TURING, SSH, FILEZILLA, & LINUX

[a guide]

This guide is based off Dr. Susan Gauch's **Working from Home!** as well as my own personal experience (as well as my friends' experience) with Turing/SSH and Filezilla!

It's an all-in-one guide so u don't have to hve 3 different tabs open between figuring out Turing, Filezilla, and linux commands! All in one spot for u (:

There are **3 parts** to this guide. You can click on them to immediately go to that section!

CONTENTS

PART I: LOGGING INTO TURING.

[Mac]

1) Open up the **Terminal** -- if you've never opened this before, i recommend using the lil search feature on the status bar of your Mac to find it. This is what the icon looks like:

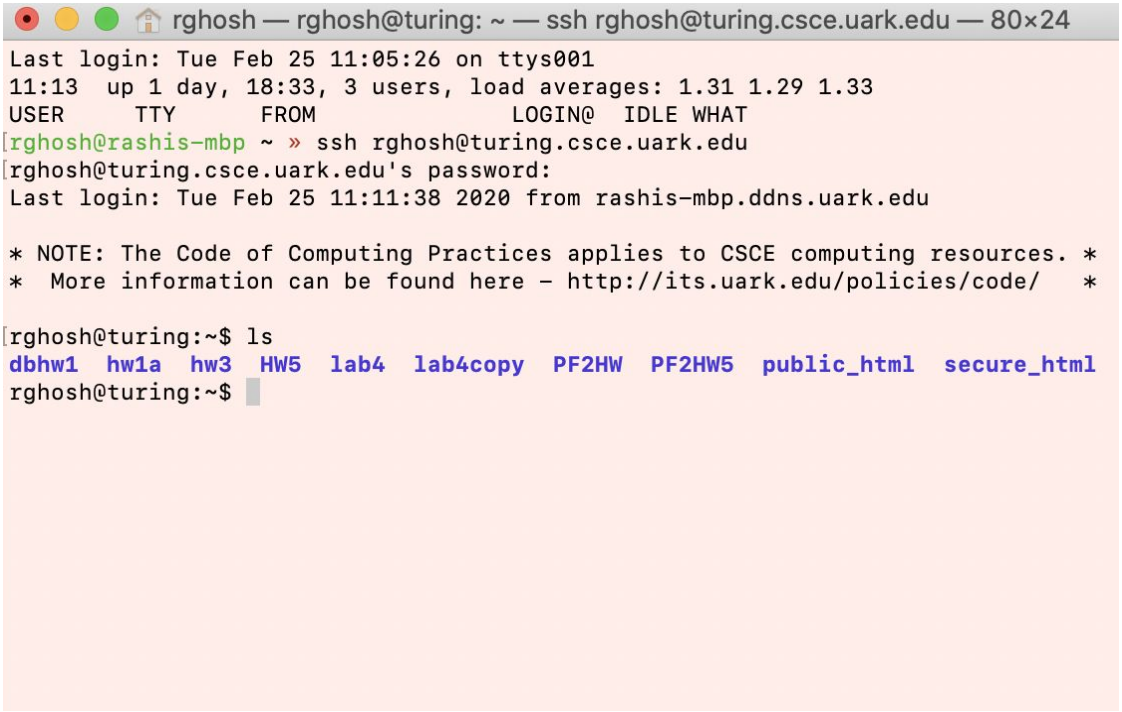
2) When you open it, type:

```
ssh YOURuarkID@turing.csce.uark.edu
```

Hit enter, & u will be prompted for your password. Once you enter it, it might ask if u want to continue connecting. Type **yes**.

& now you will **successfully be logged into Turing**! Now you can use linux commands to navigate the virtual environment. If you are unfamiliar w linux commands, the end of this document has some helpful commands!

Below is an example of how i log into turing, and how i use linux commands to navigate:



[Windows]

1) Open up the **Command Prompt** -- if you've never opened this before, u can search for it on the lil task bar thing and it'll pop right up!

