Secondary Storage

> Tags: Secondary Storage, CPU, SSD, HDD, USB,

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- Devices that store large amounts of data, instructions, and information more permanently than allowed with memory

Advantages over Memory

- nonvolatility
- greater capacity
- greater economy

Note: Secondary Storage are not directly accessible by the CPU

Most common forms

- magnetic
- optical
- solid state

Access methods

Sequential access

- data must be retrieved in the order in which it is stored.
- to be able to access certain data, you need to access the previews data (magnetic stripe)

Direct Access

- records can be retrieved in any order

Magnetic tapes

- a type of sequential secondary storage
- primarily for storing backups for critical organizational data.

Hard disk Drive (HDD)

- a direct access storage device, consists of rapidly rotating disks coated with magnetic material

Solid State Secondary

- store data in memory chips rather than magnetic or optimal media

Advantages

- require less power and provide faster access than magnetic data storage devices
- have no moving parts, so they are less fragile than hard disk drives
- A universal serial bus (USB) flash drive is a common SSD
- HDD is cheaper than SSD

HDD	SSD
fragile	less fragile
cheaper	expensive
slower than SSD	faster

Input and Output Devices: The gateway to computer systems

- allow the user to provide data and instructions to the computer and to receive results from it
- are parts of a computer's user interface