

# TURING, SSH, FILEZILLA, & LINUX

## [ a guide ]

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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!

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## PART I: LOGGING INTO TURING.

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### [ 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:

```
rgghosh — rgghosh@turing: ~ — ssh rgghosh@turing.csce.uark.edu — 80x24
Last login: Tue Feb 25 11:05:26 on ttys001
11:13 up 1 day, 18:33, 3 users, load averages: 1.31 1.29 1.33
USER      TTY      FROM          LOGIN@  IDLE WHAT
[rgghosh@rashis-mbp ~ » ssh rgghosh@turing.csce.uark.edu
[rgghosh@turing.csce.uark.edu's password:
Last login: Tue Feb 25 11:11:38 2020 from rashis-mbp.ddns.uark.edu

* NOTE: The Code of Computing Practices applies to CSCE computing resources. *
* More information can be found here - http://its.uark.edu/policies/code/   *

[rgghosh@turing:~$ ls
dbhw1 hw1a hw3 HW5 lab4 lab4copy PF2HW PF2HW5 public_html secure_html
rgghosh@turing:~$
```

[ 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:

```
cjmcmantu@turing: ~  
Microsoft Windows [Version 10.0.18362.657]  
(c) 2019 Microsoft Corporation. All rights reserved.  
  
C:\Users\cassi>ssh cjmcmantu@turing.csce.uark.edu  
cjmcmantu@turing.csce.uark.edu's password:  
Last login: Tue Feb 25 13:21:31 2020 from desktop-6nlfb8h.ddns.uark.edu  
  
* NOTE: The Code of Computing Practices applies to CSCE computing resources. *  
* More information can be found here - http://its.uark.edu/policies/code/ *  
  
cjmcmantu@turing:~$ ls  
010773971and010720912.tar      cf_cordic_r_8_8_8.ddc    lab4c.cpp                Producer.class  
010794241_010812239.tar        cipher1.cpp              lab4c.exe               ProducerConsumer.class  
010794241.tar                  cipher.cpp               lab5a.cpp               ProducerConsumer.java  
addmain.cpp                    Cipher.cpp               lab5a.exe               project1.cpp  
addmain.exe                    Cipher.cpp.save          lab5b.cpp               Project1.cpp  
address.cpp                     cipher.exe               lab5b.cpp.save          project1.cpp.save  
address.h                      Cipher.exe               lab5b.exe               Project1.cpp.save  
address.h.save                 command.log              lab5c.cpp               project1.exe  
biglist.txt                    Consumer.class           lab5c.cpp.save          Project1.exe  
BoundedBuffer.class            csce2014                lab5c.exe               project2.cpp  
caesar.cpp                     CSV.class                lab6a.cpp               Project2.cpp  
caesar.exe                     CSV.java                 lab6a.exe               Project2.cpp.save  
cf_cordic_r_8_8_8_10_0.ddc       cube.cpp                 lab6b.cpp               Project2.cpp.save.1  
cf_cordic_r_8_8_8_10_1.ddc       cube.exe                 lab6b.exe               project2.exe  
cf_cordic_r_8_8_8_11.ddc         DataBase.java            lab6c.cpp               Project2.exe  
cf_cordic_r_8_8_8_11_DW01_inc_0.ddc day2.cpp                 lab6c.exe               project3.cpp  
cf_cordic_r_8_8_8_12_0.ddc       day2.exe                 lab7a.cpp               Project3.cpp  
cf_cordic_r_8_8_8_12_1.ddc       day.cpp                  lab7a.exe               Project3.cpp
```

**\*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.

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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:

```
rgghosh — rgghosh@turing: ~ — ssh rgghosh@turing.csce.uark.edu — 80x24
Last login: Tue Feb 25 11:05:26 on ttys001
11:13 up 1 day, 18:33, 3 users, load averages: 1.31 1.29 1.33
USER      TTY      FROM          LOGIN@  IDLE WHAT
[rgghosh@rashis-mbp ~ » ssh rgghosh@turing.csce.uark.edu
rgghosh@turing.csce.uark.edu's password:
Last login: Tue Feb 25 11:11:38 2020 from rashis-mbp.ddns.uark.edu

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rgghosh@turing:~$ ls
dbhw1  hw1a  hw3  HW5  lab4  lab4copy  PF2HW  PF2HW5  public_html  secure_html
rgghosh@turing:~$
```

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.

