Archie Ross AJR19034

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VM 1: 172.16.50.28

VM 2: 172.16.50.19

Lab Section 001

SSH Login Challenge

Lab 0 involved learning the proper use of various commands in a virtual machine's (VM) terminal. The first step involved connecting to the VM which can be accomplished by typing "ssh cse@iPaddress" in the terminal. The next commands used were *pwd* to show the current directory, *ls* to list the files in the directory, and *cd* to go to a specific directory. Screenshots of and explanations of the various other commands are included in the results section of this report.

Results:

The below picture shows how ssh can be used to login to a remote virtual machine (VM).

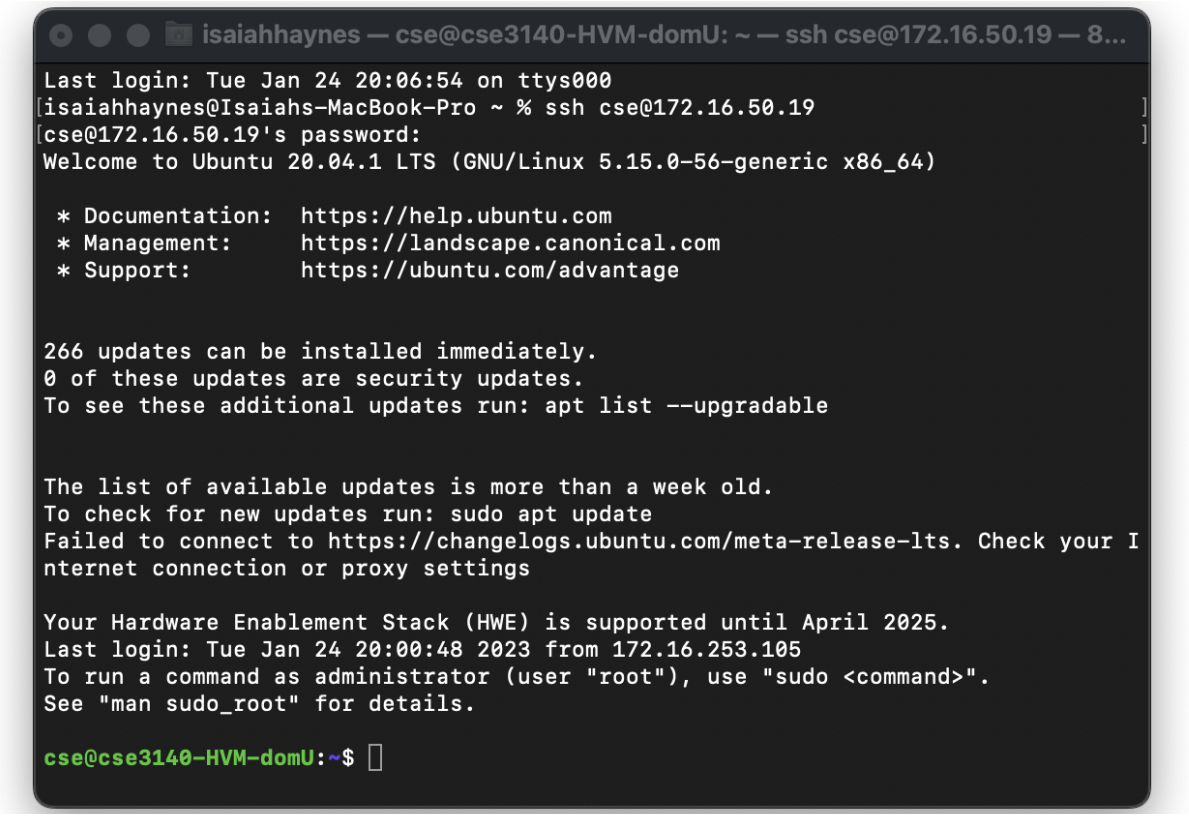

Image 1.1: how to ssh using 172.16.50.19

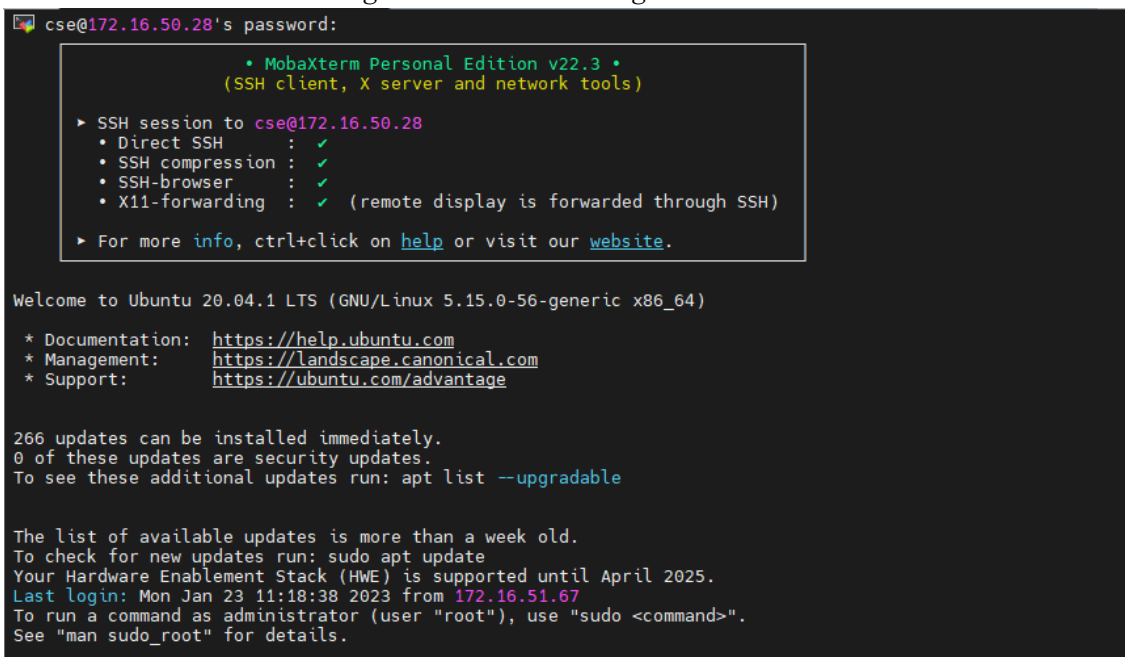

Image 1.2: how to ssh using 172.16.50.28

This next screenshot shows (from top to bottom) the uses of *pwd*, *ls*, *cd*, *mkdir*, and *rm*. "*pwd*" is used to show the directory that the VM is currently in, *ls* shows the files in the current directory, *cd Lab0* is used to go to the Lab0 directory, *mkdir Report_mkdir* makes a directory titled "Report_mkdir", and *rm* removes a file. In the screenshot shown, the option *-r* is included to remove the directory "Report_mkdir".

