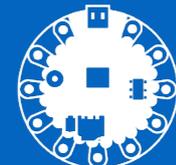
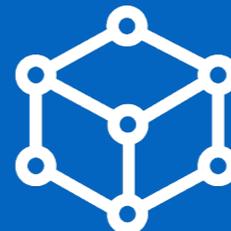
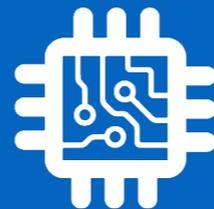
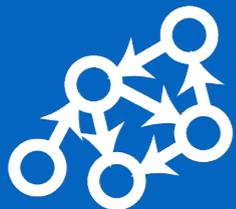


CSI 34: Lab 01



Today's Plan

Tools & resources for doing CS Labs!

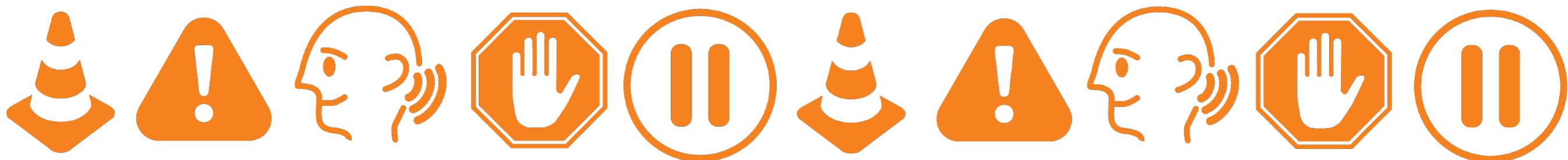
After this lesson, you should be able to:

1. Explain the difference between VS Code, Terminal, and python
2. Navigate your file structure with Terminal
3. Submit your lab assignments to be graded



Lab Deadlines

- Depend on your lab session day!
- Mondays —> Wednesday @10p
- Tuesdays —> Thursday @10p



Lab Instructions on Course Website!

- <https://bit.ly/cs134f24>

CSCI 134
Introduction to Computer Science
Home | Lectures | **Assignments** | Resources | Williams CS

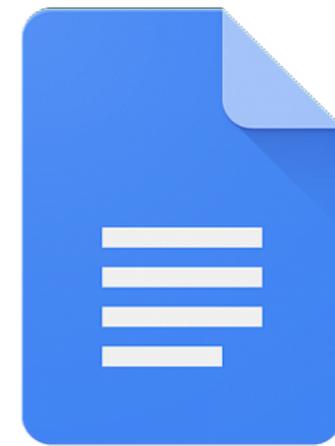
Labs

Lab assignments are due Wednesday 10 pm EST for students in Monday lab sections, and Thursday 10 pm EST for students in Tuesday lab sections. To request a 12-hour extension, please fill out [this form](#) before your lab's submission deadline.

| Lab Date | Topic |
|---------------|--|
| Sept 09/10 | Lab 1: Python/Git Workflow |
| Sept 16/17 | Lab 2: Day of the week |
| Sept 23/24 | Lab 3: Madlibs |
| Sept 30/Oct 1 | Lab 4: Voting |
| Oct 21/22 | Lab 5: What's In A Name? |
| Oct 28/29 | Lab 6: Thinking Recursively |
| Nov 4/5 | Lab 7: AutoComplete |
| Nov 11/12 | Lab 8: Boggle! [Part A] [Part B] [Graphics module] |
| Dec 2/3 | Lab 9: Sorting |



What do these 4 applications have in common?



