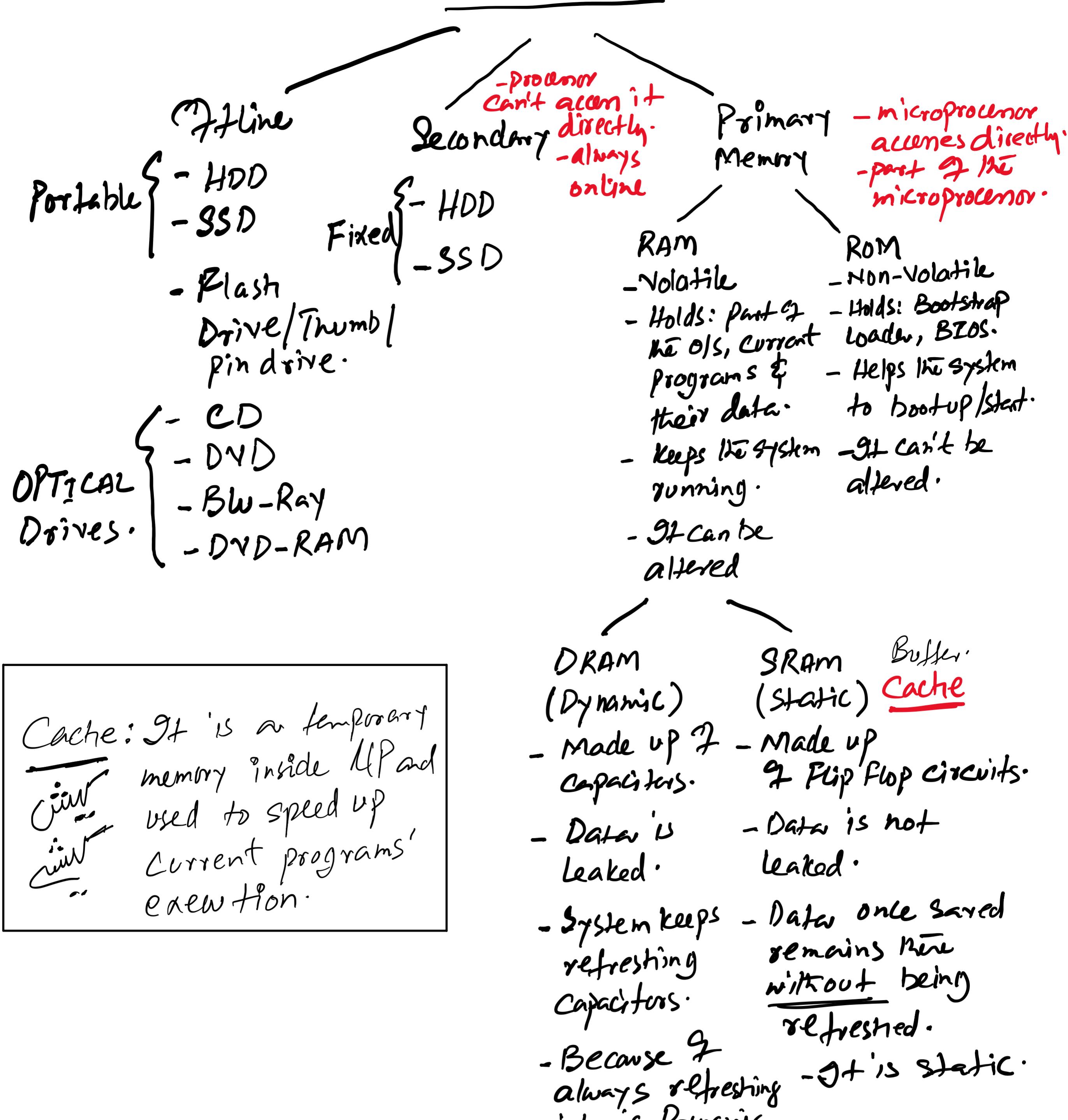


- Load
↳ DL
↳ UL
- Cache
- Online
- Offline



Cache: It is an temporary memory inside CPU and used to speed up current programs' execution.

DRAM (Dynamic)

- Made up of capacitors.
- Data is leaked.
- System keeps refreshing.
- Because it always refreshes, it is Dynamic.
- It consumes less power.
- It can hold more data than SRAM.
- It can be upgraded separately.

SRAM (Static)

- Made up of flip flop circuits.
- Data is not leaked.
- Data once saved remains there without being refreshed.
- It is static.
- It consumes more power.
- It holds less data than DRAM.
- It can't be upgraded until the whole processor is changed.

