23/01/2023

**COMPUTER MEMORY**

* The computer memory holds the data and instructions needed to process raw data and product output.

Computer memory of two types:-

* Volatile( RAM)
* Non volatile (ROM)
* the secondary memory ( hard disk) is refered as storage not memory

On the basis of space or location it can be divided in to four types:-

* **Register memory**
* **Cache memory**
* **Primary memory**
* **Secondary memory**

1. **REGISTER MEMORY**

* Smallest and the fastest memory in a computer
* It is located in CPU in the form of register
* Registers holds frequently used data ,instructions and processed by the CPU.
* Registers holds data around 32 bits to 64 bits.

1. **CACHE MEMORY**

* High speed memory.
* Cache memory can only be accessed by CPU.
* Small in size but faster than main memory ( RAM)
* By acting as buffer between RAM and CPU, it speed ups performance.

1. **PRIMARY MEMORY**

Two types of primary memory

* **RAM**:- volatile memory. Does not store data permanently.
* **ROM** :- Non volatile memory , that means stores data permanently

1. **SECONDARY MEMORY**

* Secondary storage devices are built into the computer.
* It also known as external memory or auxiliary memory.
* It can’t be directly accessed by CPU.
* It is non volatile that is permanently stores the data even when the computer Is turned off or deleted.

EXAMPLES OF SECONDARY MEMORY:-hard disk , pendrive, sd card dvd, compact disk (CD)

**MEMORY UNITS** :- used to measure and represent data.

Memory units are:-

* Bit :- have 1 binary value out of 0 and 1
* Byte :- byte contains 8 bit
* Kilobyte:- contains 1024 bytes
* Megabyte:- contains 1024 kilobytes
* Gigabyte:- contains 1024 megabytes
* Terabyte:- contains 1024 gigabytes