

4CS015 – Portfolio Task #4

STUDENT NAME: Nayan Raj Khanal_____

STUDENT NUMBER: 2227486_____

You will need to complete the workshop and then submit this Word file, complete with your answers, via Canvas, by the end of the Semester (week 12).

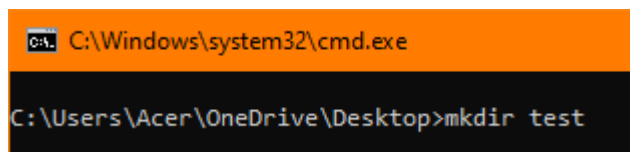
For this assignment (workshop) you will show how to navigate and create file systems from command prompt in both Windows (os) and Linux(os), also how to make a batch file to be executed in the Windows (os).

NOTE: Please make sure you have written your command and the screenshot of the commands. Failure to do so will result in a mark deduction.

Task 1 (Windows Command Line)

1. Write a command to create a directory "test"

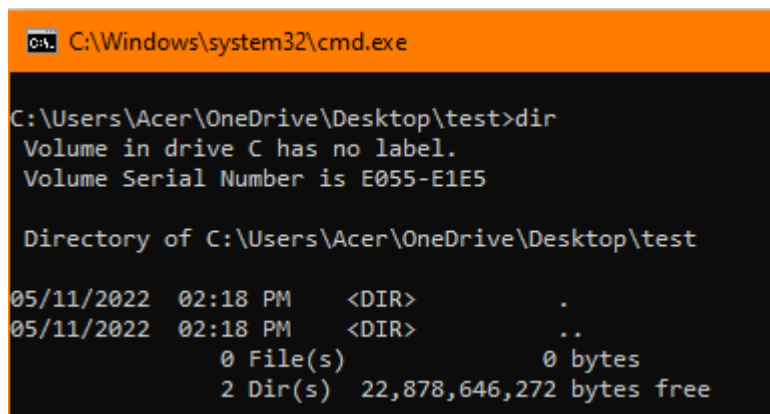
mkdir test



```
C:\Windows\system32\cmd.exe
C:\Users\Acer\OneDrive\Desktop>mkdir test
```

2. Write the command to list all the directories/files inside the directory test

dir test



```
C:\Windows\system32\cmd.exe
C:\Users\Acer\OneDrive\Desktop\test>dir
Volume in drive C has no label.
Volume Serial Number is E055-E1E5

Directory of C:\Users\Acer\OneDrive\Desktop\test

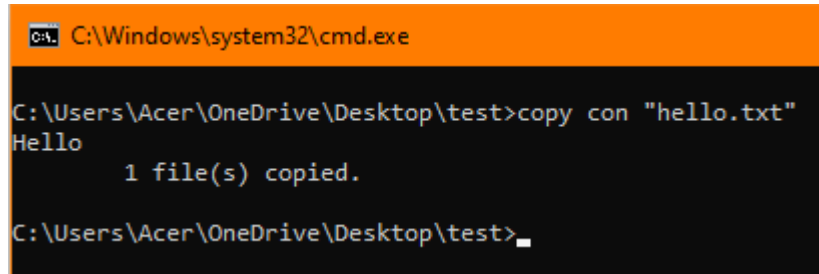
05/11/2022  02:18 PM    <DIR>          .
05/11/2022  02:18 PM    <DIR>          ..
               0 File(s)                0 bytes
               2 Dir(s)  22,878,646,272 bytes free
```

3. Create a file "**hello.txt**" containing the word "Hello", inside the test directory.

copy con "hello.txt"

Hello

#Ctrl+c



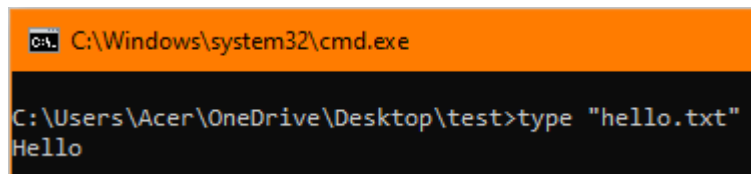
```
C:\Windows\system32\cmd.exe

C:\Users\Acer\OneDrive\Desktop\test>copy con "hello.txt"
Hello
      1 file(s) copied.

C:\Users\Acer\OneDrive\Desktop\test>
```

4. Display the content of **hello.txt** in the command line.

type "hello.txt"



```
C:\Windows\system32\cmd.exe

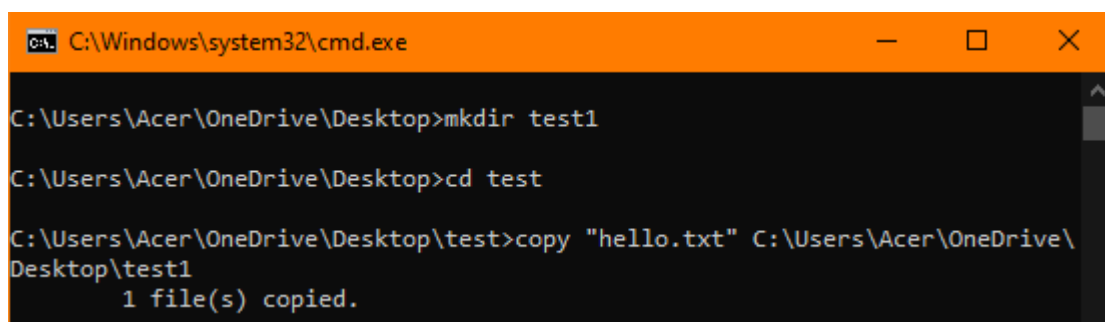
C:\Users\Acer\OneDrive\Desktop\test>type "hello.txt"
Hello
```

