

CDAC MUMBAI

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Concepts of Operating System

Assignment 2

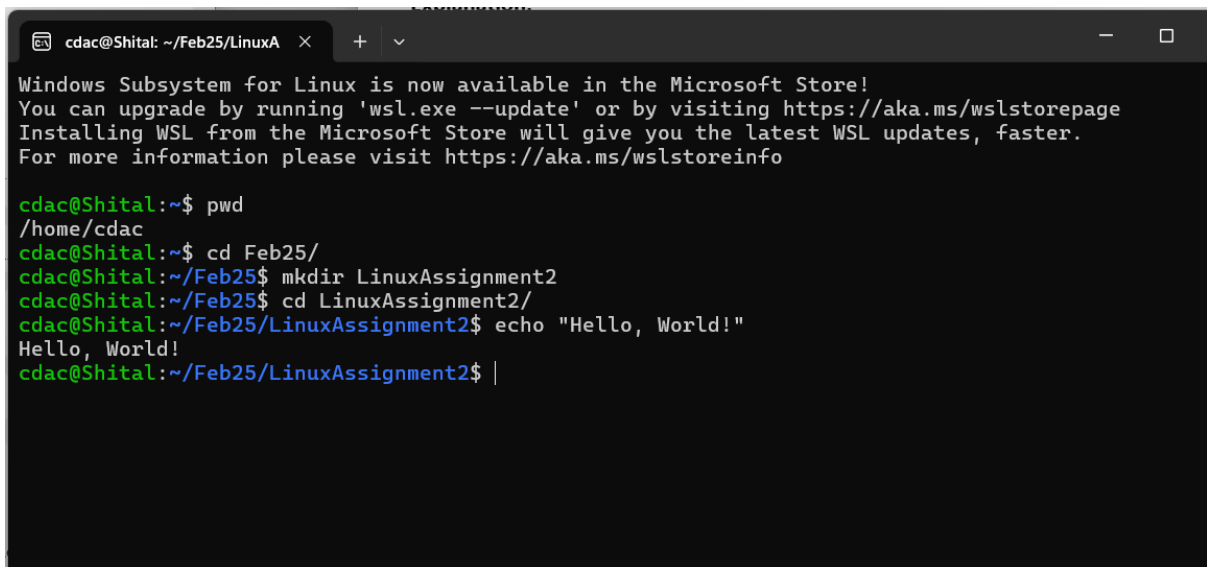
Part A

1) What will the following commands do?

1. `echo "Hello, World!"`

Ans: `cdac@Shital:~/Feb25/LinuxAssignment2$ echo "Hello, World!"`

Hello, World!



```
cdac@Shital: ~/Feb25/LinuxA x + v
Windows Subsystem for Linux is now available in the Microsoft Store!
You can upgrade by running 'wsl.exe --update' or by visiting https://aka.ms/wslstorepage
Installing WSL from the Microsoft Store will give you the latest WSL updates, faster.
For more information please visit https://aka.ms/wslstoreinfo

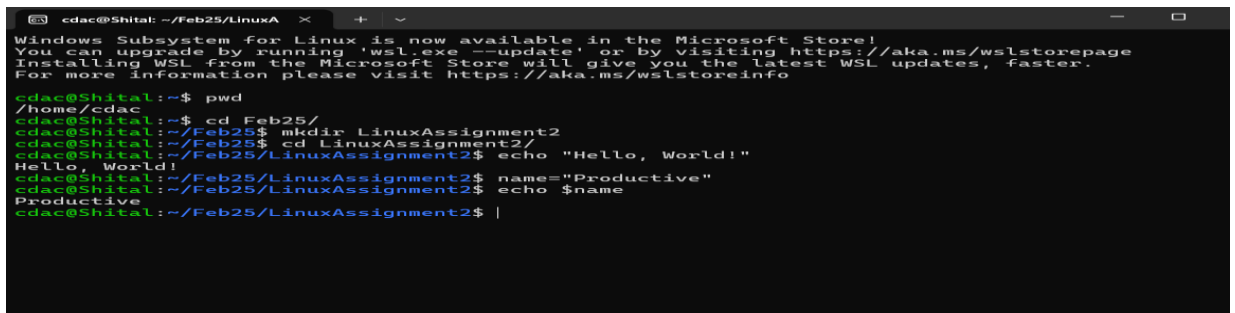
cdac@Shital:~$ pwd
/home/cdac
cdac@Shital:~$ cd Feb25/
cdac@Shital:~/Feb25$ mkdir LinuxAssignment2
cdac@Shital:~/Feb25$ cd LinuxAssignment2/
cdac@Shital:~/Feb25/LinuxAssignment2$ echo "Hello, World!"
Hello, World!
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

2. `name="Productive"`

Ans:. `cdac@Shital:~/Feb25/LinuxAssignment2$ name="Productive"`

`cdac@Shital:~/Feb25/LinuxAssignment2$ echo $name`

Productive

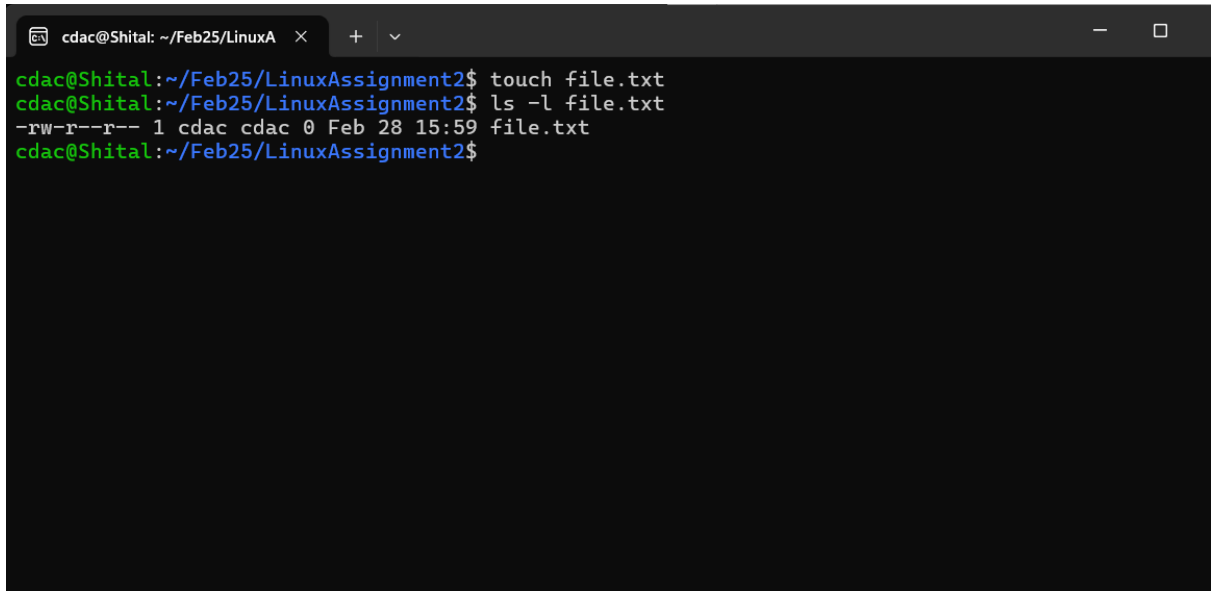


