



Networks and Operating Systems

(CS5001NI)

Course Work 2

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MARKING SCHEME

| | |
|--------------------------|-------------------------|
| Student: | Manish Giri |
| Project title: | Course Work 1 |
| Marker: | Er. Mukesh Regmi |
| Script File Size: | 45 Kilo bytes |

| | Task No | Full Marks | Awarded Marks | Comments |
|---|-----------------------------------|-------------------|----------------------|-----------------|
| 0. Representation of Course Work | Space Between Tasks | 1 | | |
| | Style of Task Titles and Comments | 2 | | |
| | "Rubbish" Cleaned | 2 | | |
| 1. Creating New Directories | TNO1 | 8 | | |
| 2. Removing Existing Files and Directories | TNO2 | 4 | | |
| | TNO3 | 4 | | |
| 3. Usage of the echo Command | TNO4 | 2 | | |
| | TNO5 | 2 | | |

| | | | | |
|--------------------------------------|-------|----|--|--|
| | TNO6 | 2 | | |
| 4. Usage of the ls command | TNO7 | 2 | | |
| | TNO8 | 4 | | |
| 5. Usage of the CAT command | TNO9 | 2 | | |
| | TNO10 | 2 | | |
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| | TNO12 | 4 | | |
| | TNO13 | 2 | | |
| 6. Usage of the chmod command | TNO14 | 6 | | |
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| | TNO18 | 4 | | |
| | TNO19 | 2 | | |
| | TNO20 | 3 | | |
| | TNO21 | 3 | | |
| | TNO22 | 3 | | |
| 9. Usage of your own | TNO23 | 1 | | |

| | | | | |
|---------------------|-------|----|--|-------------------------------|
| commands | TNO24 | 1 | | |
| | TNO25 | 1 | | |
| 10. Command History | TNO26 | 2 | | |
| | TNO27 | 2 | | |
| | TNO28 | 2 | | |
| 11. Presentation | | 10 | | |
| Total (maximum 100) | | | | In Words : |

ACKNOWLEDGEMENT

The success and final outcome of this project required a lot of guidance and assistance from many people and I am extremely privileged to have got this all along the completion of my project. All that I have done is only due to such supervision and assistance and I would not forget to thank them.

I respect and thank to **Mr. Mukesh Regmi** , for providing me an opportunity to do the project work in and giving us all support and guidance which made me complete the project duly. I am extremely thankful to him for providing such a nice support and guidance, although he had busy schedule managing the college affairs.

INTRODUCTION

This project mainly presents the work done in UNIX as per the question given by our module leader Mr. Mukesh Regmi.

UNIX is an operating system which was first developed in the 1960s, and has been under constant development ever since. UNIX is a stable, multi-user, multi-tasking system for servers, desktops and laptops. The most popular varieties of UNIX are sun Solaris, GNU/Linux and MacOS X.

OBJECTIVES OF THE COURSEWORK

- To introduce students some relevant UNIX interface details by practicing UNIX commands
- To perform some simple file-based operation by putting commands step by step.

TRANSCRIPT

Script started on Sun 24 Dec 2017 09:14:04 AM +0545

]0; student@Islington: ~student@Islington:~\$ ls

#TASK 1

```
$ mkdir Cricket
```

```
/Cricket$ mkdir India
```

```
/Cricket$ mkdir Australia
```

```
/Cricket$ mkdir England
```

```
/Cricket$ mkdir Pakistan
```

```
/Cricket$ mkdir Bangladesh
```

```
/Cricket$ ls
```

```
Australia Bangladesh England India Pakistan
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 2

/Cricket\$ cd India

/Cricket/India\$ pwd

/home/student/Cricket/India

/Cricket/India\$ cat > goa

/Cricket/India\$ cat > mumbai

/Cricket/India\$ cat > banglore

TOTAL MARKD AWARDED FOR TASK:

#TASK 3

/Cricket/India\$ cd ..

/Cricket\$

/Cricket\$ cd India

/Cricket/India\$ rm -i goa

remove regular empty file 'goa'? y


