

Homework 1

CPE 434

1. What are the three main functional areas of an operating system?
 - Time Management: Ensure that multiple processes share limited resources fairly.
 - Files: Hide the peculiarities of disks and other I/O devices; present the programmer with a clean model of device-independent files.
 - Hardware: The OS should proxy access to the computer's resources.
2. Likely not. Though processor families no longer represent a closed ecosystem of compatibility, they still help organize features and performance.
3. Text 1-14: Key difference between a trap and an interrupt.
Trap: pg. 21 Interrupt: pg. 29
 - TRAP switches from user space to the kernel to complete a task. Interrupts are signals to resume operation to complete a task.
4. Text 1;22 Difference between a block special file and character special file. pg. 43
 - Block special files are used to model devices that consist of addressable blocks. Character special files are used to model devices which I/O a character stream.

5. Text 1:24 Can client-server model be used in single computer systems? pg. 67

7 Yes: "If the client and server run on the same machine, certain optimizations are possible"