Ibrahim Mohamed Eida

Sat Sun Mon Tue Wed Thu Fri

PAGE:
DATE: / /

Storage Devices classifications:

[1] based on Speed factor:

↦ register → cache → RAM → SSD → HDD → optical disk → Magnatic tapes

[2] based on Cost factor: just as

↦ Register → cache → RAM → SSD → HDD → optical disk → Magnatic tapes

[3] based on capacity: Large to small

↦ Magnatic tapes → optical disk → HDD → SSD → RAM → cache → Register

[4] Volatility:

- Volatile: Registers → caches → RAM
- non-Volatile: SSD, HDD, optical disc, Magnetic disc

[5] Magnetic tapes → optical discs → HDD, → SSD → RAM → cache → Register

[6] Portability

→ Portable: optical discs → Magnetic tapes → SSD → HDD

→ non-Portable → RAM, Register → cache

Ibrahim Mohamed Fi[redacted]

Sat Sun Mon Tue Wed Thu Fri

PAGE:

DATE: / /

Spooling memory management

↳ stands for simultaneous peripheral operations on-li

The key idea is the CPU is producing data faster than an I/O device can consume

Spooling is storing data temporary into a buffer so the CPU don't have to wait for the I/O device to finish data consumption

So, spooling solves the issue of the speed difference between a fast CPU and slower peripheral devices

→ Spooling components:

1. buffer → the temporary storage
2. spool queue → list of jobs waiting for a device
3. spooler program → part of the OS and manages the operation

* a disadvantage of spooling: if spool area is full, this means potential delays and slow operations