Quiz 1-CSC 351
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1. I looked at the syllabus and I am familiar with the grading procedures, textbook requirements, and tentative course schedule. AC, CX
2. Define three types of user-mode to kernel-mode transfers.
   System calls: A specified procedure provided by the kernel that can be called by user level process to request privileged operation on its behalf.
   Timer: An interrupt is an asynchronous signal to the processor that some external event has occurred that may require its attention. Timer interrupt is one kind of the handlers, that ensures each process gets a turn to run. When in the user mode and timer expires, an interrupt is sent to the processor so the processor come out to kernel mode and move to the next process. Other process can also send I/O request to pull the processor out of user mode to kernel mode.
   Program exceptions: When there is an error or exception caused by a user level process, it will transfer the control to kernel mode.
3. Define four types of kernel-mode to user-mode transfers
   New process: Whenever a process start, the kernel copies the program into the designated area in the memory that user can access and switches to user-mode.
   Resume: After handling any request from an interrupt, processor exception, or system call, the kernel switches back to user-mode.
   Switch to a different process: When kernel takes the control from one process and gives it to another process, it will move into user-mode.
   User-level upcall: When a user process request to use upcalls, it sends the addresses of a series of stacks where the kernel can execute the upcalls on to the kernel. And the kernel move to user-mode to execute the upcalls.