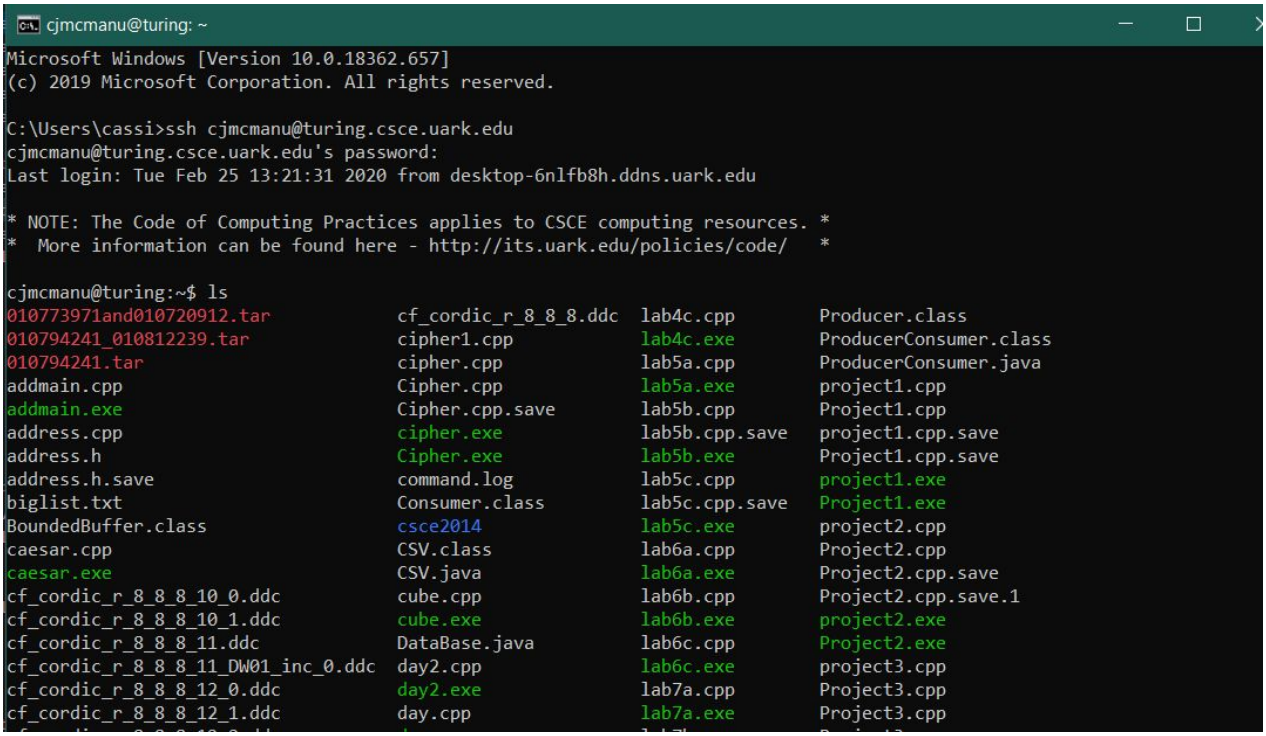
2) When you open it, type:

```
ssh YOURuarkID@turing.csce.uark.edu
```

Hit enter, & u will be prompted for your password.* Once you enter it, it might ask if u want to continue connecting. Type **yes**.

& now you will **successfully be logged into Turing**! Now you can use linux commands to navigate the virtual environment. If you are unfamiliar w linux commands, the end of this document has some helpful commands!

Below is an example of how u would log into Turing, & how u would use linux commands to navigate:



IF YOU'RE HAVING TROUBLE LOGGING IN Check the second line of the command prompt window -- make sure it's © 2018 Microsoft Corporation or later. I know for a fact this does not work with 2016, but do not know about 2017. If you hve trouble logging in, u might have to download an SSH client (such as PuTTY).

[Linux]

1) Open the command prompt, and type:

```
ssh YOURuarkID@turing.csce.uark.edu
```

2) Enter ur password, and you are in! Navigate Turing using the same linux commands as u usually do!