5. Make directory **test1** on the Desktop and copy **hello.txt** from **test** to **test1**

mkdir test1

cd test

copy "hello.txt" C:\Users\Acer\OneDrive\Desktop\test1



```
C:\Windows\system32\cmd.exe

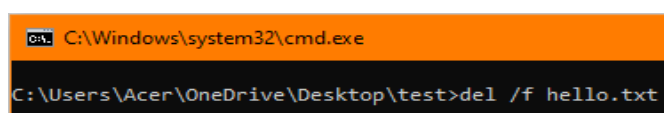
C:\Users\Acer\OneDrive\Desktop>mkdir test1

C:\Users\Acer\OneDrive\Desktop>cd test

C:\Users\Acer\OneDrive\Desktop\test>copy "hello.txt" C:\Users\Acer\OneDrive\Desktop\test1
      1 file(s) copied.
```

6. Now delete the file **hello.txt** in the current directory

del /f hello.txt

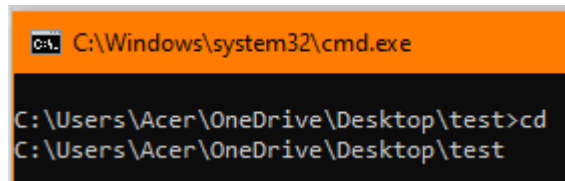


```
C:\Windows\system32\cmd.exe

C:\Users\Acer\OneDrive\Desktop\test>del /f hello.txt
```

7. Write a command to display your current directory.

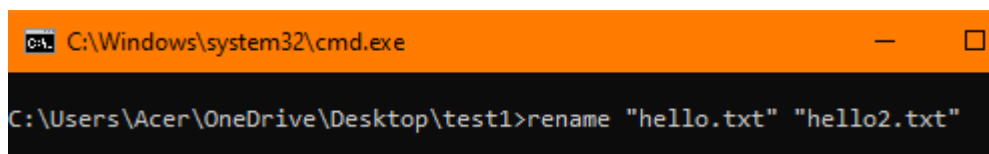
cd



```
C:\Windows\system32\cmd.exe
C:\Users\Acer\OneDrive\Desktop\test>cd
C:\Users\Acer\OneDrive\Desktop\test
```

8. Now rename the file to **hello2.txt**

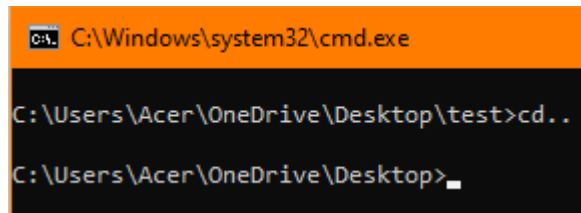
rename "hello.txt" "hello2.txt"



```
C:\Windows\system32\cmd.exe
C:\Users\Acer\OneDrive\Desktop\test1>rename "hello.txt" "hello2.txt"
```

9. Now navigate outside the directory test.

cd..



```
C:\Windows\system32\cmd.exe
C:\Users\Acer\OneDrive\Desktop\test>cd..
C:\Users\Acer\OneDrive\Desktop>
```

10. Write the command to print the tree structure. It should look something like this:

```
Folder PATH listing for volume Offline
Volume serial number is 0000-0000
U:\TEST
├── test2
│   └── hello2.txt
```

mkdir test2

cd test2

copy con "hello2.txt"

Hello

#Ctrl+c

cd..

tree /f

```
C:\Windows\system32\cmd.exe

C:\Users\Acer\OneDrive\Desktop\test>mkdir test2

C:\Users\Acer\OneDrive\Desktop\test>cd test2

C:\Users\Acer\OneDrive\Desktop\test\test2>copy con "hello2.txt"
Hello
1 file(s) copied.

C:\Users\Acer\OneDrive\Desktop\test\test2>cd..

C:\Users\Acer\OneDrive\Desktop\test>tree /f
Folder PATH listing
Volume serial number is E055-E1E5
C:.
├──test2
│   └──hello2.txt
```

Task 2

Create the following directory structure and paste it after this picture. (15 marks):

Note: MYMODULES must be inside <your_name> directory.