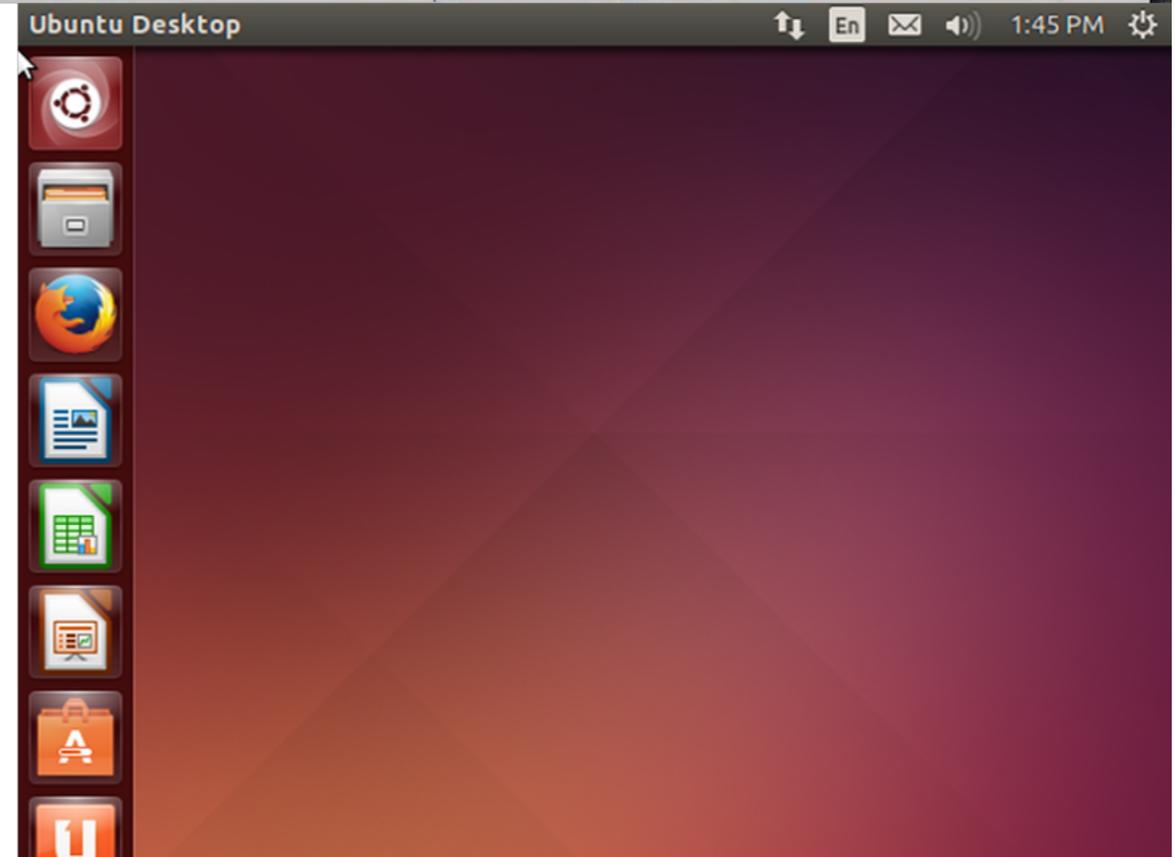
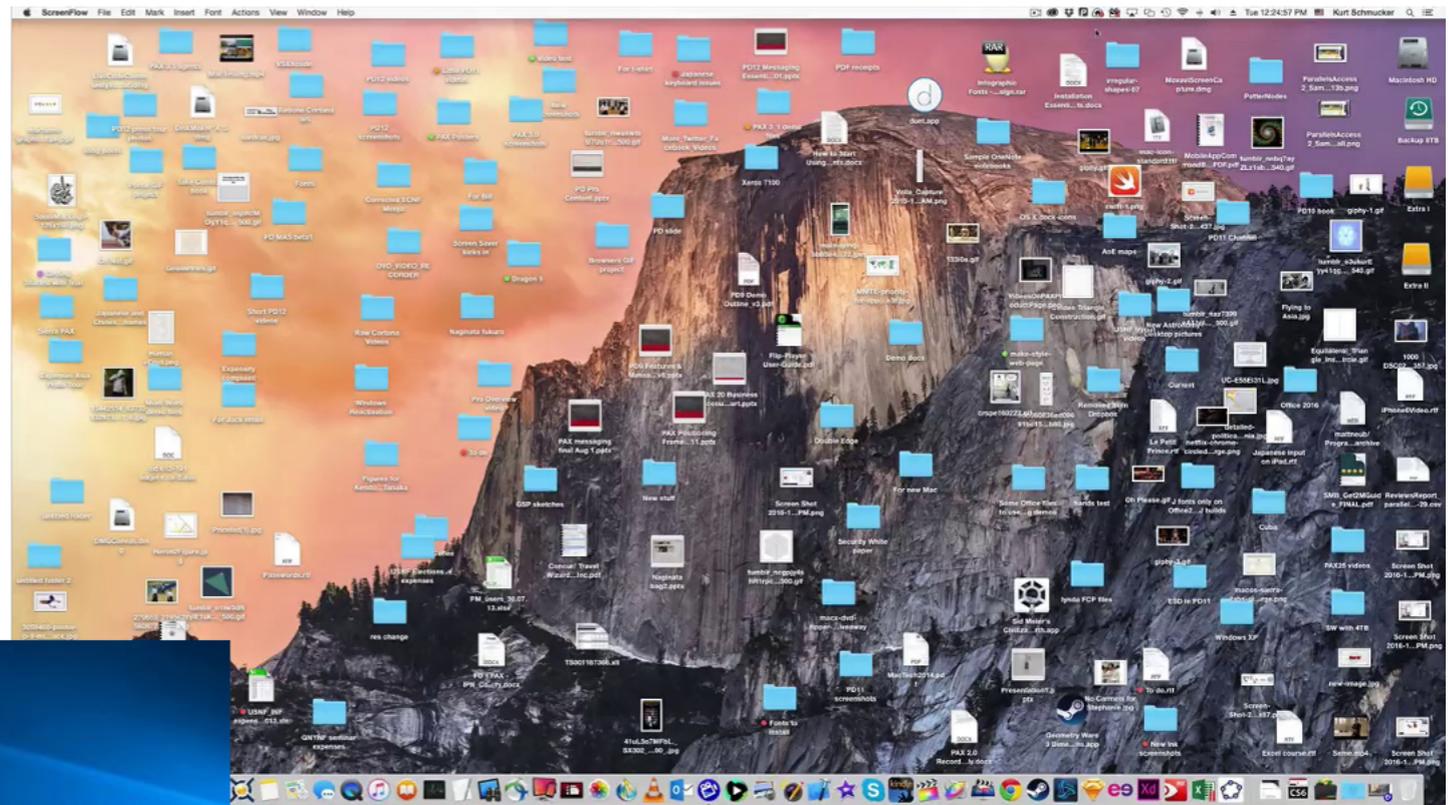
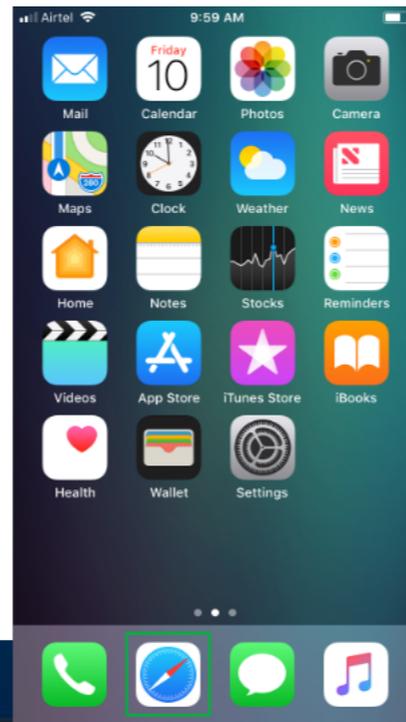
Google Docs

