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It is also called **Secondary Storage**, **External Memory**, or **Auxiliary Memory**.

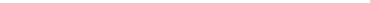
Secondary Memory (

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)

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 (Permanent)



OFF



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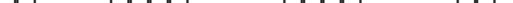

☐ ☐ ☐ **Delete** ☐ ☐ ☐ ☐

 **Secondary Storage, External Memory**
 **Auxiliary**
Memory





Why Do We Need Secondary Memory? (□□□□□□□□)

RAM 

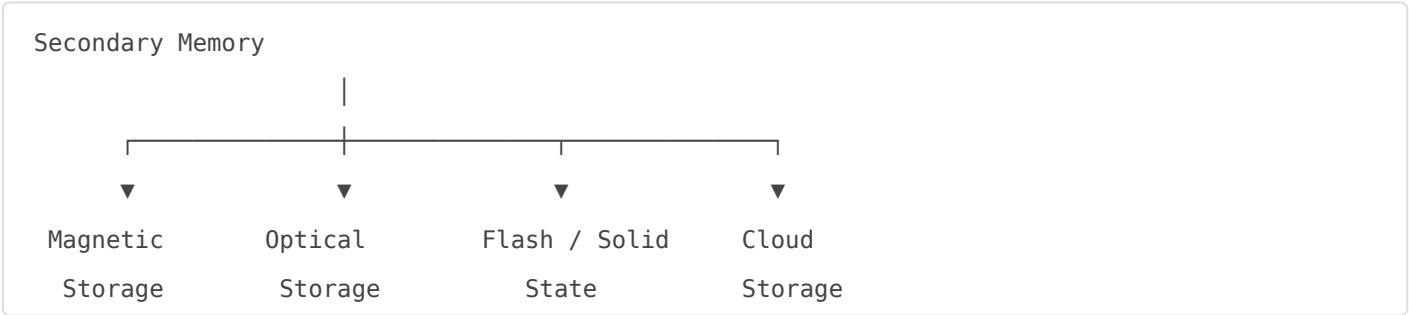
- Photos
- Videos
- Documents
- Software
- Games

It is used to store data permanently. It is slower than primary memory but has a much larger capacity. It is used to store data that is not currently being used by the computer.

Secondary Memory is used to store data permanently. It is slower than primary memory but has a much larger capacity. It is used to store data that is not currently being used by the computer.

Types of Secondary Memory (Main Memory)

Secondary Memory is divided into four main types: Magnetic Storage, Optical Storage, Flash / Solid State, and Cloud Storage.



1. Magnetic Storage (Main Memory)

Magnetic Technology is used to store data permanently. It is slower than primary memory but has a much larger capacity. It is used to store data that is not currently being used by the computer.

- Hard Disk Drive (HDD)
- Floppy Disk
- Magnetic Tape
- Advantages
- Large Storage
- Low Cost
- Disadvantages
- Slower

Mechanical Parts are used to store data permanently. It is slower than primary memory but has a much larger capacity. It is used to store data that is not currently being used by the computer.

2. Optical Storage (Main Memory)

❑❑ **Laser Light** ❑❑ ❑❑❑❑❑ ❑❑ ❑❑❑❑ ❑❑❑❑❑ ❑❑
❑❑❑❑❑ ❑❑❑

- CD
- DVD
- Blu-ray Disc
- Advantages
- Easy to Carry
- Good for Movies and Software Distribution
- Disadvantages
- Limited Capacity

Scratch ❑❑❑❑ ❑❑ ❑❑❑❑ ❑❑ ❑❑❑❑ ❑❑

3. Flash / Solid State Storage (❑❑❑❑❑ ❑❑❑❑❑❑❑❑)

❑❑ **Flash Memory Chips** ❑❑ ❑❑❑❑❑ ❑❑❑❑❑ ❑❑❑

- SSD
- Pen Drive
- Memory Card
- Advantages
- Very Fast
- No Moving Parts
- Durable
- Disadvantages
- Costlier than HDD

4. Cloud Storage (❑❑❑❑❑❑ ❑❑❑❑❑❑❑❑)

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❑❑❑

- Google Drive
- OneDrive
- Dropbox
- iCloud
- Advantages
- Access from Anywhere
- Online Backup
- Easy Sharing
- Disadvantages
- Internet Required

- Limited Free Storage

Common Secondary Storage Devices

Device	Storage Type	Use
HDD	Magnetic	Computer Storage
SSD	Flash	Fast Computer Storage
Pen Drive	Flash	Data Transfer
Memory Card	Flash	Mobile & Camera
CD	Optical	Music & Software
DVD	Optical	Movies & Data
Blu-ray	Optical	HD Movies
Magnetic Tape	Magnetic	Backup

