

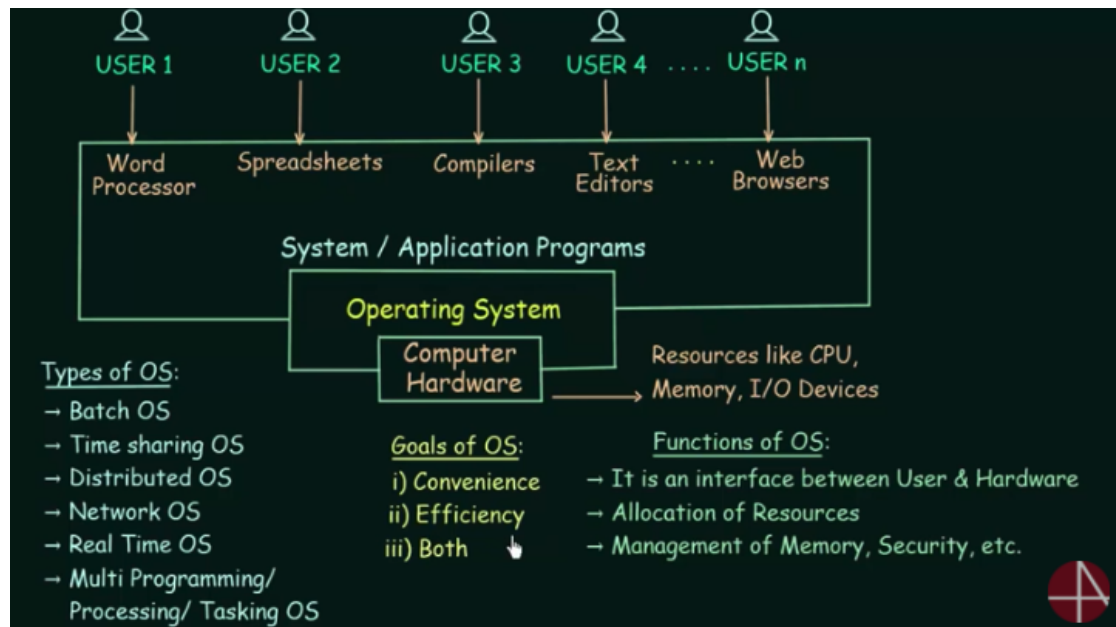
CSC369 Week 1 Notes

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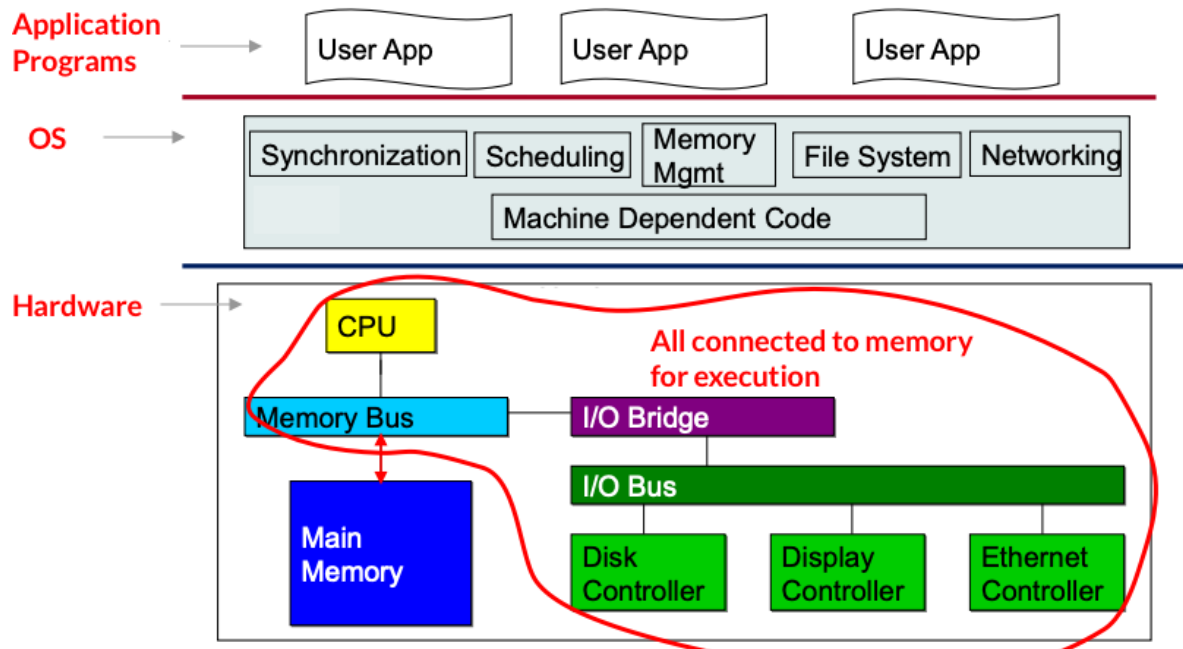
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1 Intro to OS

- What is Operating System
 - is the program that manages the computer hardware
 - is the software layer between user applications and hardware
 - is used for
 - * Allocation of resources
 - * Management of memory, security, etc.