PART II: USING FILEZILLA.

The purpose of Filezilla is to move files between your local machine and Turing (so u can test it).

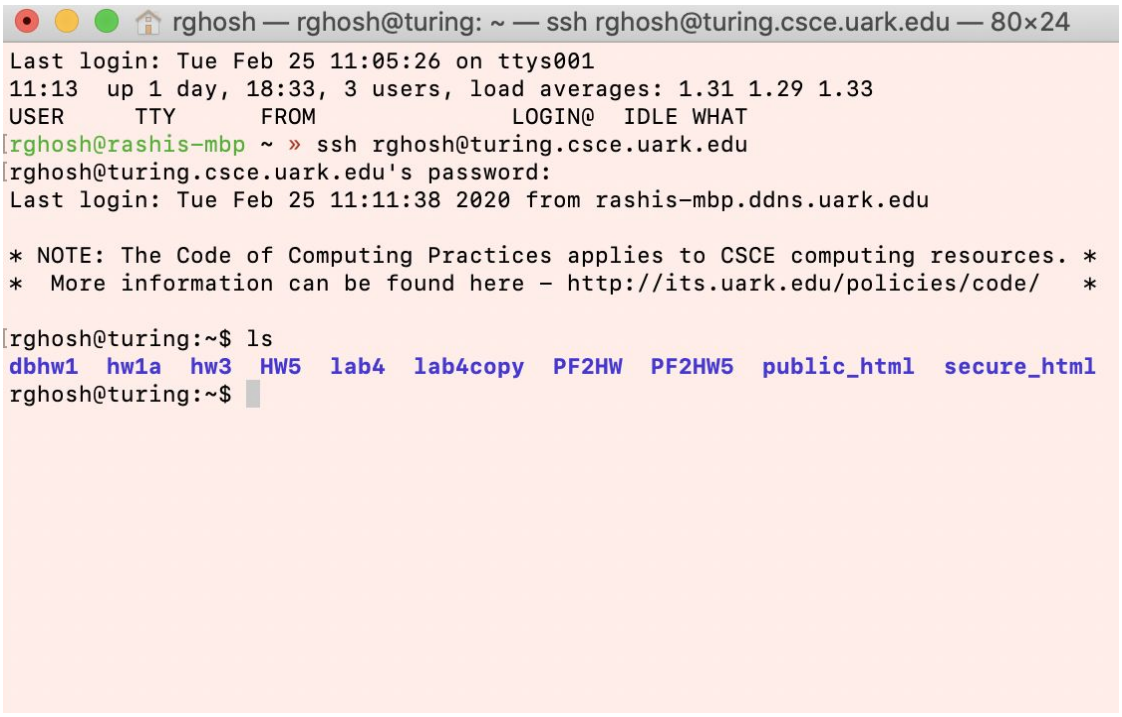
My suggestion: **write & develop ur programs on your normal computer** (NetBeans, Visual Studio Code, etc), or online GDB -- just write your code as u normally would.

THEN, **once u are done, copy it into Turing** via Filezilla in order to test it in Turing and make sure it works there.

To get started, first download Filezilla here.

[Copying files to Turing]

First, let's go into **Turing** and see what files i already have on the virtual environment:



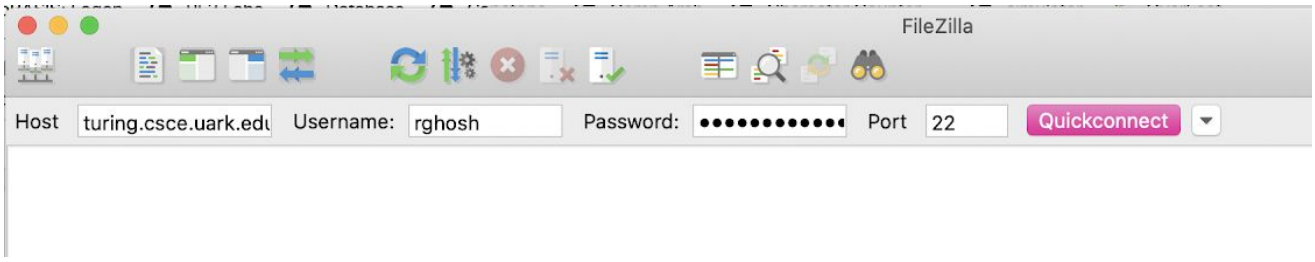
As you can see, i currently have 10 folders/files in my Turing environment (dbhw1, hw1a, hw3, etc). After this step-by-step, we will have added a new folder here.