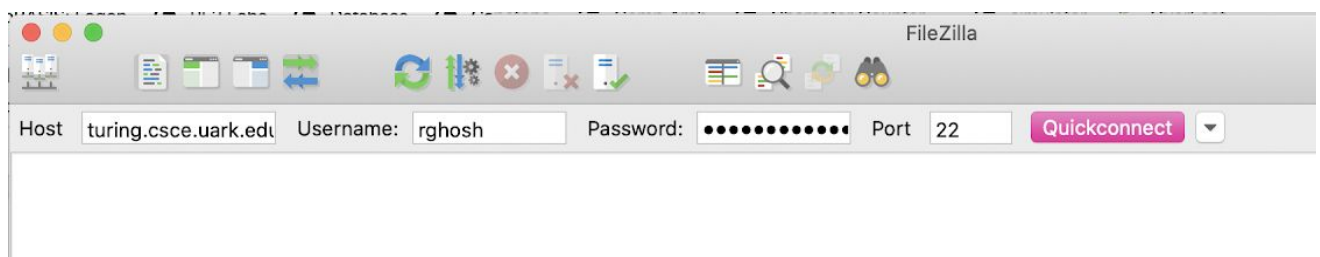
Now let's go back to my **regular computer**, and say i just completed lab7. I have the **folder** for the assignment just on my desktop on my computer. In this example, let's say i want to copy the **lab7** folder into Turing so i can run it. (the screenshot below highlights the folder on my desktop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



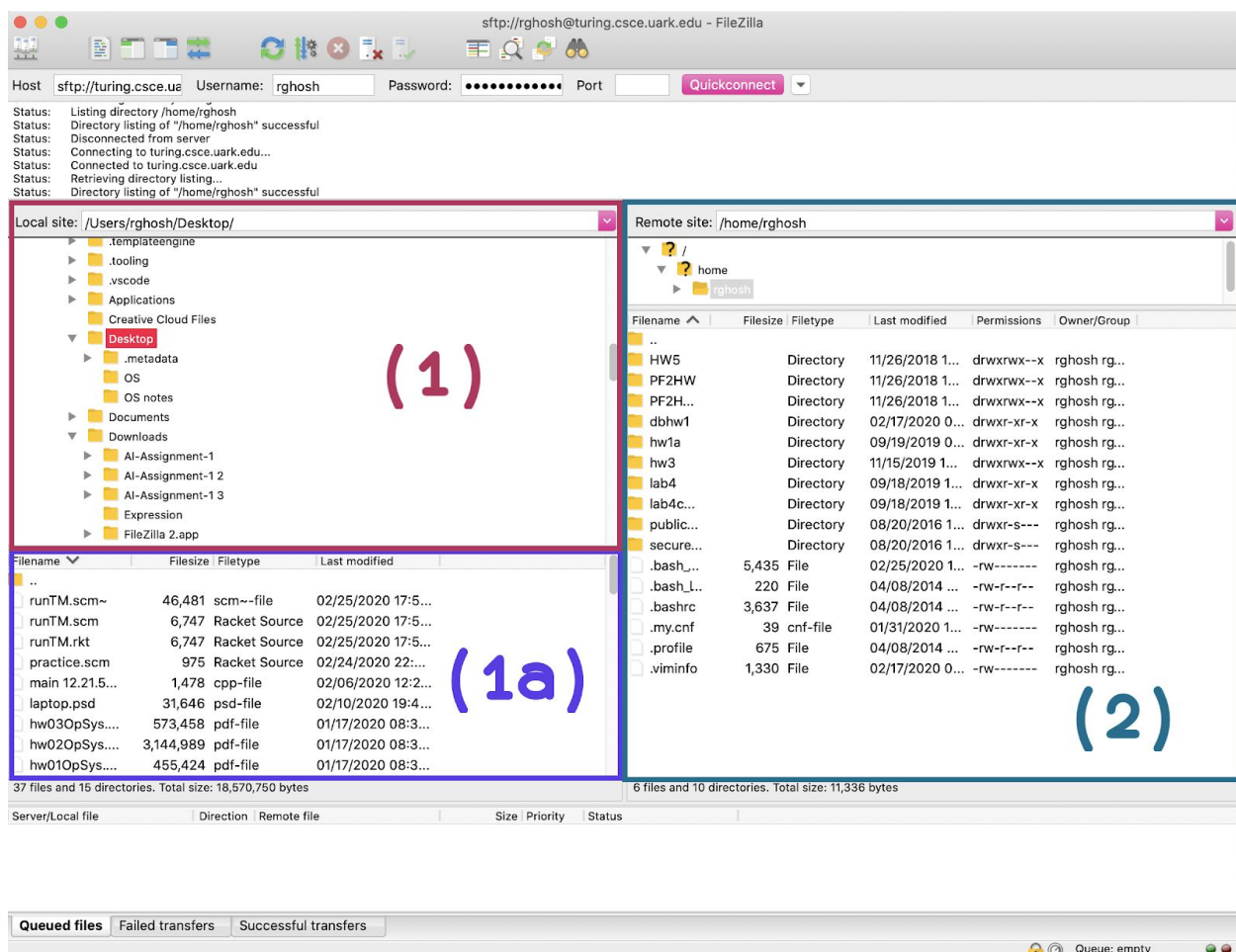
2) Now, we'll explore a bit. Below i have highlighted the important parts (where u will be dragging and dropping files to copy over).

