

INFORMATION TECHNOLOGY IN BUSINESS

UNIT – I

Introduction to Computers - Characteristics of Computers - Classification of Computers - Uses of Computers - Components of a Computer - Input Devices - Output Devices.

UNIT – II

Computer Main Memory - Auxiliary Storage Devices - Computer Software - Classification of Software - Operating Systems - Functions and Classifications – Programming Languages

UNIT – III

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UNIT – IV

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UNIT – V

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INTRODUCTION

DEFNITION

A computer is electronic device that can perform activates that involved mathematical, logical and graphical manipulations. Generally, the term is used to describe a collection of devices that function together as a system.

- ❖ It receives data & instruction from the input devices.
- ❖ It performs the following three operations in sequence.
- ❖ Process the data as per instructions.
- ❖ Provide the result (output) in a desired form

Data

It is the collection of raw facts, figures & symbols.

Ex: name of students and their marks in different subjects listed in random order.

Information

It is the data that is processed & presented in a organized manner.

Ex: when the names of students or arranged in alphabetical order, total and average marks are calculated & presented in a tabular form, it is information.

Programme

Set of instructions that enable a computer to perform a given task.

Characteristics of computer

- ❖ **High speed** : Computers have a ability to perform routine tasks at a greater speed then human beings. They can perform million of calculations in seconds.
- ❖ **Accuracy** : computers are used to perform task in a way that ensures accuracy.
- ❖ **Storage** : computer can store large amount of information. Any item of data or any instructions stored in the memory can be retrieved by computer it light speeds.
- ❖ **Automation** : Computers can be instructed to perform complex tacks automatically (which increases the productivity).
- ❖ **Diligence**: computers can perform the same task repeatedly & with the same accuracy without getting tired.
- ❖ **Versality** : computers are flexible to perform both simple and complex task.
- ❖ **Cost effectiveness** : computers reduce the amount of paper work and human effort, there by reducing costs.

Classification of computer

- 1. Micro Computer** : It is a single user computer system having moderately powerful, small, inexpensive microprocessor designed for an individual user. Business firms use personal computer for word processing, accounting, and desktop publishing and for running spreadsheet and database management applications.
- 2. Workstation** : It is also a single user computer system which is similar to personal computer but have more powerful microprocessor. This is used for engineering applications (CAD/CAM), desktop publishing, software development and other such type of application which require a moderate amount of computing power and relatively high quality graphics capabilities.
- 3. Minicomputer** : Minicomputer is multiuser computer system which is capable of supporting up to 250users simultaneously.
- 4. Mainframe Computer** : Mainframe is very large in size and is an expensive computer capable of supporting hundred or even thousands of users simultaneously. Mainframe executes may programs concurrently and supports many simultaneous execution of program.

5. Super Computer : Super computer is an extremely fast computer which can execute hundreds of millions of instructions per second. This is one of the fastest computers currently available. Supercomputers are very expensive and are employed for specialized. Applications that require immense amount of mathematical calculations. Ex: weather forecasting scientific research, electronic design and analysis of geological data.

6. Desktop Computer : A Desktop computer is the same as a personal computer but the computer is located on a desk/table due to its size and power requirements. This is used for desktop publishing woks, official and commercial work, etc.

7. Laptop Computer : Laptop computers have an L-shape design and the screen can be lowered and closed to allow for easy transportation of the machine. The primary feature that attracts users to laptops over desktops is their portability.

8. Palmtop Computer : A computer which is small enough to hold in one hand and operate with other is called as “hand top” or “palmtop” which has small keyboards or specialized keypads tailored to specific industries. Ex : tablet, ticket issuing machine in buses, electric meter reader

Components of CPU

Motherboard

A **mother board** is a multiple layer printed circuit board inside a computer that connects the different parts of the computer together. It has sockets for the CPU, RAM and expansion cards (Ex. Graphics cards, sound cards, network cards, Storage cards etc..) and it also hooks up to hard drives, disk drives and front panel ports with cables and wires. Motherboard is also known as a main board, System board, PCBs, MOBO or MB.

