, manipulating and storing video in digital format. If you wanted to make a movie on your computer, first you would need to capture images with a digital video camera and then transfer them to your computer. Next, you would need a video editing program like iMovie to cut your favorite segments, re-sequence the clips and add transitions and other effects. Finally, you could save your movie on a DVD or post it on websites like YouTube and Google video.

D _____

Multimedia is used to produce dictionaries and encyclopedias. They often come on DVDs, but some are also available on the Web. A good example is the Grolier Online Encyclopedia, which contains thousands of articles, animations, sounds, dynamic maps and hyperlinks. Similarly, the Encyclopedia Britannica is now available online, and a concise version is available for iPods, PDAs and mobile phones. Educational courses in history, science and foreign languages are also available on DVD. Finally, if you like entertainment, you'll love the latest multimedia video games with surround sound, music soundtracks, and even film extracts.

2.2. Correct the technical mistakes in these sentences.

1. Multimedia training software is distributed on magnetic disks.
2. You need to have MIDI on your computer to hear speech and music.
3. A stereo synthesizer allows your computer to communicate with electronic musical instruments.

4. A CD ripper converts CDs to live streams.
5. The Encyclopedia Britannica is only available on DVD.

2.3. Match the words (1-5) with the definitions (a-e).

1. hypertext	a. the process of manipulating video images
2. hypermedia	b. text with links which take you to other pages
3. streaming	c. a technique for playing sound and video files while they're downloading
4. webcast	d. a live event broadcast over the Internet
5. video editing	e. a form of enriched multimedia which allows an interactive and dynamic linking of visual and audio elements

3. Language work: If – Clause

Language work: conditional sentences

3.1. Look at the Help box and then complete these sentences with the correct form of the verbs in brackets.

1. If you (bring).....your digital video camera, we can make a movie on my PC.
2. You won't be able to play those video files if you (not have).....the correct plug-in.
3. If the marketing manager (have).....PowerPoint, she could make more effective presentations.
4. If I could afford it, I (buy).....a new game console.
5. If I had the money, I (invest).....in some new multimedia software.

Help box:

Conditional sentences

We use conditional sentences to express that the action in the main clause can only take place if a certain condition is fulfilled (see below for examples). They are introduced by *if*, *unless* and *as long as*. *Unless* means if not and as long as means provided/providing (that)

You won't be able to play audio and video on the Web *unless* you have a plug-in like RealPlayer or QuickTime (=if you don't have a plug-in...)

There are two types of conditional sentences.

✓ ***The first conditional (for real or possible situations)***

If A happens

B will happen

(present simple)

(will in positive or negative = Verb)

If you *like* entertainment, you *will love* the latest multimedia video games.

In the main clause, we can also have a modal (for example, *can* or *must*) or an imperative.

*If you **want to create** your own MP3 files from your CDs, you **must have** a CD ripper.*

✓ ***The second conditional (for more hypothetical situations)***

If A happened
(Past simple)

B would happen
(would in positive or negative + verb)

*If you **wanted** to make a movie on your computer, first you **would/you'd** need to...*

In the main clause, we can also use other models (e.g., **could**, **should**, **might**), depending on the meaning.

If the verb “**be**” appears in the **if** clause, we often use **were** instead of **was**, even if the pronoun is **I**, **he**, **she** or **it**.

*If I **were** you, I'd get a new MP3 player.*

3.2. In pairs, discuss these questions. Use the second conditional.

What would you do if.....

1. You had a digital video camera?
If I had a digital video camera, I'd...
2. You had a home recording studio?
3. You couldn't afford an Ipod but you wanted an MP3 player?
4. You won the lottery?
5. Someone stole your laptop?

B. PRACTICE

1. Multimedia on the web

Read the rest of this text to find the answers to these questions.

1. How do you play MP3 files?
2. What does the Windows Media Player file do with an MP3 file?
3. What is a standalone player?
4. What special features can players offer?
5. What information can you obtain by clicking on the track info button?
6. What does a skin enable you to do?
7. How do you play music from a CD-ROM on an MP3 player?
8. What hardware and software do you need to make your own audio CDs?

Play MP3 files

Most machines today have enough processing power and memory to play MP3s immediately. Simply download an MP3 file like any other and click on it in Internet Explorer. The Windows Media Player will decode the file and route the signals to your soundcard and then your speakers.

Other MP3 features include:

Players.

Most standalone players have many features beyond Windows' default Media Player. To control what music you play, players let you group songs into playlists and randomize the selections. To control how the music sounds, they offer spectrum analyzers, graphic equalizers, and frequency displays.

Track info.

A track info button gives you the information on the MP3 file's tag. Other buttons may take you to a music library where you can organize your MP3 files by performer or genre.

Skins or themes.

These programs are designed to change the appearance of the most popular players. They're akin to the wallpaper that alters the look of the Windows desktop. With a skin, a player can become a jukebox, a car dashboard, or a Star Trek tricorder. Think of them as easily interchangeable faceplates.

Rippers and encoders.

A ripper is a program that rips songs from a CD in your CD-ROM drive and turns them into WAV files. An encoder converts WAV files into MP3 files or vice versa. Many MP3 players incorporate rippers and encoders and can do both steps in one.

Recorders.

With a writeable CD-ROM drive, a recorder program lets you create your own audio CDs.

2. Read these sentences, then 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 had a multimedia system, she could make more effective presentations.

3. 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 MIDI.

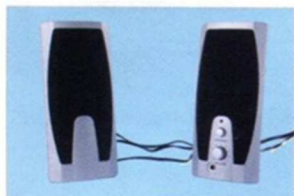
2. If the system (have)..... a SuperVGA card, we would obtain a better resolution.
3. You won't be able to play CD-ROM disks if you (not have).....a CD-ROM drive.
4. If you (come).....to the annual computer exhibition, you could see the newMacs.
5. If I could afford it, I (buy).....a Multimedia PC.

4. Match the sentences in Column A with appropriate sentences from Column B. Then join each action and effect using an if-sentence.

Column A	Column B
<ol style="list-style-type: none"> 1. you press Print Screen 2. you press Ctrl + Alt + Del in Windows 98 3. you added more memory 4. you installed a modem 5. you used a better search engine 6. you forget to save regularly 7. you hold down the mouse button over an icon 8. you used an LCD display 	<ol style="list-style-type: none"> a. you can drag it across the screen b. it would speed up the computer you may lose data c. you would have more space at your desk e. you would be able to connect to a telephone line f. you can make a copy of the screen g. you would find more relevant results h. it displays a list of active programs

5. Label the photos with the multimedia equipment in the box.

headphones	microphone	projector	speakers	video camera
virtual reality goggles	webcam			



1 _____



2 _____



3 _____



4 _____



5 _____



6 _____



7 _____

C. MEMORY

- Learn by heart vocabulary used to talk about multimedia.
 - Know how to use Conditional sentences 1 and 2
-

UNIT 7: PROGRAM DESIGN

Introduction:

Computers are controlled by sets of instructions called programs. Programs are written by a person called a programmer using special languages called programming languages. Some expressions from the programming languages used in the text in this unit are shown in the table below. By the end of this Unit, students should be better at making inferences from spoken description by writing a description of a flow chart. They should be able to use problem and solution structures.

