4CS015 - Portfolio Part -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"

Ans: MKDIR test

```
E:\F0C>dir
 Volume in drive E is College
 Volume Serial Number is C2CC-EC95
 Directory of E:\FOC
02/09/2024
            03:50 PM
                        <DIR>
               0 File(s)
                                       0 bytes
               1 Dir(s) 106,851,598,336 bytes free
E:\FOC>mkdir test
E:\F0C>dir
 Volume in drive E is College
 Volume Serial Number is C2CC-EC95
Directory of E:\FOC
02/09/2024
            03:51 PM
                        <DIR>
02/09/2024
            03:51 PM
                        <DIR>
               0 File(s)
                                       0 bytes
               2 Dir(s) 106,851,598,336 bytes free
```

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

ANS:

- cd test
- dir

```
E:\FOC>cd test

E:\FOC\test>dir
Volume in drive E is College
Volume Serial Number is C2CC-EC95

Directory of E:\FOC\test

02/09/2024 03:51 PM <DIR>
02/09/2024 03:51 PM <DIR>
0 File(s) 0 bytes
2 Dir(s) 106,851,627,008 bytes free
```

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

- echo Hello > hello.txt
- dir

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

ANS:

• Type hello.txt

```
E:\FOC\test>type hello.txt
Hello
```

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

ANS:

- mkdir test1
- copy hello.txt C:\Users\kdhit\Desktop\test1

```
C:\Users\kdhit\Desktop>mkdir test1
C:\Users\kdhit\Desktop>dir
Volume in drive C is SSD
Volume Serial Number is 9E52-4155
 Directory of C:\Users\kdhit\Desktop
02/09/2024 03:59 PM
                        <DIR>
02/07/2024 08:09 PM
                        <DIR>
02/01/2024 07:05 AM
                                 2,234 Discord.lnk
                                   624 Kamal_Dhital_2407046.Grd
02/08/2024 02:25 PM
01/31/2024 07:35 PM
                                 2,451 Personal - Edge.lnk
02/09/2024 03:59 PM
                      <DIR>
                                       test1
               3 File(s)
                                  5,309 bytes
               3 Dir(s) 402,439,413,760 bytes free
```

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

ANS:

del hello.txt

```
E:\FOC\test>del hello.txt

E:\FOC\test>dir
Volume in drive E is College
Volume Serial Number is C2CC-EC95

Directory of E:\FOC\test

02/09/2024 04:03 PM <DIR>
02/09/2024 03:51 PM <DIR>
0 File(s) 0 bytes
2 Dir(s) 106,851,344,384 bytes free
```

7. Write a command to display your current directory.

ANS:

cd

E:\FOC\test>cd E:\FOC\test

8. Now rename the file to hello2.txt

ANS:

rename hello.txt hello2.txt

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

C:\Users\kdhit\Desktop\test1>dir
Volume in drive C is SSD
Volume Serial Number is 9E52-4155

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

02/09/2024 04:07 PM <DIR> ...
02/09/2024 03:59 PM <DIR> ...
02/09/2024 03:55 PM 8 hello2.txt
1 File(s) 8 bytes
2 Dir(s) 402,437,582,848 bytes free
```

9. Now navigate outside the directory test.

ANS:

• cd..

```
C:\Users\kdhit\Desktop\test1>cd..
C:\Users\kdhit\Desktop>cd
C:\Users\kdhit\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 TEST
- cd test
- mkdir test2
- cd test2
- echo > hello2.txt

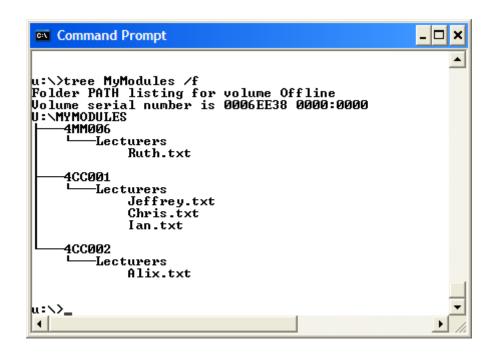
- cd..
- cd..
- tree test /f

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.