SMPS

A **switched mode power supply** is an electronic power supply that incorporates a switching regulator to convert electrical power efficiently. The most advantages of SMPS is higher power conversion efficiency.

Sound Card

A **sound card** is an internal computer expansion card. It is also known as an audio card. The sound card is applied to external audio interfaces that use software to generate sound. Typical uses of sound cards include providing the audio component for multimedia applications such as music composition, editing video or audio, presentation, education and entertainment (games) and video projection.



Graphic card

The graphics components are the part of our computer that control and enhance the display quality of a computer screen. Often, the graphics components are on a separate card that plugs into a slot on the motherboard, which is the main part of the computer. That's why the graphics components are commonly called the graphics card. The other names for the graphics components are video card, video adapter, display adapter and graphic accelerator.

Network card

A network card acts as the interface between a computer and a network cable. The purpose of the network card is to prepare, end, and control data on the network. It is also called as network adaptor or network interface card, or in short as NIC.

Input Devices - Output Devices

Input Devices

1. **Joystick:** Joystick is an input device which is used as a navigation control while playing games.
2. **Scanner:** Scanners allow us to transfer pictures and photographs to our computer. A scanner 'scans' the image from the top to the bottom, one line at a time, and transfers it the computer as a series of bits or a bitmap.
3. **Light pen:** Light pen this device is just like the pen used to write on some pad, the written matter is taken directly to the screen.
4. **Touch screen:** Touch screen is even taken as the input device as well as the output device. Touch screen is a special kind of display screen device. Which is placed on the computer monitor in order to allow the direct selection or selection of activation of the computer when somebody touches the screen.



5. **Keyboard** : It is an input device. It gets data, instruction from the user and stores them in computer memory. When a key is pressed, it generates an ASCII code (American standard code for information interchange). It has alphabet keys, numeric keys, special character keys, function keys and control keys. It usually has 101 keys.

6. **MICR** : Used by banks to process checks this is widely used by banks to process large volume of cheques and drafts.

7. **Mouse** : It is an input device, also called as pointing device. The pointer can provide data or instructions to the computer for processing. It has two buttons and a scroll wheel between these two buttons.



Output devices

- 1. Monitor:** Monitor is an output device which provides visual display data. This helps to correct wrong entries. It also shows the results of programs. In olden times we used monitors with Cathode Ray Tube (CRT). But now we are using LCD (Liquid Crystal Display) and LED (light Emitting Diode) monitors.
- 2. Printers:** Printer mainly used to take text or images in the paper. The data stored in the memory is softcopy whereas the output taken on the paper is hardcopy. Various types of printers are available they are: Dot Matrix Printer, laser printer and inkjet printer.
- 3. Speaker:** A speaker is an output device through which we can hear sound. It is an external device which is connected to the computer using port.

4. **Headphone:** Headphone are output device. They are similar to speakers, except the are worm on the ears so only; one person can hear the output at a time.

5. **Projector:** It is an output device using which the output is projected onto a flat screen. A project is often used in meetings or to make presentation. It allows the display to be visible to many people.

6. **Modem:** There are two types of Mode,

Internal computer modems

External computer modems.

Uses of computer

1 .Applications of computer in Education :

Computers are used in colleges to provide the methods of teaching in different ways. Computer education is becoming mandatory most the universities across the world.

2. Applications of computer in industries :

Mostly the software of the hardware that produced by companies would be used to automatic the manual task. One kind of the industries have task of producing such products and is called software industries. Computer can be used to produce pattern in textile industries, colours combinations in paint industries, automatic the operation of a machine in a industry using robotics etc.

3. Applications of computer in business :

The are used in commercial organization for clerical and administrative purposes. Tax calculations, salary slip preparation etc.

4. Applications of computer in Entertainment :

Animations and special Effects for the movies are done using high end workstations. In Titanic movies they used 100 high end Linux workstations in parallel to produce the special effects.

5 Applications of computer in Home :

Nowadays people have computers at home and it has become necessity electrical home appliance home. Children play games, music, view movies and some sort of reading & writing according to needs.

6. Application of computer in Weather forecasting :

Computers based weather forecasting depends on accurate collection of data from weather stations, airports, satellites, different sensitive devices all around the world.