```
cdac@Shital: ~/Feb25/LinuxA x + v
Windows Subsystem for Linux is now available in the Microsoft Store!
You can upgrade by running 'wsl.exe --update' or by visiting https://aka.ms/wslstorepage
Installing WSL from the Microsoft Store will give you the latest WSL updates, faster.
For more information please visit https://aka.ms/wslstoreinfo

cdac@Shital:~$ pwd
/home/cdac
cdac@Shital:~$ cd Feb25/
cdac@Shital:~/Feb25$ mkdir LinuxAssignment2
cdac@Shital:~/Feb25$ cd LinuxAssignment2/
cdac@Shital:~/Feb25/LinuxAssignment2$ echo "Hello, World!"
Hello, World!
cdac@Shital:~/Feb25/LinuxAssignment2$ name="Productive"
cdac@Shital:~/Feb25/LinuxAssignment2$ echo $name
Productive
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

3. `touch file.txt`

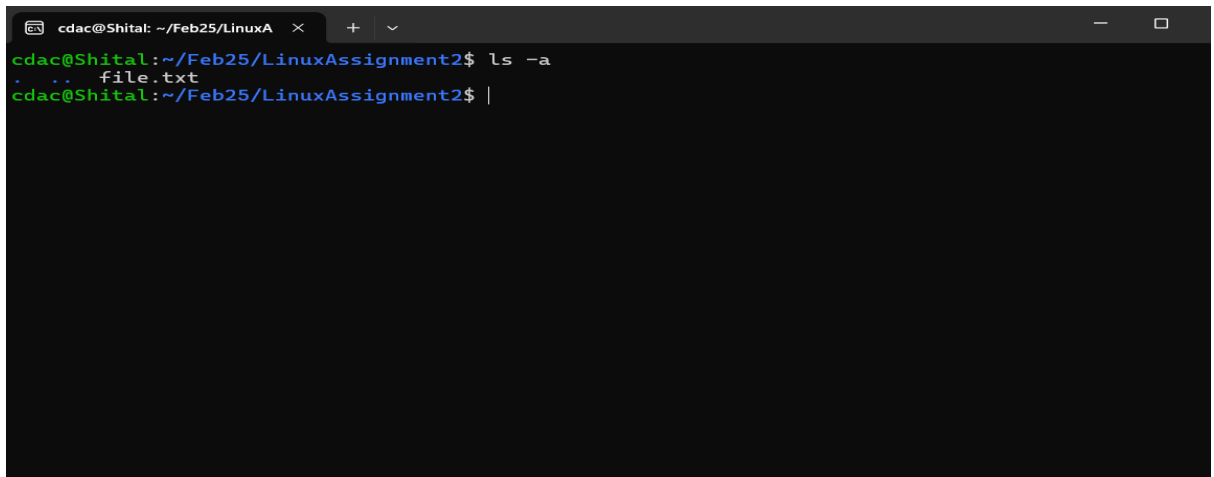
Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ touch file.txt
cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l file.txt
-rw-r--r-- 1 cdac cdac 0 Feb 28 15:59 file.txt
cdac@Shital:~/Feb25/LinuxAssignment2\$

A terminal window with a dark background. The prompt is 'cdac@Shital: ~/Feb25/LinuxA'. The user enters 'touch file.txt', then 'ls -l file.txt'. The output shows the file permissions as '-rw-r--r--' and the file size as '0'.

```
cdac@Shital:~/Feb25/LinuxAssignment2$ touch file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file.txt
-rw-r--r-- 1 cdac cdac 0 Feb 28 15:59 file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$
```

4. ls -a

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -a
. .. file.txt

A terminal window with a dark background. The prompt is 'cdac@Shital: ~/Feb25/LinuxA'. The user enters 'ls -a'. The output shows the hidden files '.' and '..' followed by 'file.txt'.

```
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -a
. .. file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

5. rm file.txt

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ rm file.txt
cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l file.txt
ls: cannot access 'file.txt': No such file or directory

```
cdac@Shital: ~/Feb25/LinuxA × + v
cdac@Shital:~/Feb25/LinuxAssignment2$ rm file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file.txt
ls: cannot access 'file.txt': No such file or directory
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

6. **cp file1.txt file2.txt**

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l file1.txt
ls: cannot access 'file1.txt': No such file or directory
cdac@Shital:~/Feb25/LinuxAssignment2\$ echo "Sample text" > file1.txt
cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l file1.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:10 file1.txt
cdac@Shital:~/Feb25/LinuxAssignment2\$ cat file.txt
cat: file.txt: No such file or directory
cdac@Shital:~/Feb25/LinuxAssignment2\$ cat file1.txt
Sample text
cdac@Shital:~/Feb25/LinuxAssignment2\$ cp file1.txt file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2\$ cat file2.txt
Sample text
cdac@Shital:~/Feb25/LinuxAssignment2\$ \

```
cdac@Shital: ~/Feb25/LinuxA × + v
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file1.txt
ls: cannot access 'file1.txt': No such file or directory
cdac@Shital:~/Feb25/LinuxAssignment2$ echo "Sample text" > file1.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file1.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:10 file1.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file.txt
cat: file.txt: No such file or directory
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt
Sample text
cdac@Shital:~/Feb25/LinuxAssignment2$ cp file1.txt file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file2.txt
Sample text
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

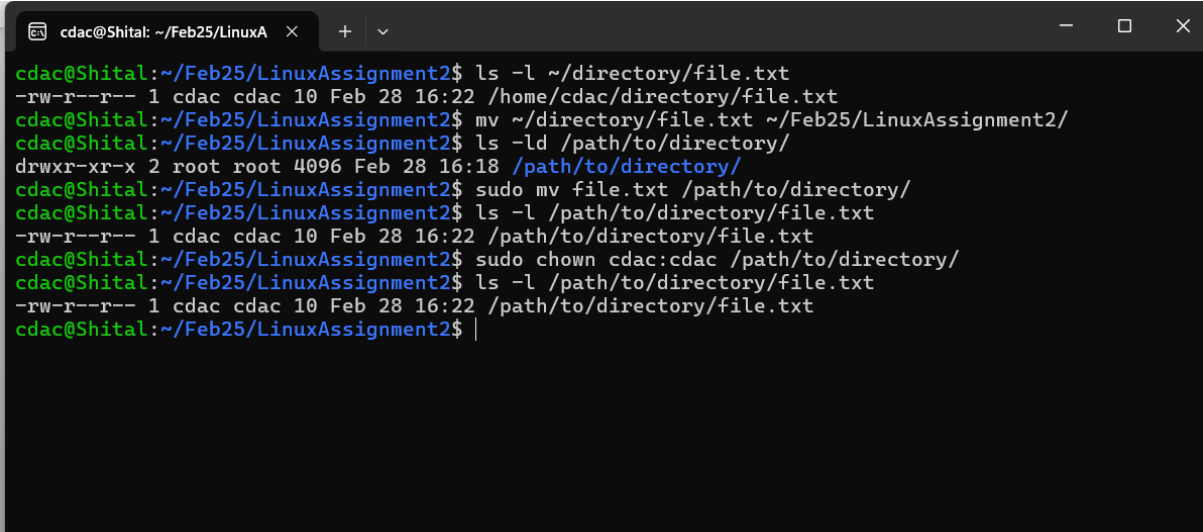
7. **mv file.txt /path/to/directory/**

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l ~/directory/file.txt
-rw-r--r-- 1 cdac cdac 10 Feb 28 16:22 /home/cdac/directory/file.txt
cdac@Shital:~/Feb25/LinuxAssignment2\$ mv ~/directory/file.txt
~/Feb25/LinuxAssignment2/

```

cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld /path/to/directory/
drwxr-xr-x 2 root root 4096 Feb 28 16:18 /path/to/directory/
cdac@Shital:~/Feb25/LinuxAssignment2$ sudo mv file.txt
/path/to/directory/
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l /path/to/directory/file.txt
-rw-r--r-- 1 cdac cdac 10 Feb 28 16:22 /path/to/directory/file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ sudo chown cdac:cdac
/path/to/directory/
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l /path/to/directory/file.txt
-rw-r--r-- 1 cdac cdac 10 Feb 28 16:22 /path/to/directory/file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$

```



```

cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l ~/directory/file.txt
-rw-r--r-- 1 cdac cdac 10 Feb 28 16:22 /home/cdac/directory/file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ mv ~/directory/file.txt ~/Feb25/LinuxAssignment2/
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld /path/to/directory/
drwxr-xr-x 2 root root 4096 Feb 28 16:18 /path/to/directory/
cdac@Shital:~/Feb25/LinuxAssignment2$ sudo mv file.txt /path/to/directory/
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l /path/to/directory/file.txt
-rw-r--r-- 1 cdac cdac 10 Feb 28 16:22 /path/to/directory/file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ sudo chown cdac:cdac /path/to/directory/
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l /path/to/directory/file.txt
-rw-r--r-- 1 cdac cdac 10 Feb 28 16:22 /path/to/directory/file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ |

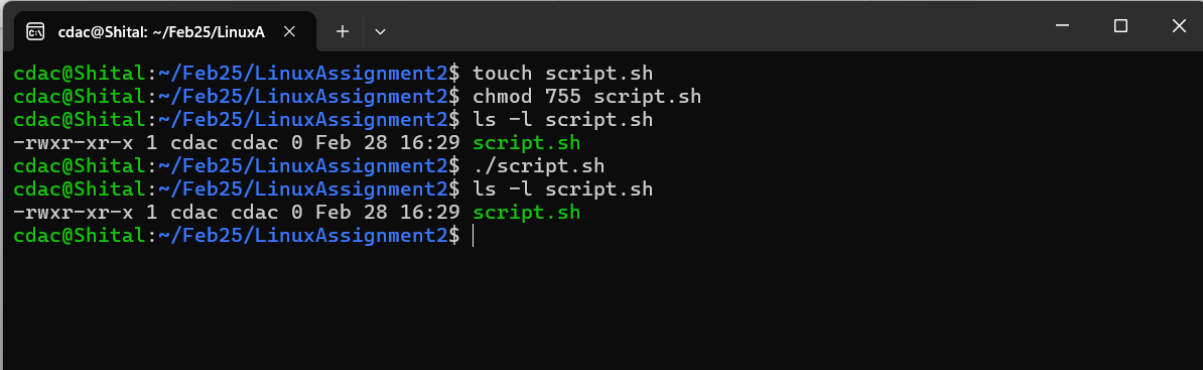
```

8. chmod 755 script.sh

```

Ans:. cdac@Shital:~/Feb25/LinuxAssignment2$ touch script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod 755 script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l script.sh
-rwxr-xr-x 1 cdac cdac 0 Feb 28 16:29 script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l script.sh
-rwxr-xr-x 1 cdac cdac 0 Feb 28 16:29 script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$

```



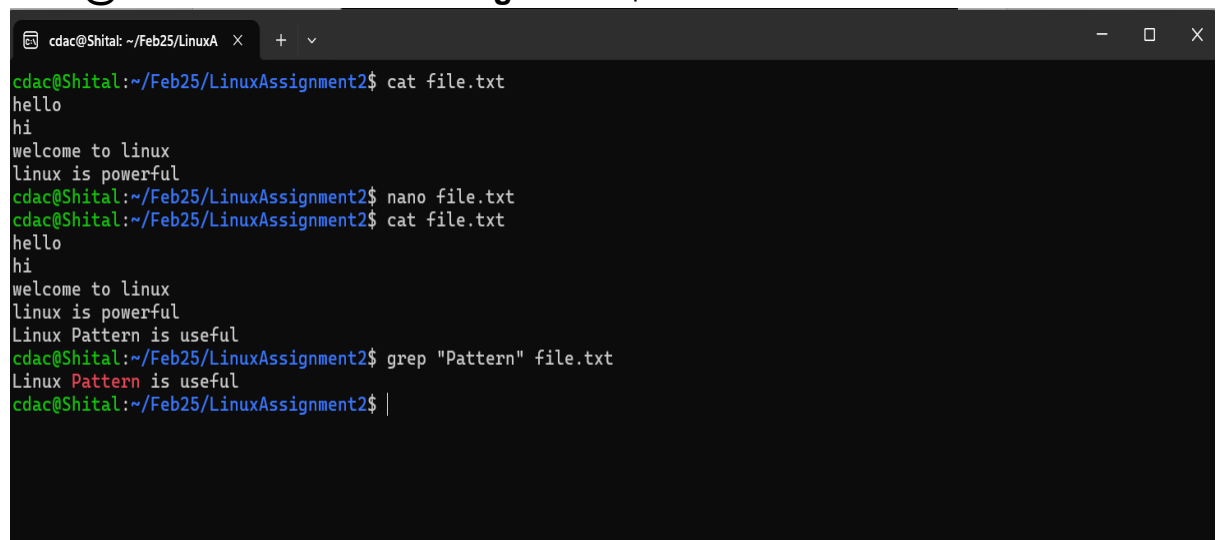
```

cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ touch script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod 755 script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l script.sh
-rwxr-xr-x 1 cdac cdac 0 Feb 28 16:29 script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l script.sh
-rwxr-xr-x 1 cdac cdac 0 Feb 28 16:29 script.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ |

```

9. grep "pattern" file.txt

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ cat file.txt
hello
hi
welcome to linux
linux is powerful
cdac@Shital:~/Feb25/LinuxAssignment2\$ nano file.txt
cdac@Shital:~/Feb25/LinuxAssignment2\$ cat file.txt
hello
hi
welcome to linux
linux is powerful
Linux Pattern is useful
cdac@Shital:~/Feb25/LinuxAssignment2\$ grep "Pattern" file.txt
Linux Pattern is useful
cdac@Shital:~/Feb25/LinuxAssignment2\$



The screenshot shows a terminal window with the following content:

```
cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file.txt
hello
hi
welcome to linux
linux is powerful
cdac@Shital:~/Feb25/LinuxAssignment2$ nano file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file.txt
hello
hi
welcome to linux
linux is powerful
Linux Pattern is useful
cdac@Shital:~/Feb25/LinuxAssignment2$ grep "Pattern" file.txt
Linux Pattern is useful
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

10. kill PID

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ ps aux

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME
root	1	0.0	0.0	1804	1188	?	SI	16:46	0:00
root	7	0.0	0.0	1812	88	?	Ss	16:46	0:00
root	8	0.0	0.0	1812	96	?	S	16:46	0:00
cdac	9	0.0	0.0	6200	5464	pts/0	Ss	16:46	0:00
cdac	148	0.0	0.0	8276	4092	pts/0	R+	16:55	0:00

cdac@Shital:~/Feb25/LinuxAssignment2\$ pgrep firefox
cdac@Shital:~/Feb25/LinuxAssignment2\$ htop
cdac@Shital:~/Feb25/LinuxAssignment2\$ ps aux | grep firefox
cdac 152 0.0 0.0 4084 2052 pts/0 S+ 16:56 0:00 grep --color=auto firefox

```

cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0  1804  1188 ?        Ssl   16:46   0:00 /init
root         7  0.0  0.0  1812    88 ?        Ss    16:46   0:00 /init
root         8  0.0  0.0  1812    96 ?        S     16:46   0:00 /init
cdac         9  0.0  0.0  6200  5464 pts/0    Ss    16:46   0:00 -bash
cdac        148  0.0  0.0  8276  4092 pts/0    R+    16:55   0:00 ps aux
cdac@Shital:~/Feb25/LinuxAssignment2$ pgrep firefox
cdac@Shital:~/Feb25/LinuxAssignment2$ htop
cdac@Shital:~/Feb25/LinuxAssignment2$ ps aux | grep firefox
cdac        152  0.0  0.0  4084  2052 pts/0    S+    16:56   0:00 grep --color=auto firefox
cdac@Shital:~/Feb25/LinuxAssignment2$ |

 0[          0.0%]  4[          0.0%]  8[          0.0%] 12[          0.0%]
 1[          0.0%]  5[          0.0%]  9[          0.0%] 13[          0.0%]
 2[          0.0%]  6[          0.0%] 10[         0.0%] 14[          0.0%]
 3[          0.0%]  7[          0.0%] 11[         0.0%] 15[          0.0%]
Mem[||||]          126M/7.62G Tasks: 5, 2 thr, 0 kthr; 1 running
Swp[          0K/2.00G Load average: 0.11 0.04 0.01
                               Uptime: 00:08:54

Main I/O
PID USER      PRI  NI  VIRT   RES   SHR  S  CPU% MEM%   TIME+  Command
 1 root        20   0  1804  1188  1104  S   0.0  0.0   0:00.11 /init
 5 root        20   0  1804  1188  1104  S   0.0  0.0   0:00.00 /init
 6 root        20   0  1804  1188  1104  S   0.0  0.0   0:00.00 /init
 7 root        20   0  1812    88     0  S   0.0  0.0   0:00.00 /init
 8 root        20   0  1812    96     0  S   0.0  0.0   0:00.11 /init
 9 cdac         20   0  6200  5464  3632  S   0.0  0.1   0:00.13 -bash
150 cdac         20   0  5532  3880  3080  R   0.0  0.0   0:00.00 htop

F1Help F2Setup F3Search F4Filter F5Tree F6SortBy F7Nice -F8Nice +F9Kill F10Quit

```

11. mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!" > file.txt && cat file.txt

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2/mydir/mydir/mydir\$
 mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!" > file.txt && cat file.txt
 Hello, World!

```

cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2/mydir/mydir/mydir$ mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!" > file.txt && cat file.txt
Hello, World!
cdac@Shital:~/Feb25/LinuxAssignment2/mydir/mydir/mydir/mydir$ |

```

12. ls -l | grep ".txt"

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l | grep ".txt"

```
-rw-r--r-- 1 cdac cdac 68 Feb 28 16:50 file.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:10 file1.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:11 file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$
```



```
cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l | grep ".txt"
-rw-r--r-- 1 cdac cdac 68 Feb 28 16:50 file.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:10 file1.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:11 file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

13. cat file1.txt file2.txt | sort | uniq

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l | grep ".txt"

```
-rw-r--r-- 1 cdac cdac 68 Feb 28 16:50 file.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:10 file1.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:11 file2.txt
```

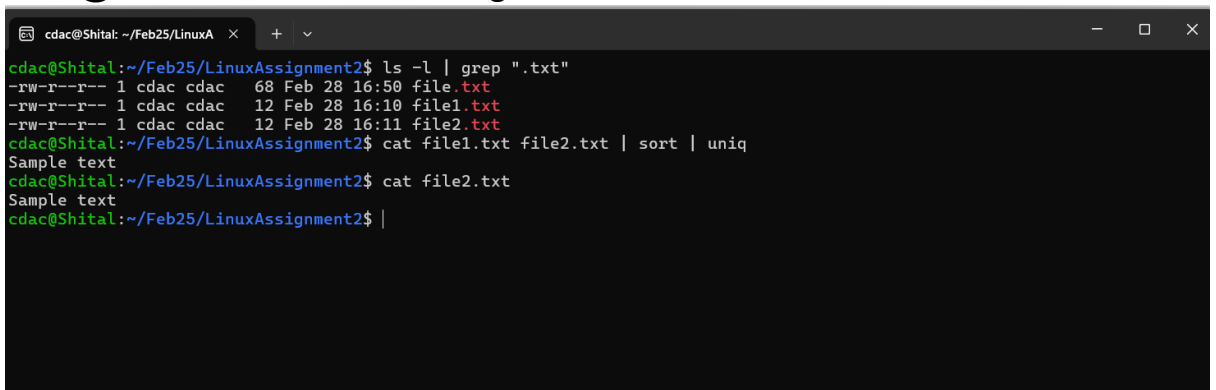
cdac@Shital:~/Feb25/LinuxAssignment2\$ cat file1.txt file2.txt | sort |
uniq

Sample text

cdac@Shital:~/Feb25/LinuxAssignment2\$ cat file2.txt

Sample text

cdac@Shital:~/Feb25/LinuxAssignment2\$



```
cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l | grep ".txt"
-rw-r--r-- 1 cdac cdac 68 Feb 28 16:50 file.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:10 file1.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:11 file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt file2.txt | sort | uniq
Sample text
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file2.txt
Sample text
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

14. ls -l | grep "^d"

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l | grep "^d"

```
drwxr-xr-x 3 cdac cdac 4096 Feb 28 17:04 mydir
```

```
cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l | grep ".txt"
-rw-r--r-- 1 cdac cdac 68 Feb 28 16:50 file.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:10 file1.txt
-rw-r--r-- 1 cdac cdac 12 Feb 28 16:11 file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt file2.txt | sort | uniq
Sample text
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file2.txt
Sample text
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l | grep "^d"
drwxr-xr-x 3 cdac cdac 4096 Feb 28 17:04 mydir
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

15. `grep -r "pattern" /path/to/directory/`

Ans.: `cdac@Shital:~/Feb25/LinuxAssignment2$ grep -r "pattern" /path/to/directory/`

`cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld /path/to/directory/`

`drwxr-xr-x 2 cdac cdac 4096 Feb 28 16:26 /path/to/directory/`

`cdac@Shital:~/Feb25/LinuxAssignment2$ echo "This is a test pattern" > /path/to/directory/file1.txt`

`cdac@Shital:~/Feb25/LinuxAssignment2$ echo "No match here" > /path/to/directory/file2.txt`

`cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l /path/to/directory/`

`total 12`

`-rw-r--r-- 1 cdac cdac 10 Feb 28 16:22 file.txt`

`-rw-r--r-- 1 cdac cdac 23 Feb 28 17:23 file1.txt`

`-rw-r--r-- 1 cdac cdac 14 Feb 28 17:23 file2.txt`

`cdac@Shital:~/Feb25/LinuxAssignment2$ grep -r "pattern" /path/to/directory/`

`/path/to/directory/file1.txt:This is a test pattern`

```
cdac@Shital:~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ grep -r "pattern" /path/to/directory/
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld /path/to/directory/
drwxr-xr-x 2 cdac cdac 4096 Feb 28 16:26 /path/to/directory/
cdac@Shital:~/Feb25/LinuxAssignment2$ echo "This is a test pattern" > /path/to/directory/file1.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ echo "No match here" > /path/to/directory/file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l /path/to/directory/
total 12
-rw-r--r-- 1 cdac cdac 10 Feb 28 16:22 file.txt
-rw-r--r-- 1 cdac cdac 23 Feb 28 17:23 file1.txt
-rw-r--r-- 1 cdac cdac 14 Feb 28 17:23 file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ grep -r "pattern" /path/to/directory/
/path/to/directory/file1.txt:This is a test pattern
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

16. `cat file1.txt file2.txt | sort | uniq -d`

`cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt file2.txt | sort | uniq -d`

`uniq: -d: No such file or directory`

`cdac@Shital:~/Feb25/LinuxAssignment2$ echo -e "apple\nbanana\ncherry\nmango" > file1.txt`


```
cdac@Shital:~/Feb25/LinuxAssignment2$ echo -e
"banana\nguava\ncherry\npeach" > file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt
apple
banana
cherry
mango
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file2.txt
banana
guava
cherry
peach
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt file2.txt | sort |
uniq -d
banana
cherry
cdac@Shital:~/Feb25/LinuxAssignment2$
```

```
cdac@Shital: ~/Feb25/LinuxA  x  +  v
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt file2.txt | sort | uniq -d
uniq: -d: No such file or directory
cdac@Shital:~/Feb25/LinuxAssignment2$ echo -e "apple\nbanana\ncherry\nmango" > file1.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ echo -e "banana\nguava\ncherry\npeach" > file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt
apple
banana
cherry
mango
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file2.txt
banana
guava
cherry
peach
cdac@Shital:~/Feb25/LinuxAssignment2$ cat file1.txt file2.txt | sort | uniq -d
banana
cherry
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

17. chmod 644 file.txt

```
Ans.: cdac@Shital:~/Feb25/LinuxAssignment2$ chmod 644 file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file.txt
-rw-r--r-- 1 cdac cdac 46 Feb 28 17:32 file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$
```

```
cdac@Shital: ~/Feb25/LinuxA  x  +  v
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod 644 file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file.txt
-rw-r--r-- 1 cdac cdac 46 Feb 28 17:32 file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

18. cp -r source_directory destination_directory

```

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2$ mkdir -p
source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ echo "Sample file" >
source_directory/sample.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cp -r source_directory
destination_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld source_directory
drwxr-xr-x 2 cdac cdac 4096 Feb 28 17:38 source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ find ~ -type d -name
"source_directory"
/home/cdac/Feb25/LinuxAssignment2/source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ cp -r /full/path/to/source
/full/path/to/destination
cp: cannot stat '/full/path/to/source': No such file or directory
cdac@Shital:~/Feb25/LinuxAssignment2$ cp -r source_directory
destination_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld destination_directory
drwxr-xr-x 3 cdac cdac 4096 Feb 28 17:40 destination_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld source_directory
drwxr-xr-x 2 cdac cdac 4096 Feb 28 17:38 source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l source_directory
total 4
-rw-r--r-- 1 cdac cdac 12 Feb 28 17:38 sample.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l destination_directory
total 8
-rw-r--r-- 1 cdac cdac 12 Feb 28 17:38 sample.txt
drwxr-xr-x 2 cdac cdac 4096 Feb 28 17:40 source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$

```

```

cdac@Shital:~/Feb25/LinuxAssignment2$ mkdir -p source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ echo "Sample file" > source_directory/sample.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ cp -r source_directory destination_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld source_directory
drwxr-xr-x 2 cdac cdac 4096 Feb 28 17:38 source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ find ~ -type d -name "source_directory"
/home/cdac/Feb25/LinuxAssignment2/source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ cp -r /full/path/to/source /full/path/to/destination
cp: cannot stat '/full/path/to/source': No such file or directory
cdac@Shital:~/Feb25/LinuxAssignment2$ cp -r source_directory destination_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld destination_directory
drwxr-xr-x 3 cdac cdac 4096 Feb 28 17:40 destination_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -ld source_directory
drwxr-xr-x 2 cdac cdac 4096 Feb 28 17:38 source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l source_directory
total 4
-rw-r--r-- 1 cdac cdac 12 Feb 28 17:38 sample.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l destination_directory
total 8
-rw-r--r-- 1 cdac cdac 12 Feb 28 17:38 sample.txt
drwxr-xr-x 2 cdac cdac 4096 Feb 28 17:40 source_directory
cdac@Shital:~/Feb25/LinuxAssignment2$ |

```

19. find /path/to/search -name "*.txt"

```

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2$ mkdir -p search
cdac@Shital:~/Feb25/LinuxAssignment2$ touch search/file1.txt
search/file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ find search -name "*.txt"
search/file1.txt
search/file2.txt