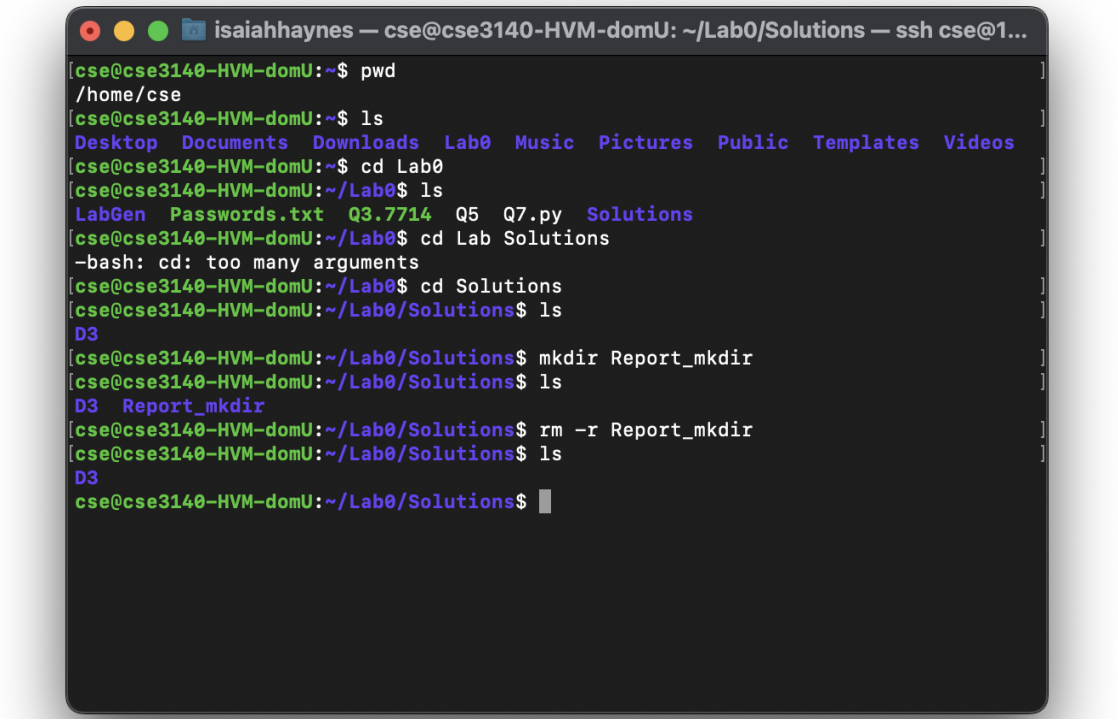

Image 2.1: various terminal commands [172.16.50.19]

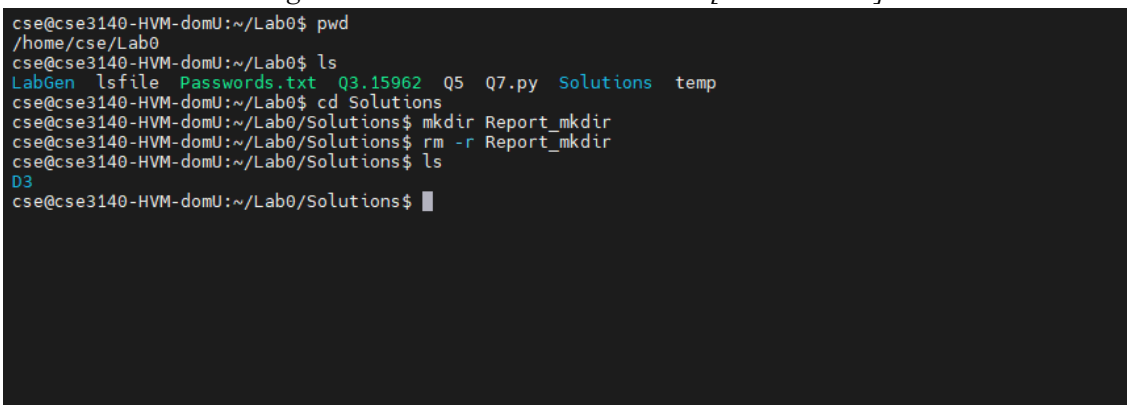

Image 2.2: various terminal commands [172.16.50.28]

The next screenshot shows how to find a specific string using the search function in the vim text editor.

