4CS015 – Portfolio Task #4

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

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

NOTE: Please make sure you have written your command as well as the screenshot of the commands. Failure to do so will result in marks deduction.

Task 1 (Windows Command Line)

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

```
C:\Users\bajra>mkdir test

C:\Users\bajra>dir
 Volume in drive C is OS
 Volume Serial Number is 882D-F038

 Directory of C:\Users\bajra

02/05/2023  02:36 PM    <DIR>          .
01/21/2023  01:12 PM    <DIR>          ..
01/31/2023  08:48 PM               455 .bash_history
01/21/2023  01:42 PM               194 .gitconfig
01/21/2023  01:14 PM    <DIR>          .vscode
01/21/2023  01:27 PM    <DIR>          ansel
01/21/2023  12:59 PM    <DIR>          Contacts
01/26/2023  06:56 PM    <DIR>          Desktop
02/04/2023  09:26 PM    <DIR>          Documents
02/04/2023  10:31 PM    <DIR>          Downloads
01/21/2023  12:59 PM    <DIR>          Favorites
01/21/2023  09:59 PM             2,448 hangman.py
01/21/2023  12:59 PM    <DIR>          Links
01/21/2023  12:59 PM    <DIR>          Music
01/22/2023  10:37 AM    <DIR>          OneDrive
01/25/2023  02:45 PM    <DIR>          Pictures
01/21/2023  01:34 PM    <DIR>          PycharmProjects
01/21/2023  02:42 PM    <DIR>          Saved Games
01/21/2023  01:00 PM    <DIR>          Searches
02/05/2023  02:36 PM    <DIR>          test
02/05/2023  02:29 PM    <DIR>          Videos
               3 File(s)          3,097 bytes
              18 Dir(s)  322,487,750,656 bytes free
```

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

```
C:\Users\bajra>cd test

C:\Users\bajra\test>dir
 Volume in drive C is OS
 Volume Serial Number is 882D-F038

 Directory of C:\Users\bajra\test

02/05/2023  02:36 PM    <DIR>          .
02/05/2023  02:36 PM    <DIR>          ..
               0 File(s)              0 bytes
               2 Dir(s)  322,487,640,064 bytes free

C:\Users\bajra\test>
```

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

```
C:\Users\bajra\test> echo hello> hello.txt

C:\Users\bajra\test>dir
 Volume in drive C is OS
 Volume Serial Number is 882D-F038

 Directory of C:\Users\bajra\test

02/05/2023  02:38 PM    <DIR>          .
02/05/2023  02:36 PM    <DIR>          ..
02/05/2023  02:38 PM                 7 hello.txt
               1 File(s)              7 bytes
               2 Dir(s)  322,484,097,024 bytes free

C:\Users\bajra\test>
```

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

```
C:\Users\bajra\test>type hello.txt
hello

C:\Users\bajra\test>
```

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

```
C:\Users\bajra\test>move hello.txt C:\Users\bajra\Desktop\test1
        1 file(s) moved.

C:\Users\bajra\test> cd ..

C:\Users\bajra>cd desktop

C:\Users\bajra\Desktop>cd test1

C:\Users\bajra\Desktop\test1>dir
 Volume in drive C is OS
 Volume Serial Number is 882D-F038

 Directory of C:\Users\bajra\Desktop\test1

02/05/2023  02:47 PM    <DIR>          .
02/05/2023  02:42 PM    <DIR>          ..
02/05/2023  02:47 PM                 8 hello.txt
               1 File(s)              8 bytes
               2 Dir(s)  322,524,250,112 bytes free
```

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

```
C:\Users\bajra\Desktop\test1>del hello.txt

C:\Users\bajra\Desktop\test1>dir
 Volume in drive C is OS
 Volume Serial Number is 882D-F038

 Directory of C:\Users\bajra\Desktop\test1

02/05/2023  02:49 PM    <DIR>          .
02/05/2023  02:42 PM    <DIR>          ..
               0 File(s)              0 bytes
               2 Dir(s)  322,523,500,544 bytes free

C:\Users\bajra\Desktop\test1>
```