Now let's go back to my **regular computer,** and say i just completed lab7. I have the **folder** for the assignment just on my desktop on my computer. In this example, let's say i want to copy the **lab7** folder into Turing so i can run it. (the screenshot below highlights the folder on my desktop i want to copy over)

Now that you (hopefully) have an idea about what we're doing, let's start copying some files over!

1) Open Filezilla. You'll get a window with a lot of things going on. For now, just focus on the top bar, and enter the following:
   - Host: **`turing.csce.uark.edu`**
   - Username: **`[your uark id ]`**
   - Password: **`[your uark password ]`**
   - Port: **`22`**

   It should look something like the following. Click **`Quickconnect`**.



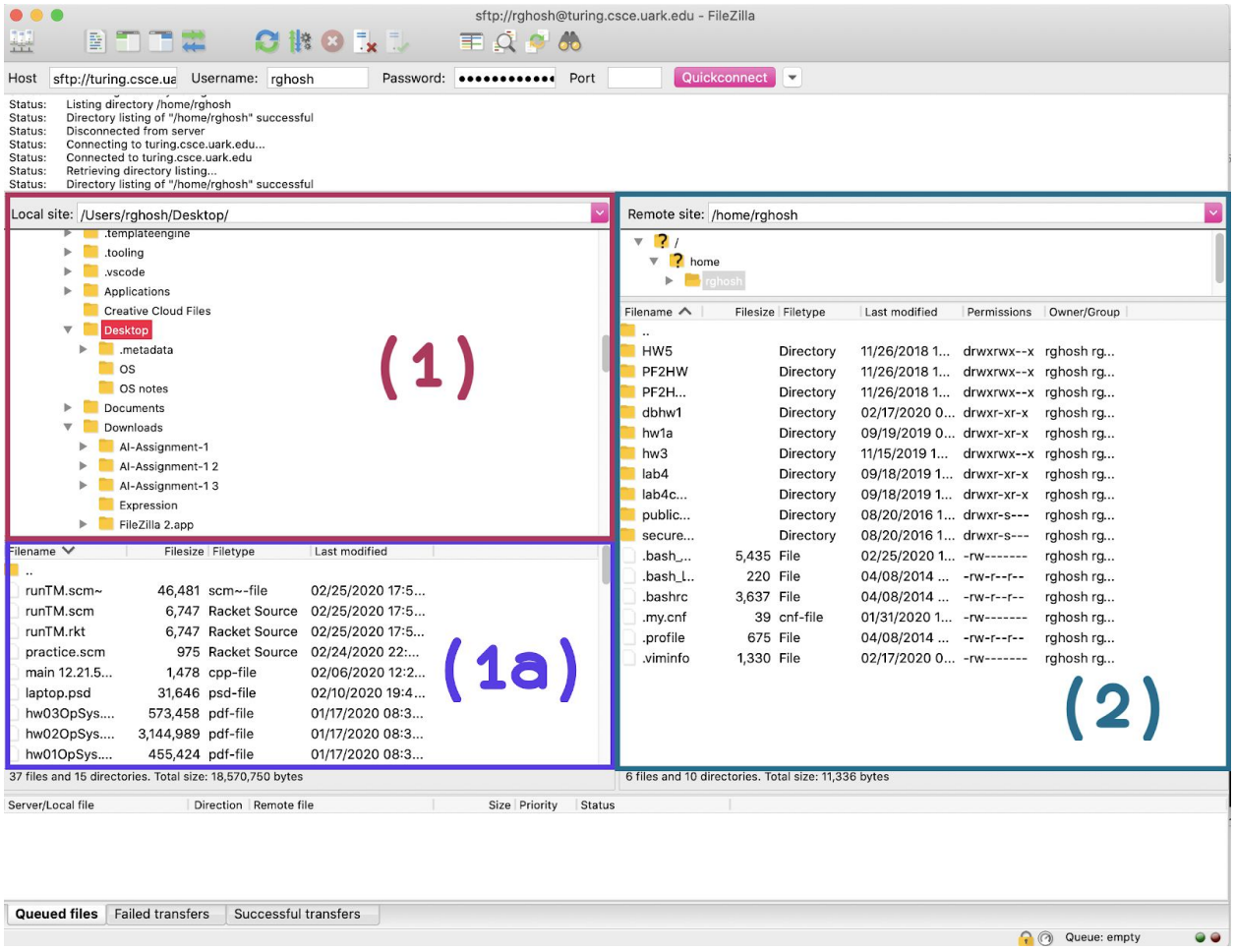
2) Now, we'll explore a bit. Below i have highlighted the important parts (where u will be dragging and dropping files to copy over).