Objectives:

- Understand vocabulary, terminology used to talk about programming
- Be confident in reading comprehension, looking up programming related documents
- Train accuracy in English pronunciation.

A. CONTENTS

1. Warm up

Program /'prəʊ.græm/: (n) A set of instructions that tells the computer how to do a specific task. The task can be anything from the solution to a Math problem to the production of a graphics package.

Programmer /'prəʊ.græm.ər/ (n) Someone who writes computer programs

Programming /'prəʊ.græm.ɪŋ/ (n) the process of writing a program using a computer language

1.1. In pairs, discuss what you think programming is.

```
#include <stdio.h>
main()
{
printf("good morning\n");
}
```

Look at the definition of programming in the above. Is it similar to yours?

1.2. Complete the following definitions with the words and phrases in the box.

the various parts of the program
binary numbers

may occur in programs
a given problem

language

a. algorithm

The step-by-step specification of how to reach the solution to.....

b. flow chart

A diagram representing the logical sequence between.....

c. coding

The translation of the logical steps into a programming.....

d. machine code

The basic instructions understood by computers. The processor operates on codes which consist of

e. debugging

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

2. Reading

2.1. Read the text. How many high-level computer languages are mentioned?

Programming languages

Unfortunately for us, computers can't understand spoken English or any other natural language. The only language they can understand directly is machine code, which consists of 1s and 0s (binary code)

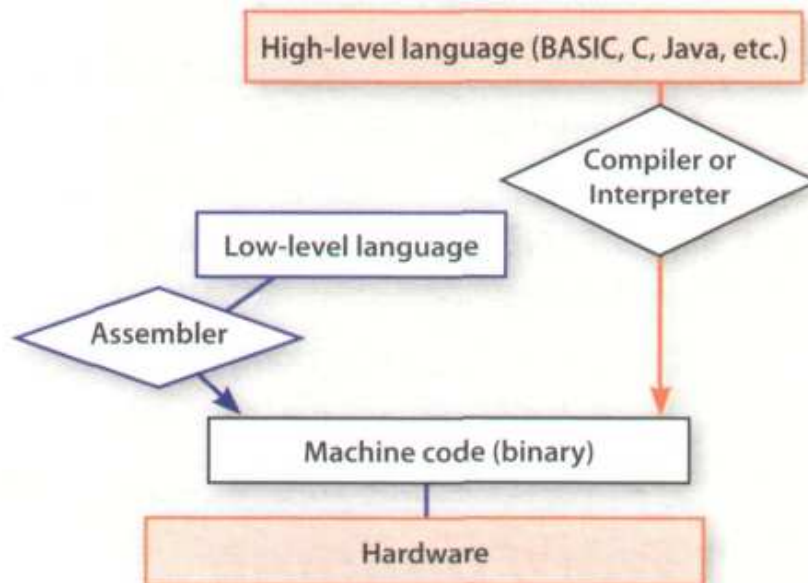
Machine code is too difficult to write. For this reason, we use symbolic languages to communicate instructions to the computer. For example, **assembly languages** use abbreviations such as ADD, SUB, MPY to represent instructions. The program is then translated into machine code by a piece of software called an **assembler**. Machine code and assembly languages are called **low-level languages** because they are closer to the hardware. They are quite complex and restricted to particular machines. To make the programs easier to write, and to overcome the problem of intercommunication between different types of computers, software developers designed **high-level languages**, which are closer to the English language. Here are some examples:

- **FORTRAN** was developed by IBM in 1954 and still used for scientific and engineering applications.
- **COBOL** (Common Business Oriented Language) was developed in 1959 and is mainly used for business applications.
- **BASIC** was developed in the 1960s and was widely used in microcomputer programming because it was easy to learn. Visual Basic is a modern version of the old Basic language, used to build graphical elements such as buttons and windows in Windows programs.
- **PASCAL** was created in 1971. It is used in universities to teach the fundamentals of programming.
- **C** was developed in the 1980s at AT&T. It is used to write system software, graphics and commercial applications. C++ is a version of C which incorporates object-oriented programming: the programmer concentrates on particular things (a piece of text, a graphic or a table, etc) and gives each object functions which can be altered without changing the entire program.

For example, to add a new graphics format, the programmer needs to rework just the graphics object. This makes programs easier to modify.

- **Java** was designed by Sun in 1995 to run on the Web. Java applets provide animation and interactive features on web pages.

Programs written in high-level languages must be translated into machine code by a compiler or an interpreter. A compiler translates the source code into object code – that is, it converts the entire program into machine code in one go. On the other hand, an interpreter translates the source code line by line as the program is running.



It is important not to confuse **programming languages** with markup languages, used to create Web documents. **Markup languages** use instructions, known as **markup tags**, to format and link text files. Some examples include:

- **HTML**, which allows us to describe how information will be displayed on web pages.
- **XML**, which stands for Extensible Markup Language. While HTML uses pre-defined tags, XML enables us to define our own tags; it is not limited by a fixed set of tags.
- **Voice XML**, which makes Web content accessible via voice and phone. VoiceXML is used to create voice applications that run on the phone, whereas HTML is used to create visual applications (for example, web pages)

```
<xml>
< name> Andrea Finch </name>
< homework> Write a paragraph describing
the C language </homework>
</xml>
```

2.2. Read the text again and answer these questions

1. Do computers understand human languages? Why? /Why not?
2. What is the function of an *assembler*?
3. Why did software developers design high-level languages?
4. Which language is used to teach programming techniques?
5. What is the difference between a *compiler* and an *interpreter*?
6. Why are HTML and VoiceXML called *markup* languages?

2.3. Complete these sentences with a computer language from the text

1.allows us to create tags to describe our data better. We aren't constrained by a predefined set of tags the way we are with HTML.
2. IBM developed.....in the 1950s. It was the first high-level language in data processing.
3.applets are small programs that run automatically on web pages and let you watch animated characters, play games, etc.
4.is the HTML of the voice web. Instead of using a web browser and a keyboard, you interact with a voice browser by listening to pre-recorded audio output and sending audio input through a telephone.
5. This language is widely used in the business community. For example, the statement ADD VAT to NET-PRICE could be used in a.....program.