7. Write a command to display your current directory.

```
C:\Users\bajra>chdir
C:\Users\bajra

C:\Users\bajra>
```

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

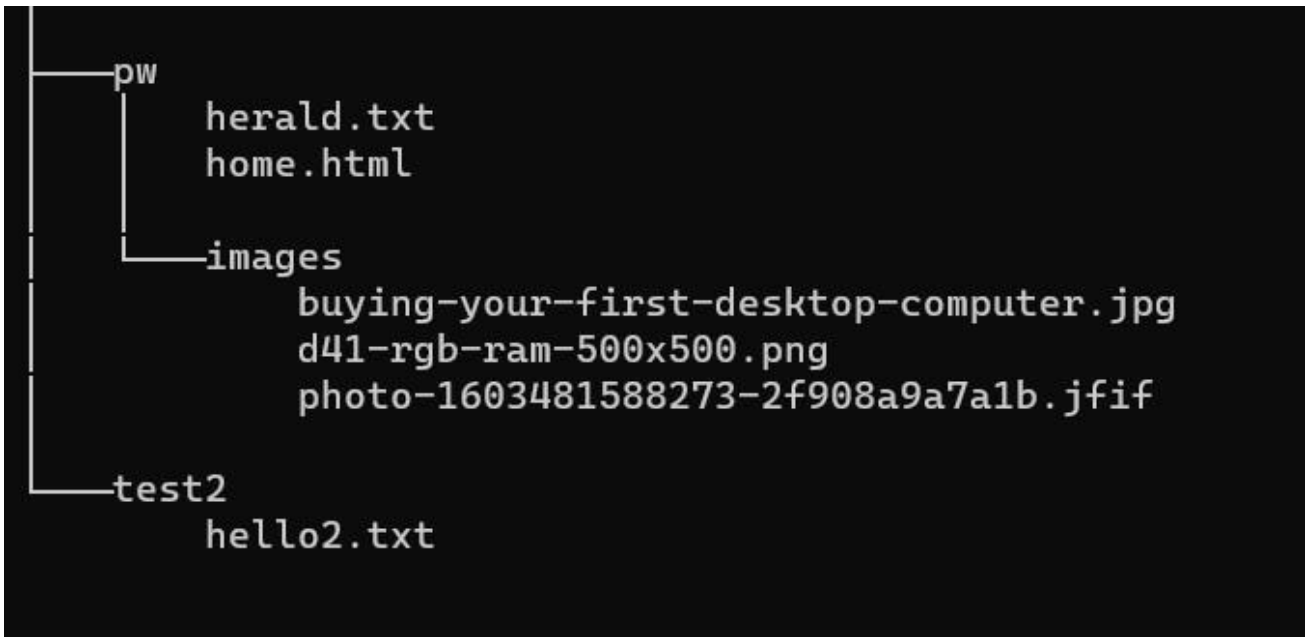
```
C:\Users\bajra\Desktop\test1>rename hello.txt hello2.txt

C:\Users\bajra\Desktop\test1>dir
 Volume in drive C is OS
 Volume Serial Number is 882D-F038

 Directory of C:\Users\bajra\Desktop\test1

02/05/2023  04:52 PM    <DIR>          .
02/05/2023  02:42 PM    <DIR>          ..
02/05/2023  04:52 PM                 8 hello2.txt
               1 File(s)              8 bytes
               2 Dir(s)  322,518,003,712 bytes free
```

9. Now navigate outside the directory test.

```
C:\Users\bajra\Desktop\test1>cd ..

C:\Users\bajra\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
```