Classification:

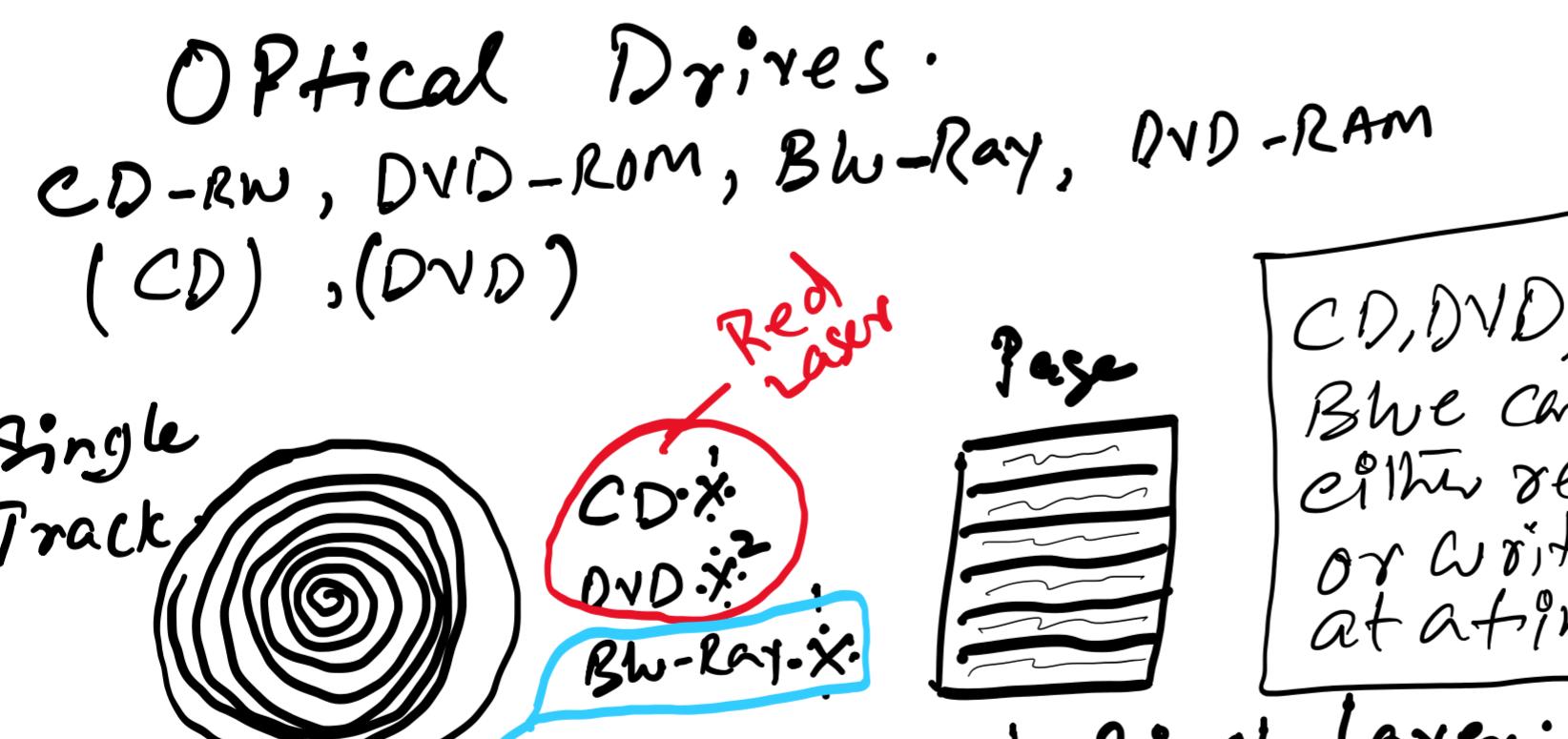
- Distance from the microprocessor
- Manufacturing medium of storage.

Medium of Storage

- Magnetic (Floppy, HDD)
- Electronic (Flash, SD, XD, SSD)
- Optical (CD, DVD, Blu-Ray, DVD-RAM).

Distance from the microprocessor

- Primary (RAM / ROM)
- Secondary (HDD, SSD)
- CPL (Flash, HDD, SSD, Floppy, CD, DVD, Blu-Ray, DVD-RAM)



- It has moving parts
- It is mechanical
- It has short life.
- Faster the platter rotates, faster the data is accessed
- Only starts working once the decided RPM is reached.
- It is cheaper.

Electronic

Solid State Drives (SSD)

- NAND Gates → (Flash)
NOR Gates → (SSD)

- Flash Drives, SD, XD.

- Single bit can't be changed but a whole bunch of bits is changed.

- It is made up of transistors.
- Transistors hold on voltage.
- Thinner than HDD
- It has a larger life span.
- Since data is stored electronically; data access is faster.

Optical Drives.

CD-RW, DVD-ROM, Blu-Ray, DVD-RAM

(CD), (DVD)



CD, DVD, Blue can either read or write at a time.

* = Single layer.

* = Dual layer.

CD, DVD uses red laser light to read & write data from surface.

Blue Ray uses blue laser light to read and write data.

Laser Burns the disk surface. Writing of data is called Burning.

DVD-RAM Concentric Track.

Laser Thickness

Most

Least

Data Storage

↓

DVD-RAM can read & write the data simultaneously.