A computer is an electronic device that generates output in the form of useful information when the input is given to it by the user. A computer accepts input in different forms such as data, program and user replay.

Classification of Computers

There are the different types of computers available these days. The function of each type of computer is to process the data and provide some output to the users. However, the methods or techniques used by these computers to process and handle the data may be different. We can classify the computer according to the following three criteria:

- **Based on operating principles**
- **Based on applications**
- **Based on size and capability**

1) Based on Operating Principles

On the basis of the operation performed and methods used to store and process the data information, computers can be classified into the following categories:

- **Analog computers**
  The analog computers represent data in the form of continuous electrical signals having a specific magnitude. These computers are very fast in their operations to be

carried out at the same time. They are a powerful tool to solve differential equations.

- **Digital Computers**
  The digital computer is also known as the digital information processing system, is a type of computer that stores and processes data in the digital form. Therefore each type of data is usually stored in these computers in terms of 0s and 1s. The output produced by these computers is also in the digital form.

- **Hybrid Computers**
  The hybrid computer is a combination of analog computer and digital computer because it encompasses the best features of both these computers. Therefore the hardware components of hybrid computers are usually the mixture of analog and digital components. The hybrid computer is also less expensive than the digital computers.

2) Based on Application

Different computers are designed for a different purpose so that they can perform their tasks according to their capabilities. On the basis of different applications or purpose, computers can be classified into the following categories:

- **General purpose computers**
  They are designed in such a manner that they can work in all environments. The general purpose computers are versatile and can store a number of programs meant for

performing distinct tasks. The general purpose computers are not efficient and consume a large amount of time in generating the results.

- **Special purpose computers**
  They are designed in such a manner that they can perform only a specified task. The special purpose computers are not versatile and their speed and memory size depend on the task that is to be performed. The special purpose computers are efficient and consume less amount of time in generating the results.

3) Based on size and Capabilities

Computers differ from each other in terms of their size, shape, and weights. Each type of computers perform some unique functions and can be employed in the fields suited to them. On the basis of size, shape the computers can be classified into the following categories.

- **Microcomputers**
  A microcomputer is a small and cheap digital computer that is designed to be used by individuals. It is built around a microprocessor, a storage unit, and an I/o channel. The microcomputers are generally in the form of PCs, workstations and notebook computers.
- **Mini computers**
  A minicomputer was first introduced in the year 1960 by Digital Equipment Corporations(DEC). They were called

minicomputers because of their smaller size than the other computers of those time.

- **Mainframe computers**
  A mainframe computer is a very large computer that is employed by the large business organization for handling major applications such as financial transaction processing.

- **Super computers**
  A super computer is the fastest type of computers that can perform complex operations at a very high speed. The super computer was first presented in the year 1960s by Seymour Cray at Control Data Corporation(CDC). They are more expansive than the other categories of computers.