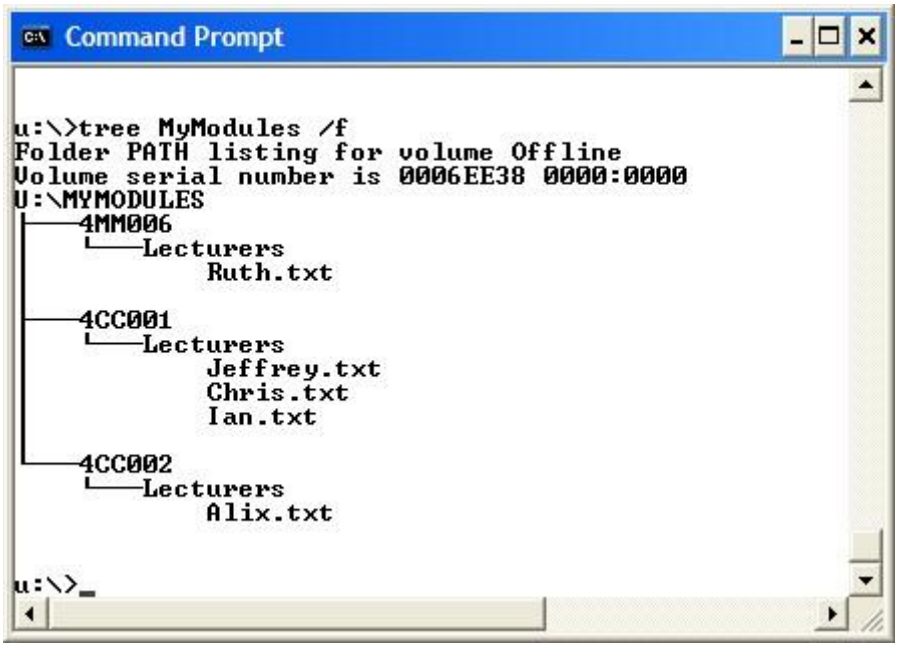

```
C:\Users\bajra\Desktop>tree /f
Folder PATH listing for volume OS
Volume serial number is 882D-F038
C:.
|   Discord.lnk
|   FIFA19.exe - Shortcut.lnk
|   This PC - Shortcut.lnk
|   Visual Studio Code.lnk
|
```

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.




```
C:\Users\bajra\Desktop\manogya>tree MyMoudles /f
Folder PATH listing for volume OS
Volume serial number is 882D-F038
C:\USERS\BAJRA\DESKTOP\MANOGYA\MYMOUDLES
├───4CC001
│   └───Lectures
│           chris.txt
│           ian.txt
│           jeffrey.txt
│
├───4CC002
│   └───Lectures
│           Alix.txt
│
└───4MM006
    └───Lectures
            Ruth.txt
```

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**"

```
This message is shown once a day. To disable it please create the
/home/manogya/.hushlogin file.
manogya@Manogya:~$ mkdir test
manogya@Manogya:~$ ls
test
manogya@Manogya:~$
```

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

```
/home/manogya/.hushlogin file.
manogya@Manogya:~$ mkdir test
manogya@Manogya:~$ ls
test
manogya@Manogya:~$ cd test
manogya@Manogya:~/test$ ls
manogya@Manogya:~/test$
```

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

```
manogya@Manogya:~$ cd test
manogya@Manogya:~/test$ ls
manogya@Manogya:~/test$ echo Hello>hello.txt
manogya@Manogya:~/test$ ls
hello.txt
manogya@Manogya:~/test$
```

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

```
hello.txt
manogya@Manogya:~/test$ cat hello.txt
Hello
manogya@Manogya:~/test$
```

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

```
manogya@Manogya: ~/Deskt
manogya@Manogya:~$ cp test/hello.txt Desktop/test1
manogya@Manogya:~$ cd Desktop
manogya@Manogya:~/Desktop$ ls
test1
manogya@Manogya:~/Desktop$ cd test1
manogya@Manogya:~/Desktop/test1$ ls
hello.txt
manogya@Manogya:~/Desktop/test1$
```

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

```
manogya@Manogya:~/Desktop/test1$ rm -r hello.txt
manogya@Manogya:~/Desktop/test1$ ls
manogya@Manogya:~/Desktop/test1$
```

7. Write a command to display your current directory.

```
manogya@Manogya:~/Desktop/test1$ pwd
/home/manogya/Desktop/test1
manogya@Manogya:~/Desktop/test1$
```

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

```
manogya@Manogya:~/Desktop/test1$ ls
hello.txt
manogya@Manogya:~/Desktop/test1$ mv hello.txt hello2.txt
manogya@Manogya:~/Desktop/test1$ ls
hello2.txt
manogya@Manogya:~/Desktop/test1$
```