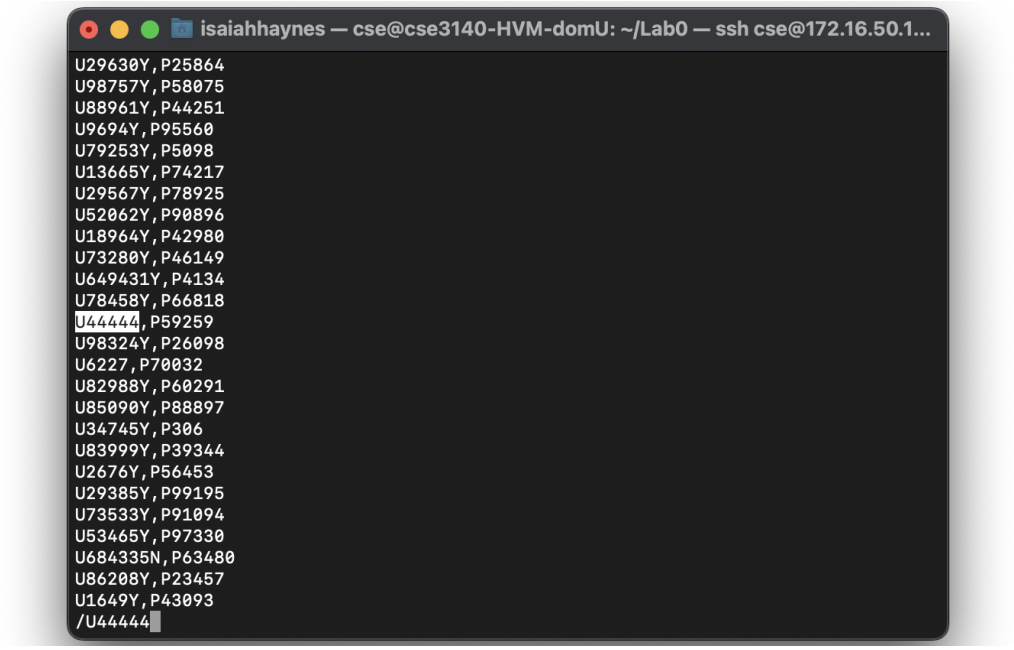

Image 3.1: search using vim [172.16.50.19]

Image 3.2: search using vim [172.16.50.28]

Image 4 shows how different options can change the use of a command. In this case adding *-l* to the *ls* command lists the permissions and attributes of each file or directory.