3. Language work: Infinitive constructions

Help Box

The Infinitive

The infinitive with to is used in the following ways:

- To express purpose

We use symbolic languages to communicate instructions to the computer (=in order to communicate)

Not:for to communicate

- After adjectives

*BASIC was widely used in the past because it was **easy to learn**.*

*Machine code is too **difficult to write** (=not easy enough to write)*

- After certain verbs (e.g. **afford, demand, plan, agree, expect, promise, appear, hope, refuse, arrange, learn, try, decide, manage**)

*A lot of companies are now **trying to develop** voice applications for web access.*

- After the object of certain verbs (e.g. **advise, encourage, allow, expect, tell, ask, invite, want, enable, order, warn**)

*HTML **allows us to describe** how information will be displayed on web pages.*

The bare infinitive (without to) is used to in the following ways:

- After modal verbs (e.g. **can, could, may, might, will, would, must, should**)

*Unfortunately, computers **can't understand** spoken English.
High-level languages **must be translated** into machine code.*

- After the object with the verbs **make** and **let**
*Programs **make computers perform** specific tasks.*

3.1. Look at the Help box and then make sentences using these prompts.

1. Not easy / write instructions in COBOL
It's not easy to write instructions in COBOL
2. Expensive / set up a data-processing area
3. Advisable / test the programs under different conditions
4. Unusual / write a program that works correctly the first time it's tested
5. Important/ use a good debugger to fix errors
6. Easy /learn Visual BASIC

3.2. Choose the correct words (a-c) to complete these sentences.

1. We use high-level languages because machine code is too difficult....., understand and debug.
a. read b. reading c. to read
2. I went on the course.....how to be a better programmer.
a. learn b. to learn c. for to learn
3. I'm not interested incomputer language.
a. learn b. learning c. to learn
4. He refuses.....the project with me
a. learn b. doing c. to do
5. The engineers warned the employees not.....the cables.
a. touch b. touching c. to touch
6. They may notto the conference.
a. come b. coming c. to come
7. Spyware can make your PCslower.
a. performs b. performing c. to perform
8. This program is too slow.....the simulation
a. do b. to do c. for doing

B. PRACTICE

1. 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 the C language.
b. I like to study the C language in the evenings.
4. a. It has started to rain.
b. It has started raining.
5. a. He needs to work harder.
b. This hard disk needs repairing.

2. In pairs, discuss something

1. You can't afford to buy at the moment.
2. You've arranged to do this weekend.
3. You've learnt to do it in the last year.
4. You'd advise someone to do before buying a new PC
5. You've expected to be included with an anti-virus package
6. You can do with Java applets

C. MEMORY

- Master vocabulary, terminology used to talk about programming.
 - Know how to use Infinitive.
-

UNIT 8: LANS AND WANS

Introduction:

Computers and peripherals connected together form a network. Networks allow communication between computers and sharing of hardware and software. By the end of this unit, students should be better at reading a diagram and text together and explaining a diagram orally.

Objectives:

- Understand the vocabulary used to talk about computer networks
- Read and understand documents about computer networks, network equipment.
- Be Confident and accurate when reading magazines about computer development
- Train accuracy in English pronunciation.

A. CONTENTS

1. Warm-up

A. In pairs, discuss these questions

1. What is a computer network?
2. What are the benefits of using networks?

Router: (n) a device used to transmit data between two computers or networks.

Modem router: (n) a device that connects various computers to the Internet.

Wireless router: (n) a device which allows computers to communicate via radio waves. Also called *wireless access point* or *base station*.

Hotspot: (n) the geographic boundary covered by a wi-fi wireless access point.

Local area network: (n) A group of computer devices interconnected within a small physical area, like a home or office building.

Peer-to-peer: a network architecture in which all the computers have the same capabilities, i.e., share files and peripherals, without requiring a separate server computer.

Client-Server: (n) a network architecture in which various client programs all connect to a central server to obtain information or to communicate.

2. Reading

2.1. Look at the (i-vi) without reading the whole text. In pairs, try to answer as many of the questions as you can.

Read the whole text and answer these questions.

1. What does PAN stand for?
2. What is the network protocol?
3. How do you log on to an Internet Service Provider?
4. WiMax is a type of wireless network. What is it used for?
5. What equipment do you need to set up a wireless LAN?
6. What are the advantages and disadvantages of wireless networks?

i. How many types of networks are there?

Networks are classified according to different criteria:

Geographical area: **PANs (Personal Area Networks)** typically include a laptop, a mobile phone and a PDA; **LANs** cover a building; **MANs (Metropolitan Area Networks)** cover a campus or a city; **WANs (Wide Area Networks)** cover a country or a continent.

Architecture: In a client-server network, a computer acts as a server and stores and distributes information to the other nodes, or clients. In a peer-to-peer network, all the computers have the same capabilities – that is, share files and peripherals without requiring a separate server computer.

Topology, or layout: In a bus network, all the computers are connected to one another in a continuous loop, or ring.

Network protocol: this is the language, or set of rules, that computers use to communicate with each other. Networks use different protocols. For instance, the Internet uses TCP/IP.

ii. How do I install a wired modem router?

A modem router is a device that connects your computer or home LAN to the Internet.

Plug one end of the phone cord directly into a phone jack, and the other end into an Ethernet port on the router.

Turn on your computer. To set up, or configure, the router, you'll need to input some parameters, for example your ISP's name and phone number.

NOTE: A router has various Ethernet ports, so you can connect various PCs to the router via Ethernet cables. If you already have a hub or switch connecting a LAN, you only need one cable to connect the hub to the router.

iii. How do I log on to the Internet Service Provider?

You need to type in your username and password. Once you are online, you can get email, look for information on the Web, look up IT words in dictionaries, try out new software, and sign up for RSS feeds, newsletters, etc. It is important that you remember to log off after using the Internet. An open line increases the risk of viruses, and hackers might break into your computer to steal confidential data.

iv. What is wireless networking?

Wired networks are linked by Ethernet cables, phone lines and high-speed fiber optic cables. Wireless networks, however, use electromagnetic waves, such as radio waves, to transmit data. These are the main types of wireless networks:

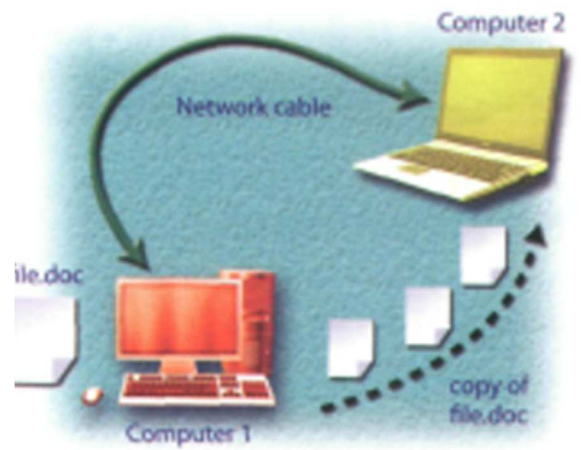
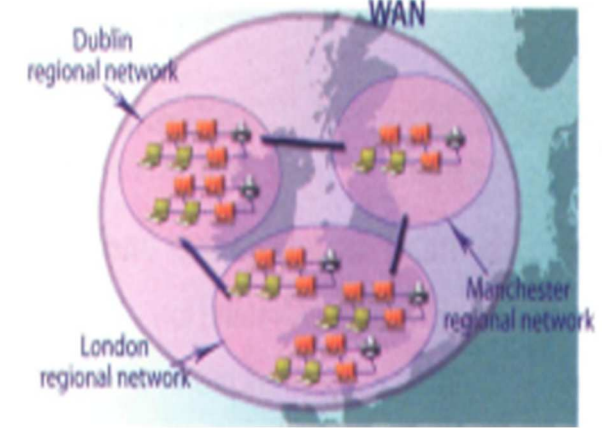
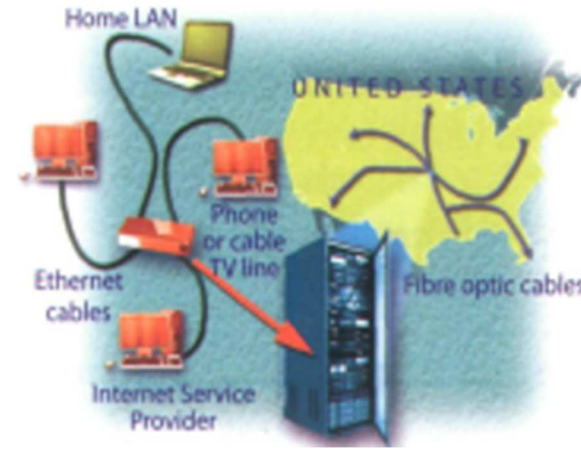
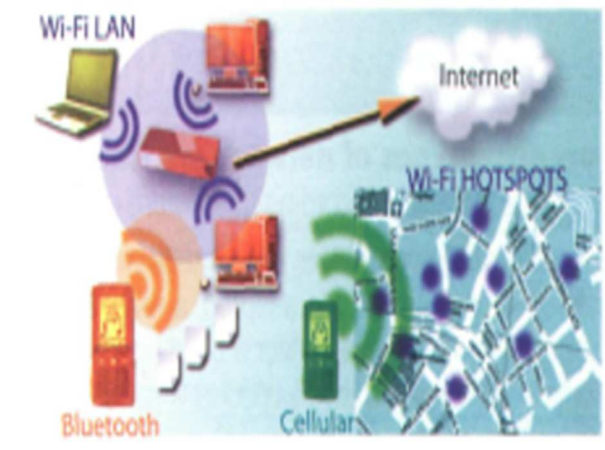
- **Satellites** – for long distances
- **WiMAX** – for connecting Wi-fi hotspots
- **Wi-fi** – for medium-range distances
- **Bluetooth** – for short distances
- **GSM** – for mobile phones

v. What do I need to set up a home wireless LAN?

You'll need computers equipped with a wireless adapter or wireless card, a wireless access point (a wireless router) and a broadband internet connection.

vi. Which is better, a wired or wireless LAN?

Wired LANs are more difficult to install, but they are cheaper, faster and more reliable. Wireless networks let you move, or roam, from one access point to another, but they are less secure and subject to interference.

 <p><i>in a basic network, two computers are connected by cable to allow file sharing</i></p>	 <p><i>WANS cover a large geographic area, like a country or even multiple countries. They are built by large telecommunication companies. The largest WAN in existence is the internet.</i></p>
 <p><i>In many homes, Ethernet cables are used to connect computers Phone or cable TV lines then connect the home LAN to the ISP Much of</i></p>	 <p><i>Wi-Fi is the standard technology for building wireless LANS and public hotspots Bluetooth networks allow handhels, mobile phones and</i></p>

*the Internet uses high-speed **fiber optic cable** to send data over long distances*

*other devices to communicate over short distances. **Cellular networks** are used in mobile phone communications.*

2.2. In pairs, do this network quiz. See which pair can finish first.

1. This network typically consists of two or more local area networks, covering a large geographical area.
a. LAN b. WAN c. Intranet
2. This type of network does not have a dedicated server; all the computers are independent.
a. Peer-to-peer b. client-server c. Metropolitan Area Network
3. On this topology, all devices are connected to the same circuit, forming a continuous loop.
a. star b. ring c. bus
4. The language used by computers to communicate with each other on the Internet is called
a. Ethernet b. ADSL c. TCP/IP
5. Which cables are used to transfer information for the Internet over long distances at high speeds?
a. telephone lines b. Ethernet cables c. fiber optic cables
6. Which device allows several computers on a local network to share an Internet connection?
a. an ADSL port b. a router c. an Ethernet port
7. Which device serves as a common connection point for devices in a wireless network?
a. wireless access point b. wired router c. wireless adapter
8. Bluetooth is a wireless technology that uses radio waves to transmit data over
a. long distance b. medium-range distances c. short distances (10m)

3. Language work: Phrasal Verb

3.1. Look at the Help box. Do you have the equivalent of phrasal verbs in your language? How do you say the phrasal verbs in the Help box?

Phrasal verbs

- The meaning of some verbs with particles (often called phrasal verbs) can be easily understood from its two parts.

Look at the photos

A network **consists of** two or more....

Separate networks are **linked over** a public network, the Internet.

- However, many phrasal verbs have an idiomatic meaning, not predictable from the meaning of its parts.

Carry (=transport); **carry out** (=execute)

Computers **carry out** the programs...

- Certain particles have similar meanings, regardless of the verb (on/off, in/cut, etc....)

Turn on/switch off (=stop the operation of something)

- Other common phrasal verbs in computing include:

Plug into (=connect)

Plug one end of the phone cord **into** the phone jack.

Set up (=establish)

What do I need to **set up** a wireless LAN?

Sign up (=register, enroll in a service)

Once connected, you can **sign up** for RSS feeds, new letters, etc.

Try out (=test or use experimentally)

You can **try out** new software on their site.

Find out (=learn, discover)

Search the Web to **find out** more information about WiMAX.

Take up (=occupy)

Fiber optic cables **take up** less space than copper cables.

Make up (=constitute, form)

Several LANs connected together **make up** a WAN.

Fill in (=write the necessary information)

You need to **fill in** this online form

- When the verb has a preposition associated with it, the preposition must precede the object:

You can **look for** information on the Web (**not: look information for**)

Hackers might **break into** your PC (**not: break your PC into**)

- When the particle is an adverb, it can precede or follow the direct object:

You need to **type in** your username/...**type** your username **in**.

You can **look up** words in a dictionary/...**look** words **up** in a dictionary

Turn on the computer. /**Turn** the computer **on**.

- If the direct object is a pronoun, the particle must follow it

You need to **type it in**. (**not type in it**)

3.2. Complete these sentences with the correct form of a phrasal verb from the Help box.

1. To join the club,this form and send it to our office.

2. The CPU.....all the basic operations on the data.
3. Digital music.....a lot of space – about 10 MB for every minute of stereo sound.
4. Thousands of networks.....the Internet.
5. You can use newsgroups to.....about the latest trends, customer needs, etc.

