

EECS 111: System Software

Lecture 5

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Lecture 5 Overview

- Course Administration
 - Assignment 1: Solution
 - Assignment 2
- Processes
 - Inter-Process Communication

Assignment 1

- Discussion
 - OS Concepts, I/O Methods, System Call
- Project
 - C Programming Environment, Processes
 - Setup C programming environment on server
 - Program `fib0` 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 `fib02` 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)

Processes

- “*Operating System Concepts*”, 8th Edition, by A. Silberschatz, P. B. Galvin, G. Gagne, John Wiley & Sons, 2009.
- Chapter 3
 - Inter-Process Communication