

CS31 Worksheet: Week 10: Operating Systems

If you were asked to design a layer between user programs and the hardware, what might your layer provide?

- What sort of services might the programs you've written need?
- (Discuss with your neighbors.)

Why is it not ideal to have only a single program available to the hardware?

- A. The hardware might run out of work to do.
- B. The hardware won't execute as quickly.
- C. The hardware's resources won't be used as efficiently.
- D. Some other reason(s). (What?)

How many programs do you think are running on a typical desktop computer?

- A. 1-10
- B. 20-40
- C. 40-80
- D. 80-160
- E. 160+

What sort of information might the OS need to store to keep track of a running process?

- That is, what **MUST** an OS know about a process?
- (Discuss with your neighbors.)

The operating system kernel...

- A. Executes as a process.
- B. Is always executing, in support of other processes.
- C. Should execute as little as possible.
- D. More than one of the above. (Which ones?)
- E. None of the above.

How might the OS forcibly take control of a CPU?

- A. Ask the user to give it the CPU.
- B. Require a program to make a system call.
- C. Enlist the help of a hardware device.
- D. Some other means of seizing control (how?).