I tried color coding/assigning numbers to this to help explain:

(1) This shows all the contents of ur local computer. I scrolled down and clicked on "Desktop"

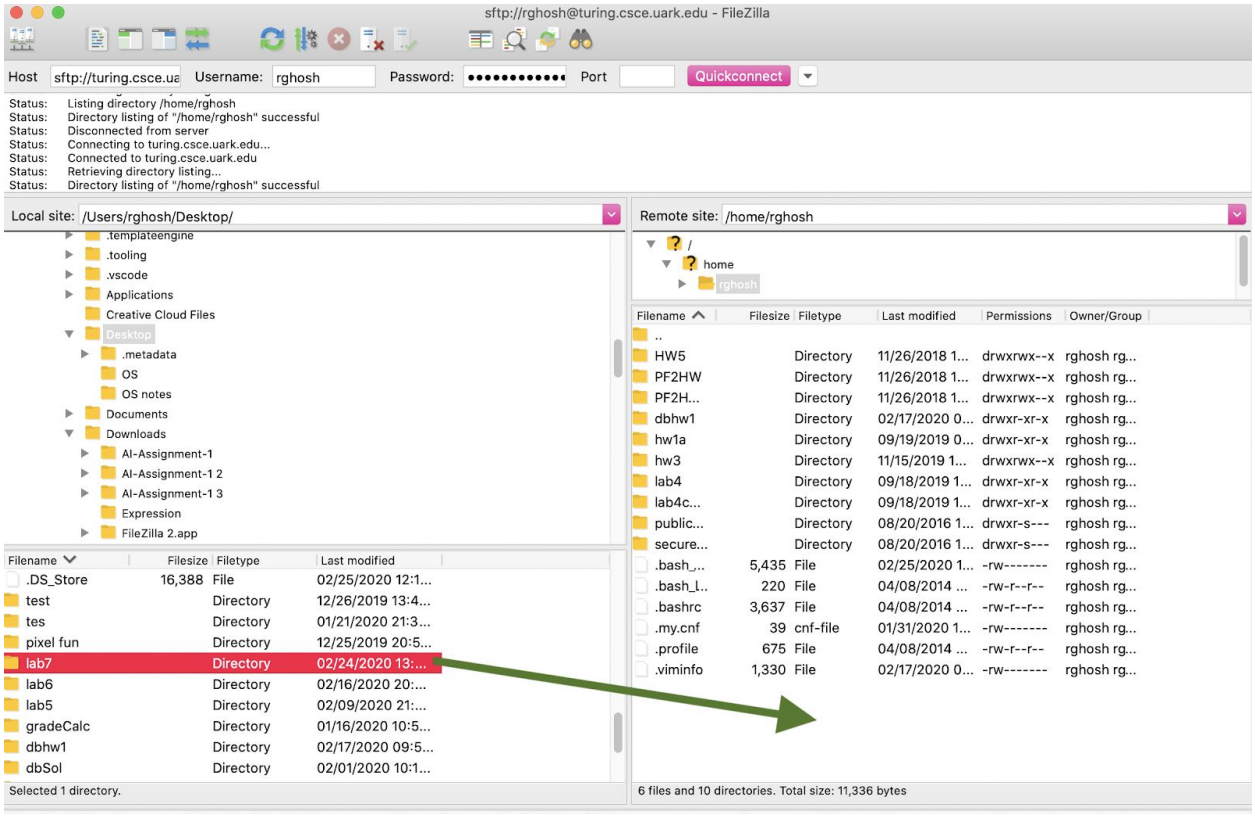
(1a) When u click on a folder from your local machine, all of its contents are displayed in this window. So currently, it's showing everything i have on my desktop.