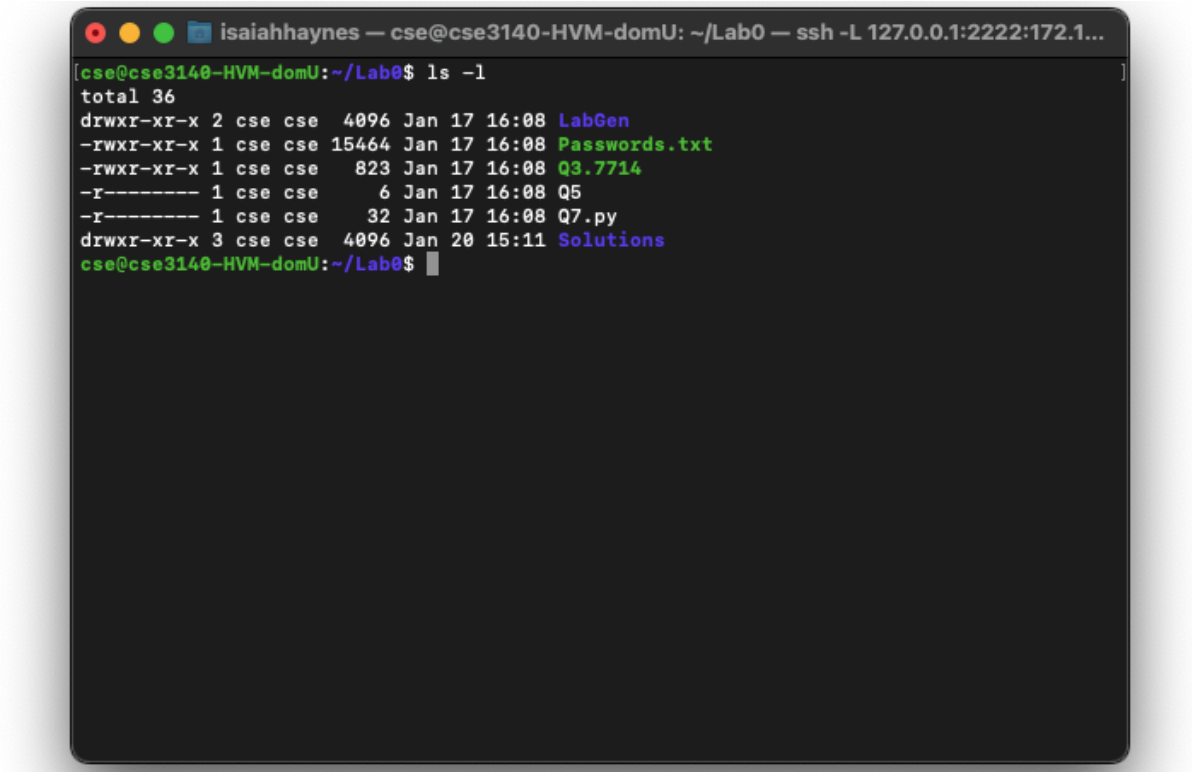

Image 4.1: using ls -l [172.16.50.19]

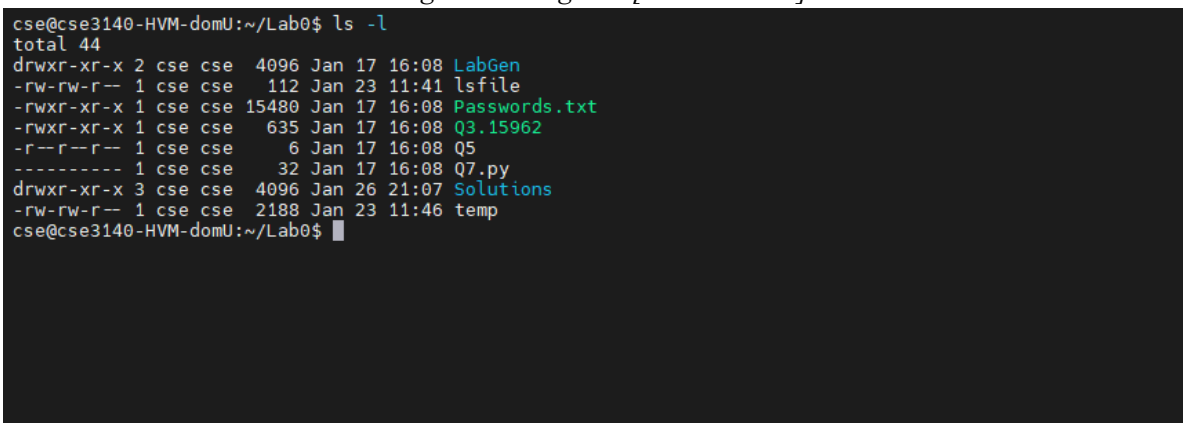

Image 4.2: using ls -l [172.16.50.28]

The following image shows how the *chmod* command can be used to change the permissions of a file. Notice how when "cat Q5" is used, there is a "permission denied" error; however, after "*chmod u+r Q5*" is used, the output of Q5 is printed to stdout.