What do these 4 applications have in common?

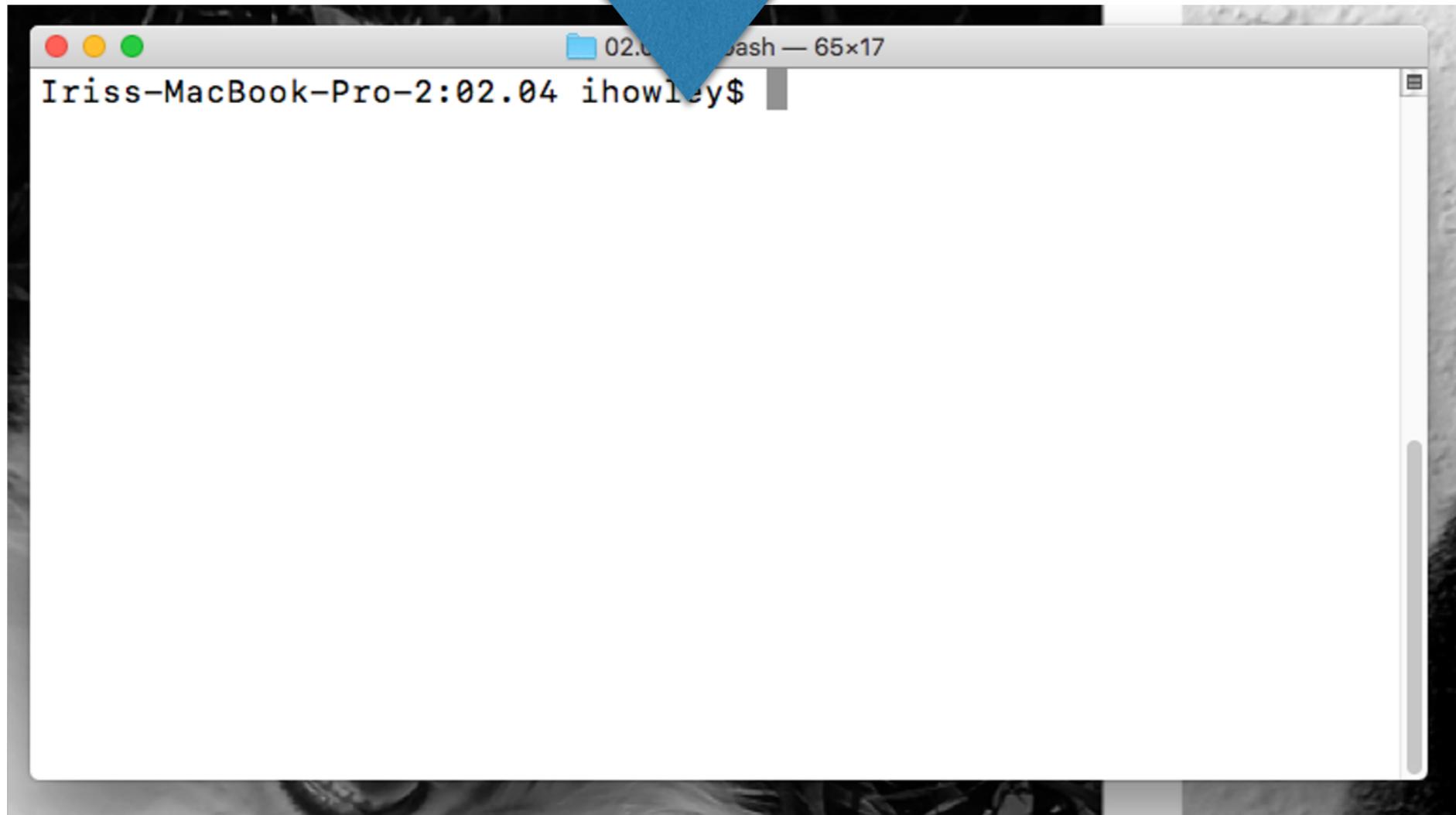
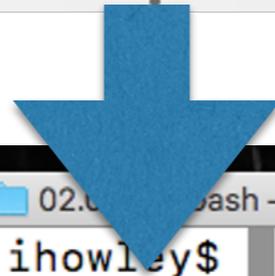
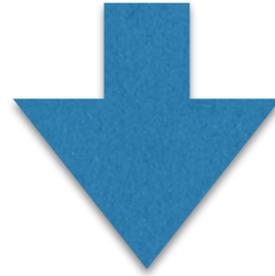
VS Code
Visual Studio Code



Similar...