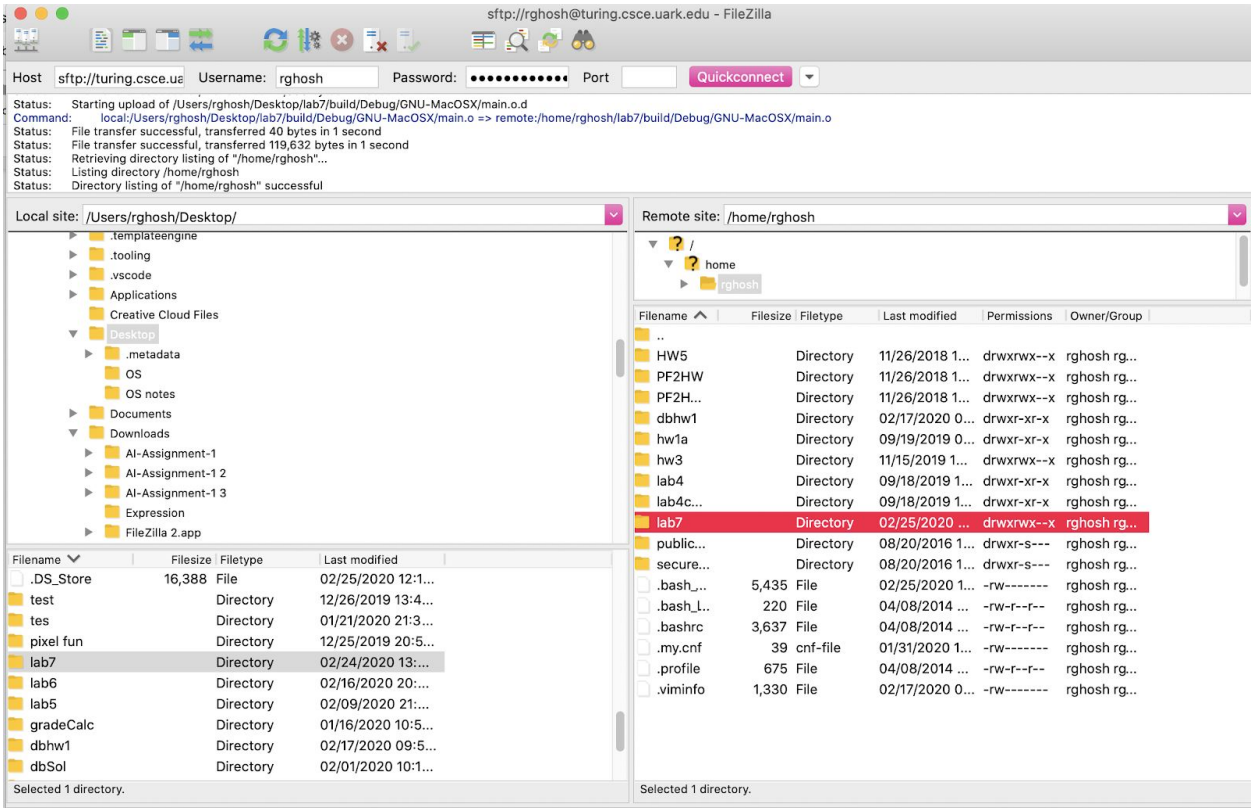
(2) This window shows the contents of your Turing environment! You can see those 10 files/folders we saw at the very beginning from the terminal.



