

Course Introduction

[ECE30021] Operating Systems

Overview



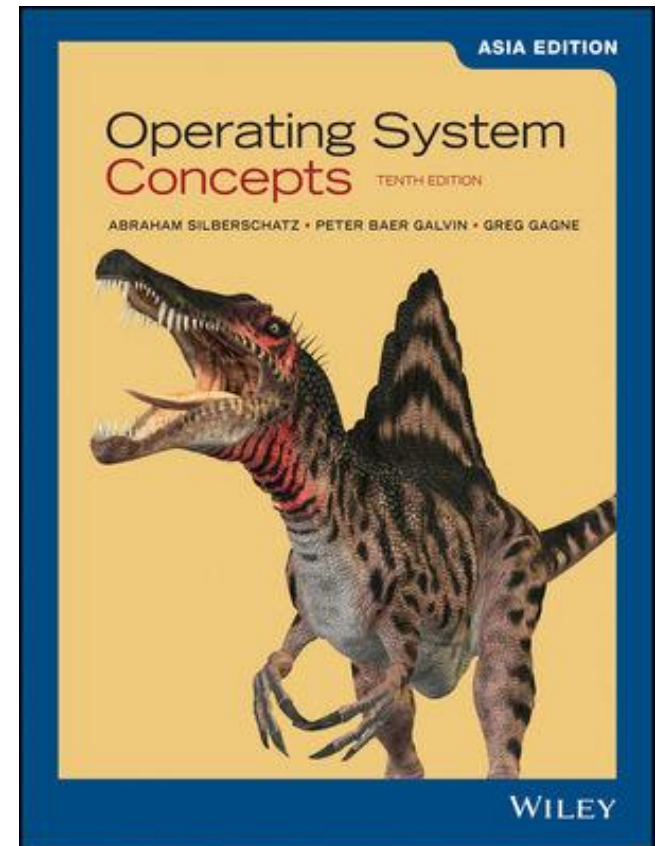
- Instructor: Prof. Injung Kim
 - Office: NTH302 (Tel: 1385)
 - Office hour: Tue/Thu. 9:00-10:00
 - e-mail: ijkim@handong.ac.kr

- Time and classroom
 - Mon/Thu 4nd or 5rd period, OH305

- Teaching Assistances
 - 박은찬 (atom@handong.ac.kr, 010-2372-2087)
 - 최윤서 (yunwest018@gmail.com, 010-4032-3940)
 - 김재윤 (pikachu@handong.ac.kr, 010-3166-8723)

Textbook

- Main text
 - Abraham Silberschatz, Peter Bear Galvin, and Greg Gagne, “Operating System Concepts, 10th ed.,” Wiley.
- Prerequisite: C Programming
 - **If you cannot program in C language, you cannot take this course.**



Overview

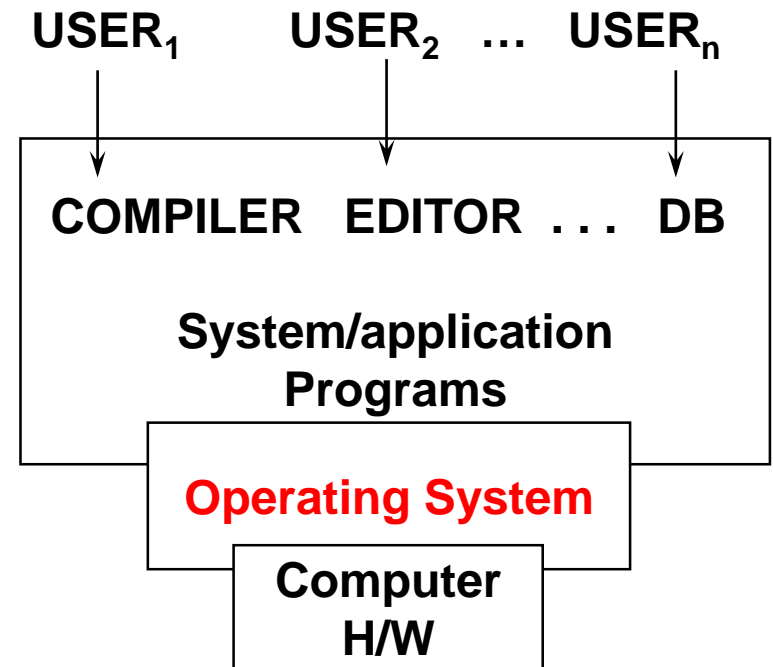


■ Objectives

- 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.
- Students can use the advanced features of Linux, including APIs and development tools, to build SW.

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

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	Read the textbook before the class
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.
 - Lateness penalty is 1/4 of absence penalty.
 - Offline students should check your attendance by Handong NFC Smart Campus app.
- Homework (20%) and quiz (15%)
 - Any submission later than its deadline will be penalized
 - One day: 20% penalty
 - More than one day: rejection
- Midterm examination (30%)
- Final examination (30%)
- Quiz, midterm, and final test require skill to program with vi and gcc on Linux (VirtualBox)

COVID-19 Countermeasure



- All students participating offline class should **adhere COVID-19 prevention rules.**
 - Wear a mask, wash or sterilize hands
 - Check body temperature frequently
 - Keep physical distance from others
 - However, let's keep close to each other **mentally.**
- **The student with any symptom of COVID-19 should participate online.**
 - Report to the professor immediately.
- The students in the classroom should not connect ZOOM or other sites that cause heavy traffic.
 - Network bandwidth should not be wasted.
- **Be careful and be joyful!**

Online Participation



- The students who are seriously concerned about COVID-19 infection can take the classes remotely.
 - Apply for online participation **one hour before the class**
 - Application form
 - Section 01: <https://forms.gle/4skDeGvU4j6HzXye9>
 - Section 02: <https://forms.gle/Y92kP7RHupK6HBTt6>
 - Maximum 4 classes per application
 - ZOOM link for remote participation
 - Section 01: <https://handong.zoom.us/j/81675871878>
 - Section 02: <https://handong.zoom.us/j/81540029992>
 - Remote students should **login by real name** and **turn on camera**.
- The student who has applied for online participation should not participate offline class.

Notices



- Lecture video is not provided.
- To ensure fairness, midterm and final tests will be conducted offline.
- Q&A on classsum
 - Sign in <http://classum.com> using real name
 - Entry code: EXIQNS
 - Join as Participant (Link): www.classum.com/EXIQNS
- Solutions of homework or exams are not provided.
 - Students can ask any questions required to build their own solution
 - After submission deadline, it is encouraged to build your own solution with your groupmates

Notices



- Any kind of excuse should be noticed **in advance**.
- Keep focused in every class
 - Sleeping or obstructing behavior can be penalized.
- Use of any electric device in the class without permission is prohibited (**will be applied when necessary**)
 - Laptop, mobile phone, or tablet.
- In each class, 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.