Operating Systems
Overview of the Course

Hitoshi Oi

The University of Aizu

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AY2014, 2nd Semester

Basic Course Information

Course Number and Title: F6/SR Operating Systems

Instructor Hitoshi Oi, `hitoshi`©`u-aizu.ac.jp`, ext 2580

Office Hours Tue. 1400 to 1600 or by appointment, at 242-C (subject to change).

Textbook "Modern Operating Systems (3rd Edition†)", by Andrew Tanenbaum, Prentice Hall, ISBN-10: 0138134596, ISBN-13:9780138134594.

Web site `http://www.u-aizu.ac.jp/~hitoshi/COURSES/OS/`

Course Assistant Tomoya Fukukawa, `os14ta`©`oslab.biz`

Grading Schemes and Policies

Information in this slide is subject to change. Keep checking the course web site and notice board.

Grading Scheme

Final Grade = Midterm Exam (30%) + Final Exam (40%)
+ Exercises (30%)

Late Submissions of Exercises No late submission accepted.

Exam Policies Only a piece of A4-sized paper can be brought into the exams (currently under revision). You will also need a calculator (you cannot use your phone during the exam).

Rough Course Schedule

Today Course Overview and Introduction to the operating systems (Chapter 1).

**Next Four to Five Weeks** "Processes and threads" and "Deadlocks" (Chapters 2 and 6).

Mid-term Exam

Next Four to Five Weeks "Memory management", "File systems" and "Input and output" (Chapters 3 to 5).

Final Exam

Exercise problems can be either programming assignments or the problems from the textbook/lectures.

OS: Interface between HW and SW

Application programs

Operating system

Hardware
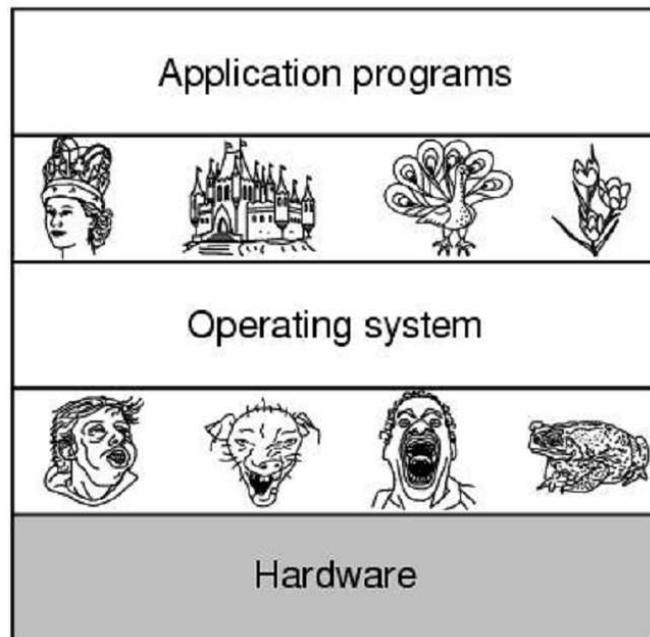
- OS provides various services using HW components to SW (application programs).

- You learned HW and SW basics in courses so far (e.g. Intro. to Computer Systems, C programming)

- If you were not good in these courses, you may need to review them by yourself

Advices on Taking This Course: Textbook

- As posted on the course notice board and the SAD sent you email, you must have (or at least have ordered) your own copy of the textbook ?

- You need to read (at least, take a look at) the textbook before coming to the class, because

  - You will know what topics will be covered in the class

  - You will know what topics or concepts may be difficult to understand (= questsions you need to ask in the class)

  - If the English is the problem, you can search the information on the same topics in Japanese in advance

Advices on Taking This Course: Lecture Slides

- We will use the slides prepared by the author of the textbook (and the modified version of them). The URLs for these slides are available at the course web site.

- You will need to down load and make a hard copy of the slides corresponding to each lecture. (or download into your computer if you work on electrical files).

- Lectures slides are **NOT** the document which "you only to memorize these' (like some other classes). You need to take notes and write into the lecture slides if necessary.

- In the past, the Acroread on the school's computers could not display some fonts correctly. Check the consistency with the textbook if you doubt.

Advices on Taking This Course (2)

Class Participation Come to class and ask questions (so you need to be prepared to ask questions). Sit in the <u>front rows</u>.

Use The Instructor Ask question during the class and the office hours as well. You have a right to ask the instructor, like "speak louder" or "I cannot read your hand-writings.". But you have to **ask**, nothing is automatic.

You don't get anything if you

sit in the very last rows of the class room

no textbook and don't take notes

come to the lab with nothing in you hand

No Drink and Food in the Lab

We cannot ignore those explicitly violating rules.

Many Students Failed Past Years (1)

Typical behavior of students who failed the course in the past years are:

Textbook

- Didn't subscribe the internal news from SAD, which included notices for the textbook order.

- Didn't check the course web page.