3.3. Match the questions (1-6) with the answers (a-f)

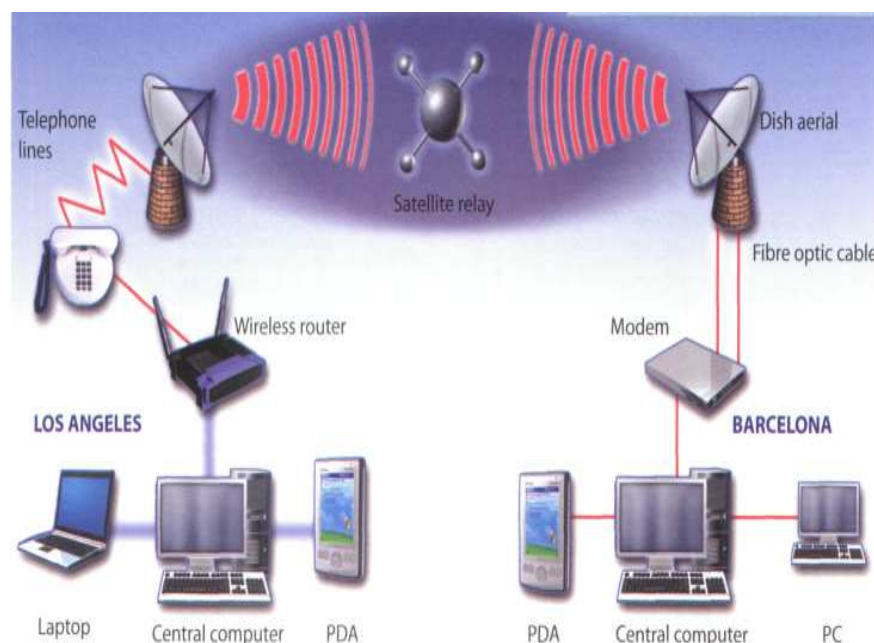
1. Why was the hacker arrested?
 2. Is it OK to **log on** to my bank account using public computers in a cybercafe?
 3. How do I **set up** an internet connection at home?
 4. Can I download software from your site?
 5. How can I add video to instant messaging?
 6. What do I need to do to **sign up** for a Yahoo! email account?
- a. Yes, but always remember to **log off** after you've ended your session
 - b. Yes, you can even **try the programs out** for a period before you buy them.
 - c. Because he **broke into** a computer system and stole confidential data.
 - d. Simply install this program a **plug the webcam into** your computer
 - e. You need to install the software for your router. Follow the instructions provided by your ISP, probably in the form of a pdf file on a CD.
 - f. You have to create a username and password and then give some personal details.

4. Speaking

WANs and worldwide communications

4.1. Prepare a description of the network below to present to the rest of the class.

Use PowerPoint if possible. Use the Useful language box, the Help box **Phrasal verb** above and the text **Networking FAQs** to help you.

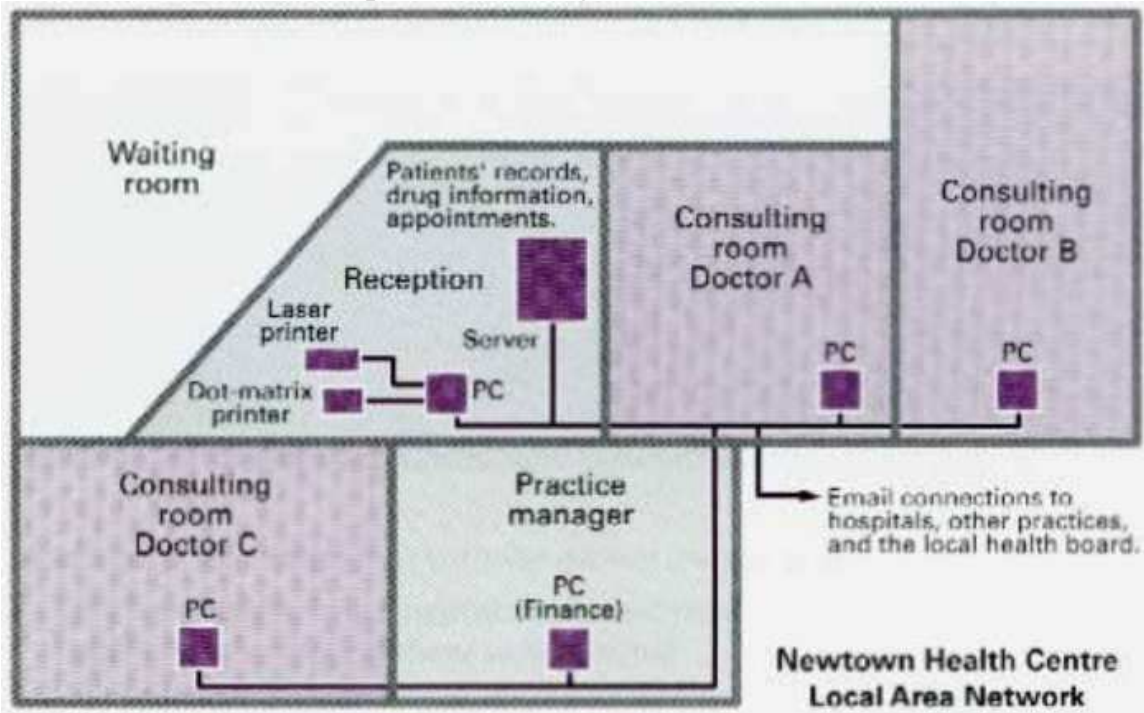


4.2. Present your description to the rest of the class.

5. Writing

5.1. Study this example of a local area network (LAN). Answer these questions.

1. Who are the users?
2. What kind of hardware is used?
3. What do the doctors use it for?
4. What do the receptionists use it for?
5. What does the practice manager use it for?



5.2. Write a description of the LAN shown in A. Use your answers to A to help you. Begin your description like this:

This LAN connects receptionists, doctors, and the practice manager in a health center. It is also connecting the center with the local health board.

B. PRACTICE

1. WANs and worldwide communications

Try to answer these questions.

1. What is a WAN?
2. How can computers be linked up over a long distance?
3. What are the advantages of optical-fibre cables over telephone lines?
4. What is the function of communications satellites?

Now read the passage and find out if your answers were correct.

For long-distance or worldwide communications, computers and LANS are usually connected into a

wide area network (WAN) to form a single, integrated network. Two good examples of wide area networks are

Internet and Arpanet. They transfer data and email for university researchers and academics, commercial groups, military installations and ordinary people.

Networks can be linked together by either telephone lines or fibre-optic cables. For example, ISDN (integrated services digital network) is 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. This new standard transmits data at great speed - 100 megabits per second.

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 considerable 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 satellite. 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 sending of signals. Then, when signals are received by the satellite, they are amplified and sent onto workstations in another part of the world.

C. MEMORY

- Learn vocabulary used to talk about computer networks.
- Use Phrasal verbs exactly.

HƯỚNG DẪN GIẢNG DẠY MÔN HỌC

I. Vị trí, tính chất, ý nghĩa và vai trò của môn học:

- **Vị trí:** Tiếng Anh chuyên ngành Công nghệ thông tin là môn học chuyên môn nghề bắt buộc của chương trình đào tạo Cao đẳng nghề Công nghệ thông tin (ứng dụng phần mềm).

- **Tính chất:** Là môn học liên quan đến chuyên môn nghề, bao gồm cả phần lý thuyết và bài tập luận, nên được bố trí tại phòng lý thuyết có phương tiện nghe nhìn hoặc bố trí tại phòng Multimedia Lab.

