1. Creating and using a local repository

**If you have not installed the git tools or GitHub Desktop skip this exercise. Just create a folder on your desktop called ITM352\_F24\_repo**

* Go to GitHub.com, sign in using your github account and select your hello-world repo (that you created from the [Hello World GitHub guide](https://guides.github.com/activities/hello-world/)). Go to Settings and change the repo name to ITM352\_F24\_repo. Change the README.md if you wish. Also in the Settings page, go to the “Danger Zone” and change the repo “Make private” if it is not already set this way. Add the instructor and TA as contributors.
* Clone this repo and open it in VS Code. You can clone it in GitHub or use GitHub desktop (or any other way you wish that works).

*What is the URL for your GitHub ITM352\_F24\_repo?* *https://github.com/GeorgeLopez81/ITM352\_F24\_repo*

*What is the path to the local ITM352\_F24\_repo?*

GeorgeLopez81/ITM352\_F24\_repo

2. Using a terminal (or command line) to access the operating system

Sometimes you will need to do more specific or detailed tasks that would be difficult or inconvenient to do through a GUI. A terminal window provides a command line interface to your operating system. There are many different types of *shell environments* such as sh, csh,bash, zsh,cmd, powershell that run in a terminal. These all have similar functionality and similar commands, but they may vary in the particular command language and syntax they use. You will find it very useful to be familiar with the basic shell commands. We will explore a few basic file system commands here needed for this class. make sure you are in the Lab1 folder.

a) Open a terminal in VS Code (go to the Terminal menu -> New Terminal). Identify what shell is being used:

b) Try each of the commands below, copy the result you get and explain what the command does:

pwd-print working directory-Georges-iMac:ITM352\_F24\_repo georgelopez$

ls-list-README.md

mkdir newdir- it makes a directory- a “newdir” appeared on the left under explorer . It makes a directory

cd new\*- Georges-iMac:newdir georgelopez$

touch test-creates a file named test- Georges-iMac:newdir georgelopez$ touch test

mv test test.txt- move to test mv: rename test to test.txt: No such file or directory

rm test.txt- remove file named test.txtrm: test.txt: No such file or directory-

echo hello > hello.txt- =”hello.txt” appeared under new directory on the left under explorer Georges-iMac:newdir georgelopez$

cat h\*.txt- hello,dislpays all files in directory that have names starting with “h”

cd ..-parent directory

rm -r newdir- removes directory named “newdir”