[Insert your picture here]

- mkdir Kamal_Dhital
- cd Kamal_Dhital
- mkdir MYMODULES
- cd mymodules
- mkdir 4MM006 4CC001 4CC002
- cd 4MM006
- mkdir Lecturers
- cd Lecturers
- echo > Ruth.txt
- cd..
- cd..
- cd 4CC001
- mkdir Lecturers
- cd Lecturers
- echo > Jeffrey.txt

- echo > Chris.txt
- echo > lan.txt
- cd..
- cd..
- cd 4CC002
- mkdir Lecturers
- cd Lecturers
- echo > Alix.txt
- cd..
- cd..
- cd..
- tree mymodules /f

```
C:\Users\kdhit\Desktop>mkdir Kamal_Dhital
C:\Users\kdhit\Desktop>cd Kamal_Dhital
C:\Users\kdhit\Desktop\Kamal_Dhital>mkdir MYMODULES
C:\Users\kdhit\Desktop\Kamal_Dhital>cd mymodules
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES>mkdir 4MM006 4CC001 4CC002
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES>cd 4MM006
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4MM006>mkdir Lecturers
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4MM006>cd lecturers
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4MM006\Lecturers>echo > Ruth.txt
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4MM006\Lecturers>cd..
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4MM006>cd...
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES>cd 4CC001
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC001>mkdir Lecturers
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC001>cd lecturers
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC001\Lecturers>echo > Jeffrey.txt
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC001\Lecturers>echo > Chris.txt
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC001\Lecturers>echo > Ian.txt
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC001\Lecturers>cd..
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC001>cd..
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES>cd 4CC002
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC002>mkdir Lecturers
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC002>cd lecturers
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC002\Lecturers>echo > Alix.txt
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC002\Lecturers>cd...
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES\4CC002>cd...
C:\Users\kdhit\Desktop\Kamal_Dhital\MYMODULES>cd..
```

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"

ANS:

Mkdir

```
__(kamal32®Kamal)-[~]
_$ mkdir test
```

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

ANS:

- Cd test
- Ls

```
___(kamal32 & Kamal) - [~]
$ cd test
___(kamal32 & Kamal) - [~/test]
$ ls
```

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

- echo Hello > hello.txt
- Is

```
(kamal32 & Kamal) - [~/test]
$ echo Hello > hello.txt

(kamal32 & Kamal) - [~/test]
$ ls
hello.txt
```

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

ANS:

more hello.txt

```
(kamal32@Kamal)-[~/test]
$ more hello.txt
Hello
```

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

- mkdir test1 in desktop to create test1 directory
- cp hello.txt /home/kamal32/Desktop/test1
- cd
- cd Desktop
- cd test1
- Is

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

- Is
- rm hello.txt
- Is

```
(kamal32 & Kamal) - [~/test]
$ ls
hello.txt

(kamal32 & Kamal) - [~/test]
$ rm hello.txt

(kamal32 & Kamal) - [~/test]
$ ls
```

7. Write a command to display your current directory.

ANS:

pwd

8. Now rename the file to hello2.txt

ANS:

- Is
- mv hello.txt hello2.txt
- Is

```
(kamal32 & Kamal) - [~/Desktop/test1]
$ ls
hello.txt

(kamal32 & Kamal) - [~/Desktop/test1]
$ mv hello.txt hello2.txt

(kamal32 & Kamal) - [~/Desktop/test1]
$ ls
hello2.txt
```

9. Now navigate outside the directory test.

ANS:

• cd ..

```
(kamal32  Kamal) - [~/Desktop/test1]
$ cd ...
(kamal32  Kamal) - [~/Desktop]
$
```

10. Write the command to print the tree structure.

ANS:

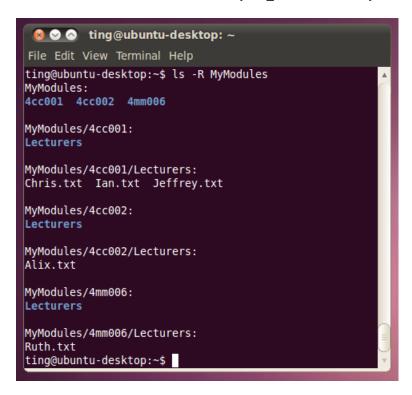
• Is -R TEST

```
(kamal32@Kamal)-[~/Desktop]
$ ls -R TEST
TEST:
test1
TEST/test1:
hello2.txt
```

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.



and insert it below (15 marks):

[Insert your picture here]