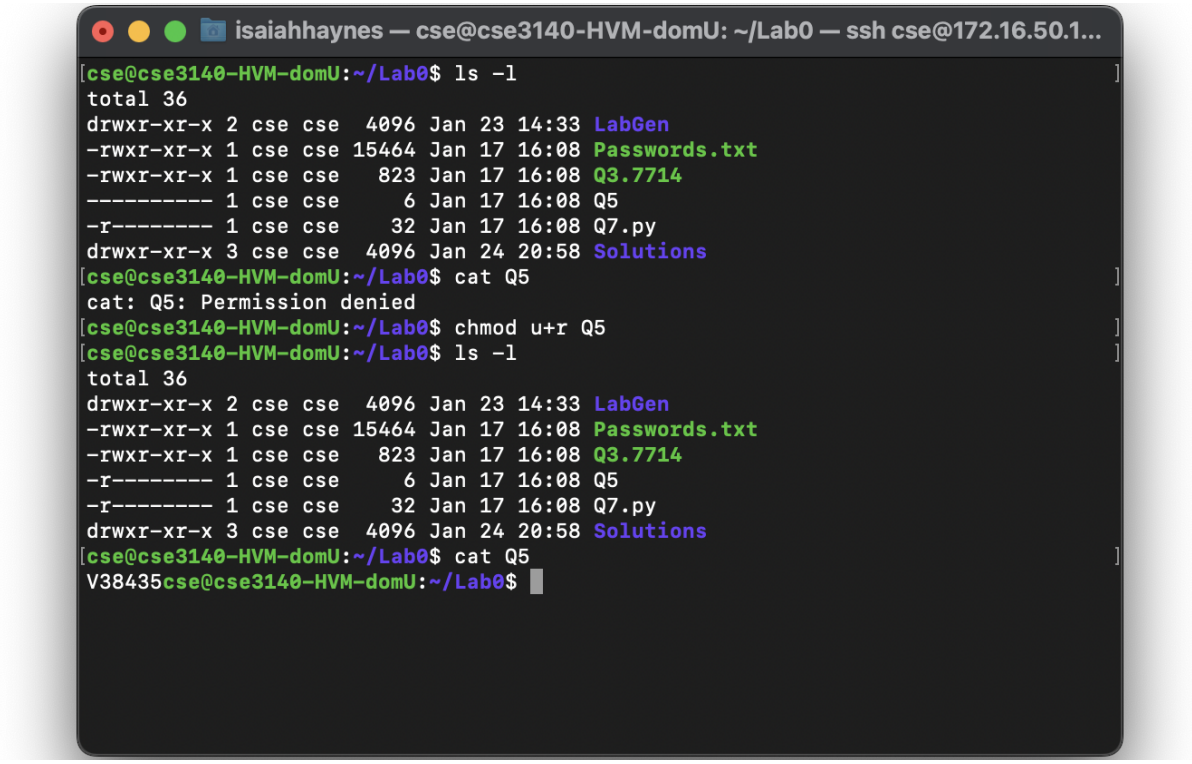

Image 5.1: using chmod [172.16.50.19]

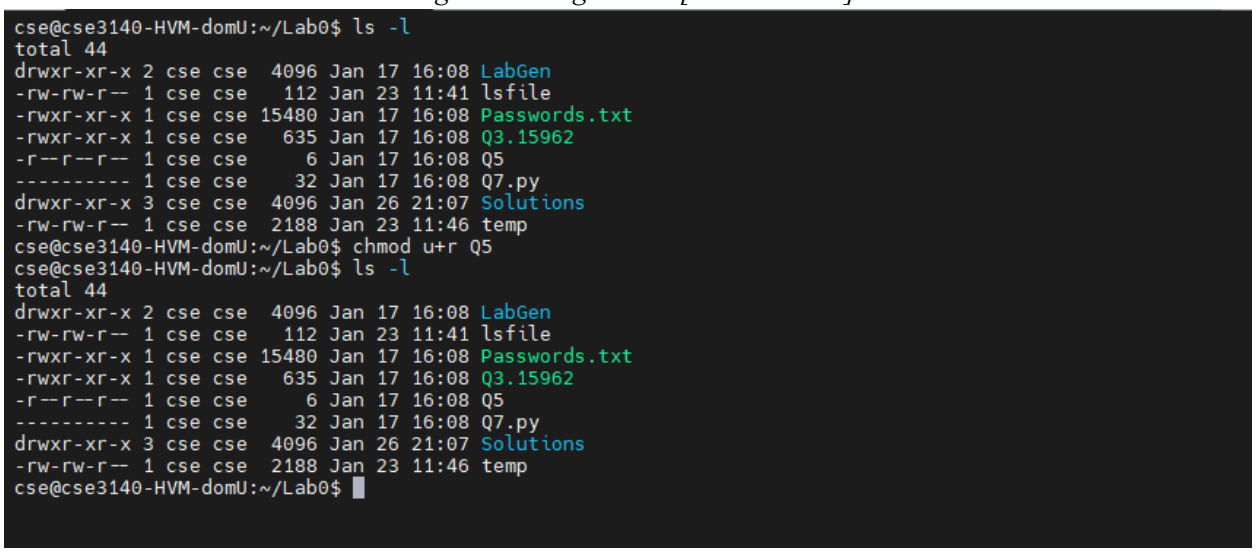

Image 5.2: using chmod [172.16.50.28]

The next image shows how the *grep* command can be used to search a large file for a specific sequence of characters.