Make a directory with your name on the desktop and navigate to the directory before you display the following structure.

```
Command Prompt

u:\>tree MyModules /f
Folder PATH listing for volume Offline
Volume serial number is 0006EE38 0000:0000
U:\MYMODULES
├──4MM006
│   └──Lecturers
│       └──Ruth.txt
├──4CC001
│   └──Lecturers
│       ├──Jeffrey.txt
│       ├──Chris.txt
│       └──Ian.txt
└──4CC002
    └──Lecturers
        └──Alix.txt

u:\>_
```

[Insert your picture here]

```
C:\Windows\system32\cmd.exe

C:\Users\Acer\OneDrive\Desktop>mkdir Nayan_Raj_Khanal
C:\Users\Acer\OneDrive\Desktop>cd Nayan_Raj_Khanal
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal>mkdir MYMODULES
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal>cd MYMODULES
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES>mkdir 4MM006
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES>cd 4MM006
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4MM006>mkdir Lecturers
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4MM006>cd Lecturers
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4MM006\Lecturers>echo > Ruth.txt
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4MM006\Lecturers>cd ../../
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES>mkdir 4CC001
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES>cd 4CC001
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC001>mkdir Lecturers
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC001>cd Lecturers
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC001\Lecturers>echo > Jeffrey.txt
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC001\Lecturers>echo > Chris.txt
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC001\Lecturers>echo > Ian.txt
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC001\Lecturers>cd ../../
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES>mkdir 4CC002
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES>cd 4CC002
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC002>mkdir Lecturers
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC002>cd Lecturers
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC002\Lecturers>echo > Alix.txt
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES\4CC002\Lecturers>cd ../../
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal\MYMODULES>cd..
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal>tree /f
Folder PATH listing
Volume serial number is E055-E1E5
C:.
├──MYMODULES
│   ├──4CC001
│   │   └──Lecturers
│   │       Chris.txt
│   │       Ian.txt
│   │       Jeffrey.txt
│   ├──4CC002
│   │   └──Lecturers
│   │       Alix.txt
│   └──4MM006
│       └──Lecturers
│           Ruth.txt
C:\Users\Acer\OneDrive\Desktop\Nayan_Raj_Khanal>_
```

Commands:

```
mkdir Nayan_Raj_Khanal
cd Nayan_Raj_Khanal
mkdir MYMODULES
cd MYMODULES
mkdir 4MM006
cd 4MM006
mkdir Lecturers
cd Lecturers
echo > Ruth.txt
cd ../..
mkdir 4CC001
cd 4CC001
mkdir Lecturers
cd Leturers
echo > Jeffery.txt
echo > Chris.txt
echo > Ian.txt
cd ../..
mkdir 4CC002
cd 4CC002
mkdir Lecturers
cd Lecturers
echo > Alix.txt
cd ../..
cd..
tree /f
```

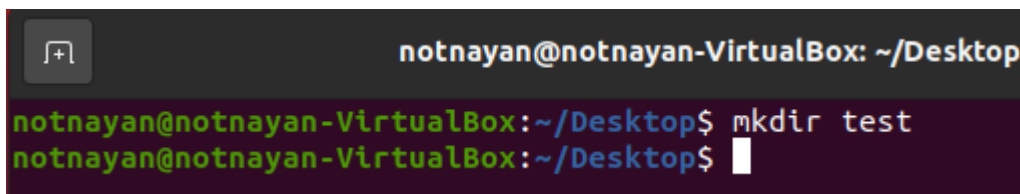
Task 3(Linux terminal)

(10 marks)

Now, Boot into Linux operating system in VirtualBox or Windows-SubSystem for Linux(On Windows)

1. Write a command to create a directory "**test**"

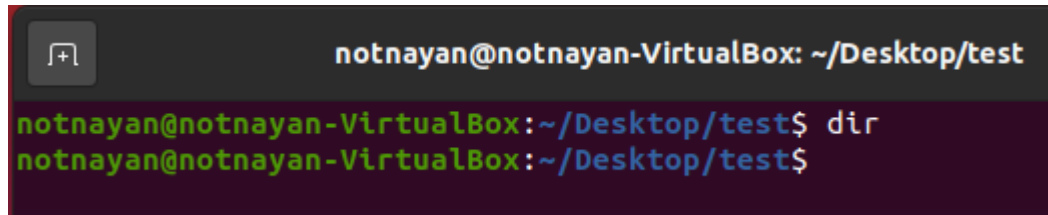
```
mkdir test
```



```
notnayan@notnayan-VirtualBox: ~/Desktop
notnayan@notnayan-VirtualBox:~/Desktop$ mkdir test
notnayan@notnayan-VirtualBox:~/Desktop$
```

2. Write the command to list all the directories/files inside the directory **test**

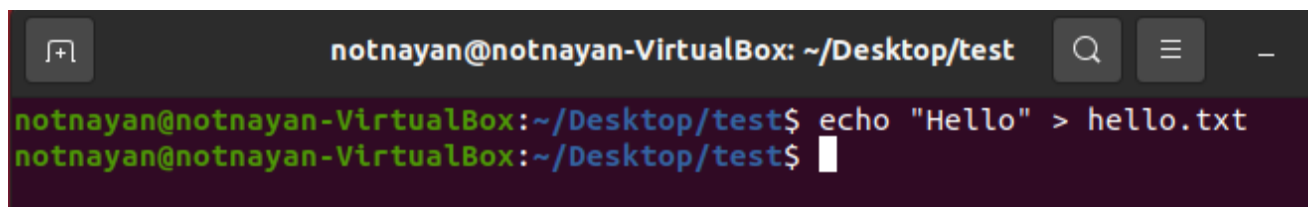
`dir`



```
notnayan@notnayan-VirtualBox: ~/Desktop/test
notnayan@notnayan-VirtualBox:~/Desktop/test$ dir
notnayan@notnayan-VirtualBox:~/Desktop/test$
```