- mkdir Kamal_Dhital
- cd Kamal_Dhital
- mkdir MyModules
- cd MyModules
- mkdir 4CC001 4CC002 4MM006
- cd 4CC001
- mkdir Lecturers
- cd Lecturers
- echo > Chris.txt
- echo > lan.txt
- echo > Jeffrey.txt
- cd ..
- cd ..
- cd 4CC002
- mkdir Lecturers
- cd Lecturers
- echo > Alix.txt
- cd ..
- cd ..
- cd 4MM006
- mkdir Lecturers
- cd Lecturers
- echo > Ruth.txt
- cd ..
- cd ..
- cd ..
- Is -R MyModules

```
-(kamal32@Kamal)-[~/Desktop]
____s mkdir Kamal_Dhital
—(kamal32@Kamal)-[~/Desktop]
s cd Kamal_Dhital
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital]
___$ mkdir MyModules
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital]
s cd MyModules
 -(kamal32⊛Kamal)-[~/Desktop/Kamal_Dhital/MyModules]
s mkdir 4CC001 4CC002 4MM006
 -(kamal32⊛Kamal)-[~/Desktop/Kamal_Dhital/MyModules]
—(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC001]
s mkdir Lecturers
 —(kamal32 & Kamal) - [~/Desktop/Kamal_Dhital/MyModules/4CC001]
s cd Lecturers
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC001/Lecturers]
_$ echo > Chris.txt
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC001/Lecturers]
_$ echo > Ian.txt
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC001/Lecturers]
-$ echo > Jeffrey.txt
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC001/Lecturers]
__$ cd ..
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC001]
$ cd ..
 —(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules]
_$ cd 4CC002
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC002]
$ mkdir Lecturers
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC002]
```

```
-(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC002/Lecturers]
secho > Alix.txt
  -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC002/Lecturers]
_$ cd ..
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4CC002]
__$ cd ..
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules]
____s cd 4MM006
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4MM006]
s mkdir Lecturers
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4MM006]
__s cd Lecturers
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4MM006/Lecturers]
secho > Ruth.txt
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4MM006/Lecturers]
_$ cd ..
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules/4MM006]
_$ cd ..
 -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital/MyModules]
_$ cd ..
  -(kamal32@Kamal)-[~/Desktop/Kamal_Dhital]
s ls -R MyModules
MyModules:
4CC001 4CC002 4MM006
MyModules/4CC001:
Lecturers
MyModules/4CC001/Lecturers:
Chris.txt Ian.txt Jeffrey.txt
MyModules/4CC002:
Lecturers
MvModules/4CC002/Lecturers:
Alix.txt
MyModules/4MM006:
Lecturers
MyModules/4MM006/Lecturers:
Ruth.txt
```

Task 5

Batch file material (50 marks in total)

Create a batch file (windows) YourNumber.bat from notepad (or your preferred text editor).

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>

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

```
Microsoft Windows [Version 10.0.22635.3130]
(c) Microsoft Corporation. All rights reserved.
C:\Windows\System32>E:
E:\>cd "Semester - 1\Fundamentals of Computing\Coursework\Window And Linux"
E:\Semester - 1\Fundamentals of Computing\Coursework\Window And Linux>2407046.bat
Enter Your Full Name: Kamal Dhital
Enter your drive name where your folder will be saved: E
Your root folder will exist in directory E:\Kamal Dhital
Enter the root directory name: MYMODULES
Root Directory Created "MYMODULES"

    Add Directory

2. Add File

 Find And Change Directory

4. Display Structure
5. Exit
Enter your choice from (1-5): 1
Enter new directory name: 4CC001
"4CC001" directory created successfully.

    Add Directory

2. Add File

 Find And Change Directory

4. Display Structure
5. Exit
Enter your choice from (1-5): 1
Enter new directory name: 4CC002
"4CC002" directory created successfully.

    Add Directory

2. Add File

 Find And Change Directory

4. Display Structure
5. Exit
Enter your choice from (1-5): 1
Enter new directory name: 4MM006
"4MM006" directory created successfully.

    Add Directory

2. Add File

 Find And Change Directory

4. Display Structure
5. Exit
Enter your choice from (1-5): 1
Enter new directory name: 4CC001\Lecturers
"4CC001\Lecturers" directory created successfully.

    Add Directory

2. Add File

 Find And Change Directory

4. Display Structure
5. Exit
```

```
Enter your choice from (1-5): 1
Enter new directory name: 4CC002\Lecturers
"4CC002\Lecturers" directory created successfully.

    Add Directory

2. Add File
3. Find And Change Directory
4. Display Structure
5. Exit
Enter your choice from (1-5): 1
Enter new directory name: 4MM006\Lecturers
"4MM006\Lecturers" directory created successfully.

    Add Directory

2. Add File

 Find And Change Directory

4. Display Structure
5. Exit
Enter your choice from (1-5): 2
Enter new file name: Chris.txt
Enter directory name where your file should be kept: 4CC001\Lecturers
"Chris.txt" file created successfully.
1. Add Directory
2. Add File

 Find And Change Directory

4. Display Structure
5. Exit
Enter your choice from (1-5): 2
Enter new file name: Ian.txt
Enter directory name where your file should be kept: 4CC001\Lecturers
```

"Ian.txt" file created successfully.