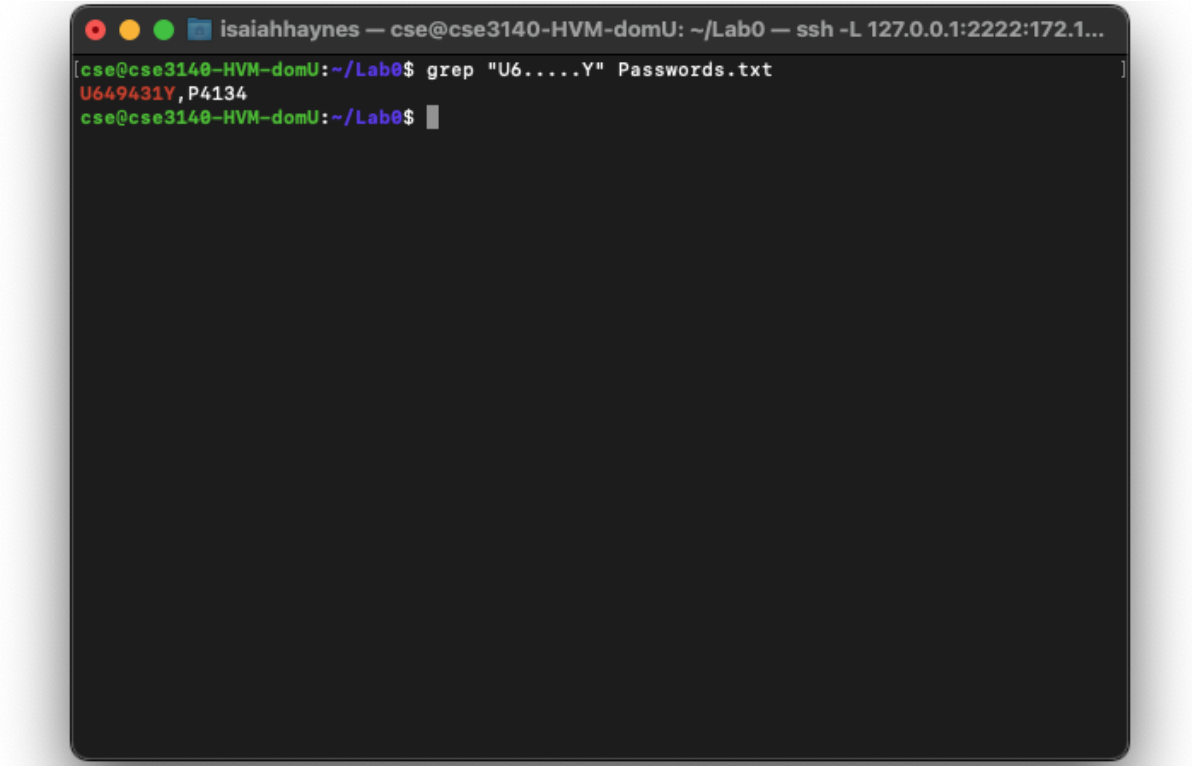

Image 6.1: using grep [172.16.50.19]

```
cse@cse3140-HVM-domU:~/Lab0$ grep "U6.....Y" Passwords.txt
cse@cse3140-HVM-domU:~/Lab0$ ls
LabGen  lsfile  Passwords.txt  Q3.15962  Q5  Q7.py  Solutions  temp
cse@cse3140-HVM-domU:~/Lab0$ vim Passwords.txt
cse@cse3140-HVM-domU:~/Lab0$
```

Image 6.2: The grep command in this file didn't work as intended due to an accidental alteration to the file leading to the deletion of the required "username". It was looked for using both vim and grep and resulted in no found results. [172.16.50.28]

This final image below shows how to run a python program in the terminal.

