EXERCISE: BASH

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Example Question:

What is the difference between shell and bash?

“Shell” is a broad term that refers to any program that provides a command-line interface; “Bash” is a specific type of shell that is widely used in Unix/Linux systems.

Exercise 1:

What is your home directory? What files/folders exist in your home directory? Navigate to it and then navigate back to your notes.

```
Johns-Air:~ johnboyle$ echo $HOME
/Users/johnboyle

Johns-Air:~ johnboyle$ ls -a
(11) The Coming Guard; Volume III.docx
.
..
.CFUserTextEncoding
.DS_Store
.Rapp.history
.Rhistory
.Trash
.bash_history
.bash_sessions
.cache
.config
.cups
.local
.oracle_jre_usage
```

.profile
.spss
.wdc
Applications
DATA_612
Desktop
Documents
Downloads
John Boyle Resume (Winter 2022).docx
John Boyle Ruiz Resume (February 2022).docx
John Boyle Ruiz Resume (June 2024).docx
Library
Movies
Music
Pictures
Public
SPSS Practice Un:Affected Variables.spv
Zotero
~$hn Boyle Resume (Winter 2022) copy.docx
~$hn Boyle Resume (Winter 2022).docx

Johns-Air:~ johnboyle$ cd
Johns-Air:~ johnboyle$ cd /Users/johnboyle
Johns-Air:~ johnboyle$

Exercise 2:

Where does the following command take you? How does it work? | cd ~/../../..

~ refers to the home directory. | .. each goes up one level.
../../.. navigates up six directories from the current location.

Exercise 3:

Read the manual page of ls. What does the a flag do? What does the l flag do?

Johns-Air:~ johnboyle$ man ls
a flag: Shows all files, including hidden ones (those starting with a dot .).
l flag: Provides a long listing format with detailed information about each file, including permissions, owner, group, size, and timestamp.

Exercise 4:

Create a new file with the touch command. For instance touch myfile.txt. Run stat myfile.txt What information do you get?

Johns-Air:~ johnboyle$ touch myfile.txt
Johns-Air:~ johnboyle$ stat myfile.txt
16777220 70441331 -rw-r--r-- 1 johnboyle staff 0 0 "Jul 7 21:11:39 2024" "Jul 7 21:11:39 2024" "Jul 7 21:11:39 2024" "Jul 7 21:11:39 2024" 4096 0 0 myfile.txt

Exercise 5:

Run ls and from the list select a file. Now, run ‘ls -l’ to display the details of the files, showing that it has been created or updated. What information does it give you regarding the myfile.txt and your selected file?

```
Johns-Air:~ johnboyle$ ls
(11) The Coming Guard; Volume III.docx		Movies
Applications				Music
DATA_612				Pictures
Desktop					Public
Documents				SPSS Practice Un:Affected Variables.spv
Downloads				Zotero
John Boyle Resume (Winter 2022).docx		myfile.txt
John Boyle Ruiz Resume (February 2022).docx	~$hn Boyle Resume (Winter 2022) copy.docx
John Boyle Ruiz Resume (June 2024).docx		~$hn Boyle Resume (Winter 2022).docx
Library

Johns-Air:~ johnboyle$ ls -1 Zotero
locate
logs
pipes
storage
styles
translators
zotero.sqlite
zotero.sqlite.1.bak
zotero.sqlite.bak
```

Exercise 6:

Add the following line This line is my first line to myfile.txt. Then run cat myfile.txt to show the line is added.

```
Johns-Air:~ johnboyle$ echo "This line is my first line" > myfile.txt
Johns-Air:~ johnboyle$ cat myfile.txt
This line is my first line
```

Exercise 7:

Run touch myfile.txt then run ls -l myfile.txt does the “timestamp” for the file myfile.txt is updated? Show the output. Note: Another common use of the touch command is to update the timestamps of an existing file.

```
Johns-Air:~ johnboyle$ touch myfile.txt
Johns-Air:~ johnboyle$ ls -l myfile.txt
-rw-r--r--  1 johnboyle  staff  27 Jul  7 21:33 myfile.txt
```