3. Create a file "**hello.txt**" containing the word "Hello", inside the test directory.

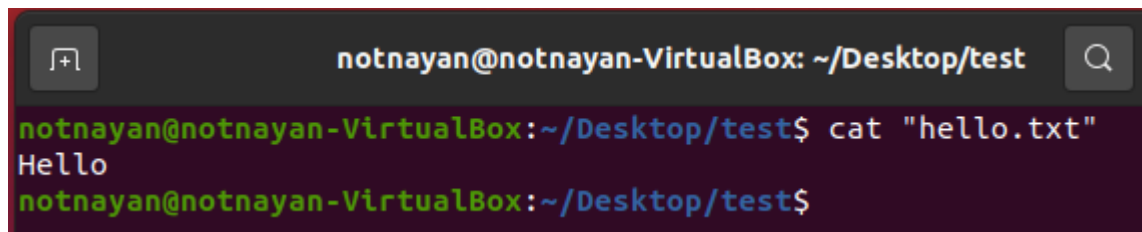
`echo "Hello" > hello.txt`



```
notnayan@notnayan-VirtualBox: ~/Desktop/test
notnayan@notnayan-VirtualBox:~/Desktop/test$ echo "Hello" > hello.txt
notnayan@notnayan-VirtualBox:~/Desktop/test$
```

4. Display the content of **hello.txt** in the command line.

`cat "hello.txt"`

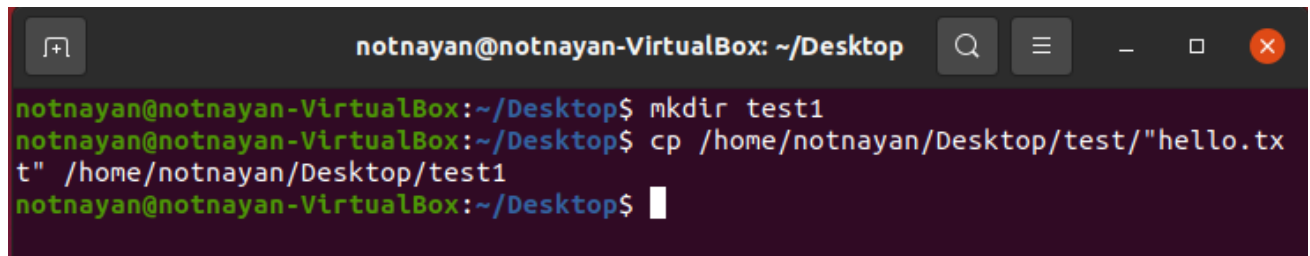


```
notnayan@notnayan-VirtualBox: ~/Desktop/test
notnayan@notnayan-VirtualBox:~/Desktop/test$ cat "hello.txt"
Hello
notnayan@notnayan-VirtualBox:~/Desktop/test$
```

5. Make directory **test1** on the Desktop and copy **hello.txt** from **test** to **test1**

`mkdir test1`

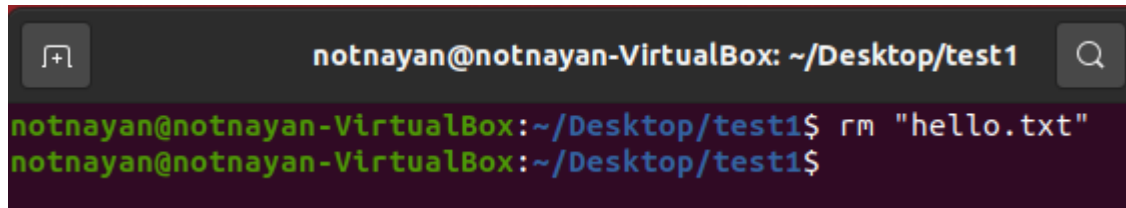
`cp /home/notnayan/Desktop/test/"hello.txt" /home/notnayan/Desktop/test1`



```
notnayan@notnayan-VirtualBox: ~/Desktop
notnayan@notnayan-VirtualBox:~/Desktop$ mkdir test1
notnayan@notnayan-VirtualBox:~/Desktop$ cp /home/notnayan/Desktop/test/"hello.txt" /home/notnayan/Desktop/test1
notnayan@notnayan-VirtualBox:~/Desktop$
```

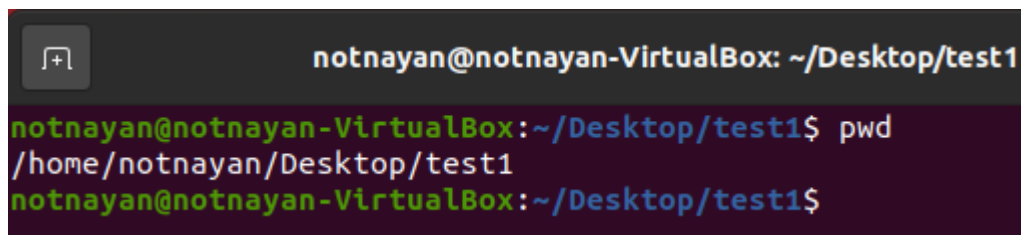
6. Now delete the file **hello.txt** in the current directory

`rm "hello.txt"`

A terminal window titled 'notnayan@notnayan-VirtualBox: ~/Desktop/test1'. The prompt is 'notnayan@notnayan-VirtualBox:~/Desktop/test1\$'. The command 'rm "hello.txt"' is entered and executed, resulting in a new prompt 'notnayan@notnayan-VirtualBox:~/Desktop/test1\$'.