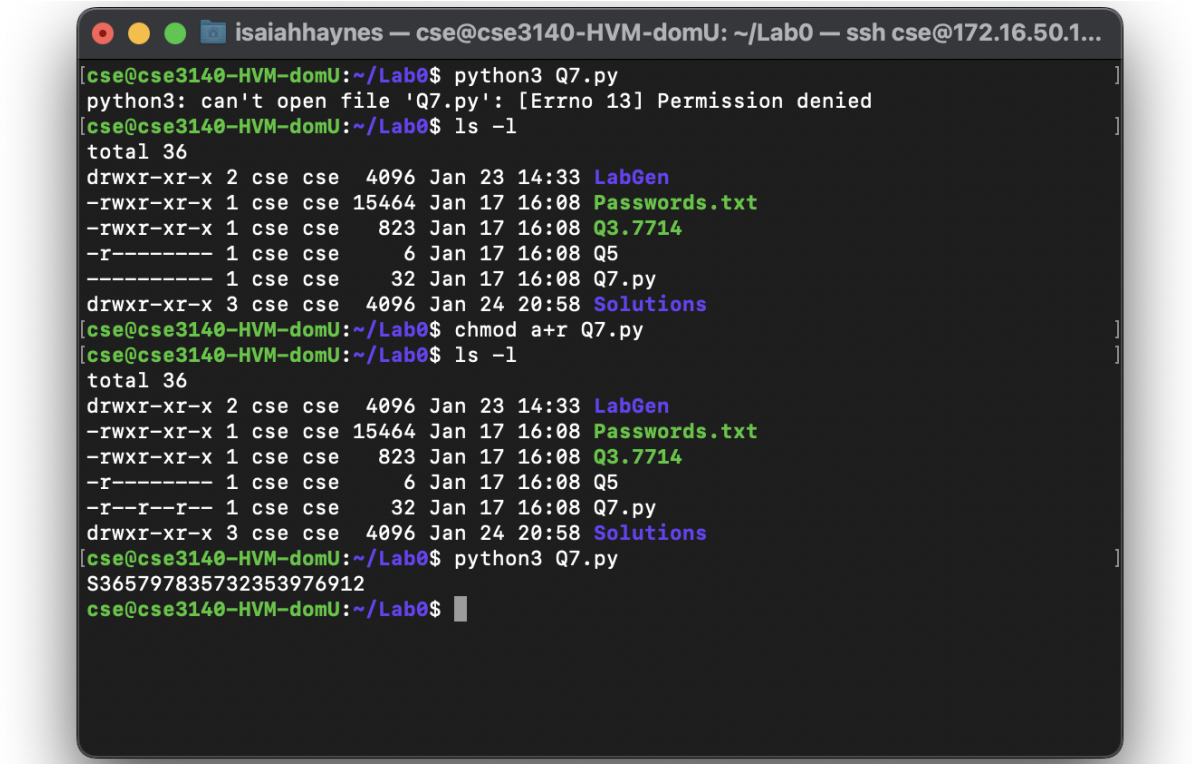

Image 7.1: running a python program [172.16.50.19]

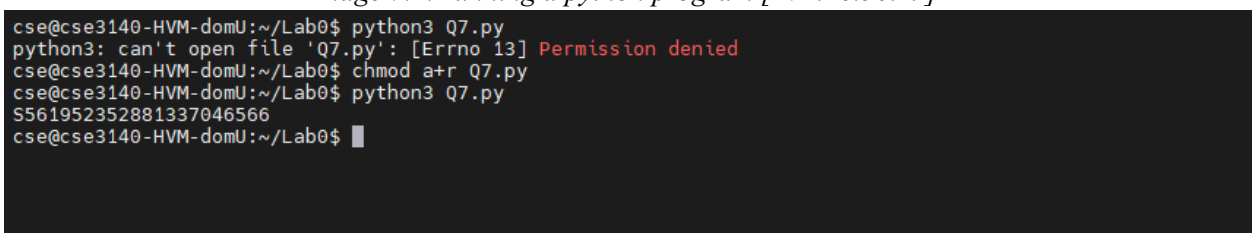

Image 7.2: running a python program [172.16.50.28]