- Read the news but didn't but the textbook.

- Bought it but didn't read it.

Many Students Failed Past Years (2)

Lecture

- Came to the class without any preparation.

- Sat in the very last rows while all front rows were vacant (if you can't hear the instructor's voice, what should you do ??).

- Didn't ask questions (or not prepared to ask ??).

- Stopped coming to the lecture when they noticed that "just coming to the class" didn't give them points.

Many Students Failed Past Years (3)

Exercise and Office Hours

- Didn't take anything (e.g. textbook, notebook, lecture slides) to the lab.

- Just tried to submit the exercise by the deadline, but submission was incomplete and/or incorrect.

- Copied and pasted materials on the Internet (with few changes on wording) $\Rightarrow$ an act of academic dishonesty that incurs penalties.

- Once missed the deadline (after submission), never tried to work on the exercise problems.

- Never came to the office hours or even sent email till failed the course.

To study should not be ...
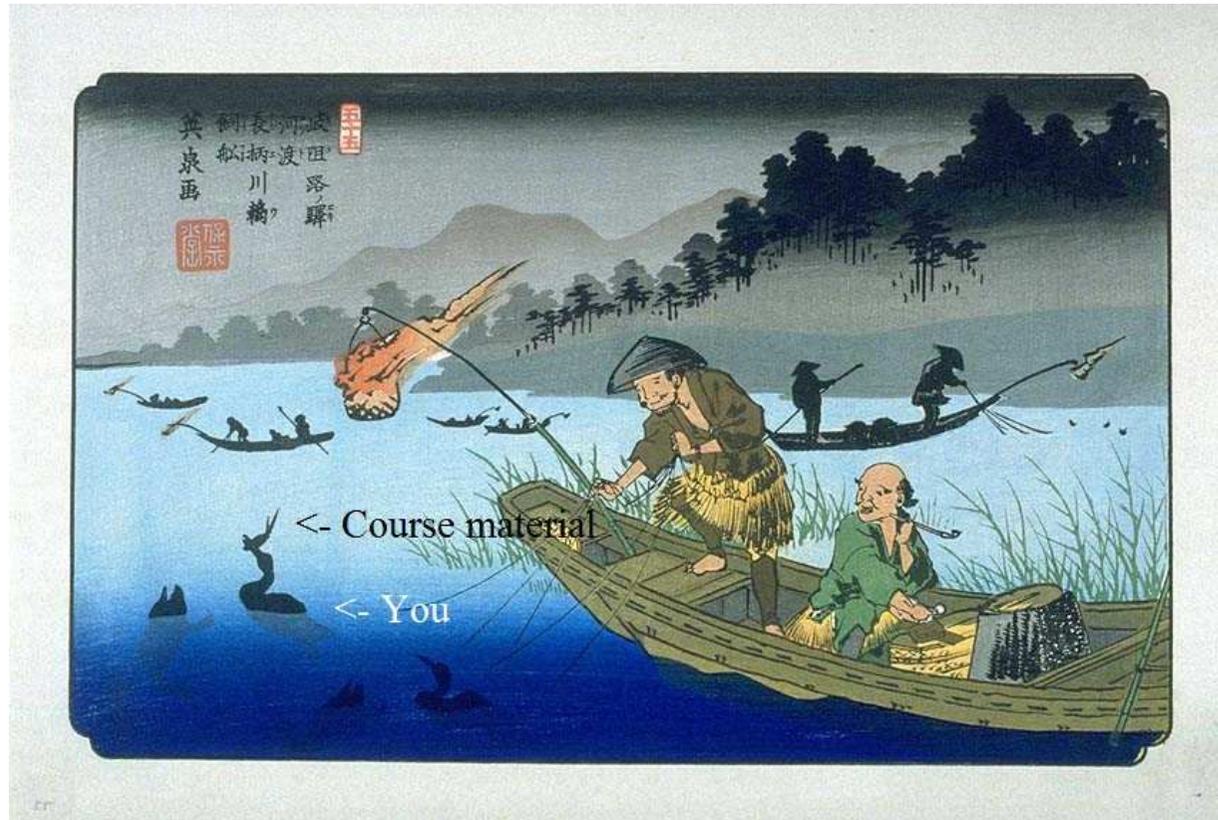
Just swallow course materials and vomit them at the exams.

Rather, it should be like ..

Digest and make them as your muscles and blood.

About The Instructor

- Assistant Professor in the Operating Systems Laboratory

- Areas of research interests:

  - Computer architecture and operating systems

  - Performance evaluation and workload analysis

  - Energy-efficient system design

  - System-level virtualization (Xen)

  - Virtual machines for Java and wireless sensor network

- Students having interests in the above areas are welcome to join our group. You may come to our group meeting which is scheduled at Tuesday 1730 (subject to change).

Extra Slides (1)

Who Studies The Operating Systems ?

Extra Slides (2)

Extra Slides (3)

Don't Expect This

Continue to the lecture slides...