```
/Cricket/India$ rm mumbai
```

```
/Cricket/India$ rm banglore
```

```
/cricket/india$ cd ..
```

```
/cricket$ rm -r -f india
```

```
/Cricket$ ls
```

Australia Bangladesh England Pakistan

TOTAL MARKD AWARDED FOR TASK:

#TASK 4

```
/Cricket$ echo "Hello! I am proud to be part of Islington Family."
```

```
> 14<(2:8)"
```

```
Hello! I am proud to be part of Islington
```

```
Family. 14<(2:8)
```

```
/Cricket$ pwd
```

```
/home/student/Cricket
```

```
$ cd Cricket/Australia
```

```
/Cricket/Australia$ pwd
```

```
/home/student/Cricket/Australia
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 5

```
/Cricket/Australia$ pwd; cd;pwd
```

```
/home/student/Cricket/Australia
```

```
/home/student
```

\$ echo " first pwd shows that where we are

> Then command cd take you to the home directory.

> The last command pwd again show you the current location location of the current directory after bringing to home."

TOTAL MARKD AWARDED FOR TASK:

#TASK 6

```
student@Islington:~$ cd Cricket/Australia
```

```
/Cricket/Australia$ pwd; cd ..; pwd; cd ..;pwd
```

```
/home/student/Cricket/Australia
```

```
/home/student/Cricket
```

```
/home/student
```

student@Islington:~\$ echo "The pwd command show the current location of current directory, cd .. command take you one step back from current directory, again pwd command show the current location

after returning back from Australia directory to Cricket, cd .. command again take you to the home directory and pwd command show the current location after returning to home."

TOTAL MARKD AWARDED FOR TASK:

#TASK 7

```
student@Islington:~$ cd; pwd
```

```
/home/student
```

```
student@Islington:~$ echo "the cd command take you to student directory of home and pwd command show the current location"
```

```
student@Islington:~$ ls
```

```
student@Islington:~$ echo "The ls command shows the folder files from the student directory."
```

```
student@Islington:~$ ls -a
```

```
echo " The ls -a command show all the files and folders including hidden also."
```

```
student@Islington:~$ ls -al
```

```
student@Islington:~$ echo " The command show the access permission of the all the files and folders."
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 8

```
student@Islington:~$ cd;pwd;cd cw1; pwd
```

```
/home/student
```

```
bash: cd: cw1: No such file or directory
```

```
/home/student
```

```
student@Islington:~$ echo The cd command take you to home location,
```

```
> pwd shows the current location,
```

```
> cd cw1 will take you to the cw1 folder but in this case it shows error as we dont have cw1 folder,
```

```
> again pwd show the current location."
```

```
student@Islington:~$ ls -R
```

```
student@Islington:~$ echo " The command shows all the files and folders in a recursive way."
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 9

~/Cricket/Pakistan\$ cat > testX

aaaabbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbbbbb
BBBBBBBBB

fff-fff Ccccc
ccccccddd Ddddddd
DDDDDDDDDD

~/Cricket/Pakistan\$ cat > testY

aaaaabbbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbbb
BBBBBBB

FF-FF c__Ccccccc
CCCCCCCC

ccddd Ddddd
DDDDDD

~/Cricket/Pakistan\$ cat > testZ

aaaaabbbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbbbbb
BBBBBB

ff-ff Ccccc
CCCCC

ccdd Dddddd
DDDDDDDD

TOTAL MARKD AWARDED FOR TASK:

#TASK 10

~/Cricket/Pakistan\$ cat testX

aaaabbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbbbbbb
BBBBBBBBBB

fff-fff Ccccc
cccccdddd Dddddd
DDDDDDDDDD

~/Cricket/Pakistan\$ cat testY

aaaaabbbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbb
BBBBBBB

FF-FF Ccccc
CCCCCCCC

ccddd Dddddd
DDDDDD

~/Cricket/Pakistan\$ cat testZ

aaaaabbbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbbbbbb
BBBBBB

ff-ff Ccccc
CCCCC

ccdd Dddddd
DDDDDDDD

TOTAL MARKD AWARDED FOR TASK:

#TASK 11

:~/cricket/Pakistan\$ cp testx testy testz ../bangladesh

TOTAL MARKD AWARDED FOR TASK:

#TASK 12

:~/cricket/Pakistan\$ cat testx testy testz

aaaabbb Aaaaaa
AAAAAAAAA

bbbccc Bbbbbbbb
BBBBBBBBB

fff-fff Ccccc
ccccccddd Ddddddd
DDDDDDDDDD

aaaaabbbb Aaaaaa
AAAAAAAAA

bbccc Bbbb
BBBBBBB

FF-FF Ccccc
CCCCCCCC

ccddd Ddddd
DDDDDD

aaaaabbbb Aaaaaa
AAAAAAAAA

bbccc Bbbbbbb
BBBBBB

ff-ff Ccccc
CCCCC

ccdd Dddddd
DDDDDDDD

:~/cricket/Pakistan\$ cat testx testy testz>testResult

:~/cricket/Pakistan\$ cat testx - testy>>testResult
asdasdasd

:~/cricket/Pakistan\$ cat testResult
aaaabbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbbbbbb
BBBBBBBBBB

fff-fff Ccccc

ccccccddd Dddddd
DDDDDDDDDD

aaaabbbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbbb
BBBBBBB

FF-FF Ccccccc
CCCCCCCC

ccddd Dddddd
DDDDDD

aaaabbbbb Aaaaaa
AAAAAAAAAA

bbbccc Bbbbbbbb
BBBBBB

ff-ff Ccccc
CCCCC

ccdd Dddddd
DDDDDDDD

aaaabbb Aaaaaa
AAAAAAAAA

bbbcccc Bbbbbbbb
BBBBBBBBB

fff-fff Ccccc
ccccccddd Ddddddd
DDDDDDDDDD

asdasdasd
aaaaabbbb Aaaaaa
AAAAAAAAA

bbcccc Bbbbb
BBBBBBB

FF-FF Ccccc
CCCCCCCC

ccddd Ddddd
DDDDDD

TOTAL MARKD AWARDED FOR TASK:

#TASK 13

~/cricket/Pakistan\$ cat test[xyz]
aaaabbb Aaaaaa
AAAAAAAAA

bbbcccc Bbbbbbbb
BBBBBBBBB

fff-fff Ccccc
ccccccddd Ddddddd
DDDDDDDDDDaaa
aabbbb Aaaaaa
AAAAAAAAA

bbcccc Bbbbb
BBBBBBB

FF-FF Ccccc
CCCCCCCC

ccddd Ddddd
DDDDDD

aaaaabbbbb Aaaaaa
AAAAAAAAA

bbcccc Bbbbbbb
BBBBBB

ff-ff Ccccc
CCCCC

ccedd Ddddd
DDDDDD

~/cricket/Pakistan\$ echo" Displaying all testx testy and testz together"

TOTAL MARKD AWARDED FOR TASK:

#TASK 14

Display access permissions for files in Pakistan

~/Cricket/Pakistan\$ ls -l

-rw-rw-r-- 1 student student 479 Dec 24 09:34 testResult

-rw-rw-r-- 1 student student 98 Dec 24 09:29 testX

-rw-rw-r-- 1 student student 92 Dec 24 09:30 testY

-rw-rw-r-- 1 student student 89 Dec 24 09:30 testZ

-rw-rw-r-- 1 student student 0 Dec 24 09:30 TESTZ

Remove all access permissions for the testX file.

```
~/Cricket/Pakistan$ chmod ugo-rwx testX
```