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.

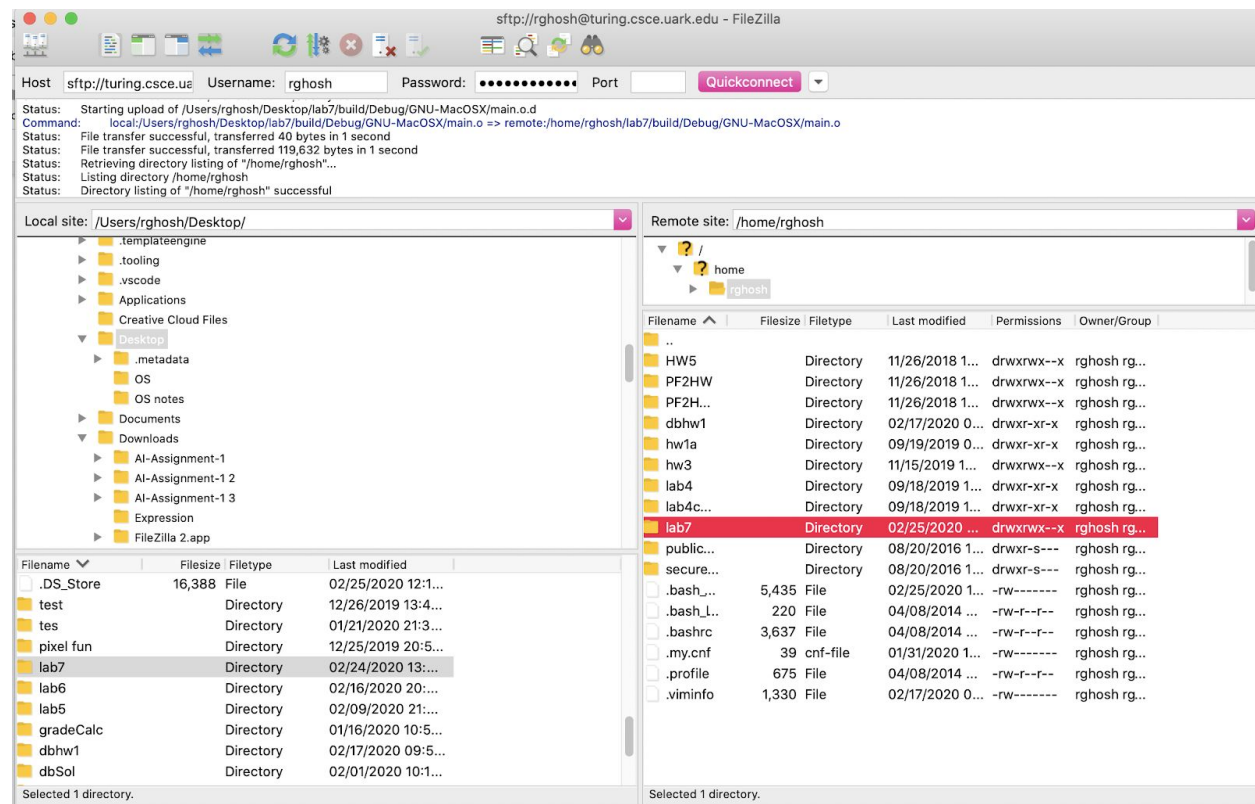
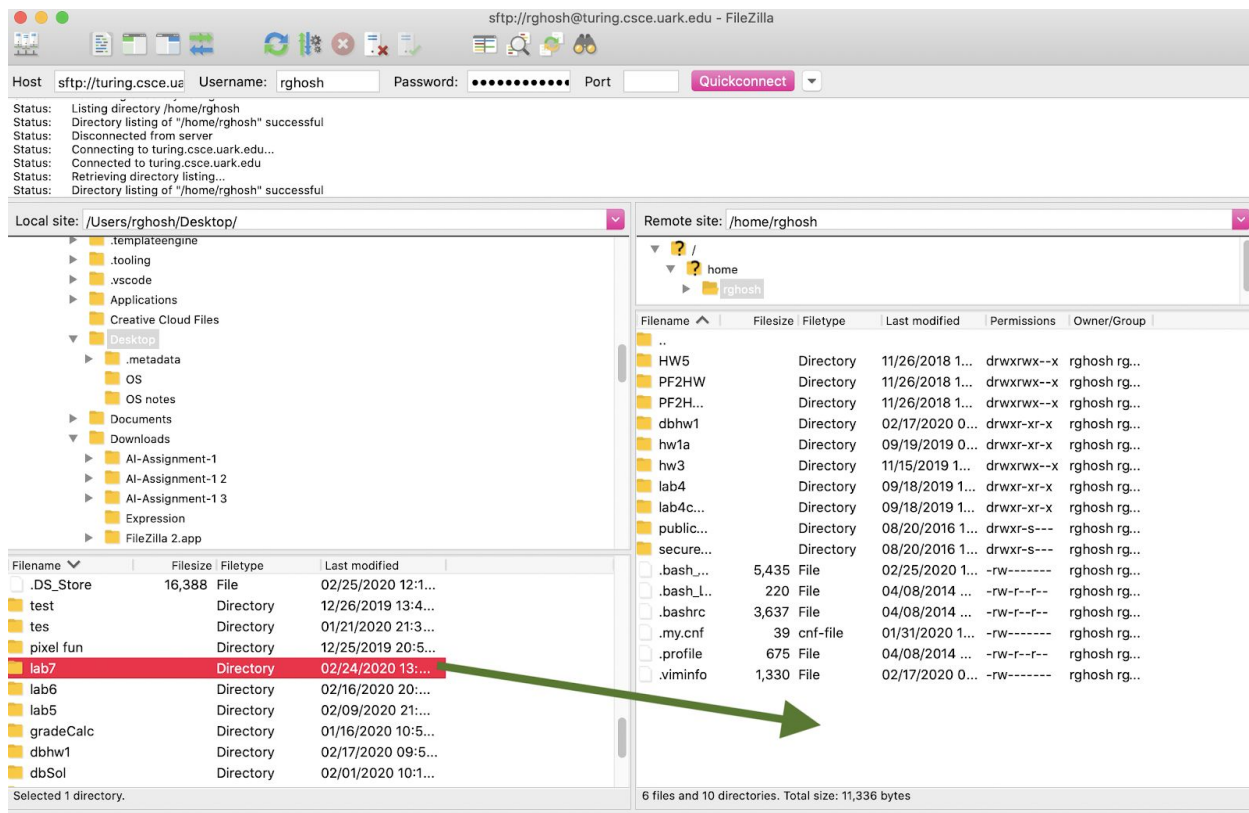
**(2)** This window shows the contents of your Turing environment! You can see those 10 files/folders we saw at the very beginning from the terminal.



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

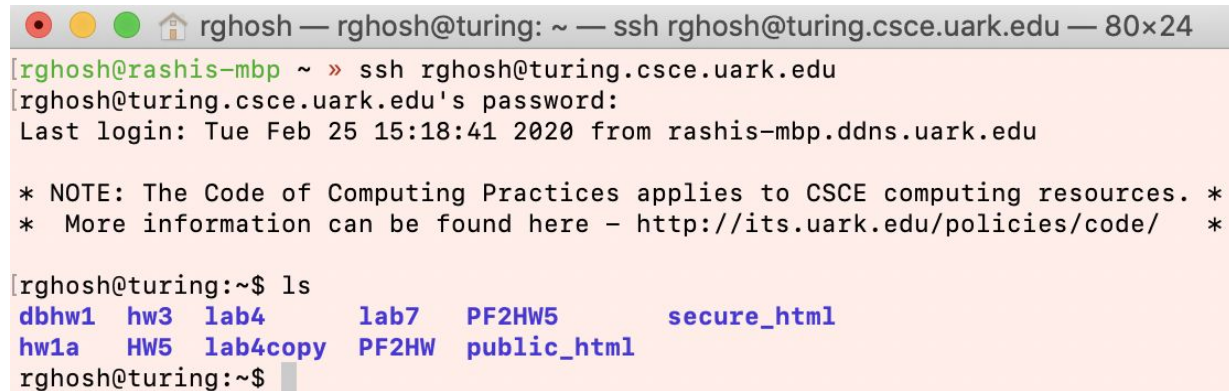


The following screenshots demonstrate me copying lab7 from my Desktop into Turing.





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



```
rgosh — rgosh@turing: ~ — ssh rgosh@turing.csce.uark.edu — 80x24
[rgosh@rashis-mbp ~ » ssh rgosh@turing.csce.uark.edu
[rgosh@turing.csce.uark.edu's password:
Last login: Tue Feb 25 15:18:41 2020 from rashis-mbp.ddns.uark.edu

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[rgosh@turing:~$ ls
dbhw1  hw3  lab4      lab7  PF2HW5  secure_html
hw1a   HW5   lab4copy  PF2HW  public_html
rgosh@turing:~$
```

And there it is!!

## PART III: SOME BASIC/HELPFUL LINUX COMMANDS.

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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:

```
rgghosh — rgghosh@turing: ~/lab7 — ssh rgghosh@turing.csce.uark.edu — 90x24
rgghosh@rashis-mbp ~ » ssh rgghosh@turing.csce.uark.edu
rgghosh@turing.csce.uark.edu's password:
Last login: Tue Feb 25 18:56:52 2020 from rashis-mbp.ddns.uark.edu

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rgghosh@turing:~$ ls
dbhw1  hw3  lab4  lab7  PF2HW5  secure_html
hw1a   HW5  lab4copy  PF2HW  public_html
rgghosh@turing:~$ cd lab7
rgghosh@turing:~/lab7$ g++ -Wall *.cpp -o output
main.cpp: In function 'std::string ParseInt(std::string, int)':
main.cpp:61:42: warning: comparison between signed and unsigned integer expressions [-Wsign-compare]
    if ((pos < 0) || (pos >= Input.length()))
                                   ^
rgghosh@turing:~/lab7$ ./output
1 1
2 1
3 1
4 1
5 1
6 1
```

```
rgghosh — rgghosh@rashis-mbp — ~ — -zsh — 90x24
3 0
4 0
5 0
6 0
7 0
8 0
9 0
#####
#####
#####
#####
#####
#####
#####
#####
#####
#####
Input = 9.98908kjh
ParseInt = 9
ParseFloat = 9.98908
rgghosh@turing:~/lab7$ exit
logout
Connection to turing.csce.uark.edu closed.
rgghosh@rashis-mbp ~ »
```

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