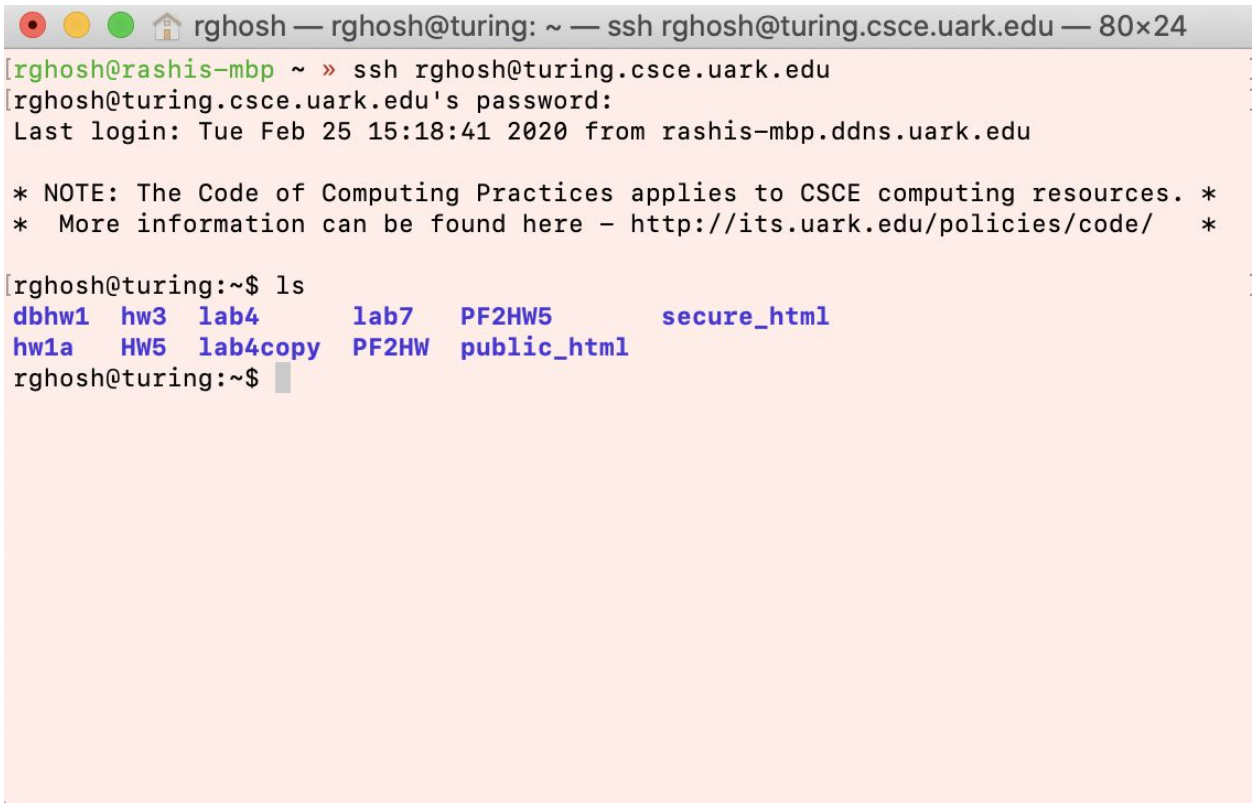
Copying files over is super simple -- you just navigate your directories in (1), and then drag folders/files from (1a) over to (2)!

The following screenshots demonstrate me copying lab7 from my Desktop into Turing.





