

# **Welcome to SWE2007: Software Experiment 2**

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# Introduction



## ▪ Schedule

- 18:30 – 21:45 (Wed)
- Lecture room: #400202, Semiconductor Bldg.

## ▪ Course homepage

- <http://csl.skku.edu/SWE2007F14/>
- All materials will be posted on this site.
- We do not use i-campus system.

# About Professor

## ▪ Jin-Soo Kim

- Professor @ CE & SSE & SW Dept.
- Computer Systems Laboratory
- Office: 산학협력센터 #85566 (5th floor)
- Email: [jinsookim@skku.edu](mailto:jinsookim@skku.edu)
- URL: <http://csl.skku.edu/jinsoo>
- Tel: 031-299-4593
- Office hours: Monday & Wednesday
- The best way to contact him is by email.

# About Me

## ▪ Woo-Yeong Jeong

- TA of this class
- MS student
- Computer Systems Laboratory
  
- Office: 산학협력센터 #85533 (5th floor)
- Email: [wooyeong@csl.skku.edu](mailto:wooyeong@csl.skku.edu)
- The preferred way to contact me is (also) by email.

# Course Outline (1)

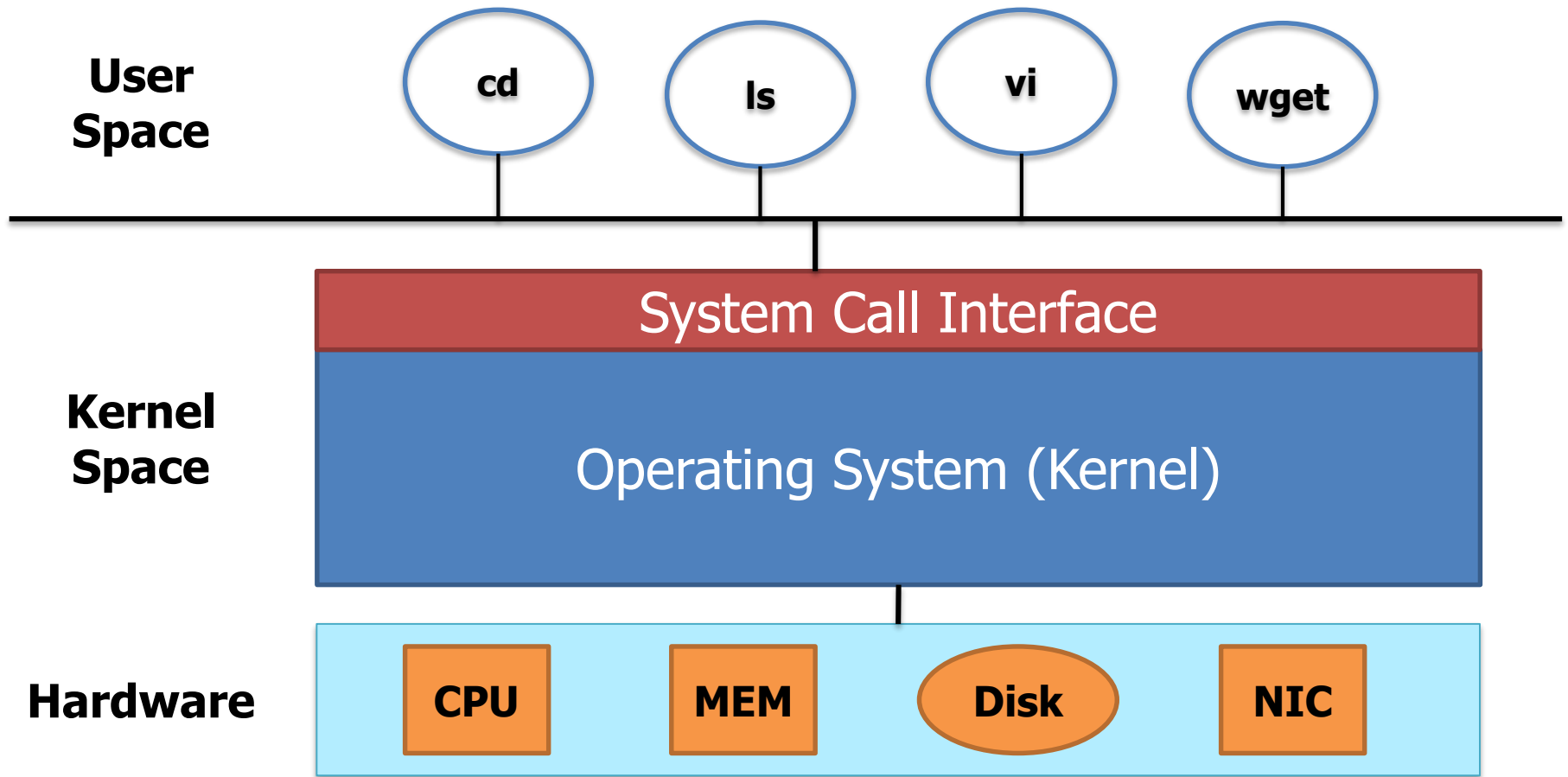
```
Looking up host 'cs1.skku.edu'...
Host 'cs1.skku.edu' resolved to 115.145.179.100.
Connecting to 115.145.179.100
Connection established.
To escape to local shell, press 'Ctrl+Alt+]'.

Linux cs1                #1 SMP

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
You have mail.
Last login: Mon Sep  1 00:22:40 2014 from 59.15
wooyeong@cs1:~$
wooyeong@cs1:~$
wooyeong@cs1:~$ whoami
wooyeong
wooyeong@cs1:~$ what should i do?
-bash: what: command not found
wooyeong@cs1:~$
wooyeong@cs1:~$ help me T_T
-bash: help: no help topics match `T_T'.  Try `help help' or `man -k T_T' or `info T_T'.
wooyeong@cs1:~$ █
```

