EECS 10: COMP METHODS IN ECE
Discussion 1

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TA Greetings

- Guantao Liu
  - PhD Candidate from EECS
  - Email: eecs10@eecs.uci.edu (preferable)
    guantaol@uci.edu
  - Office hours: Tu, Th, 1:00-2:50pm at EH 1141
    (or email me for additional appointment if needed)
  - Responsibility:
    - Discussion sessions (Tu, Th, 1:00-1:50pm)
    - Lab sessions (Tu, Th, 2:00-2:50pm)
    - Prepare and grade homework
    - Answer questions on the course MessageBoard

WHO ARE YOU?

- Introduce yourself (30 sec/student)
  - Name
  - Major
  - Which year?
  - Any programming experience?
  - What do you expect from this course?

Course Overview

- Course website:
  - https://eee.uci.edu/15y/18021/index.html
- Course Communication:
  - eecs10@eecs.uci.edu (administrative questions)
  - Course MessageBoard (homework and/or lab related questions)
- Assignments:
  - The deadline is strict (Monday at 11pm)
  - Submit homework early (multiple times)
- Exams
  - 2 mid-terms, 1 final

Discussion and Lab Sessions

- Discussion Sessions
  - Discuss about homework
    - read the homework assignment ahead of time
  - Address questions regarding lecture or concept
- Lab Sessions
  - Address questions regarding homework
  - Programming (finally!)
    - work on the homework
    - Individual work but discussion is encouraged
  - Fix program bugs
- Attendance is not mandatory but highly recommended!

Assignment 1

- Part 1: Linux working Environment
  - Discussed later today
- Part 2: Print your initials on the screen
  - Your first C program
  - Discussed later today
- Part 3: Deduct two timestamps
  - Discussed on Thursday 06/25
  - Read this part in the assignment description before the discussion

Linux Operating System

- OS family: Unix-like
- A prominent example of free and open-source software
  - The source code can be assessed, modified and distributed freely

Linux

Login to Linux Account

- Login to the machines
  - zuma.eecs.uci.edu
  - crystalcove.eecs.uci.edu
  - Use your EECS account and password to login
  - Use your UCInetID and password to get your EECS account
    - https://newport.eecs.uci.edu/account.py

Login to Linux Account

- Use a terminal with SSH protocol (secure shell)
  - Windows: putty, OpenSSH, cygwin
  - Mac: Terminal (Spotlight->terminal)
  - Linux: Terminal (Appilcations->System Tools ->Terminal)
  - Authorize yourself with username and password
    - password will not be shown explicitly on the screen
  - Enable X windows if you need graphic interfaces

Linux Working Environment

- Linux shell prints command prompt awaiting input

`ls`	list files
`cd`	change working directory
`pwd`	print working directory
`mkdir`	make directory
`mv`	rename/move files
`cp`	copy files
`rm`	remove files
`rmdir`	remove directory
`cat`	print the content of a file
`more`	print the content of a file, one screen at a time
`echo`	print the arguments on the rest of the command line

Linux Working Environment

- Linux working environment: texture-based
- One way to find the usage and options of a Linux command
  - Linux command manual page: `man rm`
- Directory paths

.	current directory
..	one level higher
~	home directory
/	the root (top level) directory

Text Editor

- Text editing
  - vi: standard Linux editor
  - vim: vi-iMproved
  - pico: easy-to-use text editor
  - emacs: powerful editor
  - many more…
  - No recommendation, pick one you are comfortable with.

Basic VI Commands

- Use vi to edit a file
  - vi filename
- Two modes: insert mode and display mode
- Basic commands:
  - `i` insert mode, now you can modify the file
  - `<esc>` escape from the current mode
  - `:line` go to a line
  - `:w` write/save the file
  - `:wq` save the file and quit from vi
  - `:q!` quit from vi, and discard all unsaved content

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Linux Shell Practice

- Login to your Linux account
- Print the current working directory
- List all files in the current working directory
- Create a new directory named EECS10
- Change into the new directory
- Create a text file named helloworld
- Insert “Hello World!” into the new file
- Save and exit the new file
- Copy the new file to the upper directory
- Change to the upper directory
- Remove the original and copied files

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Linux Shell Practice

- Login to your Linux account
- Print the current working directory `pwd`
- List all files in the current working directory `ls`
- Create a new directory named EECS10 `mkdir EECS10`
- Change into the new directory `cd EECS10`
- Create a text file named helloworld `vi helloworld`
- Insert “Hello World!” into the new file
- Save and exit the new file `:wq`
- Copy the new file to the upper directory `cp helloworld ../`
- Change to the upper directory `cd ..`
- Remove the original and copied files

```
rm helloworld
rm EECS10/helloworld
```

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Our first C Program

- HelloWorld: write a C program to display the following string
  - “Hello World!”
- What do you need to write a C program:
  - Program comments
    - `/* YOUR COMMENTS */`
  - Preprocessor directive
    - `#include`
  - Main function
    - Formatted output (to **stdout**)

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Time to Program!

- Login to a Linux server
- Create the `tmp` directory in `~/EECS10/`
- Use an editor to write your program
  - `vi helloworld.c`
- Save the program
- Compile it !
  - `gcc helloworld.c -o helloworld`
- Run it !
  - `./helloworld`
- Check the printout on the screen

Assignment 1

- Next you can work on Section 3 of Assignment 1
  - Create the `hw1` directory in `~/EECS10/`
  - Use the exact file name:
    - initials.c
    - initials.txt
    - initials.script
- Submit the homework
  - Go to the parent directory of `hw1`
  - Submission command:
    - `/ecelib/bin/turnin10`
  - Verify your submission:
    - `/usrs/ugrad/2004/fall/eecs10/bin/listfiles.py`