

**Course: BBA Part I**

**Paper: V**

**Topic: Types of Computer Memory**

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## **Types of Computer Memory: Primary and Secondary**

Although many types of memory in a computer exist, the most basic distinction is between primary memory, often called system memory, and secondary memory, which is more commonly called storage.

The key difference between primary and secondary memory is speed of access.

- **Primary memory** includes ROM and RAM, and is located close to the CPU on the computer motherboard, enabling the CPU to read data from primary memory very quickly indeed. It is used to store data that the CPU needs imminently so that it does not have to wait for it to be delivered.
- **Secondary memory** by contrast, is usually physically located within a separate storage device, such as a hard disk drive or solid state drive (SSD), which is connected to the computer system either directly or over a network. The cost per gigabyte of secondary memory is much lower, but the read and write speeds are significantly slower.

## **Primary Memory Types: RAM and ROM**

There are two key types of primary memory:

1. RAM, or random access memory
2. ROM, or read-only memory

## **Secondary Memory Types**

Secondary memory comprises many different storage media which can be directly attached to a computer system. These include:

- hard disk drives
- solid state drives (SSDs)
- Optical (CD or DVD) drives
- Tape drives

Secondary memory also includes:

- Storage arrays including 3D NAND flash arrays connected over a storage area network (SAN)
- Storage devices which may be connected over a conventional network (known as network attached storage, or NAS)

Arguably cloud storage can also be called secondary memory.