# Course Outline (2)



# Course Outline (3)



- **Why we use Linux?**

- Used in many scientific and industrial settings
- Internet servers and services run on Linux
- It's free!

- **How to use Linux?**

- **How to make programs on Linux?**

- **How to make [advanced] programs on Linux?**

- We will learn various system calls provided by Linux systems

# Topics



- **Very basic Linux commands**
  - Shell, text editor, compiler
- **Basic Linux system calls**
  - File I/O, Process management
  - Inter-Process Communication (IPC)
- **Network programming**
  - Sockets
- **Concurrent programming**
  - Processes, Threads



# Projects (1)

- **Basic Linux system calls**
  - File I/O
  - Process management
  - Inter-Process Communication (IPC)
- **Concurrent programming**
  - Processes
  - Threads
- **Network programming**
  - Sockets

# Projects (2)

## ■ Policies

- There will be 4~5+ lab exercises
- We will solve one or two term projects
- Each project must be done individually

# Projects (3)

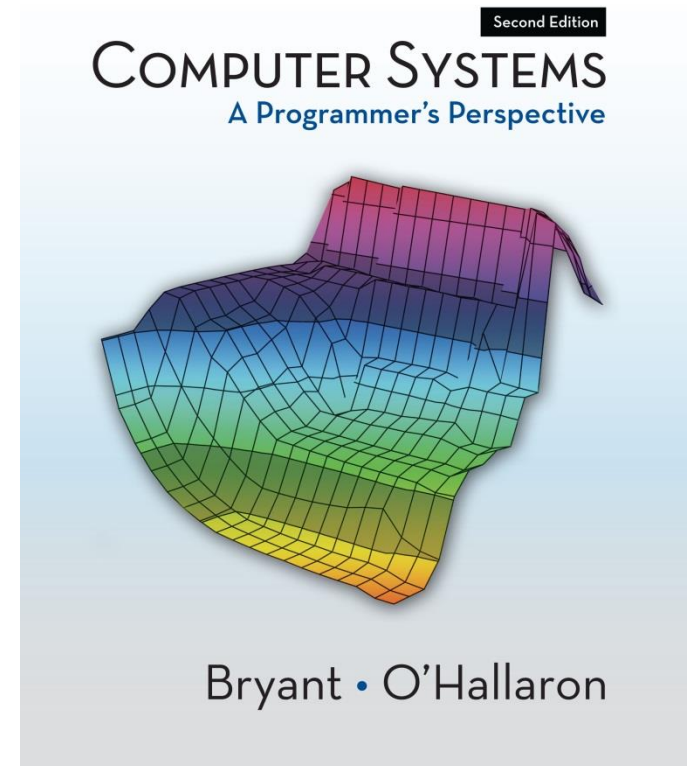
## ▪ Evaluation

- Your code will be evaluated in the following ways:
  - Demonstration
  - Documentation
  - Your progress
- You should be able to answer any questions on basic system architecture, design decisions, and implementation details
- Always pay attention to
  - Performance issues
  - Documentation

# Reference

## ■ Computer Systems: A Programmer's Perspective

- Randal E. Bryant and David R. O'Hallaron, **Second Edition**, Prentice-Hall, Inc. 2010.
- <http://csapp.cs.cmu.edu>



# Class Policies (1)

- **Grading Policy (subject to change)**
  - Class attendance (10%)
  - Lab exercises (50%)
  - Term projects (40%)
  
- **There will be no exams (subject to change)**

# Class Policies (2)

## ▪ Cheating Policy

- What is cheating?
  - Copying another student's solution (or one from the Internet) and submitting it as your own
  - Allowing another student to copy your solution
- What is NOT cheating?
  - Helping others use systems or tools
  - Helping others with high-level design issues
  - Helping others debug their code
- Penalty for cheating:
  - Severe penalty on the grade and report to dept. chair
- Ask helps to your TA if you experience any difficulty!

# Any Questions?

