ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution

STUDY MATERIAL - 1

Subject: COMPUTER **Class - 6**

Chapter: Computers **Date: 05/05/2020**

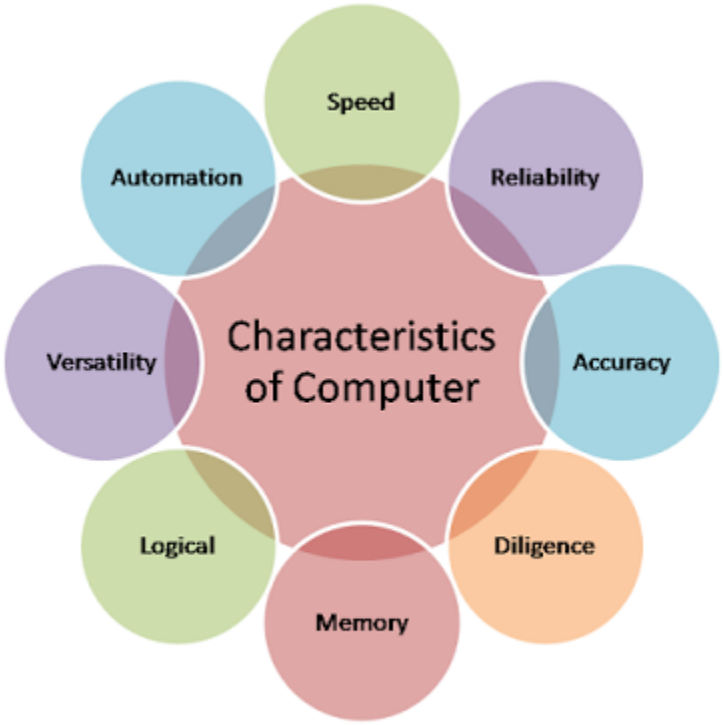
INTRODUCTION

A computer is a programmable electronic device that accepts raw data as input and processes it with a set of instructions (a program) to produce the result as output.

Computers can be generally classified by size and power as follows, though there is considerable overlap:

- Personal computer: A small, single-user computer based on a microprocessor.
- Workstation: A powerful, single-user computer. A workstation is like a personal computer, but it has a more powerful microprocessor and, in general, a higher-quality monitor.
- Minicomputer: A multi-user computer capable of supporting up to hundreds of users simultaneously.
- Mainframe: A powerful multi-user computer capable of supporting many hundreds or thousands of users simultaneously.
- Supercomputer: An extremely fast computer that can perform hundreds of millions of instructions per second.

CHARACTERISTICS OF A COMPUTER



SPEED : A Computer can perform tasks very fast In general, no human being can compete to solving the complex computation, faster than computer. Speed of a computer is measured in MIPS (Millions of Instructions per Second).

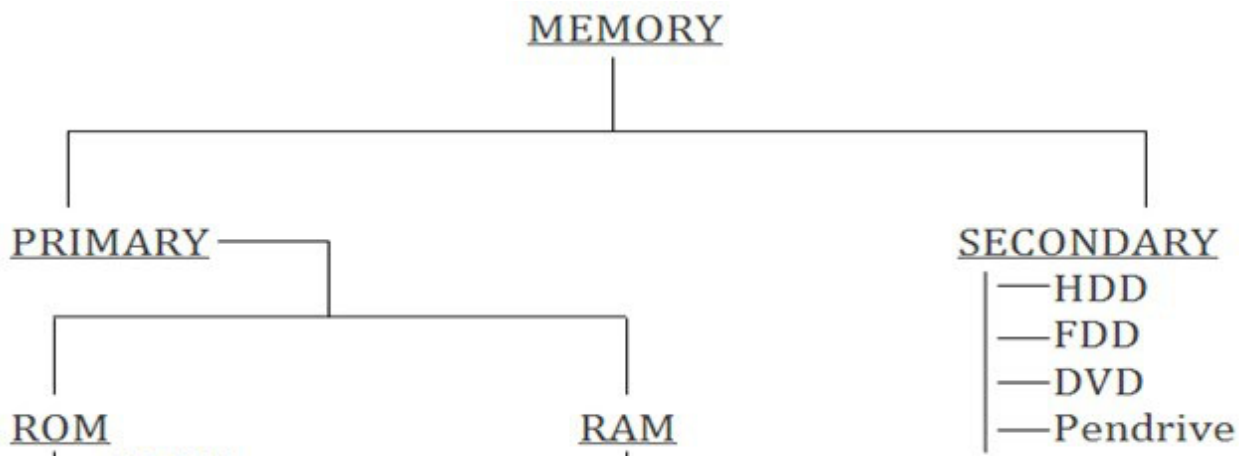
ACCURACY : Since Computer is programmed, so whatever input we give it gives result with accurately.

VERSATILITY : We can use computer to perform completely different type of work at the same time.

MEMORY : Computer can store huge amount of data or information. Every piece of Information that a user stores on a Computer can be retained as long as is needed.

RELIABILITY : Computers are devoid of emotions, they have no feelings and no instincts because they are machines. Computer can work for hours without any break and creating error.

Memory



Primary memory is computer memory that is accessed directly by the CPU. Primary Memory is of two types: RAM and ROM.

RAM (Volatile Memory) : It is a volatile memory. It means it does not store data or instructions permanently. When you switch on the computer the data and instructions from the hard disk are stored in RAM.

CPU utilizes this data to perform the required tasks. As soon as you shut down the computer the RAM loses all the data.

ROM (Non-volatile Memory): It is a non-volatile memory. It means it does not lose its data or programs that are written on it at the time of manufacture. So it is a permanent memory that contains all important data and instructions needed to perform important tasks like the boot process.

Secondary memory (or secondary storage) is the slowest and cheapest form of memory. It cannot be processed directly by the CPU. It must first be copied into primary storage.

Secondary memory devices include magnetic disks like hard drives and floppy disks ; optical disks such as CDs and CDROMs ; and magnetic tapes, which were the first forms of secondary memory.

Applications of computer

The computer has become a part of our life. There are plenty of things that we do in a day are dependent on a computer. Some of the common examples are as follows:

1. **ATM:** While withdrawing cash from an ATM, you are using a computer that enables the ATM to take instructions and dispense cash accordingly.
2. **Touchscreen**: It is a display device that allows the user to interact with a computer by using their finger or stylus. They're a useful alternative to a mouse or keyboard for navigating a GUI (graphical user interface). Touch screens are used on a variety of devices, such as computer and laptop displays, smartphones, tablets, cash registers, etc.
3. **Voice recognition:** It is a computer software program with the ability to decode the human voice. Voice recognition is commonly used to operate a device, perform commands, or write without having to use a keyboard, mouse, or press any buttons.

Answer the following questions:

1. **Define supercomputers.**

   Ans: Supercomputers are the most powerful and extremely fast computer that can perform hundreds of millions of instructions per second.

2. **What do you mean by 100 MIPS?**

   Ans: It means that a machine can process 100 millions of instructions per second.

3. **Write a short note on voice recognition.**

   Ans: It is a computer software program with the ability to decode the human voice. Voice recognition is commonly used to operate a device, perform commands, or write without having to use a keyboard, mouse, or press any buttons.

4. **Differentiate between primary memory and secondary memory.**

   Ans: The key difference between primary and secondary memory is that primary memory can be directly accessed by the CPU whereas; the CPU cannot directly access the secondary memory. The primary memory of the computer is also known as the main memory of the computer. However, secondary memory is known as auxiliary memory.

5. **Write any three characteristics of a computer.**

   Ans: Three characteristics of a computer are as follows:

ACCURACY : Since Computer is programmed, so whatever input we give it gives result with accurately.

VERSATILITY : : We can use computer to perform completely different type of work at the same time.

RELIABILITY : Computers are devoid of emotions, they have no feelings and no instincts because they are machines. Computer can work for hours without any break and creating error.