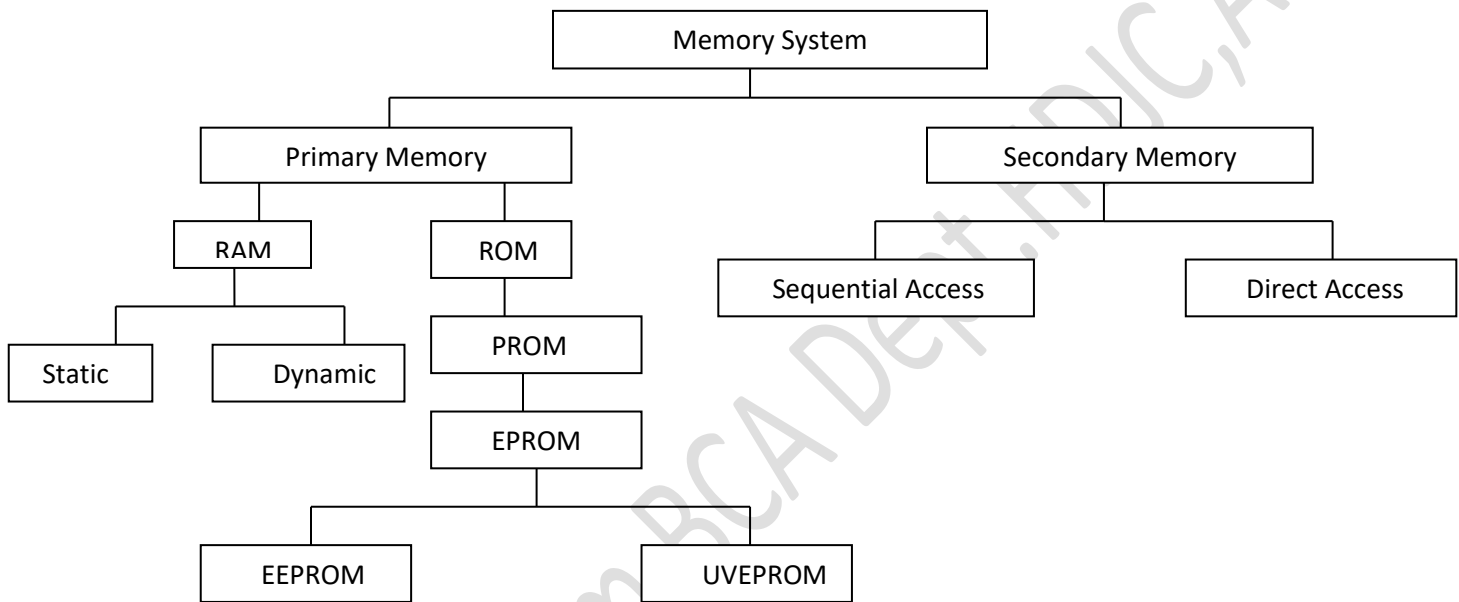# The Memory System:-

It is use to store the data. It is two essential part of hardware. There are two types of memory used in computer system such as:-

(i)   Primary / Volatile Memory / Storage

(ii)   Secondary /Non- Volatile Memory / Storage

Primary Memory / Storage

The primary storage can hold information only which the computer can hold information only which the computer is as soon as computer system switched off or reset the information held in the primary memory these appear. This loses its data, when power is switched off. The memory unit that communicates directly within the CPU, Auxiliary memory and Cache memory, is called main memory. It is the central storage unit of the computer system. It is a large and fast memory used to store data during computer operations. Main memory is made up of RAM and ROM, with RAM integrated circuit chips

RAM(Random Access Memory):- RAM is the main memory which temporary read and write of a computer system and faster than secondary memory.

RAM is of two types:-

1. Static RAM
2. Dynamic RAM

1. **Static RAM:-**It is a RAM with high speed and lost. It stored information as long as when power supply is on it consumes more power. Static RAM, has a six transistor circuit in each cell and retains data, until powered off.

2. **Dynamic RAM:** - Its losses, it stored in information in a very few short time even thorough the power supply is on. It is low speed and cheaper. It consumes less power. Dynamic RAM, is made of capacitors and transistors. It is slower and cheaper than SRAM.

ROM(Read Only Memory):- The data/information are stored permanently in the ROM and are read for used when computer is switched on. ROM stands for read-only memory, and the name stems from the fact that while data can be read from this type of computer memory, data cannot normally be written to it. It is a very fast type of computer memory which is usually installed close to the CPU on the motherboard.

ROM is a type of non-volatile memory, which means that the data stored in ROM persists in the memory even when it receives no power – for example when the computer is turned off. In that sense it is similar to secondary memory, which is used for long term storage.

Types of ROM

ROM is available in several different types:-

1. PROM

2. EPROM

3. EEPROM

4. UVEPROM

1.**PROM:-** PROM stands for Programmable Read-Only Memory, and it is different from true ROM in that while a ROM is programmed (i.e. has data written to it) during the manufacturing process.

2. **EPROM: -**EPROM stands for Erasable Programmable Read-Only Memory, and as the name suggests, data stored in an EPROM can be erased and the EPROM reprogrammed. Erasing an EPROM involves removing it from the computer and exposing it to ultraviolet light before re-burning it.

3. **EEPROM:-**EEPROM stands for Electrically Erasable Programmable Read-Only Memory, and the distinction between EPROM and EEPROM is that the latter can be erased and written to by the computer system it is installed in. In that sense EEPROM is not strictly read-only. However in many cases the write process is slow, so it is normally only done to update program code such as firmware or BSIOS code on an occasional basis.

4. **UVEPROM:-** Ultra Violet Erasable PROM.