9. Now navigate outside the directory test.

```
manogya@Manogya:~/Desktop/test1$ cd
manogya@Manogya:~$
```

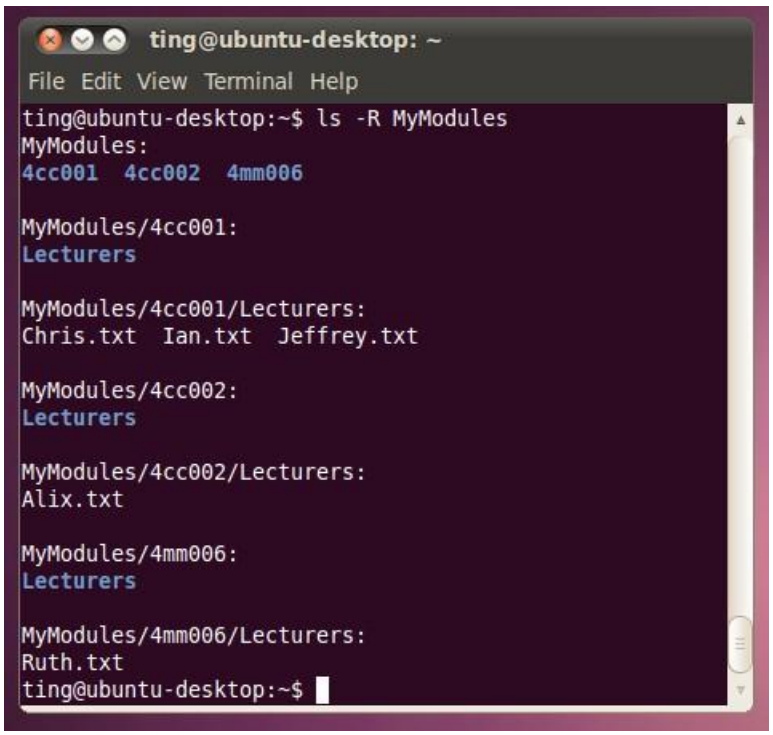
10. Write the command to print the tree structure.

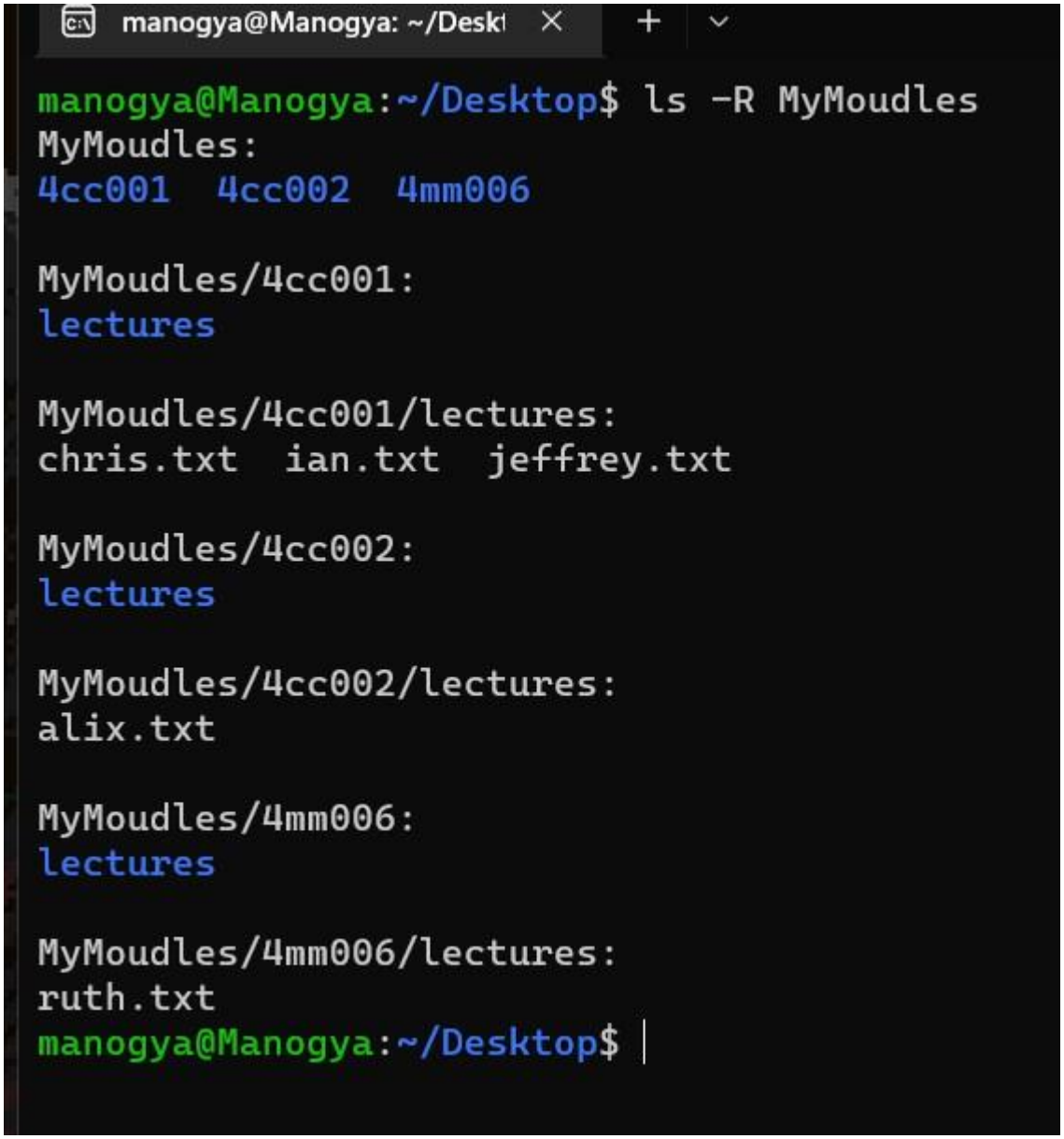
```
manogya@Manogya:~$ tree
.
├── Desktop
│   └── test1
│       └── hello2.txt
└── test
    └── hello.txt

3 directories, 2 files
manogya@Manogya:~$
```

