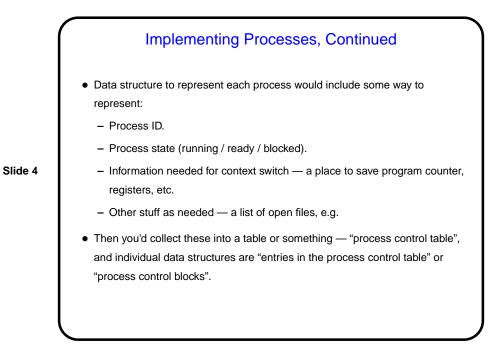
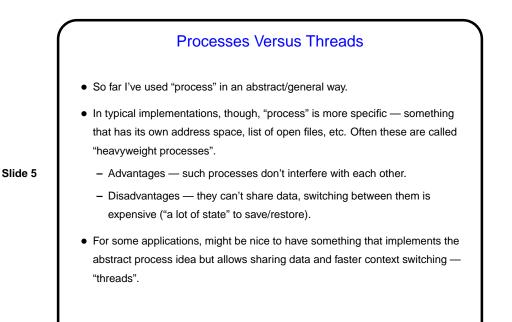
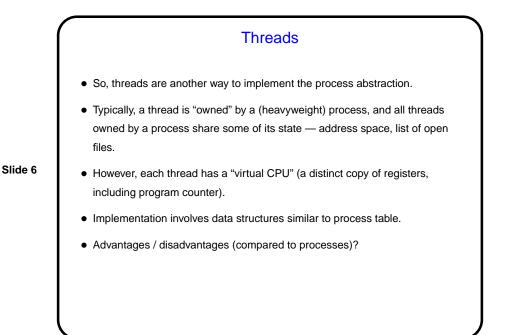
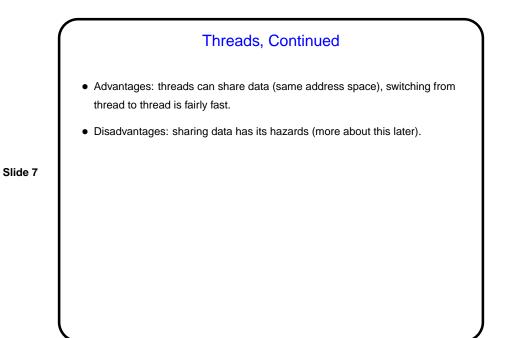


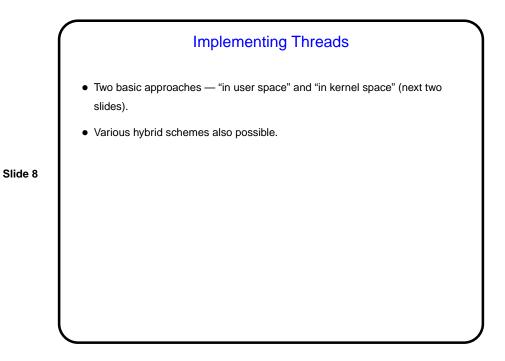
Slide 3

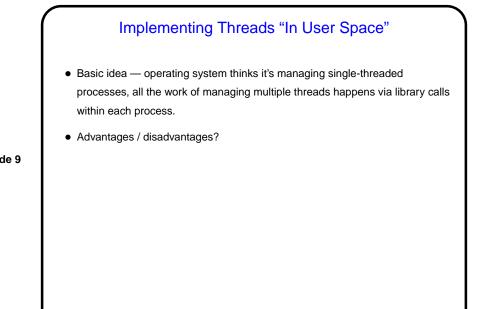








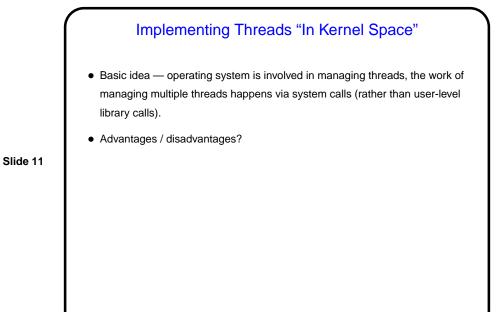


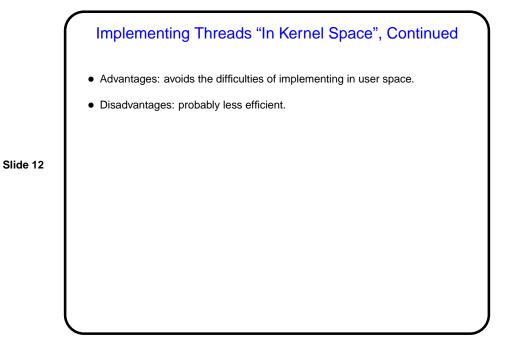


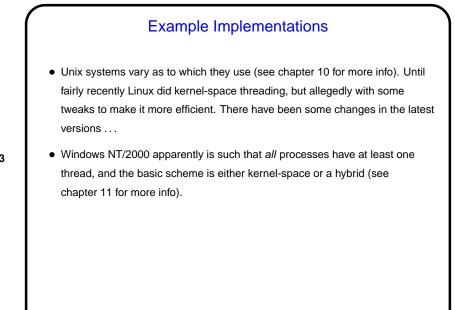
Slide 9

Slide 10

## Implementing Threads "In User Space", Continued • Advantages: fewer system calls, hence probably more efficient. • Disadvantages: - If a thread blocks, it may do so in a way that blocks the whole process. - Preemptive multitasking is difficult/impossible. - Using multiple CPUs is difficult/impossible.







Slide 13

## Minute Essay • If you were doing an object-oriented design for an operating system, you might have a Process class and a Thread class. How might you think of relating them? (class/subclass? something else?) Slide 14