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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.

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1 Introduction

UNIX is an operating system that was first developed in the 1960s and has been continuously developed ever since. Operating system refers to a series of programs that put your computer to work. It is a stable and multi-tasking system for servers and laptops.

UNIX systems also have a Microsoft Windows-like graphical user interface (GUI) that provides a user-friendly environment. However, knowledge of UNIX is required for operations not covered by a graphics program or when a Windows operating system is not available, such as during a telnet session. (Anon., 2018)

Aims and objectives:

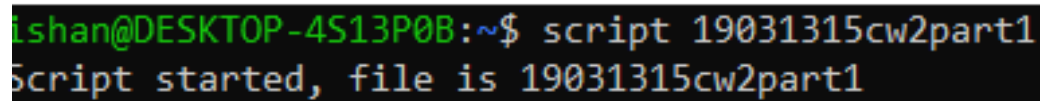
- Introduction to Unix.
- Learn basic Unix commands.
- Perform some simple file-based operations in the Unix shell.
- Know how to present courses in this module.
- Increase capacity management time by meeting deadlines. (Anon., 2021)

2 TRANSCRIPT

PROMPT COMMAND

1. Script started on 2021-04-06 16:54:08+05:45 [TERM="xterm-256color" TTY="/dev/tty1" COLUMNS="114" LINES="53"]
2. ishan@DESKTOP-4S13P0B:~\$ PS1='\$PWD>'
- 3.

Screenshot



```
ishan@DESKTOP-4S13P0B:~$ script 19031315cw2part1
Script started, file is 19031315cw2part1
```

Figure 1 script command



```
ishan@DESKTOP-4S13P0B:~$ PS1='$PWD>'
```

Figure 2 print working directory

#Task 1

1. /home/ishan>mkdir -p NBA/{Lakers,Miami,"Chicago Bulls","Brooklyn nets","Dallas Maverick"}
2. /home/ishan>tree

Output :

Mkdir command is used to create the directories with -p option, which helps to create parent and child directories.

Screenshot

```
/home/ishan>tree
.
├── 19031315cw2part1
└── NBA
    ├── Brooklyn nets
    ├── Chicago Bulls
    ├── Dallas Maverick
    ├── Lakers
    └── Miami

6 directories, 1 file
```

Figure 3 tree command

Tree command allows the user to view an easy-to-read list of files and folders.

#Task 2

Syntax: touch file1 file2

Two files such as file1 and file2 is made by using touch command in India directory.

1. Syntax: cd ../rm -ri Miami;ls
- 2.

This rm command is always used to delete and -i option is used to prompt question in every removal in rm command. Syntax: rm -ri script By asking question in removal this command is used to delete script directory.

1. /home/ishan>cd NBA/Miami;pwd;touch file1 file2
2. /home/ishan/NBA/Miami
3. /home/ishan/NBA/Miami>cd ../rm -ri Miami;ls
4. rm: descend into directory 'Miami'? y
5. rm: remove regular empty file 'Miami/file1'? y
6. rm: remove regular empty file 'Miami/file2'? y
7. rm: remove directory 'Miami'? y
8. 'Brooklyn nets' 'Chicago Bulls' 'Dallas Maverick' Lakers

```

/home/ishan/NBA/Miami>cd ../rm -ri Miami;ls
rm: descend into directory 'Miami'? y
rm: remove regular empty file 'Miami/file1'? y
rm: remove regular empty file 'Miami/file2'? y
rm: remove directory 'Miami'? y
rm: cannot remove 'Miami': Directory not empty
'Brooklyn nets' 'Chicago Bulls' 'Dallas Maverick' Lakers Miami
/home/ishan/NBA>rm -ri Miami
rm: descend into directory 'Miami'? y
rm: remove regular empty file 'Miami/file2'? y
rm: remove directory 'Miami'? y
/home/ishan/NBA>ls
'Brooklyn nets' 'Chicago Bulls' 'Dallas Maverick' Lakers

```

Figure 4 rm command

#Task 4

Syntax: `echo -e " Hello! I am big fan of NBA finals. \n 14 < (2+2)"`

This echo command is used to display the lines. `\n` is used to print the text in next line. And the `-e` option interprets backslash escapes.

And the path is changed to Lakers by using `cd` command and by using `pwd` command recent path is checked.

```

1. /home/ishan/NBA>echo -e "Hello! I am big fan of NBA finals. \n 14 <
   (2+2)"
2. Hello! I am big fan of NBA finals.
3.  14 < (2+2)
4. /home/ishan/NBA>pwd;cd Lakers;pwd
5. /home/ishan/NBA
6. /home/ishan/NBA/Lakers
7.

```

Screenshot

```

/home/ishan/NBA>echo -e "Hello! I am big fan of NBA finals. \n 14 < (2+2)"
Hello! I am big fan of NBA finals.
 14 < (2+2)

```

Figure 5 echo command


```
/home/ishan/NBA>pwd;cd Lakers;pwd  
/home/ishan/NBA  
/home/ishan/NBA/Lakers
```

Figure 6 `pwd;cd Lakers;ped`

#Task 5

Syntax: `pwd; cd; pwd`

This is a group of commands and is used to execute commands simultaneously. Each command is separated by a colon (;). Initially, the `pwd` command is executed and the current location is displayed, then the `cd` command changes the location to the home directory and `pwd` shows the current working directory as the user's home directory again.

1. `/home/ishan/NBA/Lakers>pwd;cd;pwd`
2. `/home/ishan/NBA/Lakers`
3. `/home/ishan`

Screenshot

```
/home/ishan/NBA/Lakers>pwd;cd;pwd  
/home/ishan/NBA/Lakers  
/home/ishan
```

Figure 7 `pwd;cd;pwd`

#Task 6

Syntax:

1. `/home/ishan>cd NBA/Lakers;pwd;cd ../pwd;cd ../pwd`
2. `/home/ishan/NBA/Lakers`
3. `/home/ishan/NBA`
4. `/home/ishan`

Screenshot

```
/home/ishan>cd NBA/Lakers;pwd;cd ../pwd;cd ../pwd
/home/ishan/NBA/Lakers
/home/ishan/NBA
/home/ishan
```

Figure 8 `cd NBA/Lakers;pwd;cd ../pwd;cd ../pwd`

This is the command group separated by colon (;). Before executing the command group in the first directory, it is modified in Lakers with the `cd` command. When a particular command group is first run, `pwd` displays the current working directory as Lakers. The `cd ..` command then changes the directory to the root directory, and the `pwd` command shows the location as the NBA directory again. The `cd ..` command again changes the location in the root directory, the home directory. And the `pwd` command shows the current corporate directory as the home directory,

#Task 7

- `Ls`

This `ls` command is used to show the files and folders.

- `ls -a`

This `ls -a` command is used to show all files including files which are not visible.

- `ls -al`

This `ls -al` command is used to show all files including files which are not visible with all information.

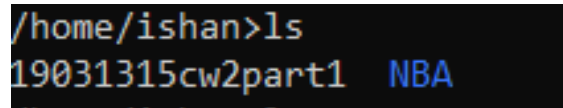
```
1. /home/ishan>ls
2. 19031315cw2part1 NBA
3. /home/ishan>ls -a
4. .  ..  19031315cw2part1  .bash_logout  .bashrc  NBA  .profile
5. /home/ishan>ls -al
6. total 20
7. drwxr-xr-x 1 ishan ishan  512 Apr  6 16:54 .
8. drwxr-xr-x 1 root  root   512 Apr  5 19:56 ..
9. -rw-r--r-- 1 ishan ishan 2048 Apr  6 16:58 19031315cw2part1
```

```

10. -rw----- 1 ishan ishan 5414 Apr  6 16:52 .bash_history
11. -rw-r--r-- 1 ishan ishan  220 Apr  5 19:56 .bash_logout
12. -rw-r--r-- 1 ishan ishan 3564 Apr  6 14:38 .bashrc
13. drwxr-xr-x 1 ishan ishan  512 Apr  5 20:25 .local
14. drwxr-xr-x 1 ishan ishan  512 Apr  6 16:56 NBA
15. -rw-r--r-- 1 ishan ishan  807 Apr  5 19:56 .profile

```

Screenshot:

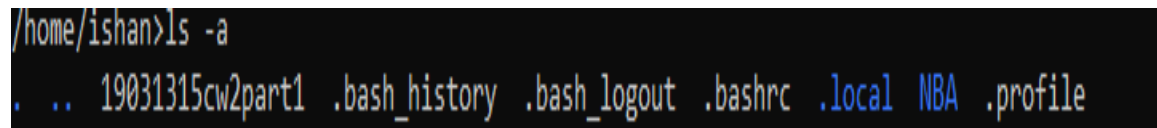


```

/home/ishan>ls
19031315cw2part1  NBA

```

Figure 9 ls



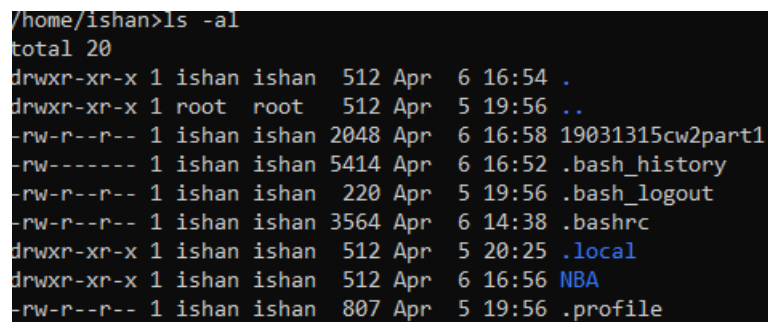
```

/home/ishan>ls -a
.  .. 19031315cw2part1 .bash_history .bash_logout .bashrc .local NBA .profile

```

Figure

10 ls -a



```

/home/ishan>ls -al
total 20
drwxr-xr-x 1 ishan ishan  512 Apr  6 16:54 .
drwxr-xr-x 1 root  root   512 Apr  5 19:56 ..
-rw-r--r-- 1 ishan ishan 2048 Apr  6 16:58 19031315cw2part1
-rw----- 1 ishan ishan 5414 Apr  6 16:52 .bash_history
-rw-r--r-- 1 ishan ishan  220 Apr  5 19:56 .bash_logout
-rw-r--r-- 1 ishan ishan 3564 Apr  6 14:38 .bashrc
drwxr-xr-x 1 ishan ishan  512 Apr  5 20:25 .local
drwxr-xr-x 1 ishan ishan  512 Apr  6 16:56 NBA
-rw-r--r-- 1 ishan ishan  807 Apr  5 19:56 .profile

```

Figure 11 ls -al

#Task 8

Syntax: cd; pwd; cd cw2; pwd

This is the command group. Each command is separated by a colon (;). Initially, the cd command changes the location in the home directory to what extent the pwd command represents the location of the current directory, the home directory. The NBA CD will still attempt to change the NBA directory.

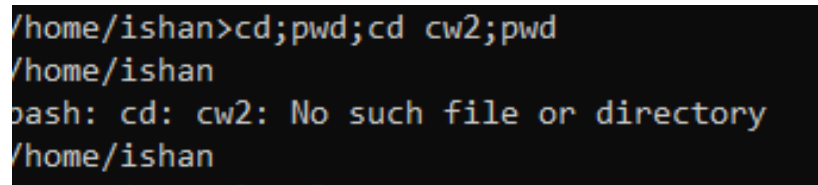
```

1. /home/ishan>cd;pwd;cd cw2;pwd

```

```
2. /home/ishan
3. bash: cd: cw2: No such file or directory
4. /home/ishan
5.
```

Screenshot



```
/home/ishan>cd;pwd;cd cw2;pwd
/home/ishan
bash: cd: cw2: No such file or directory
/home/ishan
```

Figure 12 cd;pwd;cd cw2;pwd

Syntax: ls -R

This command recursively lists all files, folders, and subfolders. Here, this command showed the folders and subfolders of your own library,

```
1. /home/ishan>ls -R
2. .:
3. 19031315cw2part1  NBA
4.
5. ./NBA:
6. 'Brooklyn nets'  'Chicago Bulls'  'Dallas Maverick'  Lakers
7.
8. './NBA/Brooklyn nets':
9.
10. './NBA/Chicago Bulls':
11.
12. './NBA/Dallas Maverick':
13.
14. ./NBA/Lakers:
15.
16.
```

Screenshot

```
/home/ishan>ls -R
.:
19031315cw2part1  NBA

./NBA:
'Brooklyn nets'  'Chicago Bulls'  'Dallas Maverick'  Lakers

'./NBA/Brooklyn nets':
'./NBA/Chicago Bulls':
'./NBA/Dallas Maverick':
./NBA/Lakers:
```

Figure 13 ls -R

#Task 9

Syntax: cd NBA/Chicago\ Bulls

This upper command is used to change the directory to the Chicago Bulls.

Syntax : touch testX testY testZ

The touch command is used to create a file of testX testY testZ

Syntax: cat > testX

This cat command is used to create a file named called testX in which text is write which is saved by ctrl + D button.

Syntax: cat > testY

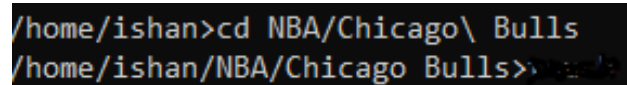
This cat command is used to create a file named called testY in which text is write which is saved by ctrl + D button.

Syntax: cat > testZ

This cat command is used to create a file named called testZ in which text is write which is saved by ctrl + D button.

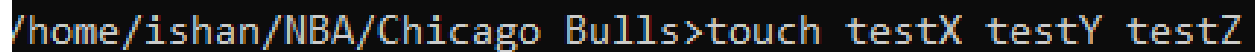
```
1. /home/ishan>cd NBA/Chicago\ Bulls
2. /home/ishan/NBA/Chicago Bulls>touch testX testY testZ
3. /home/ishan/NBA/Chicago Bulls>cat > testX
4. aaabb Aaaaa
5. AAAAA
6. bbbcc Bbbbb
7. BBBBB
8. ff-ff Ccccc
9. CCCCC
10. cccdd Ddddd
11. DDDDD
12. ^C
13. /home/ishan/NBA/Chicago Bulls>cat > testY
14. aaabb Aaaaa
15. AAAAA
16. bbbcc Bbbbb
17. BBBBB
18. ff-ff Ccccc
19. CCCCC
20. cccdd Ddddd
21. DDDDD
22. ^C
23. /home/ishan/NBA/Chicago Bulls>cat > testZ
24. aaabb Aaaaa
25. AAAAA
26. bbbcc Bbbbb
27. BBBBB
28. ff-ff Ccccc
29. CCCCC
30. cccdd Ddddd
31. DDDDD
32. ^C
```

Screenshot



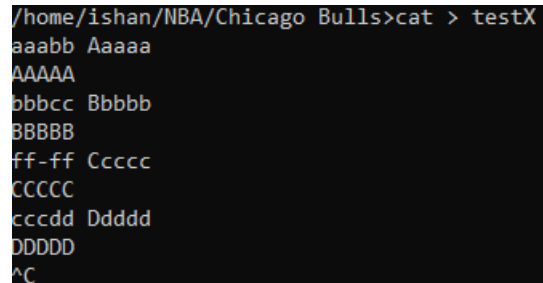
```
/home/ishan>cd NBA/Chicago\ Bulls
/home/ishan/NBA/Chicago Bulls>
```

Figure 14 cd NBA



```
/home/ishan/NBA/Chicago Bulls>touch testX testY testZ
```

Figure 15 touch command



```
/home/ishan/NBA/Chicago Bulls>cat > testX
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
cccdd Ddddd
DDDDD
^C
```

Figure 16 cat > testX

```
/home/ishan/NBA/Chicago Bulls>cat > testY
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD
^C
```

Figure 17 cat > testY

```
/home/ishan/NBA/Chicago Bulls>cat > testZ
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD
^C
```

Figure 18 cat > testZ

#Task 10

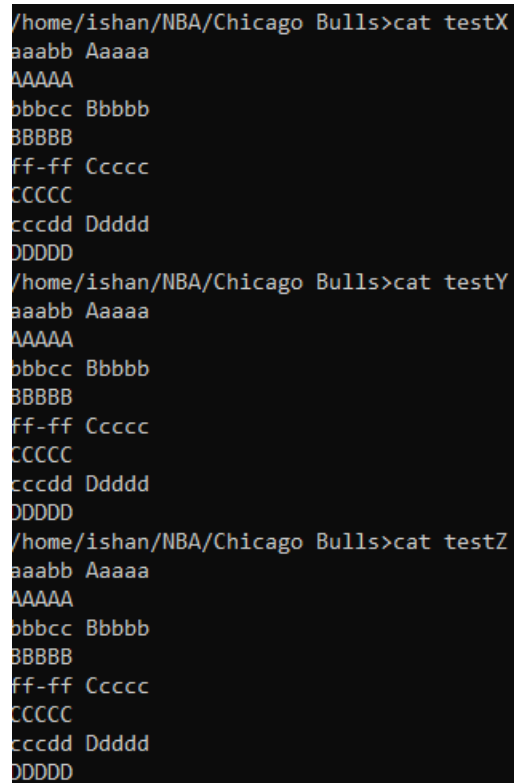
Syntax: cat testX

As shown below this command is used to read the testX testY testZ file.

```
1. /home/ishan/NBA/Chicago Bulls>cat testX
2. aaabb Aaaaa
3. AAAAA
4. bbbcc Bbbbb
5. BBBBB
6. ff-ff Ccccc
7. CCCCC
8. ccdd Ddddd
9. DDDDD
10. /home/ishan/NBA/Chicago Bulls>cat testY
11. aaabb Aaaaa
12. AAAAA
13. bbbcc Bbbbb
14. BBBBB
```

```
15. ff-ff Ccccc
16. CCCCC
17. cccdd Ddddd
18. DDDDD
19. /home/ishan/NBA/Chicago Bulls>cat testZ
20. aaabb Aaaaa
21. AAAAA
22. bbbcc Bbbbb
23. BBBBB
24. ff-ff Ccccc
25. CCCCC
26. cccdd Ddddd
27. DDDDD
```

Screenshot



```
/home/ishan/NBA/Chicago Bulls>cat testX
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDD
/home/ishan/NBA/Chicago Bulls>cat testY
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDD
/home/ishan/NBA/Chicago Bulls>cat testZ
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDD
```

Figure 19 cat testX testY testZ

#Task 11 and #Task 12


```
1. /home/ishan/NBA/Chicago Bulls>cp -p * /home/ishan/NBA/Brooklyn\ nets/
```

Screenshot

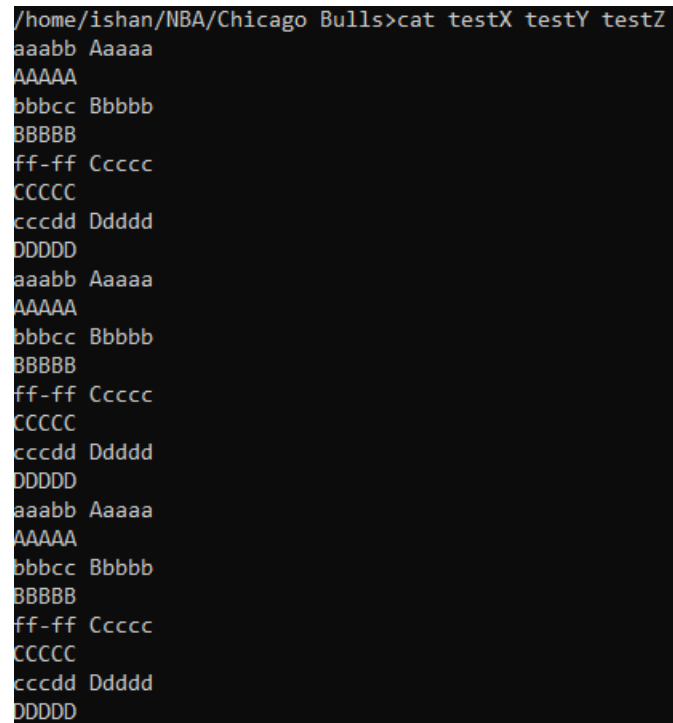
```
/home/ishan/NBA/Chicago Bulls>cp -p * /home/ishan/NBA/Brooklyn\ nets/
```

Figure 20 cp -p * /home/ishan/NBA/Brooklyn\ nets/

```
1. /root/NBA/Chicago Bulls>cat testX testY testZ
2. aaabb Aaaaa
3. AAAAA
4. bbbcc Bbbbb
5. BBBBB
6. ff-ff Ccccc
7. CCCCC
8. ccdd Ddddd
9. DDDDD
10. aaabb Aaaaa
11. AAAAA
12. bbbcc Bbbbb
13. ff-ff Ccccc
14. CCCCC
15. ccdd Ddddd
16. DDDDD
17. aaabb Aaaaa
18. AAAAA
19. bbbcc Bbbbb
20. BBBBB
21. ff-ff Ccccc
22. CCCCC
23. ccdd Ddddd
24. DDDDD
25. /root/NBA/Chicago Bulls>cat testX testY testZ>testResult
26. /root/NBA/Chicago Bulls>cat testResult
27. aaabb Aaaaa
28. AAAAA
29. bbbcc Bbbbb
30. BBBBB
31. ff-ff Ccccc
32. CCCCC
33. ccdd Ddddd
34. DDDDD
35. aaabb Aaaaa
36. AAAAA
37. bbbcc Bbbbb
38. ff-ff Ccccc
39. CCCCC
40. ccdd Ddddd
41. DDDDD
42. aaabb Aaaaa
43. AAAAA
44. bbbcc Bbbbb
45. BBBBB
46. ff-ff Ccccc
```

```
47. CCCCC
48. cccdd Ddddd
49. DDDDD
50.
```

Screenshot



```
/home/ishan/NBA/Chicago Bulls>cat testX testY testZ
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Dddd
DDDD
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Dddd
DDDD
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Dddd
DDDD
```

```
/home/ishan/NBA/Chicago Bulls>cat testX testY testZ>testResult
/home/ishan/NBA/Chicago Bulls>cat testResult
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD
```

Figure 21 cat testX testY testZ

#Task 13

```
1. /home/ishan/NBA/Chicago Bulls>cat test[XYZ]
2. aaabb Aaaaa
3. AAAAA
4. bbbcc Bbbbb
5. BBBBB
6. ff-ff Ccccc
7. CCCCC
8. ccdd Ddddd
9. DDDDD
10. aaabb Aaaaa
11. AAAAA
12. bbbcc Bbbbb
13. BBBBB
14. ff-ff Ccccc
15. CCCCC
16. ccdd Ddddd
17. DDDDD
18. aaabb Aaaaa
19. AAAAA
20. bbbcc Bbbbb
21. BBBBB
22. ff-ff Ccccc
23. CCCCC
```

```

24. cccdd Ddddd
25. DDDDD
26.

```

```

/home/ishan/NBA/Chicago Bulls>cat test[XYZ]
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD

```

Figure 22 cat test[XYZ]

#Task 14

```

1. /home/ishan/NBA/Chicago Bulls>ls -l
2. total 0
3. -rw-r--r-- 1 ishan ishan 216 Apr  6 17:01 testResult
4. -rw-r--r-- 1 ishan ishan  72 Apr  6 16:59 testX
5. -rw-r--r-- 1 ishan ishan  72 Apr  6 17:00 testY
6. -rw-r--r-- 1 ishan ishan  72 Apr  6 17:00 testZ
7. /home/ishan/NBA/Chicago Bulls>chmod 000 testX
8. /home/ishan/NBA/Chicago Bulls>ls -l testX
9. --rw----- 1 ishan ishan  72 Apr  6 16:59 testX
10. /home/ishan/NBA/Chicago Bulls>cat testX
11. cat: testX: Permission denied
12. /home/ishan/NBA/Chicago Bulls>nano testX
13. /home/ishan/NBA/Chicago Bulls>chmod u+rw testX
14. /home/ishan/NBA/Chicago Bulls>ls -l testX
15. -rw----- 1 ishan ishan  72 Apr  6 16:59 testX
16. /home/ishan/NBA/Chicago Bulls>cat testX
17. aaabb Aaaaa
18. AAAAA

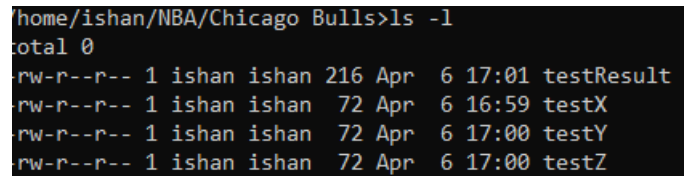
```

```

19. bbbcc Bbbbb
20. BBBBB
21. ff-ff Ccccc
22. CCCCC
23. ccdd Ddddd
24. DDDDD
25. /home/ishan/NBA/Chicago Bulls>nano testX
26.

```

Screenshot

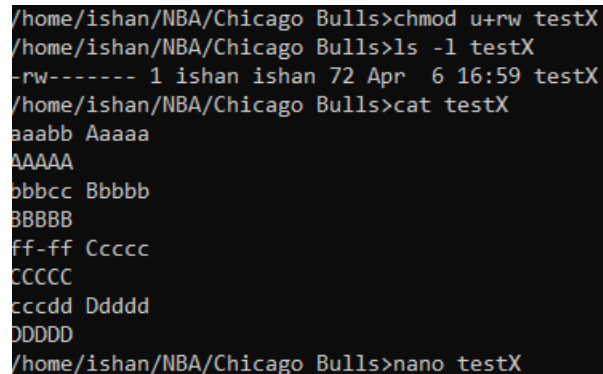


```

/home/ishan/NBA/Chicago Bulls>ls -l
total 0
-rw-r--r-- 1 ishan ishan 216 Apr  6 17:01 testResult
-rw-r--r-- 1 ishan ishan  72 Apr  6 16:59 testX
-rw-r--r-- 1 ishan ishan  72 Apr  6 17:00 testY
-rw-r--r-- 1 ishan ishan  72 Apr  6 17:00 testZ

```

Figure 23 ls -l



```

/home/ishan/NBA/Chicago Bulls>chmod u+rw testX
/home/ishan/NBA/Chicago Bulls>ls -l testX
-rw----- 1 ishan ishan 72 Apr  6 16:59 testX
/home/ishan/NBA/Chicago Bulls>cat testX
aaabb Aaaaa
AAAAA
bbbcc Bbbbb
BBBBB
ff-ff Ccccc
CCCCC
ccdd Ddddd
DDDDD
/home/ishan/NBA/Chicago Bulls>nano testX

```

Figure 24 chmod u+rw testX

#Task 15

```

1. /home/ishan/NBA/Chicago Bulls>cd ..
2. /home/ishan/NBA>chmod 000 Chicago\ Bulls
3. /home/ishan/NBA>cat /home/ishan/NBA/Chicago\ Bulls/testX
4. cat: '/home/ishan/NBA/Chicago Bulls/testX': Permission denied
5. /home/ishan/NBA>touch /home/ishan/NBA/Chicago\ Bulls/Newfile
6. touch: cannot touch '/home/ishan/NBA/Chicago Bulls/Newfile': Permission
   denied
7. /home/ishan/NBA>ls Chicago\ Bulls/
8. ls: cannot open directory 'Chicago Bulls/': Permission denied
9. /home/ishan/NBA>chmod u=rwx Chicago\ Bulls
10. /home/ishan/NBA>ls -l Chicago\ Bulls
11. total 0
12. -rw-r--r-- 1 ishan ishan 216 Apr  6 17:01 testResult

```

```

13. -rw----- 1 ishan ishan 72 Apr 6 16:59 testX
14. -rw-r--r-- 1 ishan ishan 72 Apr 6 17:00 testY
15. -rw-r--r-- 1 ishan ishan 72 Apr 6 17:00 testZ
16. /home/ishan/NBA>cat /home/ishan/NBA/Chicago\ Bulls/testX
17. aaabb Aaaaa
18. AAAAA
19. bbbcc Bbbbbb
20. BBBBBB
21. ff-ff Ccccc
22. CCCCC
23. cccdd Ddddd
24. DDDDD
25. /home/ishan/NBA>touch /home/ishan/NBA/Chicago\ Bulls/Newfile
26. /home/ishan/NBA>ls Chicago\ Bulls/
27. Newfile testResult testX testY testZ

```

Screenshot

```

/home/ishan/NBA/Chicago Bulls>cd ..
/home/ishan/NBA>chmod 000 Chicago\ Bulls
/home/ishan/NBA>cat /home/ishan/NBA/Chicago\ Bulls/testX
cat: '/home/ishan/NBA/Chicago Bulls/testX': Permission denied
/home/ishan/NBA>touch /home/ishan/NBA/Chicago\ Bulls/Newfile
touch: cannot touch '/home/ishan/NBA/Chicago Bulls/Newfile': Permission denied
/home/ishan/NBA>ls Chicago\ Bulls/
ls: cannot open directory 'Chicago Bulls/': Permission denied
/home/ishan/NBA>chmod u=rwx Chicago\ Bulls
/home/ishan/NBA>ls -l Chicago\ Bulls
total 0
-rw-r--r-- 1 ishan ishan 216 Apr 6 17:01 testResult
-rw----- 1 ishan ishan 72 Apr 6 16:59 testX
-rw-r--r-- 1 ishan ishan 72 Apr 6 17:00 testY
-rw-r--r-- 1 ishan ishan 72 Apr 6 17:00 testZ

```

Figure 25 task 15

#Task 16

```

1. /home/ishan/NBA>cd Brooklyn\ nets
2. /home/ishan/NBA/Brooklyn nets>grep bb testX
3. aaabb Aaaaa

```

```
4. bbbcc Bbbbb
5. /home/ishan/NBA/Brooklyn nets>grep -v bb testX
6. AAAAA
7. BBBBB
8. ff-ff Ccccc
9. CCCCC
10. cccdd Ddddd
11. DDDDD
12. /home/ishan/NBA/Brooklyn nets>grep -n bb testX
13. 1:aaabb Aaaaa
14. 3:bbbcc Bbbbb
15. /home/ishan/NBA/Brooklyn nets>grep -l bb *
16. testX
17. testY
18. testZ
19. /home/ishan/NBA/Brooklyn nets>grep -i bb *
20. testX:aaabb Aaaaa
21. testX:bbbcc Bbbbb
22. testX:BBBBB
23. testY:aaabb Aaaaa
24. testY:bbbcc Bbbbb
25. testY:BBBBB
26. testZ:aaabb Aaaaa
27. testZ:bbbcc Bbbbb
28. testZ:BBBBB
29. /home/ishan/NBA/Brooklyn nets>grep -i BB *
30. testX:aaabb Aaaaa
31. testX:bbbcc Bbbbb
32. testX:BBBBB
33. testY:aaabb Aaaaa
34. testY:bbbcc Bbbbb
35. testY:BBBBB
36. testZ:aaabb Aaaaa
37. testZ:bbbcc Bbbbb
38. testZ:BBBBB
39. /home/ishan/NBA/Brooklyn nets>grep -c bb *
40. testX:2
41. testY:2
42. testZ:2
43. /home/ishan/NBA/Brooklyn nets>grep '^A' *
44. testX:AAAAA
45. testY:AAAAA
46. testZ:AAAAA
47. /home/ishan/NBA/Brooklyn nets>grep -n '^' testX
48. 1:aaabb Aaaaa
49. 2:AAAAA
50. 3:bbbcc Bbbbb
51. 4:BBBBB
52. 5:ff-ff Ccccc
53. 6:CCCCC
54. 7:ccdd Ddddd
55. 8:DDDDD
```

Screenshot

```
/home/ishan/NBA>cd Brooklyn\ nets
/home/ishan/NBA/Brooklyn nets>grep bb testX
aaabb Aaaaa
bbbcc Bbbbb
/home/ishan/NBA/Brooklyn nets>grep -v bb testX
AAAAA
BBBBB
ff-ff Ccccc
CCCCC
ccdd Dddd
DDDD
/home/ishan/NBA/Brooklyn nets>grep -n bb testX
1:aaabb Aaaaa
3:bbbcc Bbbbb
/home/ishan/NBA/Brooklyn nets>grep -l bb *
testX
testY
testZ
/home/ishan/NBA/Brooklyn nets>grep -i bb *
testX:aaabb Aaaaa
testX:bbbcc Bbbbb
testX:BBBBB
testY:aaabb Aaaaa
testY:bbbcc Bbbbb
testY:BBBBB
testZ:aaabb Aaaaa
testZ:bbbcc Bbbbb
testZ:BBBBB
```

Figure 26 task 16

#Task 17

```
1. /home/ishan/NBA/Brooklyn nets>alias lsal='ls -al';alias lsa='ls -a'
2. /home/ishan/NBA/Brooklyn nets>alias
3. alias ls='ls --color=auto'
4. alias lsa='ls -a'
5. alias lsal='ls -al'
6. /home/ishan/NBA/Brooklyn nets>lsal /home/ishan/
7. total 32
```



```

8. drwxr-xr-x 1 ishan ishan 512 Apr 6 16:54 .
9. drwxr-xr-x 1 root root 512 Apr 5 19:56 ..
10. -rw-r--r-- 1 ishan ishan 10752 Apr 6 17:08 19031315cw2part1
11. -rw----- 1 ishan ishan 5414 Apr 6 16:52 .bash_history
12. -rw-r--r-- 1 ishan ishan 220 Apr 5 19:56 .bash_logout
13. -rw-r--r-- 1 ishan ishan 3564 Apr 6 14:38 .bashrc
14. drwxr-xr-x 1 ishan ishan 512 Apr 5 20:25 .local
15. drwxr-xr-x 1 ishan ishan 512 Apr 6 16:56 NBA
16. -rw-r--r-- 1 ishan ishan 807 Apr 5 19:56 .profile

```

Screenshot

```

/home/ishan/NBA/Brooklyn nets>alias lsal='ls -al';alias lsa='ls -a'
/home/ishan/NBA/Brooklyn nets>alias
alias ls='ls --color=auto'
alias lsa='ls -a'
alias lsal='ls -al'
/home/ishan/NBA/Brooklyn nets>lsal /home/ishan/
total 32
drwxr-xr-x 1 ishan ishan 512 Apr 6 16:54 .
drwxr-xr-x 1 root root 512 Apr 5 19:56 ..
-rw-r--r-- 1 ishan ishan 10752 Apr 6 17:08 19031315cw2part1
-rw----- 1 ishan ishan 5414 Apr 6 16:52 .bash_history
-rw-r--r-- 1 ishan ishan 220 Apr 5 19:56 .bash_logout
-rw-r--r-- 1 ishan ishan 3564 Apr 6 14:38 .bashrc
drwxr-xr-x 1 ishan ishan 512 Apr 5 20:25 .local
drwxr-xr-x 1 ishan ishan 512 Apr 6 16:56 NBA
-rw-r--r-- 1 ishan ishan 807 Apr 5 19:56 .profile
/home/ishan/NBA/Brooklyn nets>lsa /home/ishan/
. .. 19031315cw2part1 .bash_history .bash_logout .bashrc .local NBA .profile

```

Figure 27 task 17

#Task 18

```

1. /home/ishan/NBA/Brooklyn nets>lsa /r
2. home/ ishan/
3. /home/ishan/NBA/Brooklyn nets>lsa /r
4. home/ ishan/
5. /root/ishan/NBA/Brooklyn nets>lsa /home/ishan/NBA/
6. . .. 'Brooklyn nets' 'Chicago Bulls' 'Dallas Maverick' Lakers
7.

```

#Task 19

```

1. /home/ishan/NBA/Brooklyn nets>ls -la /home/ishan/
2. .      ..  19031315cw2part1  .bash_logout  .bashrc  .local  NBA  .profile
3.

```

Screenshot

```

/home/ishan/NBA/Brooklyn nets>cd
/home/ishan>nano .bashrc
/home/ishan>

```

Figure 28 cd

```

# Enable color support of ls and also add handy aliases
if [ -x /usr/bin/dircolors ]; then
    test -r ~/.dircolors && eval "$(dircolors -b ~/.dircolors)" || eval "$(dircolors -b)"
    alias ls='ls --color=auto'
    #alias dir='dir --color=auto'
    #alias vdir='vdir --color=auto'

    #alias grep='grep --color=auto'
    #alias fgrep='fgrep --color=auto'
    #alias egrep='egrep --color=auto'
fi

# colored GCC warnings and errors
export GCC_COLORS='error=01;31:warning=01;35:note=01;36:caret=01;32:locus=01:quote=01'

# some more ls aliases
alias ll='ls -l'
alias la='ls -A'
alias l='ls -CF'
alias lsall='ls -al'
alias lsa='ls -a'

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -x ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile)
# sources /etc/bash.bashrc).
if [ -n "$(type -t _complete)" ]; then
    if [ -x /usr/share/bash-completion/bash_completion ]; then
        . /usr/share/bash-completion/bash_completion
    elif [ -x /etc/bash_completion ]; then
        . /etc/bash_completion
    fi
fi

```

Figure 29 nano .bashrc

```
ishan@DESKTOP-4S13P0B:~$ . .bashrc
ishan@DESKTOP-4S13P0B:~$ PS1='$PWD>'
/home/ishan>alias
alias ls='ls --color=auto'
alias lsa='ls -a'
alias lsal='ls -al'
```

Figure 30. .bashrc

#Task 20

```
1. /home/ishan/NBA/Brooklyn nets>unalias lsal;unalias lsa;alias
2. alias ls='ls --color=auto'
3. /home/ishan/NBA/Brooklyn nets>nano .bashrc
4. /home/ishan/NBA/Brooklyn nets>alias noAllf='ls -a | wc -l'
5.
6.
```

Screenshot

```
/home/ishan>alias noAllf='ls -a | wc -l'
```

Figure 31 task 20

Task 21

Syntax: echo "alias noAsubsir='ls -aR | wc -l'"

Stores the alias in the .bashrc file. The ls -aR command recursively lists all directories and files, including invisible ones, and wc -l counts the total number of files.

```
1. /home/ishan/NBA/Brooklyn nets>alias noAsubsir='ls -aR | wc -l'
```

Screenshot

*Figure 32 task 21*

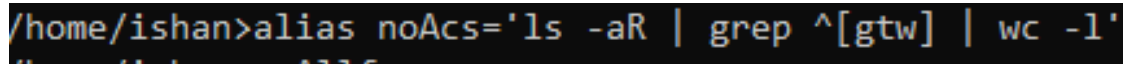
Task 22

Syntax: echo "alias noAcs='ls -aR | grep ^[gtw] | wc -l'"

NoAcs stores aliases in the .bashrc file. The ls -aR command recursively lists all files and directories, and the grep ^[gtw] command finds files and directories beginning with g, t and w. wc -l shows the number of files and folders.

```
1. /home/ishan/NBA/Brooklyn nets>alias noAcs='ls -aR | grep ^[gtw] | wc -l'
```

Screenshot

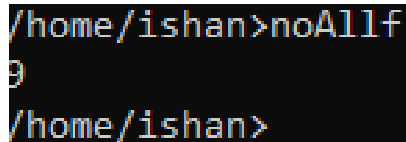
*Figure 33 task 22*

#Task 23

The noAllf alias shows the total number of files as 10 in the home directory.

```
1. /home/ishan/NBA/Brooklyn nets>noAllf
2. 9
3.
```

Screenshot

*Figure 34 noalif*

#Task 24

The alias `noAsubsir` recursively shows the total number of all files and subfolders in the home directory.

```
1. /home/ishan/NBA/Brooklyn nets>noAsubsir
2. 56
```

Screenshot

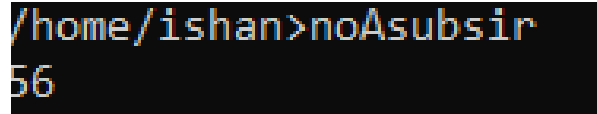
A terminal window with a black background. The prompt is `/home/ishan>` and the command `noAsubsir` has been entered. The output `56` is displayed on the next line.

Figure 35 `noAsubsir`

#Task 25

The `noAcs` alias counts the file and directory that appear recursively, starting with `g`.

```
1. /home/ishan/NBA/Brooklyn nets>noAcs
2. 7
```

Screenshot

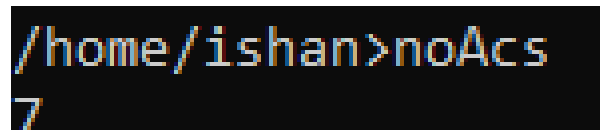
A terminal window with a black background. The prompt is `/home/ishan>` and the command `noAcs` has been entered. The output `7` is displayed on the next line.

Figure 36 `noAcs`

#Task 26

Syntax: `fc -l`

It shows the last commands of the history in the list format.

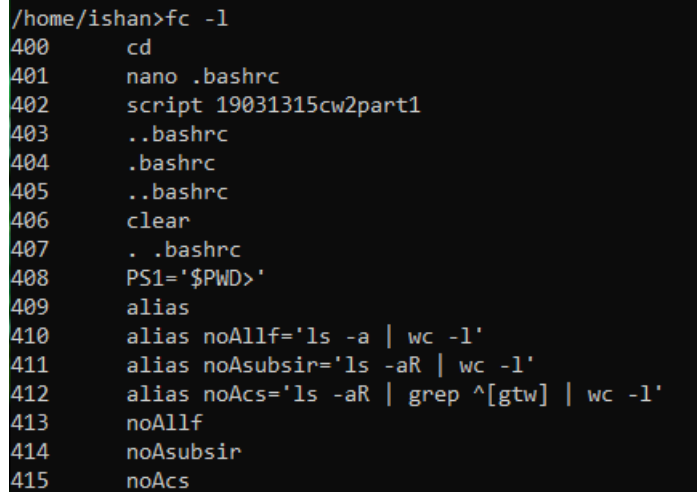
```
1. /home/ishan>fc -l
2. 400      cd
3. 401      nano .bashrc
4. 402      script 19031315cw2part1
5. 403      ..bashrc
6. 404      .bashrc
7. 405      ..bashrc
8. 406      clear
9. 407      . .bashrc
10. 408     PS1='$PWD>'
```

```

11. 409      alias
12. 410      alias noAllf='ls -a | wc -l'
13. 411      alias noAsubsir='ls -aR | wc -l'
14. 412      alias noAcs='ls -aR | grep ^[gtw] | wc -l'
15. 413      noAllf
16. 414      noAsubsir
17. 415      noAcs

```

Screenshot



```

/home/ishan>fc -l
400      cd
401      nano .bashrc
402      script 19031315cw2part1
403      ..bashrc
404      .bashrc
405      ..bashrc
406      clear
407      . .bashrc
408      PS1='$PWD>'
409      alias
410      alias noAllf='ls -a | wc -l'
411      alias noAsubsir='ls -aR | wc -l'
412      alias noAcs='ls -aR | grep ^[gtw] | wc -l'
413      noAllf
414      noAsubsir
415      noAcs

```

Figure 37 fc -l

#Task 27

Syntax: ! -8

This command reissues the command, provided there are eight commands for the first time in history.

```

1. /home/ishan>!-8
2. alias
3. alias ls='ls --color=auto'
4. alias lsa='ls -a'
5. alias lsal='ls -al'
6. alias noAcs='ls -aR | grep ^[gtw] | wc -l'
7. alias noAllf='ls -a | wc -l'
8. alias noAsubsir='ls -aR | wc -l'

```

Screenshot

```
/home/ishan>!-8
alias
alias ls='ls --color=auto'
alias lsa='ls -a'
alias lsal='ls -al'
alias noAcs='ls -aR | grep ^[gtw] | wc -l'
alias noAllf='ls -a | wc -l'
alias noAsubsir='ls -aR | wc -l'
/home/ishan>fc -e- m
```

Figure 38 !-8

#Task 28

Syntax: fc -e- m

The last command that starts with m this command pre publish it.

```
1. /home/ishan/NBA/Brooklyn nets>fc -e- m
2. mkdir -p NBA/{Lakers,Miami,"Chicago Bulls","Brooklyn nets","Dallas
   Maverick"}
3. /home/ishan/NBA/Brooklyn nets>exit
4. exit
5.
6. Script done on 2021-04-06 20:48:12+05:45 [COMMAND_EXIT_CODE="0"]
```

Screenshot

```
/home/ishan>fc -e- m
mkdir -p NBA/{Lakers,Miami,"Chicago Bulls","Brooklyn nets","Dallas Maverick"}
```

Figure 39 fc -e- m

Conclusion

Finally, task completed successfully. This course provides a great deal of knowledge about basic commands for Unix systems. This course covers the fundamental commands of Unix systems in great detail. Although they are simple, they are very important, which helps to get to know the Unix system. It also helped me learn to manage files in Unix and to understand this module and I learned to send the courses on time in the given deadline.

I have made many mistakes while completing the task and the same time saved the command which is also saved in it. So, I have removed the mistakes script code to make it smaller than 50 kb.

References

Anon., 2018. *ee.surrey*. [Online]

Available at: <http://www.ee.surrey.ac.uk/Teaching/Unix/unixintro.html>

Anon., 2021. *software testing help*. [Online]

Available at: <https://www.softwaretestinghelp.com/unix-introduction/>