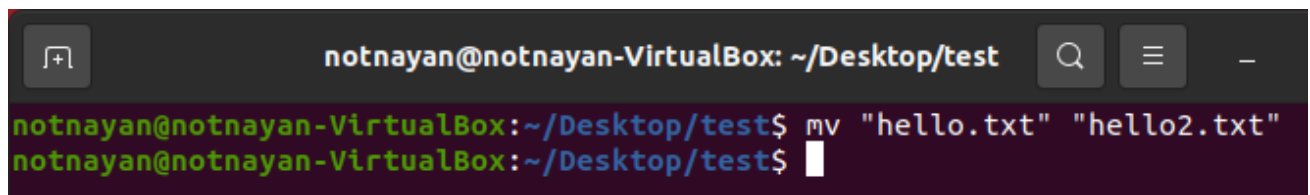
7. Write a command to display your current directory.

`pwd`

A terminal window titled 'notnayan@notnayan-VirtualBox: ~/Desktop/test1'. The prompt is 'notnayan@notnayan-VirtualBox:~/Desktop/test1\$'. The command 'pwd' is entered and executed, resulting in the output '/home/notnayan/Desktop/test1' and a new prompt 'notnayan@notnayan-VirtualBox:~/Desktop/test1\$'.

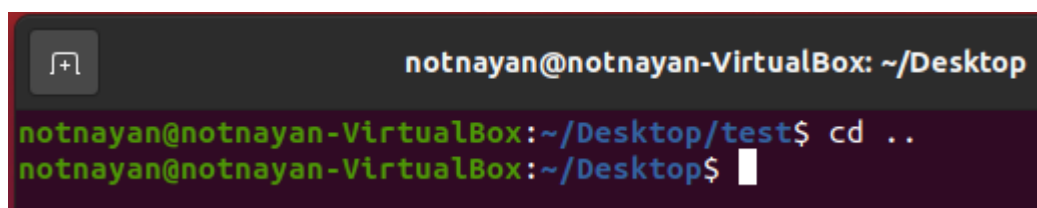
8. Now rename the file to **hello2.txt**

`mv "hello.txt" "hello2.txt"`

A terminal window titled 'notnayan@notnayan-VirtualBox: ~/Desktop/test'. The prompt is 'notnayan@notnayan-VirtualBox:~/Desktop/test\$'. The command 'mv "hello.txt" "hello2.txt"' is entered and executed, resulting in a new prompt 'notnayan@notnayan-VirtualBox:~/Desktop/test\$'.

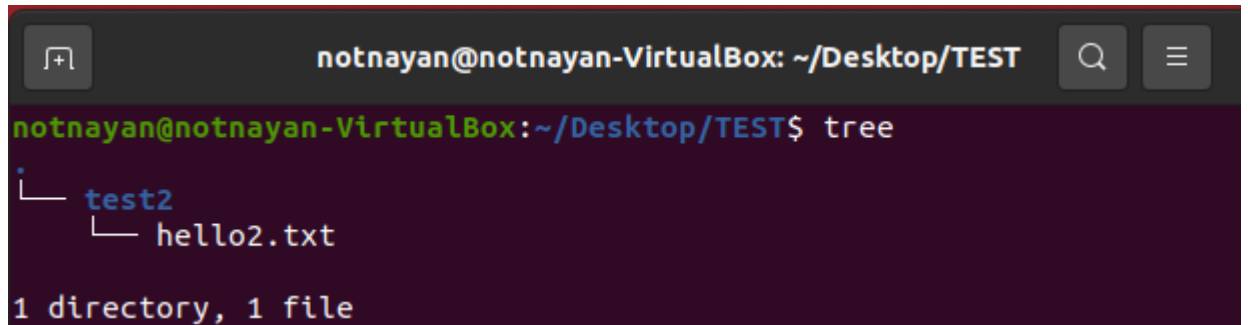
9. Now navigate outside the directory test.

`cd ..`

A terminal window titled 'notnayan@notnayan-VirtualBox: ~/Desktop'. The prompt is 'notnayan@notnayan-VirtualBox:~/Desktop/test\$'. The command 'cd ..' is entered and executed, resulting in the output 'notnayan@notnayan-VirtualBox:~/Desktop\$'.

