

Part One: Shell Commands

1. Assume all of the directories below are valid directories (e.g., they exist and we have access to them). What would the following print out?

```
cd /usr/src/INFO3401/../../homework/./problem1
pwd
```

Change the directory to INFO3401, which is located within the usrsrc directory

../homework/ brings user to parent directory

Open problem1, which is located within the homework directory

Print the working directory→ everything in problem 1

2. What set of commands would you use to achieve the following:

You've found yourself in a situation where your python program is trying to parse files in a directory and is throwing an error. You think it might be a permissions issue (i.e., you don't have permission to access the files in that directory) and need to verify the permissions on all files in that directory. The directory is in your home directory under the "datasets/activedata" directory. Make no assumptions about what directory you are currently working in.

```
cd ~
cd datasets
ls -l /activedata
pwd
```

3. Briefly describe what the following set of commands would achieve. What process would happen and what would be printed to the command line?

```
cd ~
mkdir ./problem_set_1
touch submission.txt
cd ..
pwd
```

First cd~ change to the home directory.

mkdir ./problem_set_1 will then make a new a dictionary called problem_set_1

Touch submission.txt will then make a txt file called submission.txt

Cd.. then will take you to the parent dictionary

Pwd then will print the working dictionary

4. What set of commands would you use to achieve the following:

Copy a document called config.txt from your home directory to the root directory. Then, create a new directory in the root called preferences. Within preferences, copy prefs.txt from a matching directory called preferences in your home directory. Finally, determine that the start and end of the config.txt document in both root and home match.

```
Cp ~/config.txt /  
Mkdir preferences  
Cd / preferences  
Cp ~/preferences/prefs.txt  
Head / config.txt  
Head ~/config.txt  
tail ~/config.txt  
Tail / config.txt
```

5. You have accidentally moved a file (~/Documents/datafile.csv) to your current directory rather than copying it. What command did you use to do that? What command should you have used to do that? What command might you use to undo it?

Command used:

```
mv datafile.csv Documents or mv ~/Documents/datafile.csv ./datafile.csv
```

Command that should have been used:

```
Cp datafile.csv ~/Documents
```

Undo:

```
Rm datafile.csv Documents
```

6. Download and unzip [asciify-master.zip](#) from Canvas. Then, navigate to the directory and use the command line to run asciify.py. What does this script do? Include a screenshot of your results.

[illegible]

Pip install Delorean

```
from delorean import Delorean
```

```
d = Delorean(timezone=EST)
```

```
print(d)
```

What prints to the command line?

```
Delorean(datetime=datetime.datetime(2020, 1, 29, 12, 45, 42, 316565), timezone='US/Eastern')
```

8. We can scrape webpage content or download collections of data files using `wget`. NASA, the USDA, and the NCBI all recommend using `wget` to download data from their repositories because it is faster and allows you to download data in bulk. We'll experiment with that on a smaller scale: use the command line to download data on the World Bank's budgetary expenditures at

<https://finances.worldbank.org/api/views/yu93-ayrw/rows.csv?accessType=DOWNLOAD>
(Links to an external site.)

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. What command did you use? Make sure to include this file as part of your submission.

wget <https://finances.worldbank.org/api/views/yu93-ayrw/rows.csv?accessType=DOWNLOAD>

9. The above budgetary data contains both individual items and aggregated totals across different sectors. Let's distill the data down to different aggregated totals. In this dataset, you can use the keyword "Total" to identify only those rows containing aggregate budget items. Use the command line to identify these rows. What command did you use? How many rows did this find (hint: the -c option can be helpful here)?

```
grep Total rows.csv?accessType=DOWNLOAD.1
grep Total rows.csv?accessType=DOWNLOAD.1 -c
33
```

10. Now, print the lines containing the word "Total" to a file to "distilledExpenditures.csv". What command did you use? Include this file as part of your submission.

```
cat rows.csv?accessType=DOWNLOAD > distilledExpenditures.csv
```

Worked with Priya, Lanea during class, and I also worked a little with Kat.