EECS 211:
Advanced System Software
Lecture 12

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Lecture 12: Overview

- Course administration
  - Midterm Exam
  - Assignment 4

- Protection and Security
  - Protection

Course Administration

- Midterm Exam Review

  - Results
    - Quite positive, everybody seems to be on track

  - Solution
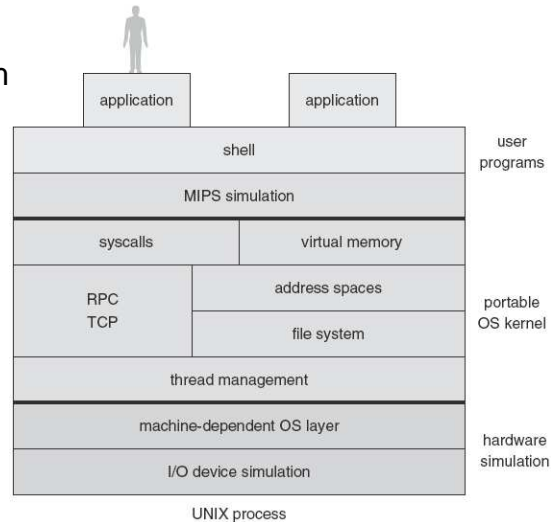   - **MidtermExam_Solution.pdf**

Course Administration

- Assignment 4
  - Two-week assignment
    - posted yesterday (Feb 19, 2007)
    - due March 5, 2006, at 11:59pm (midnight)
  - The Nachos System
    - User program execution
    - Exception handling, System calls
    - User programs as test cases
      - Positive tests
        (**HelloWorld**, **Echo**, **List**)
      - Negative tests
        (**StoreAtZero**, **WriteToInvalidFile**, **ReadFromStdout**)
  - Deliverables
    - Noteboard discussion (extra credit!)
    - Source files
    - Text files (including logs)

Course Administration

- **Assignment 4**
  - The Nachos System

    - User code:
      emulated by
      MIPS simulator

    - Kernel:
      normal (debug'able)
      Unix process

    - I/O System:
      simulated by
      std. process I/O

application		application	user programs
shell			
MIPS simulation			
syscalls	virtual memory		
RPC TCP	address spaces		portable OS kernel
	file system		
thread management			
machine-dependent OS layer			hardware simulation
I/O device simulation			

UNIX process

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Protection and Security

- Excerpts from chapter 14 of
  "Operating System Concepts", 7th Edition,
  by A. Silberschatz, P. B. Galvin, G. Gagne,
  John Wiley & Sons, 2005.

- Protection

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