And that's it!!! Now we can ssh into Turing via the terminal/command prompt and see this file:



And there it is!!

PART III: SOME BASIC/HELPFUL LINUX COMMANDS.

Now that we can copy files over to Turing & can ssh in, here's some super basic commands for navigating into folders & compiling ur code.

NEW: fun fact! If using the citrix VM, a c++ compiler is installed on it, and u can compile directly from command prompt!

`ls`

This command will list everything in the current directory.

`cd [folder name]`

Entering "cd" followed by a folder name will move u into that folder. For example, "cd project3" will move you into the project3 folder.

`cd ..`

Entering "cd" followed by two dots moves you back up one directory. For example, if you "cd .." from inside the project4 folder, you will be back at your home directory.

`exit`

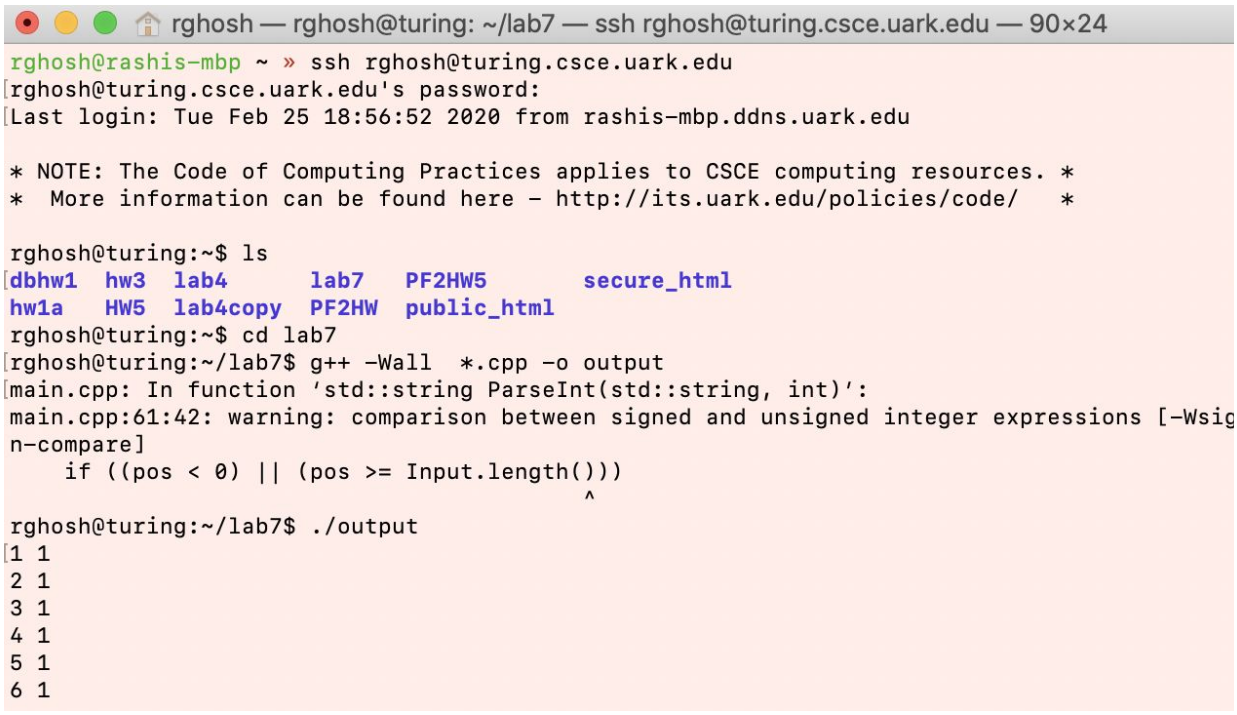
Exits Turing and returns to ur normal terminal/command prompt.

`g++ -Wall *.cpp -o output`

`./output`

These are the big commands! Once inside your project folder, run these two commands to first compile ur program, and then run it.

The following are screenshots of me compiling & running lab7:



& that's it! Congratulations u are now a turing master.