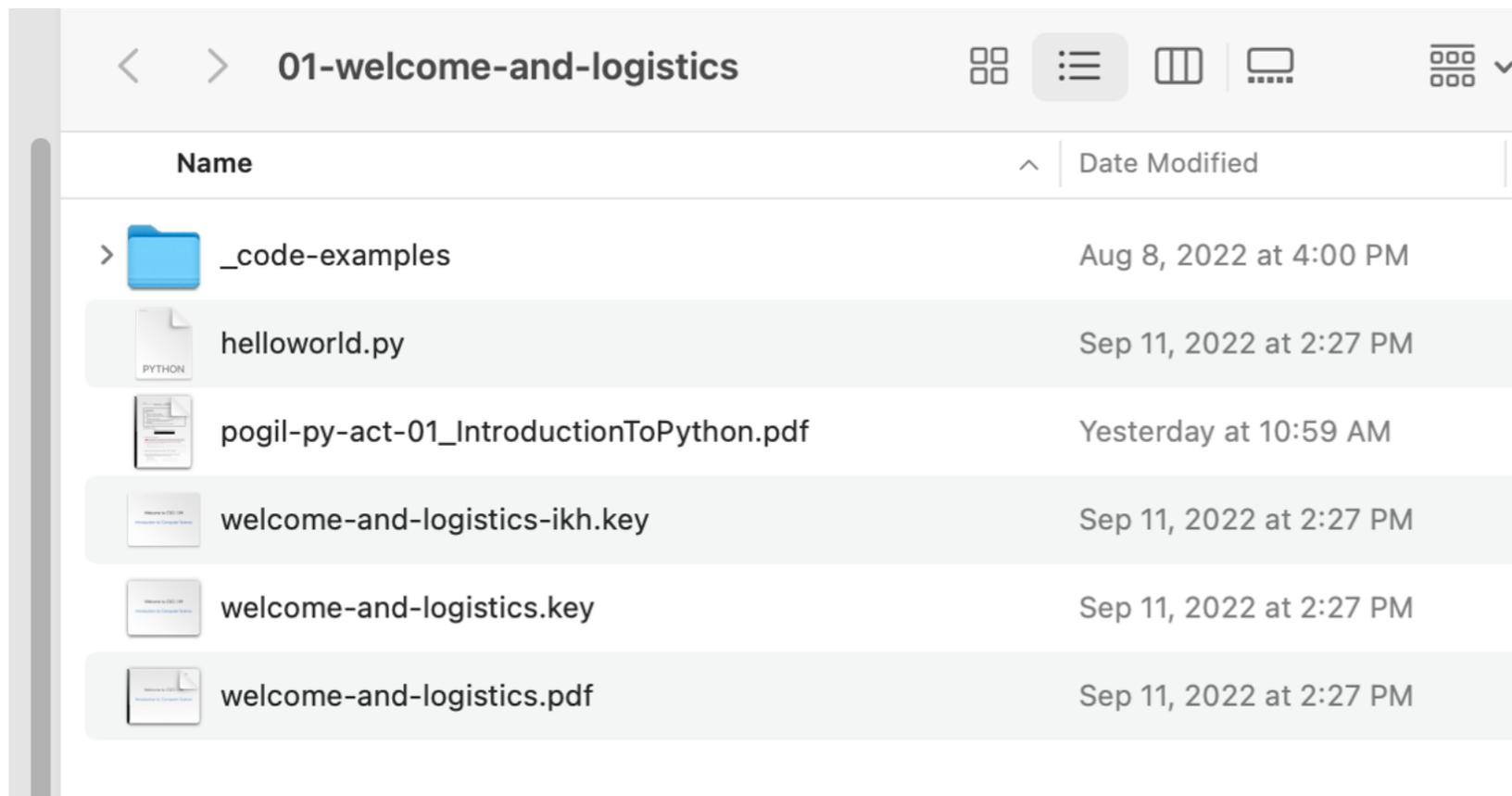
Terminal



Terminal vs. File Explorer

- Terminal is a text-based view of your **directory** structure
 - Like File or Explorer / Windows Explorer, but in text

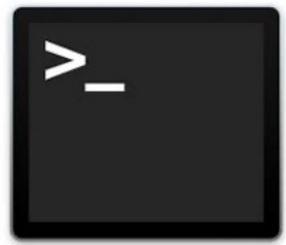
```
ihowley@ihYeti 01-welcome-and-logistics % ls
_code-examples                welcome-and-logistics-ikh.key
helloworld.py                 welcome-and-logistics.key
pogil-py-act-01_IntroductionToPython.pdf  welcome-and-logistics.pdf
ihowley@ihYeti 01-welcome-and-logistics %
```



Python

- Written into a **script** and then interpreted by Python
- `python3 hello.py`
- **Interactive** mode
 - `python3`
 - `>>> print("hello!")`
- Terminal & Python are two separate apps!





Terminal Keyboard Shortcuts

- Type a letter or two, then hit  → Tab Complete!
-  → Cycles through all previous Terminal commands!

