Computer Programming
Course Overview

엄현상 (Eom, Hyeonsang)
School of Computer Science and Engineering
Seoul National University

©Copyrights 2014 Eom, Hyeonsang All Rights Reserved
Outline

- Greeting
- Preface
- Lecture Goal
- Overview
- Q&A
Preface

- Excellent Choice
  - Computer Science & Engineering
    - High Demand
    - Interesting
    - Sense of Mission
Preface Cont’d
Lecture Goals

- Unix/Linux Centric Programming
- Considering the basic interaction in execution between the programs and the underlying computer systems
- Solving complicated problems by making C programs
- Understanding the Object-Oriented programming principles
- Acquiring good programming styles
- Learning C++ Object-Oriented programming methodologies
### Why UNIX?

**CLIENT PLATFORMS (CPU & OS)**

| Windows 3.1, 95/98, NT, 2000 and XP | Mac OS | Mac OS
|---------------|--------|--------
| DOS  | AIX (Unix) | AIX (Unix)
| OS/2 | OS/2 | OS/2
| Solaris (Unix) | Solaris (Unix) | Solaris (Unix)
| Interactive Unix | Interactive Unix | Interactive Unix
| SCO Open Desktop (Unix) | SCO Open Desktop (Unix) | SCO Open Desktop (Unix)
| SCO UnixWare (Unix) | SCO UnixWare (Unix) | SCO UnixWare (Unix)
| AIX (Unix) | AIX (Unix) | AIX (Unix)
| NextStep (Unix) | NextStep (Unix) | NextStep (Unix)
| Linux (Unix) | Linux (Unix) | Linux (Unix)

**SERVER PLATFORMS (CPU & NOS)**

| Windows NT and 2000 | DYNIX/ptx (Unix) | Unix SVR4
|---------------|-----------------|--------
| NetWare  | NetWare  | NetWare  
| Novell  | Novell  | Novell  
| SCO Open Server (Unix) | SCO Open Server (Unix) | SCO Open Server (Unix)
| SCO UnixWare (Unix) | SCO UnixWare (Unix) | SCO UnixWare (Unix)
| NextStep (Unix) | NextStep (Unix) | NextStep (Unix)
| VMS (Unix) | VMS (Unix) | VMS (Unix)
| AIX (Unix) | AIX (Unix) | AIX (Unix)
| OS/400 | OS/400 | OS/400

**CPU & NOS**

- Intel (x86)
- Motorola 680x0
- PowerPC
- Solaris
- HP 9000 (PA-RISC)
- Compaq Alpha
- DEC VAX
- SPARCstation
- IBM RS/6000
- Silicon Graphics (MIPS)
- Digital Unix
- OpenVMS
- Windows NT
- VMS
- UltraSp (Unix)
- DEC UX (Unix)
- Encore (Alpha)
- DEC UX ( Unix)
- HP (PA-RISC)
- Digital Unix
- Ultrix (Unix)
- Windows NT
- DG UX (Unix)
- Digital Unix
- DG UX (Unix)
- HPUX (Unix)
- HP (PA-RISC)
- Digital Unix
- Ultrix (Unix)
- Windows NT
- DG UX (Unix)
- Digital Unix
- Ultrix (Unix)
- Windows NT
- DG UX (Unix)
- Digital Unix
- Ultrix (Unix)
- Windows NT
- DG UX (Unix)
- Digital Unix
- Ultrix (Unix)
- Windows NT
- DG UX (Unix)
- Digital Unix
- Ultrix (Unix)
- Windows NT
- DG UX (Unix)
- Digital Unix
- Ultrix (Unix)
- Windows NT
- DG UX (Unix)
- Digital Unix
- Ultrix (Unix)
- Windows NT
- DG UX (Unix)
- Digital Unix
- Ultrix (Unix)
- Windows NT
Lecture Plan

- Program Execution on Unix/Linux
- Programming Tools
- Modularity and Abstraction in C
- C Pointers
- Memory Management in C
- File I/O in C, Libraries
- Object-Oriented Programming Principles
- Good Programming Style
Lecture Plan Cont’d

- C++ Basics, Data Types and Pointers
- Name Spaces, Operator Overloading
- Class Derivation and Inheritance
- C++ Templates, Standard Library
- Runtime Type Identification
- Exception Handling
- Design Patterns
- C vs C++, Review
Course Web Page URL

http://dcslab.snu.ac.kr/courses/cp2014s/