history-

1 open$TMPDIR

2 open $TMPDIR

3 node

4 > console. log

5 git clon https:https://github.com/GeorgeLopez81/ITM352\_S24\_repo

6 node server.js

7 node server.js

8 npm install minimist

9 node server.js

10 node server.js

11 npm install express

12 node server.js

13 node server.js

14 node server.js

15 node server.js

16 node server.js

17 node server.js

18 node server.js

19 node server.js

20 node -i

21 node server.js

22 node Ex3b.js

23 cd Lab9

24 ls

25 node Ex3b.js

26 node Ex3b.js

27 node Ex3b.js

28 cd Lab9

29 ls

30 node Ex3b.js

31 node Ex3b.js

32 ls

33 cd Lab9

34 ls

35 node Ex4a.js

36 node Ex4a.js

37 node -i

38 node Ex5.js

39 node Ex3b.js

40 cd Lab9

41 ls

42 node Ex3b.js

43 ls

44 node Ex4a.js

45 cd Lab9

46 ls

47 node Ex5.js

48 node Ex5.js

49 node Ex5.js

50 cd Lab9

51 ls

52 node Ex5.js

53 cd Lab9

54 ls

55 node Ex6.js

56 .exit

57 git config pull.rebase true

58 cd DayofTheWeek

59 cd dayoftheweek1

60 node. server.js

61 cd dayoftheweek1.js

62 ls

63 node.server.js

64 ls

65 chmod+x node.server.js

66 node.server.js

67 node.server.js

68 ls

69 node.server.js

70 chmod+x node.server.js

71 ls

72 node.server.js

73 ls

74 node.server.js

75 cd Lab11

76 ls

77 node ../server.js

78 node.server.js

79 node server.js

80 ls

81 npm start

82 ls

83 npm start

84 ps aux | grep server\_process\_name

85 kill PID

86 ls

87 npm start

88 ls

89 npm start

90 ls

91 npm start

92 kill

93 ls

94 npm start

95 npm start

96 ls

97 npm start

98 npm start

99 ls

100 npm start

101 ps aux | grep <server\_name>

102 kill <pid>

103 ls

104 npm start

105 npm start

106 npmstart

107 npm start

108 ls

109 npm start

110 npm start

111 ls

112 npm start

113 ls

114 npm start

115 ls

116 npm start

117 ls

118 npm start

119 ls

120 npm start

121 open $TMPDIR

122 pwd

123 ls

124 mkdir newdir

125 cd new\*

126 touch test

127 mv test test.txt

128 rm test.txt

129 mv test test.txt

130 rm test.txt

131 echo hello>hello.txt

132 cat h\*.txt

133 cd..

134 rm-r newdir

135 history

***NOTE: if a command doesn’t work for your particular shell, look up (or guess) what the command is supposed to do and then do a Google search to find out how to do it in your shell.***

c) Most shells support command history. What happens if you press the uparrow key? downarrow key? In the terminal it goes thru all the commands I have input.

d) Most shells support file name expansion. Try touch xxxx.txt then rm xx then hit the TAB key. What happened? **touch xxxx.txt appeared under the explorer section. Then its removed. It also tries to do a file expansion.**

3. Using VS Code to create a Python program

VS Code is a file editor designed to help build applications (code). Applications are built from files with instructions that the server and browser process. Let try making a simple “hello world” program and viewing it in a terminal.

* In the repo folder, create a new folder inside called Lab1, create file in this folder <your Last\_First name>\_hello.py. Edit this file and put
* print("Hello from <your first name>!")

**Don’t forget to save this file after you make changes!**

* Open an integrated terminal window in VS Code (you may find it easier to right-click on the file in VS Code and Open in Integrated Terminal). Type the following in the terminal:

python <your Last\_First name>\_hello.py

*Explain here why you see text in the terminal window. Where did this come from?*

bash: python: command not found

* Edit the file and delete the closing quote mark. Click on the PROBLEMS tab next to the TERMINAL tab in bottom VS Code window.

*Explain why you see the code underlined in red and some messages in the PROBLEMS :*

Because it is identifying something wrong with the syntax.

* Click on the TERMINAL window and try executing the program again.

\*Explain why you see the Hello from ! and there are errors messages\*

bash: python: command not found.

-Put the closing quote mark back. In VS Code file manager right-click in explorer/finder, change the file extension from .py to .txt.

*Explain why the color of the code changed and what you can do to get it back to what you saw opreviously*

It changed because the .txt is the extension used. If I want it back, I would change the extension back to .py (python)

* In the terminal, execute the program again
* python <your Last\_First name>\_hello.txt

*Explain why the code did not run and what you need to do to fix it*

*It did not run because the command was for a python program*

* Change the file extension back to .py

*Explain why you****do****get the Intellisense help for Python now*

*VS code recognizes the file extension and enables language-specific features for the python file.*

4. Interactive Python

In the terminal window type the following:

python -i

Now try

print("hey! I'm using Python interactively")

You can quit interactive Python with

exit()

5. Remote Repo

In GitHub Desktop view the changes made in you local repo. Commit and “push” these to your repository on GitHub. Go to github.com and verify your commits have been added.

*Explain the benefits of working locally and pushing changes to a remote repository*

*Working locally allows a user to make mistakes and test things out before committing. The repository acts as a backup.*

5. Join Discord

We will use Discord for most class communication and for seeking help. Use email only for private matters. Here is the [invitation to join](https://discord.gg/qrWzUHgr). Please use your first and last name as your nickname so that others can recognize who they are talking to!