10. Write the command to print the tree structure.

tree

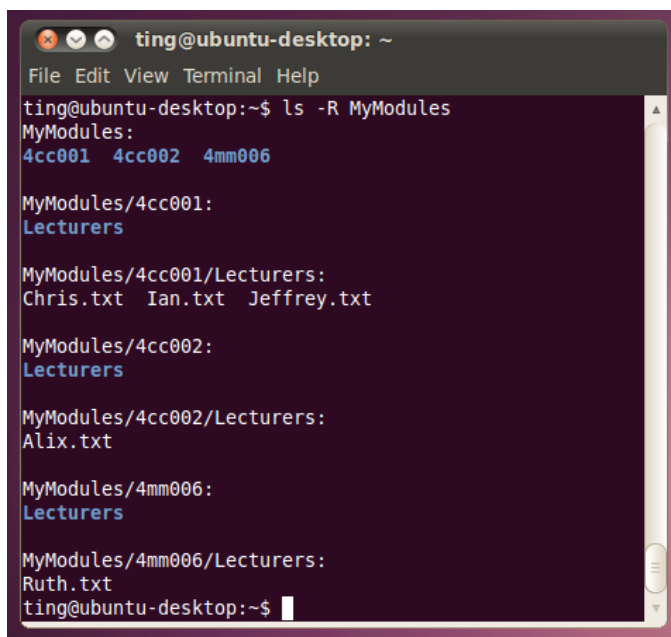
A terminal window titled 'notnayan@notnayan-VirtualBox: ~/Desktop/TEST'. The prompt is 'notnayan@notnayan-VirtualBox:~/Desktop/TEST\$'. The command 'tree' has been entered, and the output shows a directory structure: a directory named 'test2' containing a file named 'hello2.txt'. At the bottom, it says '1 directory, 1 file'.

```
notnayan@notnayan-VirtualBox: ~/Desktop/TEST
notnayan@notnayan-VirtualBox:~/Desktop/TEST$ tree
.
├── test2
│   └── hello2.txt
1 directory, 1 file
```

Task 4

Create the following directory structure (identical to the one that you created in Windows Command Prompt):

Note: MYMODULES must be inside <your_name> directory.

A terminal window titled 'ting@ubuntu-desktop: ~'. The prompt is 'ting@ubuntu-desktop:~\$'. The command 'ls -R MyModules' has been entered, and the output shows a directory structure: 'MyModules' containing three subdirectories: '4cc001', '4cc002', and '4mm006'. Each subdirectory contains a 'Lecturers' directory. The 'Lecturers' directory in '4cc001' contains 'Chris.txt', 'Ian.txt', and 'Jeffrey.txt'. The 'Lecturers' directory in '4cc002' contains 'Alix.txt'. The 'Lecturers' directory in '4mm006' contains 'Ruth.txt'.

```
ting@ubuntu-desktop: ~
File Edit View Terminal Help
ting@ubuntu-desktop:~$ ls -R MyModules
MyModules:
4cc001 4cc002 4mm006

MyModules/4cc001:
Lecturers

MyModules/4cc001/Lecturers:
Chris.txt Ian.txt Jeffrey.txt

MyModules/4cc002:
Lecturers

MyModules/4cc002/Lecturers:
Alix.txt

MyModules/4mm006:
Lecturers

MyModules/4mm006/Lecturers:
Ruth.txt
ting@ubuntu-desktop:~$
```

and insert it below (15 marks):

[Insert your picture here]

```
notnayan@notnayan-VirtualBox: ~/Desktop/Nayan_Raj_Khanal
notnayan@notnayan-VirtualBox:~/Desktop/Nayan_Raj_Khanal$ ls -R MYMODULES
MYMODULES:
4CC001 4CC002 4MM006

MYMODULES/4CC001:
Lecturers

MYMODULES/4CC001/Lecturers:
Chris.txt Ian.txt Jeffery.txt

MYMODULES/4CC002:
Lecturers

MYMODULES/4CC002/Lecturers:
Alix.txt

MYMODULES/4MM006:
Lecturers

MYMODULES/4MM006/Lecturers:
Ruth.txt
notnayan@notnayan-VirtualBox:~/Desktop/Nayan_Raj_Khanal$
```

Commands:

```
mkdir Nayan_Raj_Khanal
cd Nayan_Raj_Khanal
mkdir MYMODULES
cd MYMODULES
mkdir 4MM006
cd 4MM006
mkdir Lecturers
cd Lecturers
touch Ruth.txt
cd ../..
mkdir 4CC001
cd 4CC001
mkdir Lecturers
cd Lecturers
touch Jeffery.txt
touch Chris.txt
touch Ian.txt
cd ../..
mkdir 4CC002
cd 4CC002
mkdir Lecturers
cd Lecturers
touch Alix.txt
cd ../..
cd ..
ls -R MYMODULES
```

Task 5

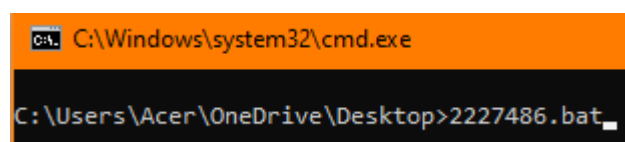
Batch file material (50 marks in total)

Create a batch file (windows) **YourNumber.bat** from notepad (or your preferred text editor). Create this program on your home drive (or portable drive – USB) ready for execution.

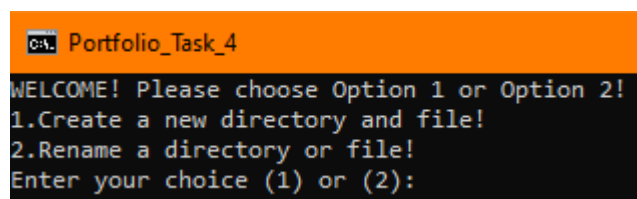
The batch file should create a directory structure similar to the one created for the first section of this assignment but the directory entries should be provided from an input request from the batch file itself.

You should be able to create a root directory and directory structure and populate it if required. The batch file program will ask for names (**input directory names and file names**) to be used and have some form of **error checking** (empty – incorrect character, length, etc.) You can add other features such as being able to edit the new structure from within the batch file program (**find and change a directory name**).

