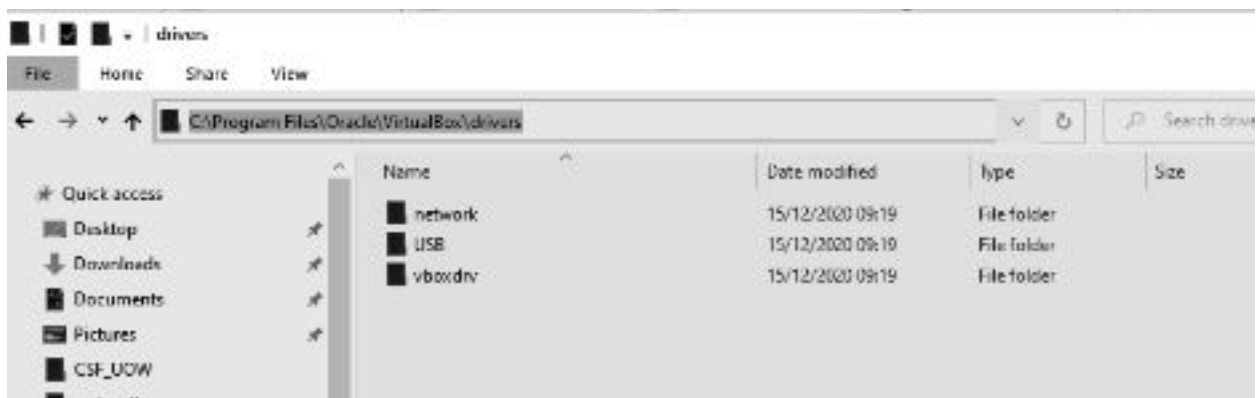# CM1604  Computer Systems Fundamentals

## Tutorial

To do the following tutorial, you will need a CLI ( Command Line Interface). You may use the terminal in an  installation of a Linux distribution or use the terminal in Mac  Machine or use an online terminal (https://cocalc.com/doc/terminal.html).

1. In the GUI, the file explorer can be used to view the files and folders/directories in a specific path. If we want to view the same(content of a directory) in the terminal, what is the command that is used? try it out in the terminal.

2. The following image shows the current directory where the file explorer is at the  moment. If we want to know the current working directory in a terminal, what command can be used? Try it out and write down the output you got.

3. Create a folder named 'my_folder' .

   Double check through the terminal if the folder is created(list the directory content).

   Try removing the Folder. Verify it in the terminal.

   Write down the commands you used for the above.

4. Create a file with the following content and name it as `my_script.sh`. (Use the terminal with `cat` command to create the file)

```bash
#!/bin/bash


# Script follows here:


echo 'Hi there'
sleep 3
ls
sleep 3
echo 'Bye bye'
```

   1) Use the `file` command to find out the file type
   2) Try to run the above file in the terminal.
   3) Try the same in the ii with '`&`' at the end of the command. Comment on your observations.
   4) How can you get the output of the execution to a file named '`output.log`'

5. Run each of the following commands multiple times in the terminal and observe the output. Comment on the behaviours

Command 1

```
mkdir test1 ; echo 'It is a semicolon'
```


Command 2

```
mkdir test2 && echo 'It is ampersand'
```

Command 3

```
mkdir test3 || echo 'It is vertical slash'
```


6. What is the use of pipes in the terminal?