Q & A Review: OS-Structure (1)

- Which of the following statements are true?
  - The OS can read application data
  - The OS can execute application code
  - Applications can read OS data
  - Applications can execute code from segments with privilege level 1.
- (T/F) The OS always decides when the processor transitions from user mode to kernel mode.

Q & A Review: OS-Structure (2)

- Check all of the following that might behave differently in user and supervisor mode:
  - Which instructions can be executed
  - What memory can be accessed
  - How fast the processor runs
  - What happens when you try to halt the processor
  - How two numbers are added.

Q & A Review: OS-Structure (3)

- T/F The contents of the indirection table used to dispatch to interrupt handlers is identical on the MIPS and x86 architectures.
- Which of the following can cause the OS to run:
  - An arithmetic instruction
  - An application accessing memory
  - An application making a system call
  - A network packet arriving
  - The OS wants to run

Q & A Review: Context Switching (1)

- Is it OK for the kernel to run a different process when all it's been asked to do is provide a `pid` to the calling process?

- Why should the kernel run on a stack different from that of the application?

Q & A Review: Context Switching (2)

- Given what you now know about how the kernel sets up return values from system calls, what must the library code that invokes the trap for the system call do upon return?
  - What the kernel does:
    - Leaves success/fail in a3
    - Return value or errno in v0
  - So, at user level: