Course Introduction

[ECE30021/ITP30002] Operating Systems

Overview

- Instructor: Prof. In-Jung Kim
  - Office: NTH302 (Tel: 1385)
    - Office hour: Tue and Thu 1st periods (AM 9:00 ~ AM 10:15)
  - e-mail: ijkim@handong.edu
- Time and classroom
  - Mon/Thu 4nd(Kor),5rd(Eng) period, OH401
- TA
  - To be announced

Textbook

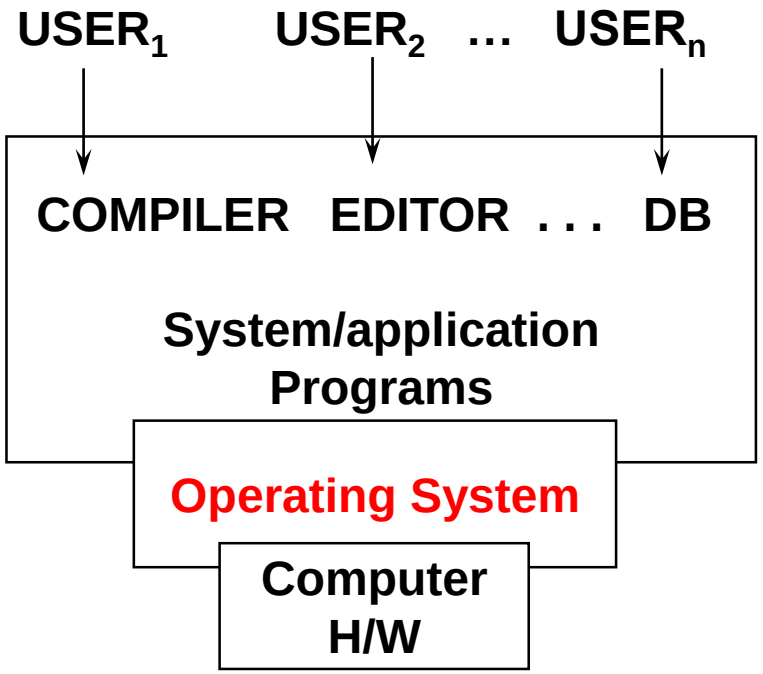
- Main text
  - Abraham Silberschatz, Peter Bear Galvin, and Greg Gagne, “Operating System Concepts, 9th Edition,” John Wiley, 2012.
- Prerequisite: C Programming
  - **If you cannot program in C language, you cannot take this course.**

Overview

- Objectives
  - The students understand basic knowledge of the mechanism and theories that are used to implement modern operating systems.
    - The emphasis will be given to the ones about process and storage management.
    - This course mainly covers theoretical aspects, but also contains some practical development using Linux system calls.

Why Should We Study OS ?

- To understand what happens in computer system.
- To learn knowledge and techniques common over various systems.
- Frequently, the developer has to utilize the functions provided by the OS.
- To prepare OS-related jobs
  - Platform, embedded system, search engine, …
- OS is placed at the boundary between S/W and H/W
- Just for fun!



본 과목과 연관된 프로그램 학습성과

1. 수학, 기초과학, 공학의 지식과 정보기술을 응용할 수 있는 능력
2. 자료를 이해하고 분석할 수 있는 능력 및 실험을 계획하고 수행할 수 있는 능력
3. 현실적 제한조건을 반영하여 시스템, 요소, 공정을 설계할 수 있는 능력
4. 공학 문제들을 인식하여, 이를 공식화하고 해결할 수 있는 능력
5. 공학 실무에 필요한 기술, 방법, 도구들을 사용할 수 있는 능력
6. 복합 학제적 팀의 한 구성원의 역할을 해낼 수 있는 능력
7. 효과적으로 의사를 전달할 수 있는 능력
8. 평생교육의 필요성에 대한 인식과 이에 능동적으로 참여할 수 있는 능력
9. 공학적 해결방안이 세계적, 경제적, 환경적, 사회적 상황에 끼치는 영향을 이해할 수 있는 폭넓은 지식
10. 시사적 논점들에 대한 기본 지식
11. 직업적 책임과 윤리적 책임에 대한 인식
12. 세계문화에 대한 이해와 국제적으로 협동할 수 있는 능력

Program Outcomes Related to This Course

1 [Scientific Base] an ability to apply the knowledge and information of math, science and engineering

2 [Lab work] an ability to design and conduct experiments, as well as to analyze and interpret data

3 [Design] An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

4 [Formulation] an ability to identify, formulate and solve engineering problems

5 [Tool Usage] an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

6 [Inter-discipline teamwork] an ability to function on multi-disciplinary teams

7 [Communication] an ability to communicate effectively

8 [Life-long Education] a recognition of the need for, and an ability to engage in life-long learning

9 [Impact of Engineering] the broad education necessary to understand the impact of engineering solutions in a global, economical, environmental, and societal context

10 [Contemporary Issues] a knowledge of contemporary issues

11 [Professional Ethics] an understanding of professional and ethical responsibility

12 [Globalization] an ability to understand various culture and to work internationally

*** ABEEK (Accreditation Board for Engineering Education of Korea)**

Tentative Schedule

Weeks	Chap.	Contents	Remarks
1	1	Introduction	
2,3	2	Operating System structures	
4,5	3	Processes	
6	4	Threads	
7	5	Process Synchronization	Read the textbook before the class
8		Midterm	
9	5	Process Synchronization	
10, 11	6	CPU scheduling	
12,13	8	Main Memory	
14,15	9	Virtual Memory	
16		Final	

* This schedule can be modified according to the students' performance and other reasons.

Grading Policy

- Attendance (5%)
  - More than 6 times of absence will result in F by university regulation.
  - Three times of lateness will be counted as one absence.
  - Check your attendance by your smartphone using Handong NFC Smart Campus app.
- Homework and quiz (20%)
  - Any submission later than its deadline will be penalized
    - One day: 20% penalty
    - More than one day: rejection
- Midterm examination (35%)
- Final examination (40%)

Notices

- Keep focused in every class
  - Sleeping or obstructing behavior can be penalized.
- Use of any electric device is prohibited.
  - Laptop, mobile phone, or tablet.
- Any kind of excuse should be noticed before the incident.
- In each class, 1~2 students will be asked to introduce themselves.
  - Starting from the student with the fastest student ID.

Honor Code Guidelines

- Any type of dishonesties will result in failure (F).
- For the criteria of dishonesty, see HGU CSEE Standard
  - Korean version: https://drive.google.com/file/d/0B9iQGS7v1k9ORGhXSHNyTkpvQW8/view?usp=sharing
  - English version: https://drive.google.com/file/d/0B9iQGS7v1k9Ob0oxTExmMjhPU28/view?usp=sharing
- Particularly note that …
  - Sharing or showing any submission, including source codes, will be regarded as cheating.
  - Referencing any solution written by others, including the solution acquired from the internet, will be regarded as cheating.
  - Doing homework together will be regarded as cheating.

Conclusion

Let's try our best!

Hopefully, enjoy this course.