Run batch file from windows prompt: YourNumber.bat <enter>



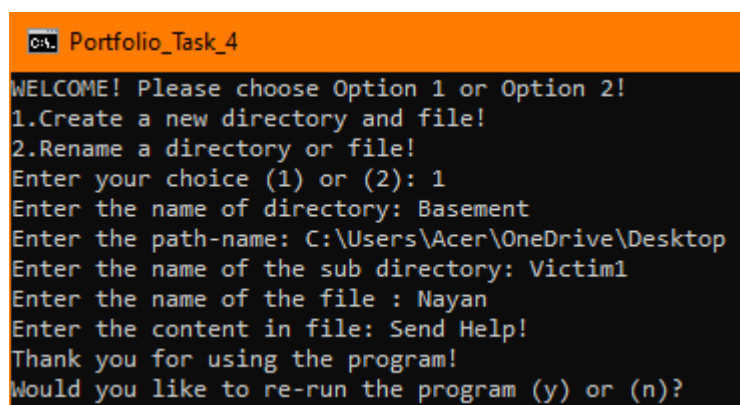
```
C:\Windows\system32\cmd.exe
C:\Users\Acer\OneDrive\Desktop>2227486.bat
```



```
CA. Portfolio_Task_4
WELCOME! Please choose Option 1 or Option 2!
1.Create a new directory and file!
2.Rename a directory or file!
Enter your choice (1) or (2):
```

[Insert your picture(s) here] – Directory structure created / menu of batch file (inputs and output when batch file is executed) (10 marks)

1. Create:



```
CA. Portfolio_Task_4
WELCOME! Please choose Option 1 or Option 2!
1.Create a new directory and file!
2.Rename a directory or file!
Enter your choice (1) or (2): 1
Enter the name of directory: Basement
Enter the path-name: C:\Users\Acer\OneDrive\Desktop
Enter the name of the sub directory: Victim1
Enter the name of the file : Nayan
Enter the content in file: Send Help!
Thank you for using the program!
Would you like to re-run the program (y) or (n)?
```

```
C:\Users\Acer\OneDrive\Desktop\Basement>tree /f
Folder PATH listing
Volume serial number is E055-E1E5
C:..
├──Victim1
│   └──Nayan.txt
```

```
C:\Users\Acer\OneDrive\Desktop\Basement\Victim1>type Nayan.txt
Send Help!
```

2. Rename:

```
C:\> Portfolio_Task_4

WELCOME! Please choose Option 1 or Option 2!
1.Create a new directory and file!
2.Rename a directory or file!
Enter your choice (1) or (2): 2
Enter the path of the directory or the file: C:\Users\Acer\Onedrive\Desktop\Basement\Victim1
Enter the name of the directory or file: Nayan.txt
Enter the new name of the directory or the file: Khanal.txt
Your directory or file has been renamed!
Thank you for using the program!
Would you like to re-run the program (y) or (n)? _
```

```
C:\> C:\Windows\system32\cmd.exe

C:\Users\Acer\OneDrive\Desktop\Basement>tree /f
Folder PATH listing
Volume serial number is E055-E1E5
C:..
├──Victim1
│   └──Khanal.txt
```

3. Wrong Input:

```
C:\ Portfolio_Task_4
WELCOME! Please choose Option 1 or Option 2!
1.Create a new directory and file!
2.Rename a directory or file!
Enter your choice (1) or (2): 5
Please enter either (1) or (2)
Press any key to continue . . . █
```

```
C:\ Portfolio_Task_4
WELCOME! Please choose Option 1 or Option 2!
1.Create a new directory and file!
2.Rename a directory or file!
Enter your choice (1) or (2): 2
Enter the path of the directory or the file: C:\Users\Acer\Onedrive\Desktop
Enter the name of the directory or file: ASSIGNMENTS
Enter the new name of the directory or the file: Assignments
Your directory or file has been renamed!
Thank you for using the program!
Would you like to re-run the program (y) or (n)? 12345
Please enter either (y) or (n)
Press any key to continue . . . █
Would you like to re-run the program (y) or (n)? 4567
Please enter either (y) or (n)
Press any key to continue . . . █
```

[Insert your text here] – batch file listing (script)(40 marks)

```
@echo off
```

```
cls
```

```
title Portfolio_Task_4
```

```
:welcome
```

```
cls
```

```
@echo WELCOME! Please choose Option 1 or Option 2!
```

```
@echo 1.Create a new directory and file!
```

```
@echo 2.Rename a directory or file!
```

```
set /p choice= Enter your choice (1) or (2):
```

```
if %choice%==1 Call :create Exit/b
```

```
if %choice%==2 Call :rename Exit/b
```

```
echo Please enter either (1) or (2)
```

```
pause
```

```
Call :welcome
```

```
:re-run
```

```
set /p re-run=Would you like to re-run the program (y) or (n)?
```

```
if %re-run%==y Call :welcome
```

```
if %re-run%==n exit
```

```
echo Please enter either (y) or (n)
```

```
pause
```

```
Call :re-run
```

```
:create
```

```
set /p directory=Enter the name of directory:
```

```
set /p path=Enter the path-name:
```

```
cd %path%
```

```
mkdir %directory%
```

```
cd %directory%
```

```
set /p sub=Enter the name of the sub directory:
```

```
mkdir %sub%
```

```
cd %sub%
```

```
set /p file=Enter the name of the file :
```

```
set /p content=Enter the content in file:
```

```
echo %content% > %file%.txt
```

```
cd../..
```