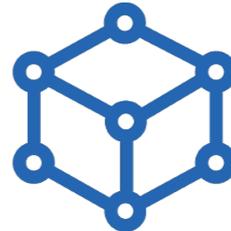
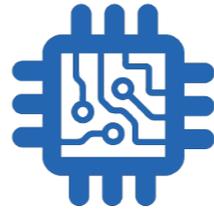
Useful Keyboard Shortcuts

-  (command) + C → Copy
-  (command) + X → Cut
-  (command) + V → Paste
-  (command) + A → Select All
-  (command) + S → Save
-  (command) + R → Refresh
-  (command) + Z → Undo
- Ctrl+ A → First character of line
- Ctrl + E → End of line
- Option +  → Right one word
- Option +  → Left one word

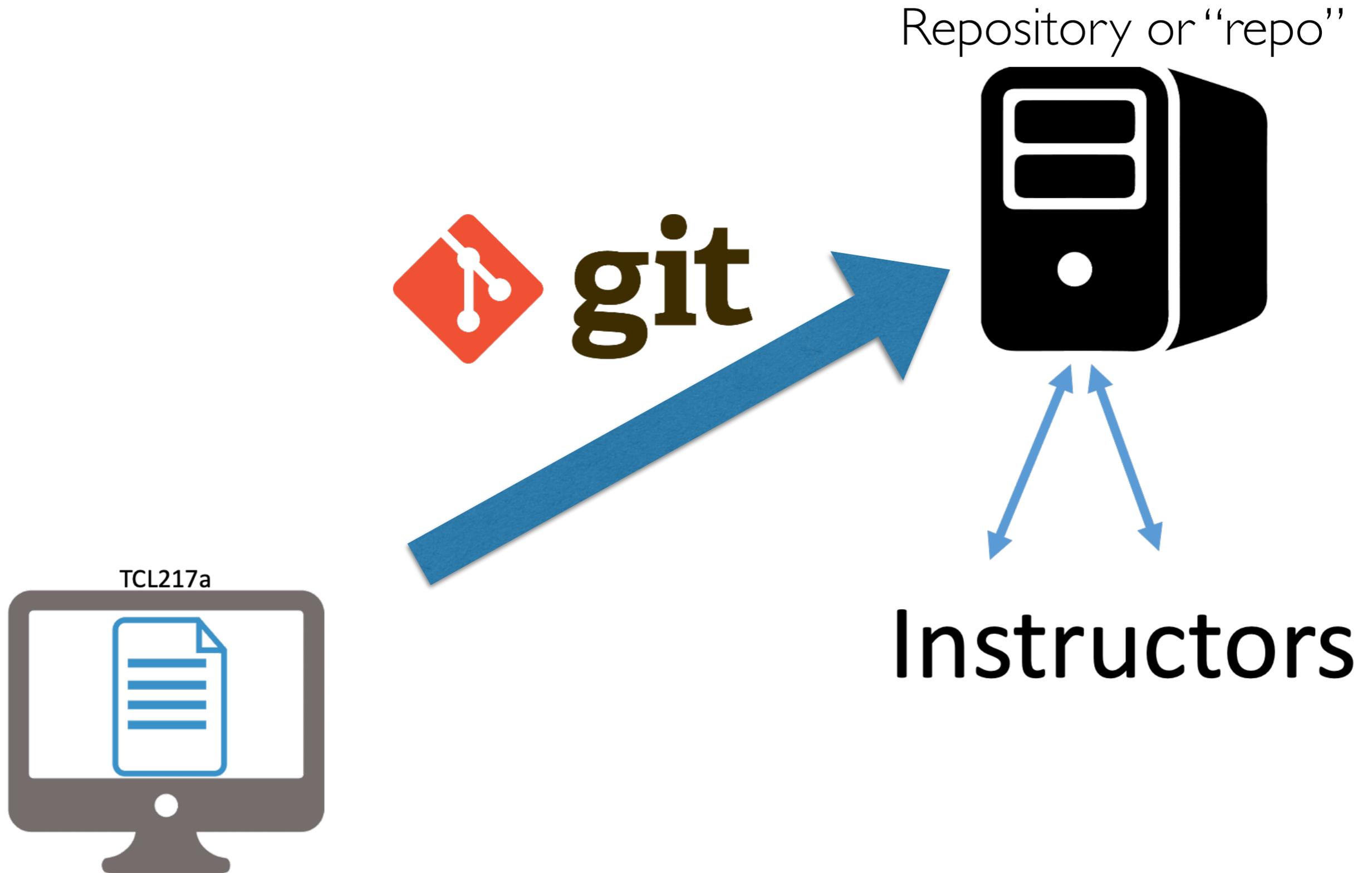
Useful Terminal/Unix Commands

- `pwd` - print working directory
- `mkdir <dir name>` - make new directory (or folder)
- `cd <dir name>` - change directory (like moving into a folder)
- Special directory names in Unix
 - single dot, current directory
 - . two dots, parent directory
 - ~ tilde, home directory
- `cd ..` - takes you to the parent directory
- `cd` - takes you "home"
- `ls` - shows contents of current directory

