

**Note: The given content need not to be printed.**

## CHAPTER 1

### INPUT.OUTPUT.AND STORAGE DEVICES

#### COMPUTER SYSTEM



A Computer is a machine that works on electricity. It can be compared to a magic box that can do a variety of jobs. Computers are not confined to offices only. These can be seen everywhere around us, such as shops,schools,hospitals,banks,airports,railway stations etc. Computers work very fast and give 100% accurate results.

**Definition:** A computer is an electronic machine that can store and deal with large amounts of information.

A computer system performs three basic functions.



#### PARTS OF A COMPUTER:

A computer system is made up of four types of devices:

Input Devices    Processing Devices    Output Devices    Storage Devices

**INPUT DEVICES:** The devices through which we enter data and instructions are called the input devices. Example Keyboard,Mouse,Microphone,Touchpad,Touch screen,Light pen, Scanner,Digital Camera, Web camera etc.

**PROCESSING DEVICES:** Processing devices are the components responsible for the processing of information within the computer system. This includes devices such as the CPU, memory and motherboard. Storage devices are components which allow data to be stored within a computer system

**OUTPUT DEVICES:** The devices which are used to display the data that we enter into a computer and the results that we get after processing. Example Monitor,Speakers,Printer etc

**STORAGE DEVICES:** The devices which help us in storing the data permanently are called storage devices.Example Hard disk,CD,DVD etc.

## **BITS AND BYTE**

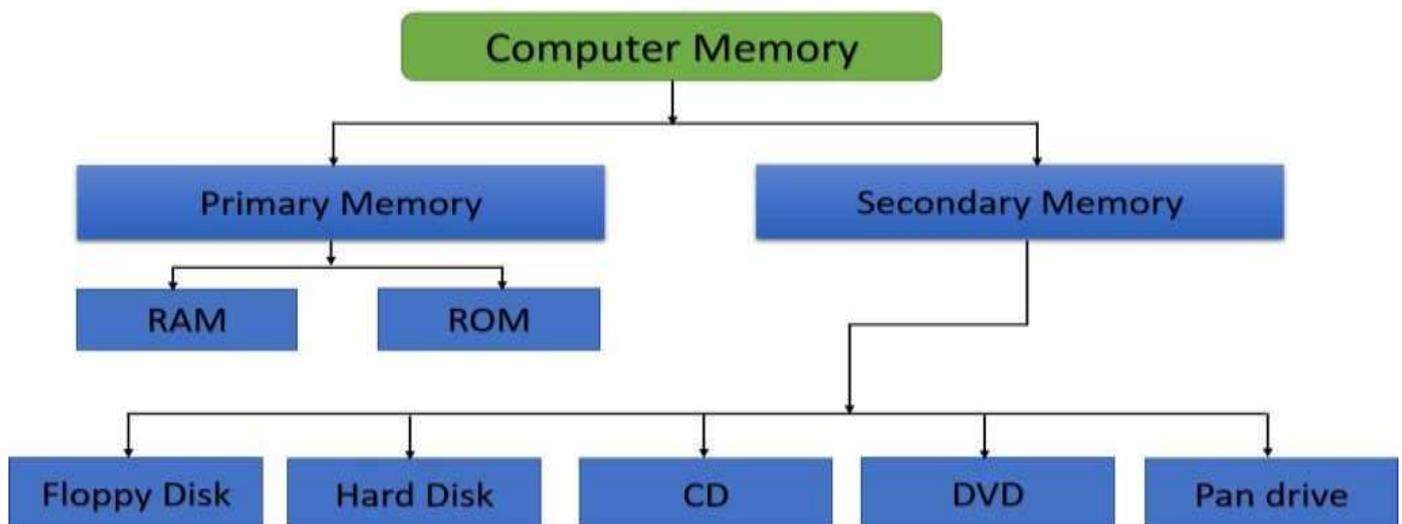
A computer can understand only two stages- ON(represented by 1) and OFF(represented by 0). These two digits-0s and 1s are called Binary digits or Bits. A Bit is just a smaller unit of information than a Byte. A Byte is the central memory unit on a computer that is usually made up of a string of at least eight binary digits. The data is stored in the computer memory in the form of Bits, and is measured in Bytes.

## **MEMORY SIZE**

**Memory Capacity Conversion Chart**

Term (Abbreviation)	Approximate Size
Byte (B)	8 bits
Kilobyte (KB)	1024 bytes / $10^3$ bytes
Megabyte (MB)	1024 KB / $10^6$ bytes
Gigabyte (GB)	1024 MB / $10^9$ bytes
Terabyte (TB)	1024 GB / $10^{12}$ bytes
Petabyte (PB)	1024 TB / $10^{15}$ bytes
Exabyte (EB)	1024 PB / $10^{18}$ bytes
Zettabyte (ZB)	1024 EB / $10^{21}$ bytes
Yottabyte (YB)	1024 ZB / $10^{24}$ bytes

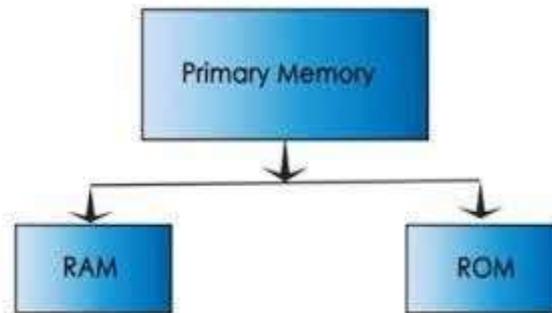
The memory of the computer is of two types:



## INTERNAL MEMORY

“Internal memory is also called “Primary memory or Main memory”.It is built-in memory, designed to store data and instructions while the computer is working.The data stored in the internal memory is erased when the computer is turned off.It is typically smaller in size but has faster access times.

Internal memory/primary memory is of two types:



### **RAM (RANDOM ACCESS MEMORY):**

- It is a volatile memory so the information stored in the memory is lost when we turn off the computer.
- RAM is a temporary memory . It stores the information temporarily.
- It is a form of computer memory that can be read and changed in any order, typically used to store working data and machine codes.

### **ROM (READ ONLY MEMORY):**

- It is a non-volatile memory . It retains the stored information even when the power is switched off.
- ROM is a permanent memory. It stores the information permanently.
- The instructions stored in ROM cannot be changed.

### **EXTERNAL MEMORY:**

Secondary memory is also termed external memory and refers to the various storage media on which a computer can store data and programs.



Compact Disk



Hard Disk



Pen drive



Floppy Disk