

# Storage Devices

In the previous sections, we have learnt the difference between Memory and Storage. To recall, a Memory can be understood as a tabletop where we can spread out our books, documents etc. To work efficiently, we need to have enough table space. While working the books and files that are not needed should be stored. In other words, we need one or more storage devices, mechanisms with nonvolatile memories large enough to meet our storage needs. Storage Devices can be Internal, that is located inside the CPU case, or they can be External, that is located outside the case.

Just as a File Cabinet needs to have its drawers and folders labeled so that one can easily find information within it, so a storage device needs to be formatted before it is used. Formatting a Storage device labels its parts so that the computer can find data on the device. The media used in storage devices have to be formatted for the particular platform with which they will be used. Many storage devices come preformatted, while others have to be formatted by the user.

## How is Data stored?

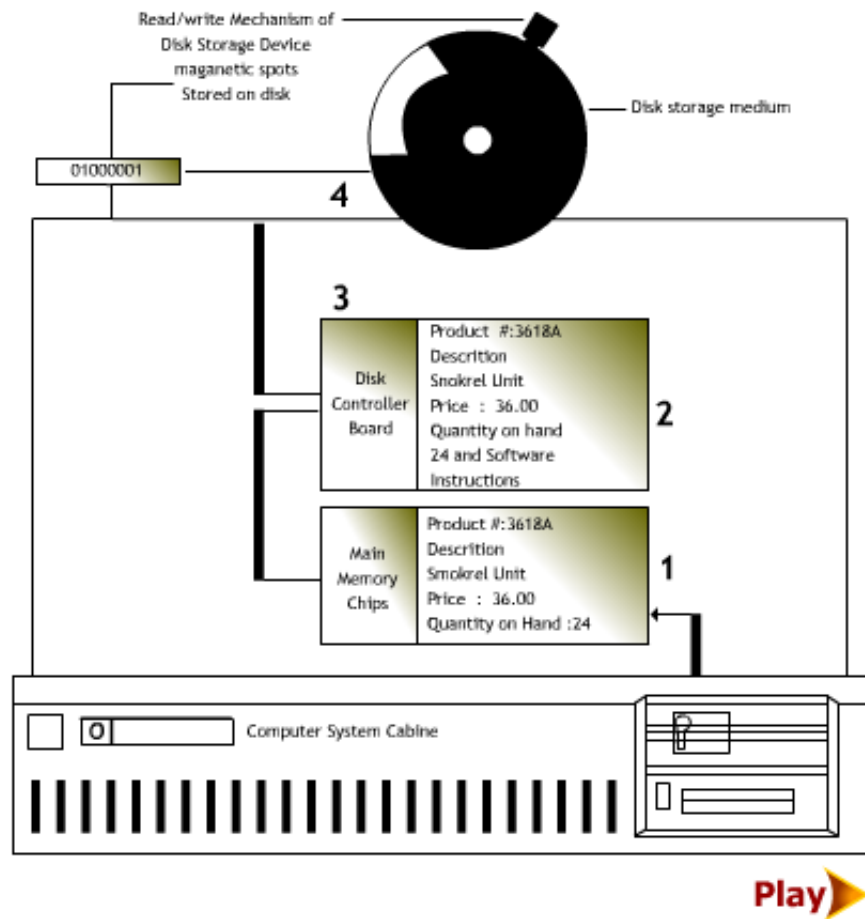
To store data for later use we require, a storage medium and a storage device. The storage device records the data on to the medium, where the data is held until it is needed. The process of recording data onto media includes the following four steps.

➤ The data enters the main memory from an external device, such as a keyboard.

➤ The software instructions determine where the data is to be recorded onto the disk (storage medium).

➤ The data goes to the controller board for storage device, which positions the recording mechanism over the appropriate location on the storage medium. In case of disk, this mechanism is referred to as a read/write head.

➤ Finally, the data flows to the read/write head in the disk storage device and is recorded on the storage medium.



The main Storage Devices include:-

[Magnetic Storage Devices](#)

[Optical Storage Devices](#)