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.


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:~$


manogya@Manogya: ~/Deskt
manogya@Manogya:~/Desktop$ ls -R MyMoudles
MyMoudles:
4cc001 4cc002 4mm006
MyMoudles/4cc001:
lectures
MyMoudles/4cc001/lectures:
chris.txt ian.txt jeffrey.txt
MyMoudles/4cc002:
lectures
MyMoudles/4cc002/lectures:
alix.txt
MyMoudles/4mm006:
lectures
MyMoudles/4mm006/lectures:
ruth.txt
manogya@Manogya:~/Desktop$

Task 5

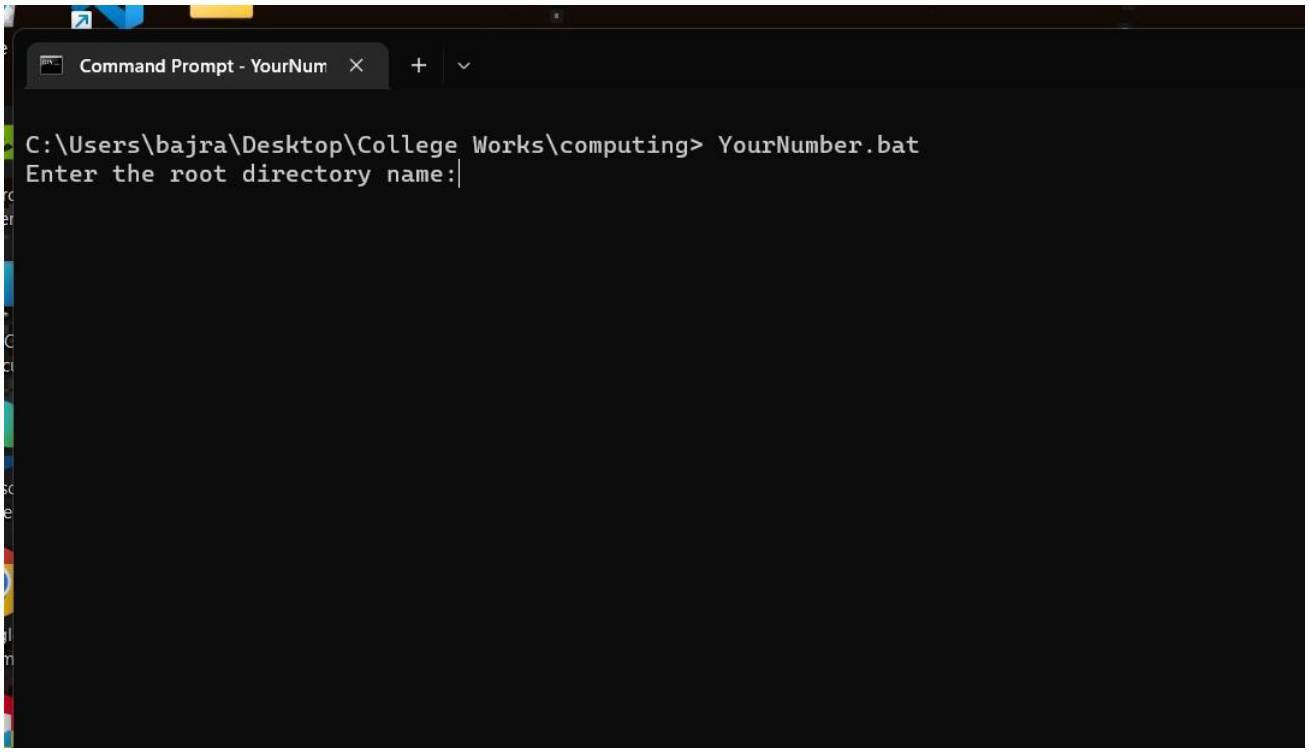
Batch file material (50 marks in total)

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 create for the first section of this assignment but the directory entries should be provided from an input request from the batch file itself.