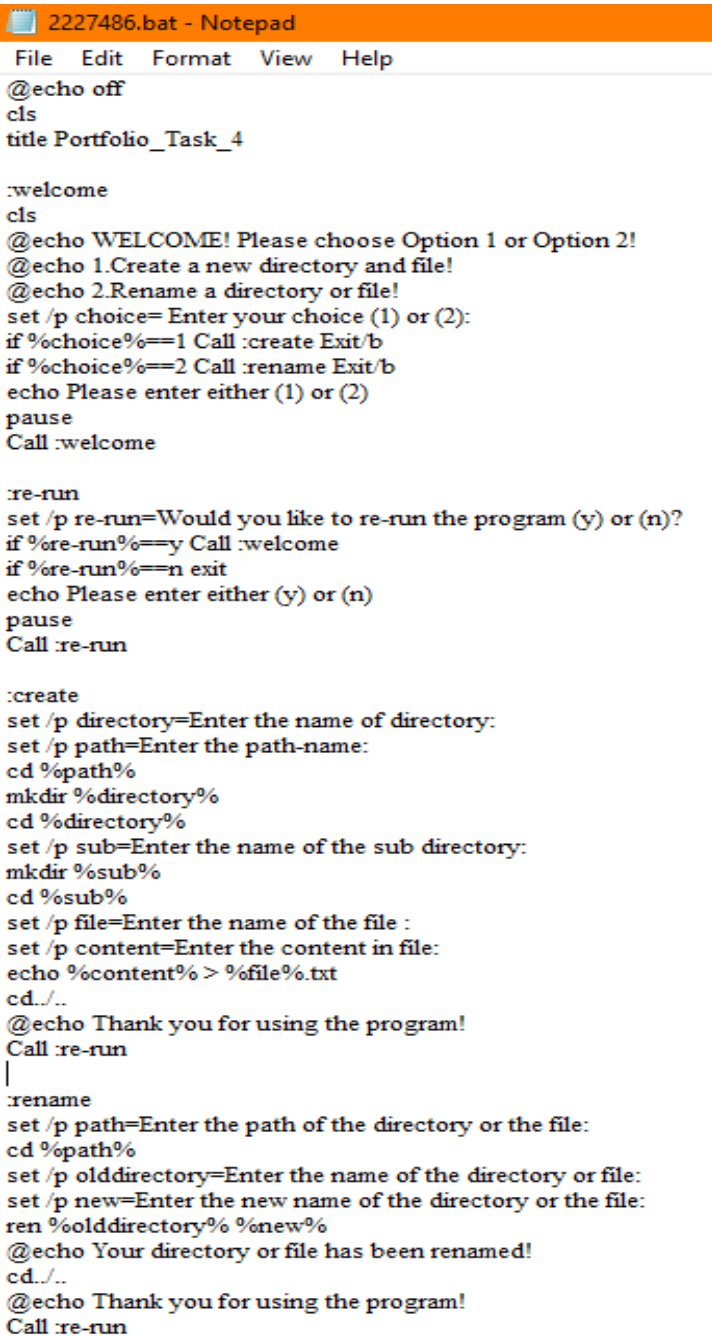
```
@echo Thank you for using the program!
```

```
Call :re-run
```

```

:rename
set /p path=Enter the path of the directory or the file:
cd %path%
set /p olddirectory=Enter the name of the directory or file:
set /p new=Enter the new name of the directory or the file:
ren %olddirectory% %new%
@echo Your directory or file has been renamed!
cd../..
@echo Thank you for using the program!
Call :re-run

```



```

2227486.bat - Notepad
File Edit Format View Help
@echo off
cls
title Portfolio_Task_4

:welcome
cls
@echo WELCOME! Please choose Option 1 or Option 2!
@echo 1.Create a new directory and file!
@echo 2.Rename a directory or file!
set /p choice=Enter your choice (1) or (2):
if %choice%==1 Call :create Exit/b
if %choice%==2 Call :rename Exit/b
echo Please enter either (1) or (2)
pause
Call :welcome

:re-run
set /p re-run=Would you like to re-run the program (y) or (n)?
if %re-run%==y Call :welcome
if %re-run%==n exit
echo Please enter either (y) or (n)
pause
Call :re-run

:create
set /p directory=Enter the name of directory:
set /p path=Enter the path-name:
cd %path%
mkdir %directory%
cd %directory%
set /p sub=Enter the name of the sub directory:
mkdir %sub%
cd %sub%
set /p file=Enter the name of the file :
set /p content=Enter the content in file:
echo %content% > %file%.txt
cd../..
@echo Thank you for using the program!
Call :re-run

:rename
set /p path=Enter the path of the directory or the file:
cd %path%
set /p olddirectory=Enter the name of the directory or file:
set /p new=Enter the new name of the directory or the file:
ren %olddirectory% %new%
@echo Your directory or file has been renamed!
cd../..
@echo Thank you for using the program!
Call :re-run

```