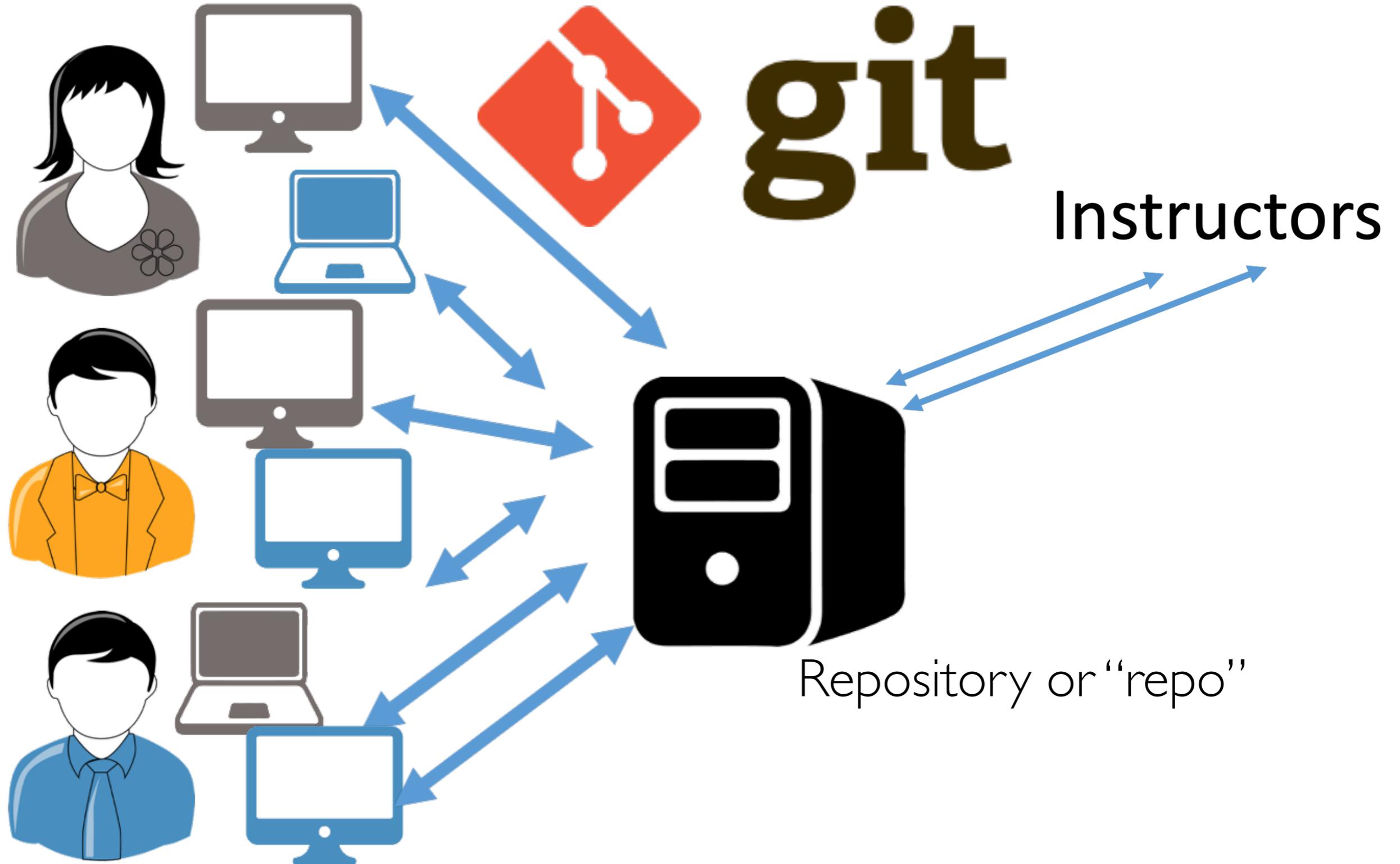
git



Working on Labs



Working on Labs



Why git?!

- Version history!
- Access files from anywhere!
- Great for collaboration!
- Great for maintaining large code bases!

(Example: Google Docs)

Version history

All versions ▾

WEDNESDAY

September 7, 9:48 PM ⋮
Current version
● Form responses

September 7, 11:58 AM
● Form responses

LAST WEEK

September 6, 4:10 PM
● Form responses

AUGUST

August 30, 11:56 PM
● Form responses

August 26, 9:30 AM
● Form responses

August 25, 1:41 PM
● Form responses

August 24, 9:22 PM
● Stephen Freund

August 24, 2:35 PM
● Stephen Freund

git:: Get the starter code first

- Copying files —> “I need to get a copy of the lab files my instructor made.”

```
git clone https://URL-here.git
```



git:: 3 Steps: `git add`

- Staging files —> “I edited this file, I want to include it in the next snapshot of my code .”