II. Mục tiêu của môn học:

- Về kiến thức:

+ Nêu được nghĩa của các thông báo từ hệ thống và các phần mềm ứng dụng khi khai thác và cài đặt;

+ Trình bày được cấu trúc của máy tính và các chức năng của máy khi mua máy tính tại cửa hàng kinh doanh máy tính;

+ Trình bày và thảo luận các chủ đề chuyên ngành CNTT theo chuyên môn của bản thân;

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

+ Áp dụng được từ vựng và ngữ pháp cơ bản của tiếng Anh vào đọc hiểu, dịch thuật tiếng Anh chuyên ngành CNTT

- Về kỹ năng:

+ Đọc hiểu, dịch được các tài liệu tiếng Anh chuyên ngành Công nghệ thông tin theo chuyên môn đã học;

+ Giao tiếp linh hoạt các thuật ngữ Anh ngữ chuyên ngành Công nghệ thông tin.

+ Dịch thuật được, đọc được, tra cứu và nghiên cứu được tài liệu tiếng Anh chuyên ngành Công nghệ thông tin.

- Về năng lực tự chủ và trách nhiệm:

+ Chủ động khai thác thêm các nguồn tài liệu trên mạng để học tập, nâng cao trình độ chuyên môn.

+ Có thái độ học tập và rèn luyện nghiêm túc

+ Có ý thức phải thường xuyên đọc tài liệu bằng tiếng Anh, phát âm đúng

III. Nội dung chính của môn học

Mã chương/bài	Tên chương/bài	Loại bài dạy	Địa điểm	Thời lượng				
				Tổng số	Lý thuyết	Thực hành	Kiểm tra	Thi
1010005-01	Computer Applications	Lý	Lớp	6	2	4		

Mã chương/bài	Tên chương/bài	Loại bài dạy	Địa điểm	Thời lượng				
				Tổng số	Lý thuyết	Thực hành	Kiểm tra	Thi
		thuyết	học					
1010005-02	Hard Drives	Lý thuyết	Lớp học	6	2	4		
1010005-03	Operating Systems	Lý thuyết	Lớp học	6	2	4		
1010005-04	Databases	Lý thuyết	Lớp học	6	2	4		
	Bài kiểm tra số 1			2			2	
1010005-05	Graphics and design	Lý thuyết	Lớp học	6	2	4		
1010005-06	Multimedia	Lý thuyết	Lớp học	6	2	4		
1010005-07	Programming	Lý thuyết	Lớp học	6	2	4		
1010005-08	Lans and Wans	Lý thuyết	Lớp học	6	2	4		
	Bài kiểm tra số 2			2			2	
	Ôn tập			6	3	3		
	<i>Thi hết mô đun</i>			2				2
	Cộng			60	19	35	4	2

IV. Hướng dẫn thực hiện bài tập thực hành

Nội dung	Mục tiêu	Nguồn lực	Cách thức tiến hành	Nhiệm vụ	Thời gian hoàn thành	Kết quả và tiêu chuẩn cần đạt được của bài tập

Chương/Bài 1 - COMPUTER APPLICATIONS						
Các câu hỏi	- Sử dụng bị động ở hiện tại đơn để miêu tả quá trình hoạt động của các ứng dụng máy tính.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	30 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 1	Nói các bức tranh (a-f) với cách sử dụng đúng (1-6)	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	10 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 2	Nói mỗi mục (1-4) với định nghĩa đúng (a-d).	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	10 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 3	Ghép mỗi mục ở Cột A với chức năng của nó ở Cột B	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	10 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 4	Hoàn thành các câu với hình thức thích hợp của động từ được liệt kê dưới đây.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	20 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 5	Điền vào chỗ trống dạng đúng của động từ trong ngoặc	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng	Suy nghĩ Phân tích Điền	10 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu

			lẽ	kết quả		câu
Chương/Bài 2 – HARD DRIVES						
Nội dung	Mục tiêu	Nguồn lực	Cách thức tiến hành	Nhiệm vụ	Thời gian hoàn thành	Kết quả và tiêu chuẩn cần đạt được của bài tập
Các câu hỏi	- Sử dụng từ nối để nối 2 mệnh đề chỉ nguyên nhân, kết quả	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	30 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 1	Điền vào chỗ trống trong mỗi câu bằng các từ đã cho	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	15 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 2	Đọc văn bản dưới đây và quyết định xem những câu này là đúng hay sai.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	20 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 3	Chọn từ đúng trong ngoặc để hoàn thành các câu sau	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền kết quả	20 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Chương/Bài 3 – OPERATING SYSTEMS						
Nội dung	Mục tiêu	Nguồn lực	Cách thức tiến hành	Nhiệm vụ	Thời gian hoàn thành	Kết quả và tiêu chuẩn cần đạt được của bài tập
Các	- Sử dụng câu	Đề bài,	Cá	Suy	15	- Hoàn thành

câu hỏi	trúc to infinitive hay V-ing để miêu tả hệ điều hành - Lựa chọn từ vựng phù hợp cho các ngữ cảnh cụ thể. - Trình bày chức năng của hệ điều hành	bút, giấy, máy tính	nhân tự thực hiện riêng lẻ	nghĩ Phân tích Chọn kết quả	phút (bài)	đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 1	Điền vào chỗ trống dạng đúng của động từ trong ngoặc. Nối các lệnh DOS ở bên trái với giải thích bên phải. Một số câu lệnh là chữ viết tắt của các từ tiếng Anh	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Chọn kết quả	15 phút (bài)	- Hoàn thành đúng thời gian. - Đánh giá đúng yêu cầu
Bài 2	Trả lời câu hỏi trắc nghiệm. Làm việc cùng bạn. Cố gắng trả lời càng nhiều câu hỏi càng tốt.	Đề bài, bút, giấy, máy tính	Thực hiện cùng bạn	Suy nghĩ Phân tích Chọn kết quả, so sánh kết quả	20 phút (bài)	- Hoàn thành đúng thời gian. - Đánh giá đúng yêu cầu
Bài 3	Làm việc theo cặp. Đặt các bước này trong việc cài đặt lại hệ điều hành theo đúng thứ tự.	Đề bài, bút, giấy, máy tính	Thực hiện cùng bạn	Suy nghĩ Phân tích Chọn kết quả, so sánh kết quả	20 phút (bài)	- Hoàn thành đúng thời gian. - Đánh giá đúng yêu cầu
Bài 4	Tìm các từ trong bài 3 phù hợp với	Đề bài, bút,	Cá nhân	Suy	20 phút	- Hoàn thành đúng thời

