

39 Lecture - CS302

Important Subjective

1. **What is the difference between primary memory and secondary memory?**

Answer: Primary memory is volatile and used for storing data temporarily, while secondary memory is non-volatile and used for storing data permanently.

What is the function of cache memory?

Answer: Cache memory is used to store frequently accessed data for faster access by the CPU.

What is virtual memory and how does it work?

Answer: Virtual memory is a technique used by the operating system to increase the amount of available memory by temporarily transferring data from RAM to the hard drive. This allows the system to run more programs or larger programs than the available physical memory would allow.

How is data stored on a hard drive?

Answer: Data is stored on a hard drive using magnetic disks that are divided into tracks and sectors.

What is RAM and why is it important?

Answer: RAM (Random Access Memory) is primary memory that is used for storing data temporarily. It is important because it allows the CPU to access data quickly, which can improve system performance.

What is the purpose of ROM?

Answer: The purpose of ROM (Read-Only Memory) is to store permanent instructions that cannot be changed, such as the computer's BIOS.

What is the difference between a hard drive and a solid-state drive?

Answer: A hard drive uses magnetic disks to store data, while a solid-state drive uses flash memory.

What is the maximum amount of memory that a 32-bit operating system can address?

Answer: A 32-bit operating system can address up to 4GB of memory.

How does a CPU cache work?

Answer: A CPU cache stores frequently accessed data for faster access by the CPU. It works by storing copies of data that is likely to be accessed again in the near future.

What is the role of memory in computer performance?

Answer: Memory plays a crucial role in computer performance by allowing the CPU to access data quickly, which can improve the speed and efficiency of running programs and performing tasks.