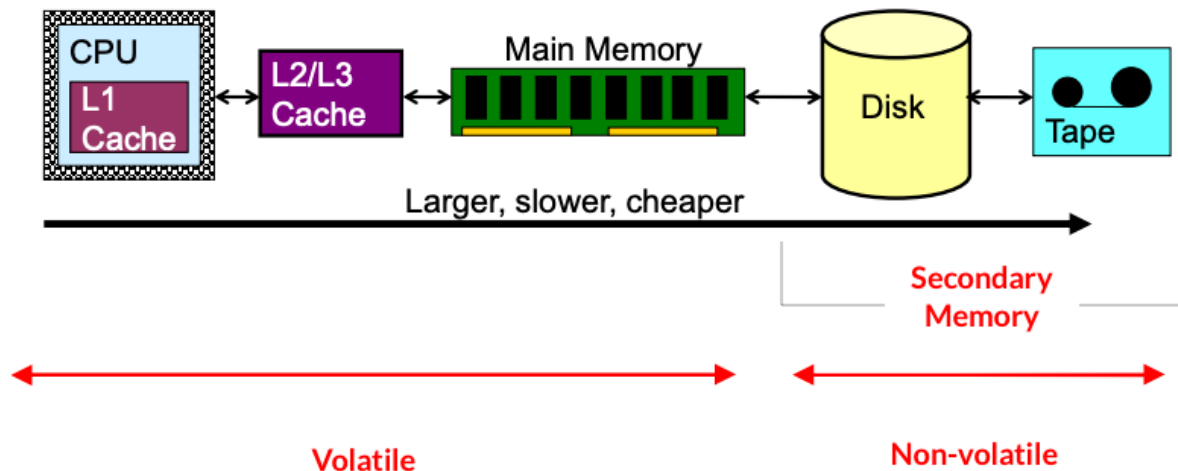


- Overview of Computer System



- All hardware devices are connected through common **bus** and are loaded to memory for execution.
- **Synchronization:** to ensure orderly acces to the shared memory

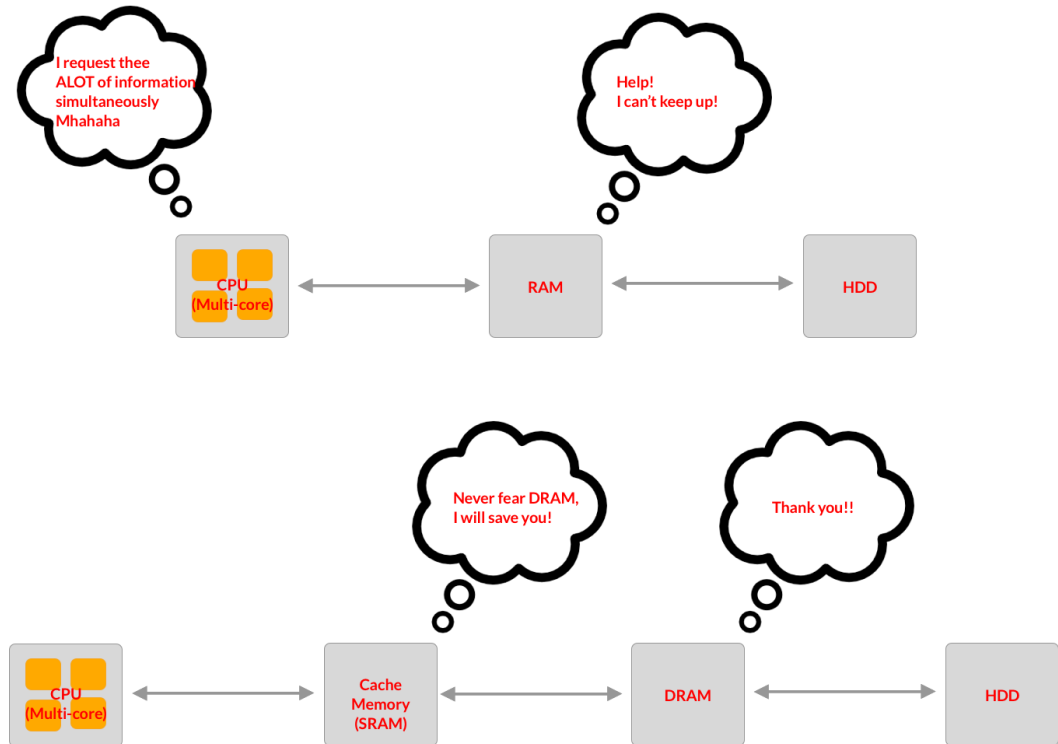
- Storage Hierarchy / Storage Structure



- **Volatile** → Loses contents when power is removed
- **Non-volatile** → Retains contents even when power is removed

- Caching / Cache Memory

- Is also called **Static Random Access Memory (SRAM)**
- Is more costly
- Hides performance differences when large access-time gap exists between two levels
 - * Quad-quare requesting RAM for information



- More can be found here

- Concurrency

- Is execution of several instruction sequences at same time
 - * i.e, CPU and device controllers
- **Interrupt:** are signals sent to the CPU by external devices, (usually I/O devices)
 - * It's like telling 'Hey CPU, please stop this process, and do y instead, since this is more important'
 - * i.e. Network Packet has arrived, Disk I/O comeplete occured
- **System Call:** are interrupt signals sent by software
 - * Is a programmatic way of a program requesting for service to kernel of operating system
 - * i.e. Accessing a hard-disk drive
- IMPORTANT: An operating system is an event-driven program.