	các định nghĩa này.	giấy, máy tính	tự thực hiện riêng lẻ	nghĩ Phân tích Chọn kết quả	(bài)	gian. - Đánh giá đúng yêu cầu
Chương/Bài 4 – DATABASES						
Nội dung	Mục tiêu	Nguồn lực	Cách thức tiến hành	Nhiệm vụ	Thời gian hoàn thành	Kết quả và tiêu chuẩn cần đạt được của bài tập
Các Câu hỏi	<ul style="list-style-type: none"> - Cơ sở dữ liệu là gì. - Những nhiệm vụ nào có thể được thực hiện bằng cách sử dụng cơ sở dữ liệu. - Đọc hiểu bài viết về cơ sở dữ liệu và viết tóm tắt chức năng của các cơ sở dữ liệu 	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Chọn kết quả	15 phút (bài)	<ul style="list-style-type: none"> - Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 1	Hoàn thành các câu bằng cách sử dụng một thuật ngữ cho sẵn. Sau đó viết các từ trong ô chữ để tìm thông điệp ẩn.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Chọn kết quả	15 phút (bài)	<ul style="list-style-type: none"> - Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 2.1, 2.2, 2.3	<ul style="list-style-type: none"> - Đọc về cơ sở dữ liệu, gạch dưới các tính năng cơ bản của một cơ sở dữ liệu. - Hãy lập danh 	Đề bài, bút, giấy, máy tính	Thực hiện cùng với các sinh viên	Suy nghĩ Phân tích Dịch nghĩa	30 phút (bài)	<ul style="list-style-type: none"> - Hoàn thành đúng thời gian. - Đánh giá đúng yêu cầu

	sách những từ bạn không hiểu. bạn có thể đoán họ nghĩa? So sánh ý tưởng của bạn với các sinh viên khác. - Sử dụng thông tin trong văn bản, hoàn thành các câu.		khác			
Bài 3	- Ghép các giải pháp lưu trữ và sao lưu dữ liệu trong khung với các hình A-F. Có những giải pháp nào khác?	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Đưa ra kết quả đúng	15 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 4	Ghép bộ phận của công ty từ 1-8 với loại dữ liệu mà nó hoạt động với a- h.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Chọn kết quả	15 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu

Chương / Bài 5 – GRAPHICS AND DESIGN

Nội dung	Mục tiêu	Nguồn lực	Cách thức tiến hành	Nhiệm vụ	Thời gian hoàn thành	Kết quả và tiêu chuẩn cần đạt được của bài tập
Các Câu hỏi	- Kể tên một số ngành nghề sử dụng thiết kế đồ họa - Trả lời thông tin về chức năng của thiết kế đồ họa - Miêu tả các bước liên quan đến vẽ máy bay	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền từ Kết nối câu	15 phút (bài)	- Hoàn thành đúng thời gian. - Đánh giá đúng yêu cầu

	sử dụng phần mềm máy tính					
Bài 1	- Ghép các công cụ từ hộp công cụ Photoshop (1-10) với các chức năng của nó (a-j).	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Điền từ	15 phút (bài)	- Hoàn thành đúng thời gian. - Đánh giá đúng yêu cầu
Bài 2	Hoàn thành mỗi khoảng trống trong những câu này với dạng -ing của một động từ thích hợp từ danh sách này.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Phát âm Chọn kết quả	15 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu

Chương / Bài 6: MULTIMEDIA

Nội dung	Mục tiêu	Nguồn lực	Cách thức tiến hành	Nhiệm vụ	Thời gian hoàn thành	Kết quả và tiêu chuẩn cần đạt được của bài tập
Các Câu hỏi	- Những loại nội dung khác nhau nào được kết hợp trong các ứng dụng đa phương tiện?	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Chọn kết quả	15 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 1	Đọc phần còn lại của văn bản này để tìm câu trả lời cho những câu hỏi này.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Chọn kết quả	15 - 20 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 2	Đọc những câu này, sau đó xác định các thì được sử dụng trong mệnh đề if và	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng	Suy nghĩ Phân tích Chọn	15 - 20 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu

	trong mệnh đề chính.		lẽ	kết quả		câu
Bài 3	Đặt các động từ trong ngoặc ở dạng đúng.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẽ	Suy nghĩ Phân tích Chọn kết quả	15 - 20 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 4	Nối các câu ở Cột A với các câu thích hợp ở Cột B. Sau đó nối từng hành động và hiệu ứng bằng cách sử dụng câu if	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẽ	Suy nghĩ Phân tích Chọn kết quả	15 - 20 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu
Bài 5	Dán nhãn ảnh bằng thiết bị đa phương tiện trong hộp.	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẽ	Suy nghĩ Phân tích Chọn kết quả	15 - 20 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu

Chương / Bài 7 – PROGRAM DESIGN

Nội dung	Mục tiêu	Nguồn lực	Cách thức tiến hành	Nhiệm vụ	Thời gian hoàn thành	Kết quả và tiêu chuẩn cần đạt được của bài tập
Các Câu hỏi	- Mô tả ngôn ngữ lập trình - Phân biệt các chức năng ngôn ngữ lập trình	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẽ	Suy nghĩ Phân tích Viết kết quả	15 phút (bài)	- Hoàn thành đúng thời gian. - Đánh giá đúng yêu cầu
Bài 1	- Hãy nhìn vào các cặp ví dụ này và quyết định xem đâu là yếu	Đề bài, bút, giấy, máy	Cá nhân tự thực hiện riêng	Suy nghĩ Phân tích	15 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh

	tổ quan trọng thay đổi về ý nghĩa.	tính	lễ	Viết kết quả		giá đúng yêu cầu
Bài 2	Theo cặp, thảo luận các câu sau	Đề bài, bút, giấy, máy tính	Thực hiện theo cặp	Suy nghĩ Phân tích Phát âm Dịch nghĩa	15 phút (bài)	- Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu

Chương / Bài 8 – LANS AND WANS

Nội dung	Mục tiêu	Nguồn lực	Cách thức tiến hành	Nhiệm vụ	Thời gian hoàn thành	Kết quả và tiêu chuẩn cần đạt được của bài tập
Các Câu hỏi	<ul style="list-style-type: none"> - Mạng máy tính là gì? - Những lợi ích của việc sử dụng mạng là gì? - Có bao nhiêu loại mạng? - Làm cách nào để cài đặt bộ định tuyến modem có dây? 	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Viết kết quả	15 phút (bài)	<ul style="list-style-type: none"> - Hoàn thành đúng thời gian. - Đánh giá đúng yêu cầu
Bài 1	<ul style="list-style-type: none"> - Đọc và trả lời các các câu hỏi về Mạng WAN và thông tin liên lạc trên toàn thế giới 	Đề bài, bút, giấy, máy tính	Cá nhân tự thực hiện riêng lẻ	Suy nghĩ Phân tích Viết kết quả	15 phút (bài)	<ul style="list-style-type: none"> - Hoàn thành đúng thời gian. - Được đánh giá đúng yêu cầu