1. Add Directory 2. Add File 3. Find And Change Directory 4. Display Structure 5. Exit Enter your choice from (1-5): 2 Enter new file name: Jeffery.txt Enter directory name where your file should be kept: 4CC001\Lecturers "Jeffery.txt" file created successfully. Add Directory 2. Add File 3. Find And Change Directory 4. Display Structure 5. Exit Enter your choice from (1-5): 2 Enter new file name: Alix.txt Enter directory name where your file should be kept: 4CC002\Lecturers "Alix.txt" file created successfully. Add Directory 2. Add File Find And Change Directory 4. Display Structure 5. Exit

Enter directory name where your file should be kept: 4MM006\Lecturers

Enter your choice from (1-5): 2 Enter new file name: Ruth.txt

"Ruth.txt" file created successfully.

```
1. Add Directory
2. Add File
3. Find And Change Directory
4. Display Structure
5. Exit
Enter your choice from (1-5): 4
Folder PATH listing for volume College
Volume serial number is C2CC-EC95
E:\KAMAL_DHITAL\MYMODULES
    -4CC001
    L__Lecturers
            Chris.txt
            Ian.txt
            Jeffery.txt
    -4CC002
    L—Lecturers
           Alix.txt
    -4MM006
    L—Lecturers
            Ruth.txt
Press any key to continue . . .
1. Add Directory
2. Add File
3. Find And Change Directory
4. Display Structure
5. Exit
Enter your choice from (1-5): 5
Press any key to continue . . .
```

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

I have my 2407046.bat file in E:\Semester - $1\$ Coursework\Window And Linux\2407046.bat

Navigating to the file through window prompt

- E:
- cd "Semester 1\Fundamentals of Computing\Coursework\Window And Linux"
- 2407046.bat

After this My Program Start Running

```
Here is my Batch File Script:
@echo off
Title Files and Folder Creator
set /p full_name="Enter Your Full Name: "
:drive_check
set /p drive="Enter your drive name where your folder will be saved: "
if not exist %drive%: (
  echo Drive %drive% does not exist. Please enter a valid drive letter.
 goto:drive_check
cd /d "%drive%:\"
mkdir "%full_name%"
cd "%full_name%"
echo -----
echo Your root folder will exist in directory %CD%
```

```
call :create_root_directory
:create_root_directory
set /p root_directory="Enter the root directory name: "
if exist "%root_directory%" (
  echo Root Directory "%root_directory%" exists.
  call :create_root_directory
) else (
  mkdir "%root_directory%"
  echo Root Directory Created "%root_directory%"
)
:sub_menu
echo 1. Add Directory
echo 2. Add File
echo 3. Find And Change Directory
echo 4. Display Structure
echo 5. Exit
set /p userChoice="Enter your choice from (1-5): "
if "%userChoice%"=="1" (
  call :add_new_directory
) else if "%userChoice%"=="2" (
```

```
call :add_new_file
) else if "%userChoice%"=="3" (
  call:find_and_change_directory
) else if "%userChoice%"=="4" (
  call:display_directory_structure
) else if "%userChoice%"=="5" (
  call:EndOfFile
) else (
  echo Invalid Choice !!! Please Try Again !!!
  goto:sub_menu
)
:add_new_directory
set /p new_directory="Enter new directory name: "
if not defined new_directory (
  echo Error: Directory name cannot be empty. Please try again.
  goto:add_new_directory
)
if exist "%root_directory%\%new_directory%" (
  echo "%new_directory%" already exists.
) else (
  mkdir "%root_directory%\%new_directory%"
  echo "%new_directory%" directory created successfully.
)
goto:sub_menu
```

```
:add_new_file
set /p new_file="Enter new file name: "
if not defined new_file (
  echo Error: File name cannot be empty. Please try again.
 goto:add_new_file
)
:directory_check
set /p directory="Enter directory name where your file should be kept: "
if not defined directory (
  echo Error: Directory name cannot be empty. Please try again.
  goto:directory_check
)
if exist "%root_directory%\%directory%" (
  if exist "%root_directory%\%directory%\%new_file%" (
    echo "%new_file%" already exists.
  ) else (
    type nul > "%root_directory%\%directory%\%new_file%"
    echo "%new_file%" file created successfully.
  )
) else (
  echo "%directory%" directory doesnot exists
  type nul > "%root_directory%\%new_file%"
  echo Your file is Saved on Root directory
goto:sub_menu
```

```
:find_and_change_directory
set /p old_directory="Enter the old directory name: "
if not defined old_directory (
  echo Error: Directory name cannot be empty. Please try again.
  goto :find_and_change_directory
)
:new_changed_folder
set /p new_changed_directory="Enter the new directory name: "
if not defined new_changed_directory (
  echo Error: Directory name cannot be empty. Please try again.
  goto :new_changed_folder
if exist "%root_directory%\%old_directory%" (
  ren "%root_directory%\%old_directory%" "%new_directory%"
  echo Directory "%old_directory%" renamed to "%new_directory%".
) else (
  echo Directory "%old_directory%" does not exist.
)
goto:sub_menu
:display_directory_structure
tree "%root_directory%" /f
pause
goto:sub_menu
:EndOfFile
```

pause			
exit			