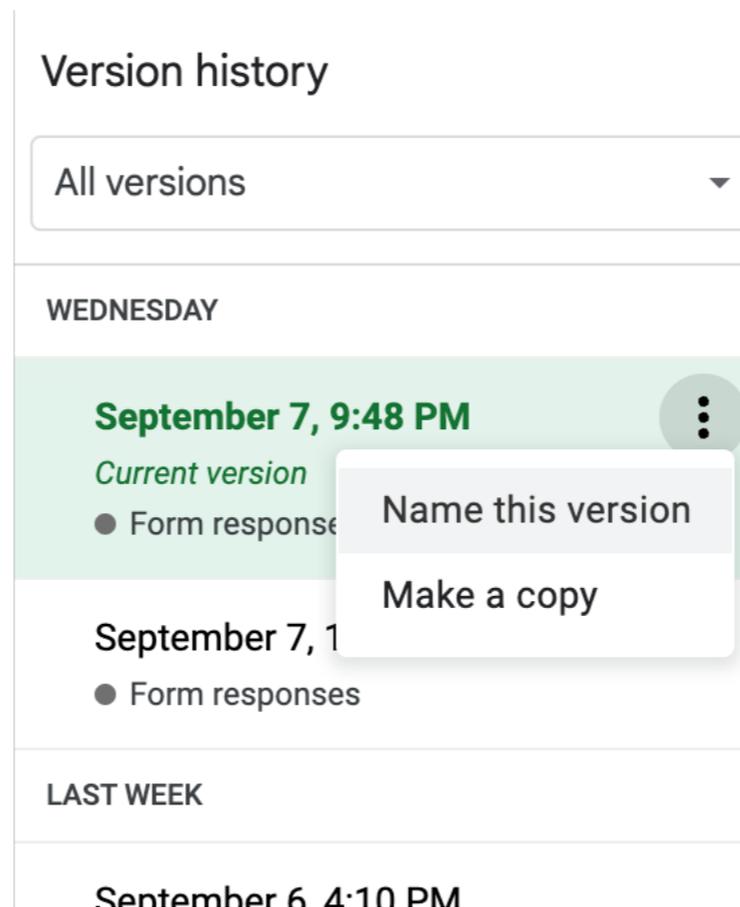
```
git add myfilename.py
```



git:: 3 Steps: `git commit -m`

- Committing files —> “Take a snapshot of my code that I’ve added so far and assign it a version number.”

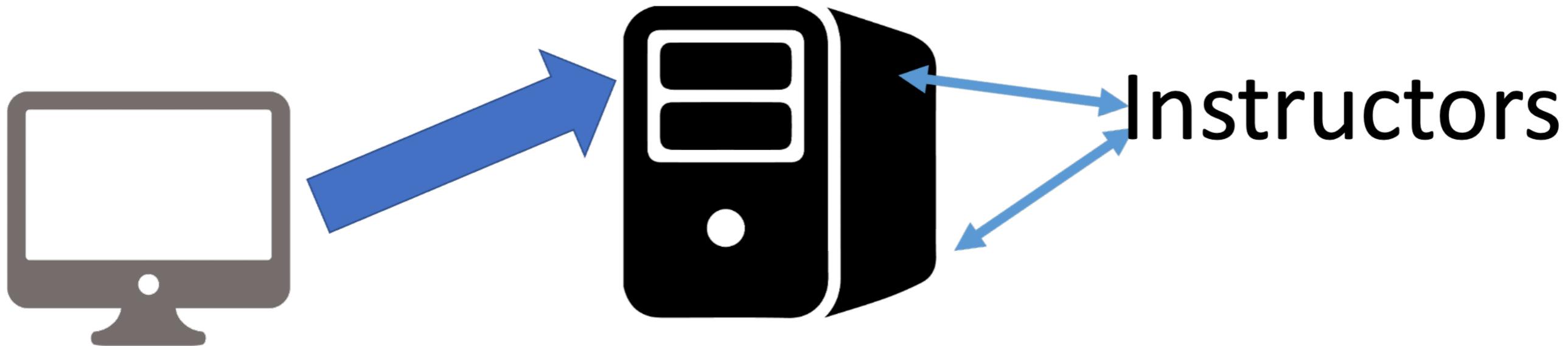
`git commit -m “Message here”`



git:: 3 Steps: git push

- Pushing files —> “Send all my snapshots up to the server!”

git push



git:: Check the Website to See Your Edits

- <https://evolene.cs.williams.edu>

evolene.cs.williams.edu/cs134-labs/iris/lab01

Projects Groups More

Search or jump to...

lab01

cs134-labs > iris > lab01

lab01 Project ID: 4713

Star 0 Fork 0

2 Commits 1 Branch 205 KB Files 205 KB Storage

Auto DevOps

It will automatically build, test, and deploy your application based on a predefined CI/CD configuration.

Learn more [Auto DevOps documentation](#)

Enable in

main lab01 / +

History Find file Web IDE Clone

starter files cs134 authored 4 days ago 07efbf38

README Add LICENSE Add CONTRIBUTING Add Kubernetes cluster Set up CI/CD

| Name | Last commit | Last update |
|----------------|---------------|-------------|
| .gitignore | starter files | 4 days ago |
| AboutMe.txt | starter files | 4 days ago |
| GradeSheet.txt | starter files | 4 days ago |
| README.md | starter files | 4 days ago |
| hello.py | starter files | 4 days ago |

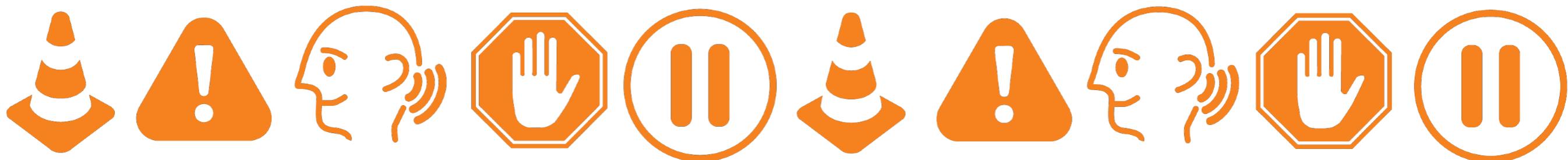
git:: 3 Steps

- **git clone**: copy code from server to a **new** machine for the first time. Only run this once for each assignment on each machine!
- **git add <files>**: add new or modified files to the next commit (this basically allows you to choose which files you plan to commit)
- **git commit -m "<message>"**: create a local snapshot of the added files (this does **not** copy anything back to the server!)
- **git push**: copy changes from your machine back to our server
- **git pull**: copy latest version of code from our server to your local machine (this can only be done **after** you have run **git clone** on this machine)
- **git commit -am "<message>"**: commits an already added file (a shortcut)

