Operating Systems
ECE344

Lecture 2: Architectural (hardware) Support for Operating Systems

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Announcements & reminders

- Lab 0 is released
  - *Due: Feb 1, 5PM (hard deadline)*

- Form your group of 2 by this Friday (18th), 5PM
  - Please send the UTORid of you and your teammate to me vie email
    - You should receive confirmation email
  - *Use piazza's Teammate Search feature*
  - Will randomly assign teammate if you cannot find anyone
    - *Might cause delay to your SVN access*

Review of hardware support I

- Which is faster?
  - Ram vs. Disk
  - Register vs. cache
  - Cache vs. Ram

- What is the difference between user mode & kernel mode?

- Why does OS need hardware support?
  - Remember the car analogy?
  - How does hardware support user/kernel mode?

Events

- After the OS has booted, all entry to the kernel happens as the result of an event

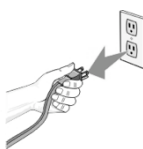 - In effect, the operating system is one big event handler
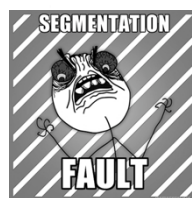
Events

	Unexpected	Deliberate
Exceptions (sync)	fault	syscall trap
Interrupts (async)	interrupt	software interrupt

Unexpected exception: fault　　　Unexpected Interrupt

Fault.

Agenda today

- Fault

- System call

- Interrupt