V. Yêu cầu về đánh giá kết quả học tập

Nội	Hướng dẫn đánh giá	Tiêu chí đánh giá	Cách thức đánh
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dung			giá
Chương/Bài 1 - COMPUTER APPLICATIONS			
Các câu hỏi	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Điền đáp án đúng	Chấm bài và cho điểm căn cứ đáp án
Bài 1	Giáo viên đọc và đánh giá bài làm của một sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Kết nối đúng từ với cách sử dụng tương ứng	Chấm bài và cho điểm căn cứ đáp án
Bài 2	Giáo viên đọc và đánh giá bài làm của một sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Kết nối đúng từ với định nghĩa tương ứng	Phát vấn và căn cứ đáp án cho điểm.
Bài 3	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Kết nối đúng từ với chức năng tương ứng	Phát vấn và căn cứ đáp án cho điểm.
Bài 4	Giáo viên đọc và đánh giá bài làm của một sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích và trả lời câu hỏi, chia thì thích hợp	Phát vấn và căn cứ đáp án cho điểm.
Bài 5	Giáo viên chấm bài làm về nhà của mỗi học viên	-Thời gian làm bài	Quy định thời gian làm bài
		-Phân tích nghĩa của từ để chọn từ đúng	Chấm bài căn cứ đáp án
Chương/ Bài 2 – HARD DRIVES			
Nội dung	Hướng dẫn đánh giá	Tiêu chí đánh giá	Cách thức đánh giá
Các câu hỏi	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra	- Thời gian làm bài	Quy định thời gian làm bài
		- Chọn đáp án	Chấm bài và cho

	đáp án và cho điểm	đúng	điểm căn cứ đáp án
Bài 1	Giáo viên kiểm tra câu trả lời của mỗi học viên, cho kết quả đúng	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích nghĩa của từ để chọn từ đúng	Chấm bài căn cứ đáp án
Bài 2	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Điền đáp án đúng	Phát vấn và căn cứ đáp án cho điểm.
Bài 3	Giáo viên đọc và đánh giá bài làm của sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Điền đáp án đúng	Chấm bài và cho điểm căn cứ đáp án
Chương/ Bài 3 – OPERATING SYSTEMS			
Nội dung	Hướng dẫn đánh giá	Tiêu chí đánh giá	Cách thức đánh giá
Các câu hỏi	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Điền đáp án đúng	Chấm bài và cho điểm căn cứ đáp án
Bài 1	Giáo viên đọc và đánh giá bài làm của sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích và chia động từ để nói các lệnh	Chấm bài và cho điểm căn cứ đáp án
Bài 2	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Chọn đáp án đúng	Phát vấn và căn cứ đáp án cho điểm.
Bài 3	Giáo viên chấm bài làm về nhà của mỗi học viên	- Thời gian làm bài	Quy định thời gian làm bài

		- Chọn thứ tự đúng	Chấm bài và cho điểm căn cứ đáp án
Bài 4	Giáo viên chấm bài làm về nhà của mỗi học viên	- Thời gian làm bài	Quy định thời gian làm bài
		- Chọn đáp án đúng	Chấm bài và cho điểm căn cứ đáp án
Chương/Bài 4 - DATABASES			
Nội dung	Hướng dẫn đánh giá	Tiêu chí đánh giá	Cách thức đánh giá
Các câu hỏi	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Đưa ra phương án đáp án trả lời đúng	Chấm bài và cho điểm căn cứ đáp án
Bài 1	Giáo viên chấm bài làm về nhà của mỗi học viên, tổng hợp những sai sót và bố trí thời gian sửa bài	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích, dịch nghĩa, chọn từ đúng để điền	Chấm bài căn cứ đáp án
Bài 2	Giáo viên chấm bài làm về nhà của mỗi học viên, tổng hợp những sai sót và bố trí thời gian sửa bài	- Thời gian làm bài	Quy định thời gian làm bài
		- Tra từ, điền vào chỗ trống	Phát vấn và căn cứ đáp án cho điểm.
Bài 3	Giáo viên đọc và đánh giá bài làm của một sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Suy nghĩ, nối từ với hình	Phát vấn và căn cứ đáp án cho điểm.
Bài 4	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Suy nghĩ, ghép từ định nghĩa với các câu liên quan	Phát vấn và căn cứ đáp án cho điểm.
Chương / Bài 5 – GRAPHICS AND DESIGN			
Nội	Hướng dẫn đánh giá	Tiêu chí đánh giá	Cách thức đánh

dung			giá
Các câu hỏi	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Liệt kê, kể tên, trả lời câu hỏi	Chấm bài và cho điểm căn cứ đáp án
Bài 1	Giáo viên đọc và đánh giá bài làm của một sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Ghép các công cụ với chức năng	Chấm bài và cho điểm căn cứ đáp án
Bài 2	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích, dịch nghĩa, chọn dạng đúng của từ đúng để điền	Phát vấn và căn cứ đáp án cho điểm.
Chương / Bài 6: MULTIMEDIA			
Nội dung	Hướng dẫn đánh giá	Tiêu chí đánh giá	Cách thức đánh giá
Các câu hỏi	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		Suy nghĩ, phân tích, tìm câu trả lời	Chấm bài và cho điểm căn cứ đáp án
Bài 1	Giáo viên chấm bài làm về nhà của mỗi học viên, tổng hợp những sai sót và bố trí thời gian sửa bài	- Thời gian làm bài	Quy định thời gian làm bài
		- Đưa ra các đáp án chính xác	Đối chiếu với đáp án
Bài 2	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích, chia thì đúng	Phát vấn và căn cứ đáp án cho điểm.
Bài 3	Giáo viên chấm bài làm về nhà của mỗi học viên, tổng hợp những sai sót và bố trí	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích, chia	Phát vấn và căn

	thời gian sửa bài	thì đúng	cứ đáp án cho điểm.
Bài 4	Giáo viên chấm bài làm về nhà của mỗi học viên, tổng hợp những sai sót và bố trí thời gian sửa bài	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích, dịch nghĩa, nối câu	Phát vấn và căn cứ đáp án cho điểm.
Bài 5	Giáo viên chấm bài làm về nhà của mỗi học viên, tổng hợp những sai sót và bố trí thời gian sửa bài	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích, chọn từ với hình thức hợp	Phát vấn và căn cứ đáp án cho điểm.
Chương / Bài 7 – PROGRAM DESIGN			
Nội dung	Hướng dẫn đánh giá	Tiêu chí đánh giá	Cách thức đánh giá
Các câu hỏi	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Trả lời câu hỏi	Chấm bài và cho điểm căn cứ đáp án
Bài 1	Giáo viên đọc và đánh giá bài làm của mỗi sinh viên, tổng hợp những sai sót và bố trí thời gian sửa bài	- Thời gian làm bài	Quy định thời gian làm bài
		- Chọn đáp án đúng	Nghe trình bày, đối chiếu với đáp án kết hợp với phát vấn
Bài 2	Giáo viên kiểm tra cách phát âm của sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Thảo luận và trình bày, đưa ra đáp án	Phát vấn và căn cứ đáp án cho điểm.
Chương / Bài 8 – LANS AND WANS			
Các câu hỏi	Giáo viên kiểm tra câu trả lời của sinh viên, đánh giá mức độ tiếp thu bài từ đó đưa ra đáp án và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Trả lời câu hỏi, thảo luận	Chấm bài và cho điểm căn cứ đáp án

Bài 1	Giáo viên đọc và đánh giá bài làm của một sinh viên, đưa ra nhận xét và cho điểm	- Thời gian làm bài	Quy định thời gian làm bài
		- Phân tích và chọn câu trả lời thích hợp	Chấm bài và cho điểm căn cứ đáp án

VI. Tài liệu tham khảo

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