EECS 111: System Software
Lecture 3

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Lecture 3 Overview

- Course Administration
  - Assignment 1
  - Assignment 2
- Operating System Structures
  - System Calls
  - System Programs
  - OS Structure, Design, and Implementation

Assignment 1

- Discussion
  - OS Concepts, I/O Methods, System Call
- Project
  - C Programming Environment, Processes
    - Setup C programming environment on server
    - Program **`fibo`** to compute Fibonacci numbers
    - Analyze execution time using **`/usr/bin/time`**
    - Analyze process memory layout
  - Due
    - Tuesday, April 13, 2010, 12:00pm (noon)

Assignment 2

- Discussion
  - Process creation, Context switch
- Project
  - Parallel Processes, Inter-Process Communication
    - Program **`fibo2`** to compute Fibonacci numbers
    - Create two parallel child processes
      - Child 1 computes Fibonacci(n-1)
      - Child 2 computes Fibonacci(n-2)
      - Parent waits for children and combines results
    - Communication via POSIX shared memory
    - Analyze and compare execution times
  - Due
    - Tuesday, April 20, 2010, 12:00pm (noon)

Operating System Structures

- *"Operating System Concepts", 8th Edition,* by A. Silberschatz, P. B. Galvin, G. Gagne, John Wiley & Sons, 2009.

- Chapter 2
  - System Calls
  - System Programs
  - OS Structure, Design, and Implementation