Display access permissions for the testX file.

```
~/Cricket/Pakistan$ ls -l testX
```

```
----- 1 student student 66 Dec 24 09:44 testX
```

Try to read this file using any utility.

```
~/Cricket/Pakistan$ cat testX  
cat: testX: Permission denied
```

Try to write into this file using any utility.

```
~/Cricket/Pakistan$ cat > testX  
bash: testX: Permission denied
```

Add read and write access permissions for yourself for the testX file

```
~/Cricket/Pakistan$ chmod u+rw testX
```

Display access permissions for the testX file.

```
~/Cricket/Pakistan$ ls -l testX
```

```
-rw----- 1 student student 66 Dec 24 09:44 testXs
```

Try to read this file using any utility.

```
~/Cricket/Pakistan$ cat testX
```

```
aaabb Aaaaa
```

```
AAAAA
```

```
bbbcc Bbbbb
```

```
ff-ff Ccccc
```

```
CCCCC
```

```
ccedd Ddddd
```

```
DDDDD
```

Try to write into this file using any utility.

```
~/Cricket/Pakistan$ cat > testX
```

```
permission access
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 15

Change to the Cricket directory.

```
~/Cricket/Pakistan$ cd ..
```

Display access permissions for Pakistan.

```
~/Cricket$ ls -ld
```

```
drwxrwxr-x 6 student student 4096 Dec 24 09:24 [0m[01;34m.[0m
```

Remove all access permissions for the Pakistan directory.

```
~/Cricket$ chmod ugo-rwx Pakistan
```

Display access permissions for Pakistan.

```
~/Cricket$ ls -ld Pakistan
```

```
d----- 2 student student 4096 Dec 24 09:47 [0m[01;34mPakistan[0m
```

Try to read a file from Pakistan using any utility.

```
~/Cricket$ cat Pakistan/testX
```

```
cat: Pakistan/testX: Permission denied
```

Try to put a file into Pakistan using any utility.

```
~/Cricket$ cat > Pakistan/testX
```

```
bash: Pakistan/testX: Permission denied
```

Try to search in Pakistan using any command.

```
~/Cricket$ ls Pakistan
```

ls: cannot open directory 'Pakistan': Permission denied

Add read, write, and execute access permissions for yourself for the Pakistan directory.

~/Cricket\$ chmod u+rwX Pakistan

Display access permissions for Pakistan.

~/Cricket\$ ls -ld Pakistan

drwxrwxr-x 2 student student 4096 Dec 24 09:47 [0m[01;34mPakistan[0m

Try to read a file from Pakistan using any utility.

~/Cricket student@Islington:~/Cricket\$ cat Pakistan testX

permission overwrite

Try to put a file into Pakistan using any utility.

~/Cricketstudent@Islington:~/Cricket\$ cat > Pakistan fileAdd

File is added.

Try to search in Pakistan using any command.

~/Cricket\$ ls Pakistan

fileAddtestResult testX testY testZ

TOTAL MARKD AWARDED FOR TASK:

#TASK 16

- `grep bb testX`

~/Cricket/Bangladesh\$ `grep bb testX`

- `grep -v bb testX`

~/Cricket/Bangladesh\$ `grep -v bb testX`

- `grep -n bb testX`

~/Cricket/Bangladesh\$ `grep -n bb testX`

- `grep -l bb *`

~/Cricket/Bangladesh\$ `grep -l bb *`

- `grep -i bb *`

~/Cricket/Bangladesh\$ `grep -i bb *`

- `grep -i BB *`

```
~/Cricket/Bangladesh$ grep -i BB *
```

- `grep -c bb *`

```
~/Cricket/Bangladesh$ grep -c bb *
```

- `grep '^A' *`

```
~/Cricket/Bangladesh$ grep '^A' *
```

- `grep -n '^' testX`

```
~/Cricket/Bangladesh$ grep -n '^' testX
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 17

