

### Midterm Topics

- Chapter 1
  - What is an OS?
  - Monolithic vs. Microkernel architectures
  - Virtual Machines
- Chapter 2
  - Processes
    - Creation
    - Termination
    - Context/Context Switches

### Midterm Topics (2)

- Chapter 2 (cont')
  - Process Table
  - Process States
  - Threads
  - User vs. Kernel Threads
  - Scheduling
  - IPC
    - Race Conditions

### Midterm Topics (3)

- Chapter 2 (cont')
  - Critical Regions
  - Mutual Exclusion
  - Semaphores & Mutexes
  - Monitors and Barriers
  - Classical IPC Problems
    - Producer/Consumer
    - Sleeping Barber

### Midterm Topics (4)

- Chapter
  - Deadlocks
  - 4 Conditions
  - Modeling
  - Detection and Recovery
  - Deadlock Avoidance
    - Banker's Algorithm
  - Deadlock Prevention
    - Spooling, Global numbering, etc.

### Midterm Topics (5)

- Chapter
  - Memory Management
  - Fixed partitions
  - Degree of Multiprogramming
  - Relocation and Protection
  - Swapping
  - Memory Management
    - Bitmaps
    - Linked Lists

### Midterm Topics (6)

- Chapter (cont ' )
  - Virtual Memory
  - Paging
  - Page Tables
    - Single level''''