Slide 1

Administrivia

- (None.)

Slide 2

Minute Essay From Last Lecture

- Many people gave a sensible explanation! My answer is in the online notes from last time (here).

Slide 3

Overview of Hardware — Recap/Continued

- Simplified view of hardware (as it appears to programmers) — processor(s), memory, I/O devices, bus.
- Last time we talked a little about each component — what it does (from user's point of view) and low-level interface to software. (Review slides about I/O, added slide about multithreaded/multicore chips.)

Slide 4

System Calls

- Recall that some things can/should only be done by o/s (e.g., I/O), and hardware enforces that.
- But application programs need to be able to request these services. How can we make this work?

Slide 5

System Calls, Continued

- Usual mechanism is a *system call* (good discussion on pp. 50–51):
  - Library routine (running in user mode) sets up parameters and issues TRAP instruction or similar — causing an interrupt.
  - Interrupt handler (running in supervisor mode) processes system call using parameters set up by library routine.
  - Control returns to library routine in user mode.
- Typical services provided — creating processes, creating files and directories, etc., etc. — see tables in textbook.

Slide 6

Minute Essay

- Tell me something you've learned from what you've read in the textbook so far.