

Intermediate Programming

Day 1

Resources

- Course content:

<https://jhu-ip.github.io/cs220-s24/>

- Piazza:

<https://piazza.com/jhu/spring2024/en601220/home>

- Gradescope:

<https://gradescope.com/>

Objectives

- Read / write / design / etc. C and C++ code
- Use Linux for editing / compiling / etc. your C and C++ code
- Use a version control system (GitHub) for development
- Learning good coding practices

Homework policy

- Due by 11pm on the due date
- 11-11:30pm grace period
 - 10% deduction
- 11:30pm- is considered late
 - You have 4 late days in total for individual coding assignments
 - At most 2 late days can be used on a given assignment
 - No late days for written or partner-based assignments
 - No grace period for late days

In class exercises

- Do not count for your grade
- Make you better coders
- Do them!

For more details

- See the syllabus

Linux

- Powerful class of operating systems
- Multiuser with a unified file-system
- Command line interface

Linux – Directories

A *directory* is a folder storing files (and possibly other directories)

- ~ := home directory
- . := current directory
- .. := parent directory

Linux – Commands

- `pwd` := print working directory
- `ls` := list contents of current directory
 - `ls -l` := list in long format
 - `ls -a` := list all contents
- `cd <directory name>` := change directory to the prescribed directory
 - `cd ~` := change directory to home directory
 - `cd ..` := change directory to parent directory
- `mkdir <directory name>` := create a directory with the prescribed name
- `less <file name>` := view contents of the file, one screenful at a time

Linux – Commands

- `mv <source> <target>` := move the source file/directory to the target
- `cp <source> <target>` := copy the source file/directory to the target
- `rm <file name>` := remove the prescribed file

Locations can be relative to the current directory:

To copy the file `misha.txt` in the current directory to `misha.new.text` in the current directory:

```
cp misha.txt misha.new.text
```

Linux – Commands

- `mv <source> <target>` := move the source file/directory to the target
- `cp <source> <target>` := copy the source file/directory to the target
- `rm <file name>` := remove the prescribed file

Or, locations can be absolute:

To copy the file `misha.txt` in the home directory to `misha.new.text` in the home directory:

```
cp ~/misha.txt ~/misha.new.text
```

Linux – Commands

- `mv <source> <target>` := move the source file/directory to the target
- `cp <source> <target>` := copy the source file/directory to the target
- `rm <file name>` := remove the prescribed file

Or, you can mix and match:

To copy the file `misha.txt` in the current directory to `misha.new.text` in the home directory:

```
cp misha.txt ~/misha.new.text
```

Review questions

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

Long-term lazy means doing more work up-front so there is less work to do later.

Review questions

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

```
> ssh <username>@ugradx.cs.jhu.edu
```

Review questions

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

- `mv`
- `cp`
- `rm`

Review questions

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

Practice, practice, and more practice

Review questions

5. What will we do during the class time?

- Review solutions for previous session's exercises
- Review main concepts from the assigned materials
- Go over recap questions
- Answer questions
- Work on the new exercise.

Exercise 1

- Website -> Course Materials -> Exercise 1