

# Welcome to SWE2007: Software Experiment 2

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Dong-kun Shin  
Embedded Software Laboratory  
Sungkyunkwan University  
<http://nyx.skku.ac.kr>

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- **Schedule**

- 18:00 – 21:45 (Wed)
- Lecture room: #21514 (Engineering Building 1)

- **Course Homepage**

- <http://www.icampus.ac.kr> or <http://nyx.skku.ac.kr>
- Materials will be posted on lab home page
- **But! assignments must be uploaded on I-Campus**

- **Dong-kun Shin**

- Professor @ CE & SW Dept.
- Embedded Software Laboratory
  
- Office: Research & Business Center #85470 (4<sup>th</sup> floor)
- Email: [donkun@skku.edu](mailto:donkun@skku.edu)
- URL: <http://nyx.skku.ac.kr>
- Tel: 031-299-4584
- **Make an appointment before visiting the office via email.**

- **Ha-yun Lee**
  - MS Student
  - Embedded Software Laboratory
  - Email: [lhy920806@gmail.com](mailto:lhy920806@gmail.com)
- **Jong-won Park**
  - MS Student
  - Embedded Software Laboratory
  - Email: [jong1prk@gmail.com](mailto:jong1prk@gmail.com)
- **Office Hours**
  - **Mon / Fri, 19:00 – 21:00 at 85465 (산학협력센터)**
  - You can visit the lab at any time during office hours, **but it is better to make an appointment** via email in advance as well.

# Course Outline (1)

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- **Course Outline**
  - 2-hour Lecture
  - 2-hour Exercise
- **Topics**
  - Very basic linux commands
    - Shell, text editor, compiler
  - Basic Linux system calls
    - File IO, Process Management
    - Inter-Process Communication (IPC)
  - Network programming
    - Sockets
  - Concurrent programming
    - Processes, Threads

# Course Outline (2)

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- **All the lectures are based on the Linux environment.**
- **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.

# Assignment (1)

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- **Policies**

- There will be 6 lab assignments. (Subject to change)
- Midterm and final exams are covered by assignments.
- Each project must be done individually without cheating.

# Assignment (2)

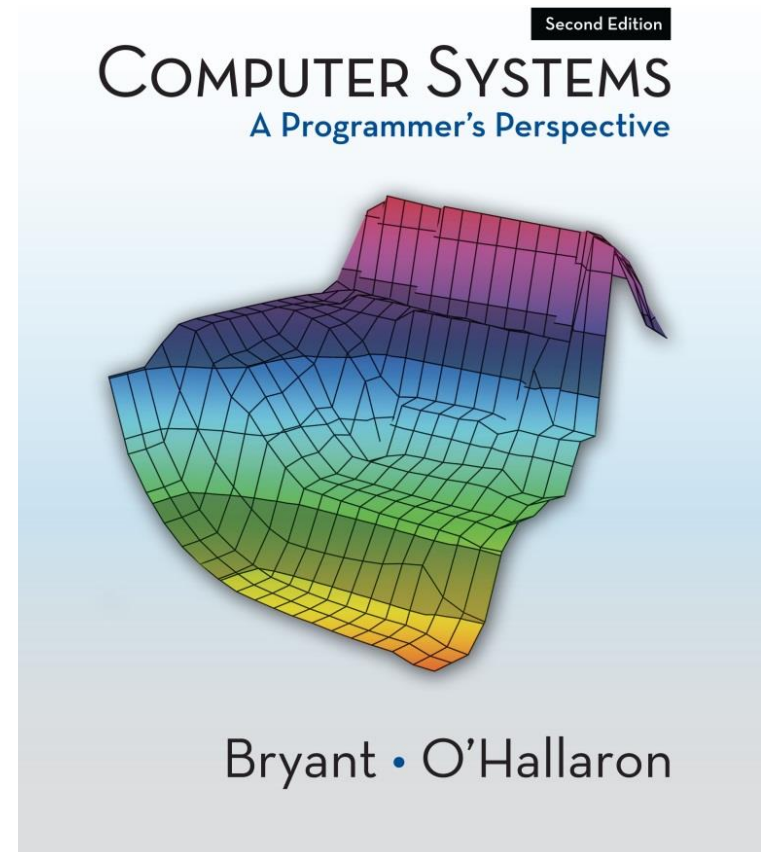
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- **Evaluation**

- Your assignments will be evaluated in the following ways:
  - Demonstration
  - Documentation
  - Personal lessons from the assignment
- Your documentation should answer any questions on basic system architecture, design decisions, and implementation details.
- Always pay attention to
  - **Performance issues**
  - **Documentation**



- Computer Systems:  
A Programmer's Perspective
  - Randal E. Bryant and  
David R. O'Hallaron,  
**Second Edition**,  
Prentice-Hall, Inc.  
2010.



# Class Polices (1)

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- Grading Policy
  - Attendance (10%)
  - Lab exercises (50%)
  - Assignments (40%)
- There will be **no exams**

# Class Polices (2)

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- Cheating
  - What is cheating?
    - Copy and paste (both **from** and **to**)
  - What is not cheating?
    - Helping others use systems or tools.
    - Helping others design the **high-level** code architecture.
    - Helping others debug their code.
  - Penalty for cheating:
    - Severe penalty on the grade and report to dept. chair.
    - No submission is better than cheating.✂
- **Ask TAs to help!**

# Class Schedule

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Week	Contents	Notes
1	Course Overview	
2	Intro	<b>Assignment0: ~week3</b>
3	File I/O	<b>Assignment1: ~week5</b>
4	File I/O examples	
5	Processes	<b>Assignment2: ~week7</b>
6	-	
7	signal	<b>Assignment3: ~week10</b>
8	-	
9	<b>(Midterm Exam)</b>	
10	IPC	
11	Sockets	
12	Sockets II	<b>Assignment4: ~week14</b>
13	Concurrency	
14	Pthreads	
15	Pthreads II	<b>Assignment5: ~week17+</b>
16	-	
17	<b>(Final Exam)</b>	

