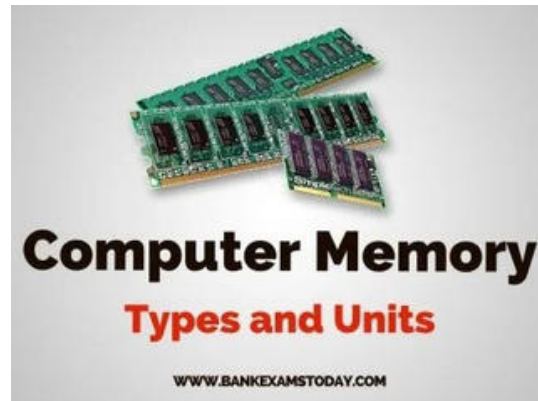


Computer Memory - Types and Units

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Computer memory is the storage space in computers where data and instructions to be processed are stored, either for temporarily or permanently.



The data is stored in the [memory unit](#) of CPU. The data storage is in binary digits 0 & 1

- 1 Bit = 0 or 1
- 8 Bits = 1 Byte
- 1024 Byte = 1 Kilobyte (KB) (1 to 3 digits)
- 1024 Kilobyte = 1 Megabyte (MB) (4 to 6 digits)
- 1024 Megabyte = 1 Gigabyte (GB) (7 to 9 digits)
- 1024 Gigabyte = 1 Terabyte (TB) (10 to 12 digits)
- 1024 Terabyte = 1 Petabyte (PB) (13 to 15 digits)
- 1024 Petabyte = 1 Exabyte (EB) (16 to 18 digits)
- 1024 Exabyte = 1 Zetabyte (ZB) (19 to 21 digits)
- 1024 Zetabyte = 1 Yottabyte (YB) (25 to 27 digits)

TYPES OF MEMORY :

A. PRIMARY MEMORY/ MAIN MEMORY

It is the internal memory of the computer and forms integral part of ALU (Arithmetic and Logical Unit) . It provides main working space to the computers.

RAM (Random Access Memory)

- Temporary memory which holds data and programs during execution.
- The data and programs will be lost in case of power failure
- One can write, modify , erase and read the data and programs during execution.
- It is also known as Volatile memory.

ROM (Read Only Memory)

- Permanent memory which contains instructions to get the computer started when it is switched on.
- One can only read the stored data but, can not write, erase or modify the data.

- The data and programs will not be affected in case of power failure
- It is also known as Non-Volatile memory.

3 Types of ROM:

- 1) PROM (Programmable Read Only Memory)
- 2) EPROM (Erasable Programmable Read Only Memory)
- 3) EEPROM (Electrically Erased Program Read Only Memory)

Cache Memory

- It is the path between the processor and memory.
- It stores the program (or its part) currently being executed or to be executed within a short period of time.

B. SECONDARY MEMORY/ AUXILLIARY MEMORY

- External and permanent memory.
- It is also known as backup storage device.

Example :-

- > Floppy Disk
- > Hard Disk
- > Optical Disks (includes CD-ROM, WORM (write-once-read-many) and Erasable (can be erased and reloaded)
- > Pen drives
- > Memory Cards