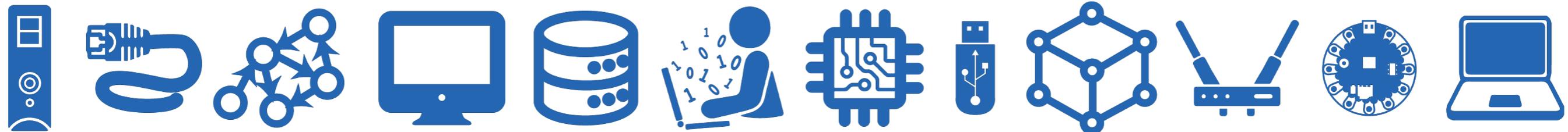
Notes

- We use **git** commands in Terminal
- You need your CS account to log-in to evolene (the gitlab server with the lab starter files)
- Always **git add/commit/push** before you leave lab!

- Lab instructions are on the course Website
- You'll *submit* your assignments through GradeScope.



Submitting Your Lab Assignment Through Gradescope



Gradescope

- First, you'll need to go to `evolene/gitlab` and download your lab assignment as a `.zip` file:

(This screenshot is for a different lab, but the buttons should be the same!)

The screenshot shows the GitLab interface for a project named 'setup'. At the top, there are navigation options like 'main', 'setup / +', and 'History'. The 'Download' button is circled in orange. Below it, the 'Download source code' dropdown menu is open, and the 'zip' option is circled in orange. Other options in the dropdown include 'tar.gz', 'tar.bz2', and 'tar'. Below the dropdown, there are buttons for 'Add LICENSE', 'Add CHANGELOG', 'Add CONTRIBUTING', 'Add Kubernetes cluster', and 'Set up CI/CD'. At the bottom, there is a table with columns 'Name', 'Last commit', and 'Last update'.

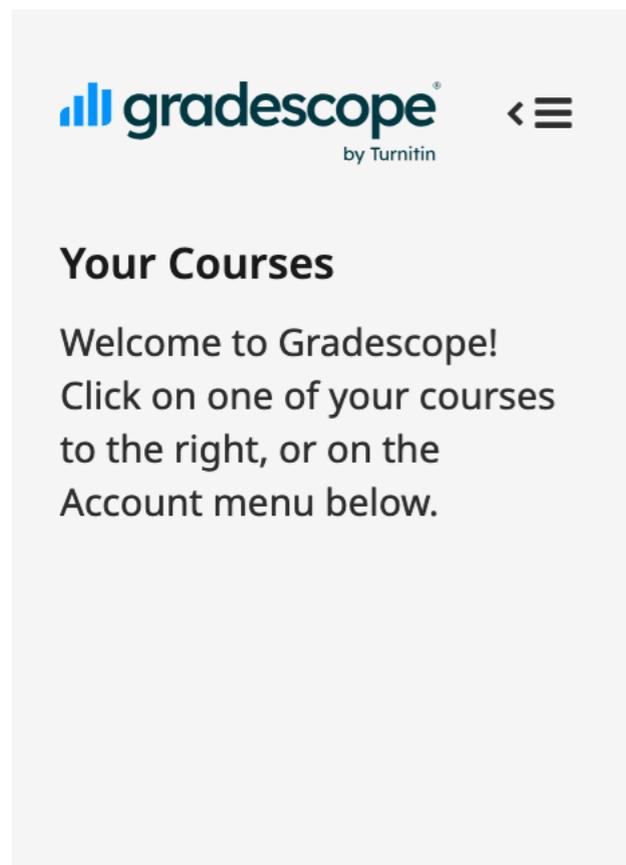
| Name | Last commit | Last update |
|-------------------------|---------------|--------------|
| <code>.gitignore</code> | starter files | 21 hours ago |
| <code>README.md</code> | starter files | 21 hours ago |

Select the downward arrow Download button
Then select 'zip' as the Download source code option

Remember where you've downloaded the `lab01-main.zip` file!

Gradescope

- Use the Gradescope [invitation email](#) you receive to create an account associated with CSI 34
- From the Gradescope Dashboard, select CSI 34



Your Courses

Fall 2024

CSI 34

3 assignments

Your Dashboard will look
something like this!

Gradescope

- Select the appropriate assignment (for this week, lab 1)

gradescope by Turnitin

CSI34 Summer 2024
Course ID: 812674

| Name | Status | Released | Due (EDT) |
|-------------------|---------------|------------------|------------------|
| <u>helloworld</u> | No Submission | Aug 30 at 3:10PM | Aug 30 at 3:11PM |

11 months, 3 weeks left

- You should navigate to your Lab .zip file, and upload it

Submit Programming Assignment

Upload all files for your submission

Submission Method

Upload

Drag & Drop
Any file(s) including .zip. Click to browse.

Cancel Upload

Remember to press
'Upload!'

The end!

