Homework 1

Est. Length: 3:00:00 Sharar Mahmood: Attempt 1

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Time sharing and multiprogamming are two concepts that are sometimes confused by people who haven't taken CS3110. Describe the difference.

Time sharing allows multiple users to interact at the same time. Emphasizes response time over processor time. It is very important to keep response time short.
In time sharing, the CPU executes multiple jobs by switching among them, but the switches occur so frequently that the users can interact with each program while it is running. It requires an interactive computer system. Multiple users are connected to the central machine via a terminal. The users are served in a round robin fashion creating the isllusion that the user is the sole user of the machine.

Multiprogramming is executing simultaneously mutiple programs on the same processor. OS selects one process and runs it till a wait condition or termination then selects the next process to run. This is advantegous as a different process can be run when one process is waiting for some event such as I/O to occur. Multiprogramming increases CPU utilization by organizing jobs (code and data) so that the CPU always has one to execute.

The main difference is multiprogramming involves running multiple processes on the same processor where as time sharing allows multiple users to interact with the computer simultaneously.

Question 27 (5 points) ✓ *Saved*