ECE30021/ITP30002 Operating System

Course Overview

Class

- ~50 students of ITP30002-02 and ~38 students of ECE30021-02
- Instructor: Shin Hong hongshin@handong.edu
- Teaching assistant: Jeewoong Kim jeewoong@handong.edu
  Juyoung Jeon 21931009@handong.edu

Course Objectives

- To have overview of design and implementation of contemporary computer systems
- To have understandings on principles of operating systems essential to software developers
- To have essential experiences of system programming

Course Webpage

https://github.com/hongshin/OperatingSystem

- Class settings and policies
- Activities: meetings, tests, programming assignments
- Materials

Topics and Schedules (tentative)

- Ch. 1. Introduction
- Ch. 2. System structures
- Ch. 3. Process concepts

❖Programming assignment 1

- Ch. 4. Multithreading
- Ch. 5. Process scheduling
- Ch. 6. Synchronization
- Ch. 7. Deadlocks

❖Midterm: 8-10PM, Apr 18 (Thur) ??

❖Programming assignment 2

- Ch. 8. Memory management
- Ch. 9. Virtual memory

❖Programming assignment 3

- Ch. 10. File system
- Ch. 11. Implementing File system
- Ch. 12. Mass-storage structure
- Ch. 13. I/O Systems
- Special topics
- Final exam: TBD

❖ Programming assignment 4

Topics and Schedules (tentative)

- Mar 1. No class for the 31 Independence Movement Days
- Apr 26. No class for Int'l Conf. Softw. Testing (ICST) 2019
- May 31. No class for Int'l Conf. Softw. Engineer. (ICSE) 2019

Grading

- Weights
  - **attendance: 0%**
    - Fail if you miss more than a quarter of the meetings (i.e., >7 times)
  - **discussion contribution: 10% (+3%)**
  - midterm: 25%
  - final exam: 30%
  - programming assignments: 25%
  - homework: 10%

- Proportion: (A : B : C-F) = (15-30 : 40-60: 15-30)

Programming Assignments

- There will be 4 to 6 programming assignments (PA)
  - First assignment will be given around Mar 18
- Each PA will be given as a team work of 1 or 2 persons
- Each PA is to practice and exercise Linux system programming
  - You will be asked to use the Peace server in doing assignments
  - It is expected that a student can use Linux to write C programming by himself/herself

Ground Rules

- Primary, students study the subjects by reading textbooks and doing assignments and homework
  - A meeting is primary for discussion of the instructor and students
- A student is expected to spend at least 6 hours per week by himself/herself to follow-up 3 hours meeting
  - excluding the time for the meetings and for doing homework
- Finding and understanding the obligations of an assignment is a crucial part of the assignment
- Each student must cover all parts of programming assign.
  - each member may take a part, and must study all aspects

Policies

https://github.com/hongshin/OperatingSystem/blob/master/policy.md

- Communication
- Checking meeting attendance
- Failure

Study Guideline

- Read, read, read textbook
  - read regularly
  - never move on once you find a unknown word/sentence
  - use your hands to repeat examples
  - memorize definitions
  - peruse stories in boxes
  - never expect that all materials will be covered at the meeting
- Solve exercise problems by yourself
  - read the problem sentence carefully
  - write down an answer completely, and never stop at a middle
  - do have a group study
- Try best to think together (i.e., discuss) at a meeting time
  - participate or loss the time