Memory versus Storage

Before we delve in to the depths of the Storage System, it is important to understand the difference between the concepts of Memory and the Storage.

Memory

Whether you are writing a letter, entering accounting records, or drawing a picture, your work is sitting inside the computer's memory.

While performing a processing operation, the CPU needs a place to temporarily hold instructions to be executed and the data to be used with those instructions. Memory, which is composed of one or more chips on the Motherboard, holds data and instructions while they are being processed by the CPU. A Memory unit is also known as a Main/Primary/Internal Memory.

Storage

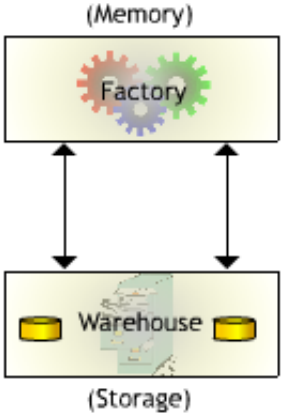
Storage can be referred as a non-volatile memory, which is external to a computer. The items in the Storage are retained even when the power is removed from the computer. The data and instructions that are entered into the computer system through Input Units are stored inside the computer before the actual processing starts, similarly the results produced by the computer after processing must also be kept somewhere. Therefore, if the data is to be stored for future retrieval purposes, then it must be copied from the Memory to a storage device before turning the computer off. The Storage is also called as Secondary Memory, Auxiliary Storage or even Mass Storage.

The process of copying the work from the Memory into the Storage Devices is called as Saving the work. The Storage Devices are the secondary media used for storing volumes of data permanently or for long term periods.

An Example

The difference between Memory and Storage can be understood with help of the following Illustration.

- We assume, a warehouse (storage) to be a storage place which stores all the material that a factory would be requiring at any point of time.
- As and when the material is required by the factory it can be retrieved from the warehouse to a place inside the factory (memory) from where all the machines and processes (CPU) would take the material.
- Process it
- Generate the output.



- Types of Memory