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601.220 Intermediate Programming

Spring 2023, Day 01 (Jan 23rd)

Welcome!

Today's agenda:

- course overview
- ugrad account, ssh
- get started with Linux
- Exercise 1

Announcements

- HW0 is due on Friday, Feb 4th

Goals for today

- By the end of class today, you should
  - Be able to log into your ugrad account
  - Have a Github account
  - Be signed up for Piazza and Gradescope
- We will help you complete any of these that you still need to do (ask!)

Today will be a bit different than usual

- Since it's not 100% certain that everyone will have done the pre-class prep, today will be slightly more lecture-oriented than usual

Important resources

- Course website: https://jhu-ip.github.io/cs220-sp23
  - All public information about the course is here!
  - Links to videos, slides, exercises, assignments, etc.
- Piazza: we'll use for announcements and Q&A, hopefully you are signed up already
- Gradescope: assignment submission and exams, you should already be registered

Typical class meeting

- Announcements
- Review of exercise(s) from previous class
- Go over recap questions
- Work on in-class exercise

What you should do before you come to class

- Watch the lecture videos
- Review the slides and the recap questions
- Bring your questions about the day's topics

Participation

Make it a priority to participate fully!

- Complete the in-class exercises
- Ask questions!
  - During the exercise review and recap question review
  - When we break for the in-class exercise(s) (great time to ask longer/more involved questions)

Homeworks

- 4.5 individual coding assignments (30% of grade)
- ~~3~~ Individual "written" assignments (6% of grade)
- You will generally have 1 week to work on each of these

Projects

- Two team projects in groups of 2 or 3
- You'll have about 2 weeks to work on each

Exams

- Midterm exam in class
- Final exam during scheduled final exam period
- Format TBD

ugrad accounts, Linux

- For all coding (homeworks, projects), you will use Linux on the ugrad computing cluster
- Hopefully you have a ugrad account already
- You will log into your ugrad account using `ssh`
  - Windows: can use either PuTTY or a WSL terminal
  - Mac or Linux: open a terminal window and use the `ssh` command
- See Resources page on course website for some Linux tutorials
- Make it a priority to become comfortable using the Linux command line
  - We're here to help you if you have questions

Day 1 recap questions

1. What is the difference between short-term and long-term lazy?
2. What is the ssh command to connect to a ugrad machine?
3. What are the commands to move, copy, and remove a file on a Linux machine?
4. What should you do to learn C and C++ faster?
5. What will we do during the class time?

1. What is the difference between short-term and long-term lazy?

Short-term lazy: take a shortcut now, but make the program more difficult to debug or modify.

Long-term lazy: invest time and thought up front, make the program easier to debug and modify. Overall, this will save you time.

2. What is the ssh command to connect to the ugrad machine?

ssh ␣ account @ugradx.cs.jhu.edu

`ssh ugradx.cs.jhu.edu`

or

`ssh ugrad1.cs.jhu.edu` (could replace 1 with any number 1–24)

3. What are the commands to move, copy, and remove a file on a Linux machine?

Move or rename a filename: `mv filename1 filename2`

Copy a filename: `cp filename1 filename2`

Remove a file: `rm filename`

Warning: overwritten files are not (easily) recoverable. *Think* before your run any of these commands.

4. What should you do to learn C and C++ faster?

Practice.

Complete all of the in-class exercises.

Take the individual programming and written homeworks seriously.

Ask questions! Ask for help!

5. What will we do during the class time?

See earlier slide (“Typical class meeting”).

In-class activities

Now we will switch to working on the in-class exercise. Today: Exercise 1 (create a Github account and register it.)

If you have additional time:

- Practice using the Linux command line
- Practice using Emacs or Vim
- Create an ssh key and add it to your Github account
- Start experimenting with C (see Exercise 2)
- Hang out and chat with us!

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