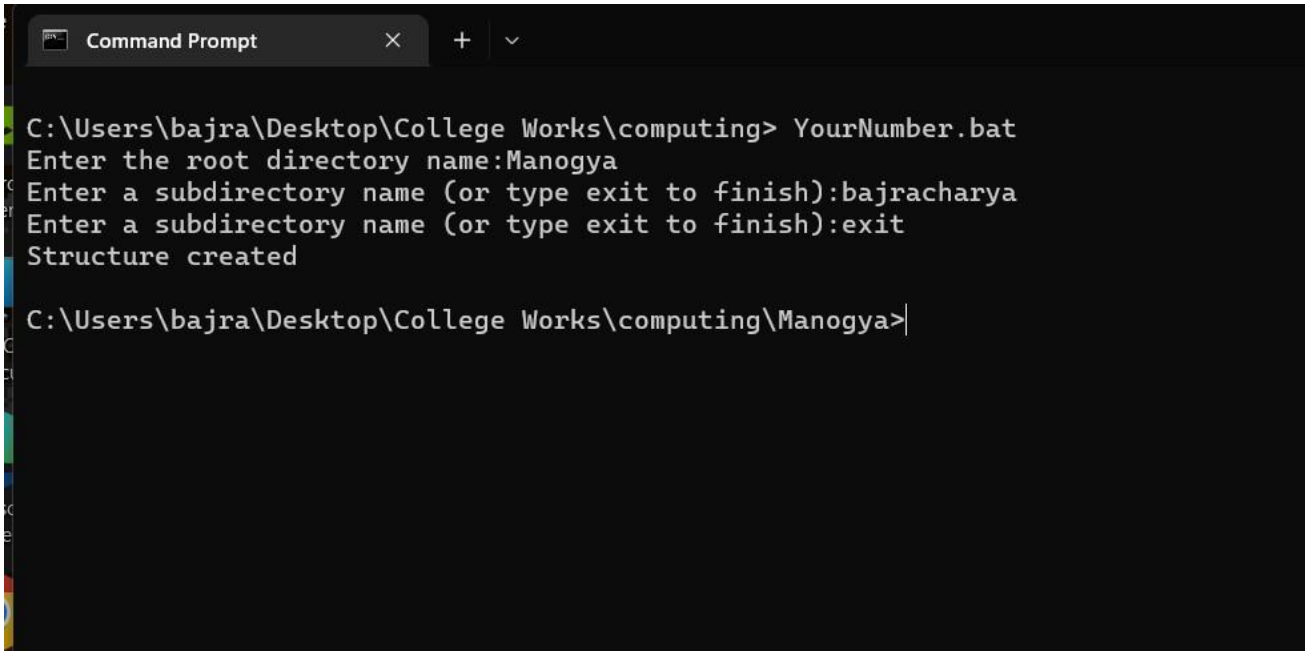
You should be able to create a root directory and directory structure and populate it if required. The batch file program will ask for names (**input directory names and file names**) to be used and have some form of **error checking** (empty – incorrect character, length, etc.) You can add other features 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>



```
@echo off



:input

set /p root=Enter the root directory name:

if "%root%"=="" (

  echo Error: invalid name

  goto input

)
```

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



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

```
@echo off

:input
set "root="
set /p root=Enter the root directory name:
if not defined root (
  echo Error: invalid name
  goto input
)

md "%root%" 2>nul
cd %root%

:subdir
set "subdir="
```

```
set /p subdir=Enter a subdirectory name (or type exit to finish):
if not defined subdir (
  echo Error: invalid name
  goto subdir
)
if "%subdir%" == "exit" (
  cd ..
  echo Structure created
  exit /b
)

md "%subdir%" 2>nul
cd %subdir%
goto subdir
```