DEFINING ALIAS `ls-l` AND `ls-al`

```
~/Cricket/Bangladesh$ alias "ls-l=ls -l"
```

```
~/Cricket/Bangladesh$ ls-l
```

```
~/Cricket/Bangladesh$ alias "ls-al=ls -al"
```

```
~/Cricket/Bangladesh$ ls-al
```

USING THESE ALIAS IN HOME DIRECTORY

```
~student@Islington:~$ ls-l
```

```
~student@Islington:~$ ls-al
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 18

REMOVE THESE ALIASES.

```
~$ unalias ls-l
```

```
~$ unalias ls-al
```

SHOW THAT YOUR SYSTEM DOES NOT STORE THESE ALIASES.

```
~$ ls-l
```

```
No command 'ls-l' found.
```

```
~$ ls-al
```

No command 'lsal' found.

TOTAL MARKD AWARDED FOR TASK:

#TASK 19

DEFINE THE ALIASES AGAIN PRESERVING THEM FOR THE NEXT SESSION.

```
~$ nano .basrc
```

```
alias "lsl=ls -l"  
alias "lsal=ls -al"
```

SHOW THAT THE SYSTEM STILL KEEPS THESE ALIASES AND THEY WORK.

```
~student@Islington:~$ lsl
```

```
total 68
```

```
~student@Islington:~$ lsal
```

```
total 160
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 20

DEFINE THE NOALLF ALIAS FOR A GROUP OF COMMANDS COUNTING AND DISPLAYING THE NUMBER OF ALL FILES.

```
~student@Islington:~$ alias "noAllf=ls -a|wc -w"
```

PUT THE ALIAS IN YOUR ENVIRONMENTAL FILE.

```
~$ noAllf
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 21

DEFINE THE NOASUBSIR ALIAS FOR A GROUP OF COMMANDS COUNTING RECURSIVELY AND DISPLAYING THE NUMBER OF ALL SUB-DIRECTORIES.

```
~student@Islington:~$ alias "noAsubsir=ls -sR"
```

PUT THE ALIAS IN YOUR ENVIRONMENTAL FILE.

```
~$ noAsubsir
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 22

DEFINE THE NOACS ALIAS FOR A GROUP OF COMMANDS COUNTING AND DISPLAYING THE NUMBER OF ALL FILES IN YOUR ACCOUNT'S SPACE WITH THE NAMES STARTING WITH G, T, AND W.

```
alias noAcs='ls -aR | wc -l | grep ^[gtw]'\>>.rozeen
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 23

```
~$ noAllf
```

TOTAL MARKD AWARDED FOR TASK:

#TASK 24

~\$ noAsubsir

TOTAL MARKD AWARDED FOR TASK:

#TASK 25

~\$ noAcs

TOTAL MARKD AWARDED FOR TASK:

#TASK 26

LIST YOUR LAST COMMANDS EXECUTED GIVING THE HISTORY COMMAND.

~\$ history

TOTAL MARKD AWARDED FOR TASK:

#TASK 27

RE EXECUTE THE COMMAND GIVEN SEVEN COMMANDS AGO.

~\$ fc -e- 7

TOTAL MARKD AWARDED FOR TASK:

#TASK 28

RE EXECUTE THE LAST COMMAND WHICH NAME BEGINS WITH 'C'.

~\$ fc -e- 'c'

TOTAL MARKD AWARDED FOR TASK:

CONCLUSION

The tasks (i.e. 1-33) are completed successfully and are recorded in the script file named 11069803cw1.
.In addition, some rubbish is also cleaned before finalizing the report.

REFERENCES

- London Metropolitan University, (n.d.). *Operating System* [online] available at:<
http://learning.londonmet.ac.uk/computing/IC_Link/Comp/modules/cc2011/WeekByWeek.html
> [Accessed JAN 6, 2012]