```

```
cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ mkdir -p search
cdac@Shital:~/Feb25/LinuxAssignment2$ touch search/file1.txt search/file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ find search -name "*.txt"
search/file1.txt
search/file2.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ find ~/ -name "*.txt"
/home/cdac/Documents/test_directory/file.txt
/home/cdac/LinuxAssignment/docs/fruit_count.txt
/home/cdac/LinuxAssignment/docs/duplicate.txt
/home/cdac/LinuxAssignment/docs/fruit.txt
/home/cdac/LinuxAssignment/docs/data.txt
/home/cdac/LinuxAssignment/docs/numbers.txt
/home/cdac/LinuxAssignment/docs/unique.txt
/home/cdac/LinuxAssignment/docs/file1.txt
/home/cdac/LinuxAssignment/docs/file2.txt
/home/cdac/LinuxAssignment/docs/output.txt
/home/cdac/LinuxAssignment/docs/input.txt
/home/cdac/LinuxAssignment/extracted_docs/docs/file2.txt
/home/cdac/LinuxAssignment/file1.txt
/home/cdac/LinuxAssignment/file2.txt
/home/cdac/myfile.txt
/home/cdac/Feb25/file.txt
/home/cdac/Feb25/somefile.txt
/home/cdac/Feb25/OSDAY-2/xyz.txt
/home/cdac/Feb25/OSDAY-2/abc.txt
/home/cdac/Feb25/OSDAY-2/File.txt
/home/cdac/Feb25/LinuxAssignment2/destination_directory/sample.txt
/home/cdac/Feb25/LinuxAssignment2/destination_directory/source_directory/sample.txt
/home/cdac/Feb25/LinuxAssignment2/file.txt
/home/cdac/Feb25/LinuxAssignment2/mydir/file.txt
/home/cdac/Feb25/somefile.txt
/home/cdac/Feb25/OSDAY-2/xyz.txt
/home/cdac/Feb25/OSDAY-2/abc.txt
/home/cdac/Feb25/OSDAY-2/File.txt
/home/cdac/Feb25/LinuxAssignment2/destination_directory/sample.txt
/home/cdac/Feb25/LinuxAssignment2/destination_directory/source_directory/sample.txt
/home/cdac/Feb25/LinuxAssignment2/file.txt
/home/cdac/Feb25/LinuxAssignment2/mydir/file.txt
/home/cdac/Feb25/LinuxAssignment2/mydir/mydir/file.txt
/home/cdac/Feb25/LinuxAssignment2/mydir/mydir/mydir/file.txt
/home/cdac/Feb25/LinuxAssignment2/mydir/mydir/mydir/file.txt
/home/cdac/Feb25/LinuxAssignment2/file1.txt
/home/cdac/Feb25/LinuxAssignment2/file2.txt
/home/cdac/Feb25/LinuxAssignment2/source_directory/sample.txt
/home/cdac/Feb25/LinuxAssignment2/search/file1.txt
/home/cdac/Feb25/LinuxAssignment2/search/file2.txt
/home/cdac/xyz.txt
/home/cdac/abc.txt
/home/cdac/myfile1.txt
/home/cdac/myfile2.txt
```

20. chmod u+x file.txt

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ chmod u+x file.txt

cdac@Shital:~/Feb25/LinuxAssignment2\$ ls -l file.txt

-rwxr--r-- 1 cdac cdac 46 Feb 28 17:32 file.txt

cdac@Shital:~/Feb25/LinuxAssignment2\$

```
cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod u+x file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file.txt
-rwxr--r-- 1 cdac cdac 46 Feb 28 17:32 file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

21. echo \$PATH

cdac@Shital:~/Feb25/LinuxAssignment2\$ chmod u+x file.txt

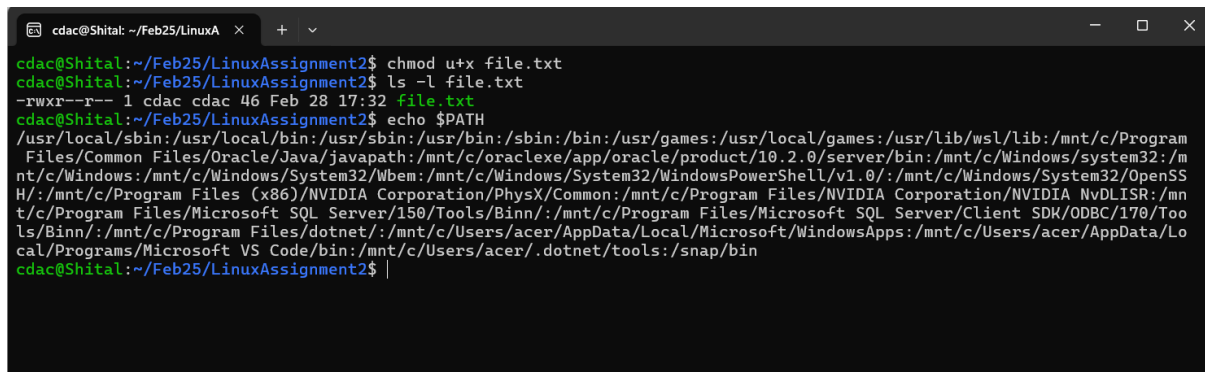
```
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file.txt
```

```
-rwxr--r-- 1 cdac cdac 46 Feb 28 17:32 file.txt
```

```
cdac@Shital:~/Feb25/LinuxAssignment2$ echo $PATH
```

```
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/usr/lib/wsl/lib:/mnt/c/Program Files/Common Files/Oracle/Java/javapath:/mnt/c/oracle/xe/app/oracle/product/10.2.0/server/bin:/mnt/c/Windows/system32:/mnt/c/Windows:/mnt/c/Windows/System32/Wbem:/mnt/c/Windows/System32/WindowsPowerShell/v1.0:/mnt/c/Windows/System32/OpenSSH:/mnt/c/Program Files (x86)/NVIDIA Corporation/PhysX/Common:/mnt/c/Program Files/NVIDIA Corporation/NVIDIA NvDLISR:/mnt/c/Program Files/Microsoft SQL Server/150/Tools/Binn:/mnt/c/Program Files/Microsoft SQL Server/Client SDK/ODBC/170/Tools/Binn:/mnt/c/Program Files/dotnet:/mnt/c/Users/acer/AppData/Local/Microsoft/WindowsApps:/mnt/c/Users/acer/AppData/Local/Programs/Microsoft VS Code/bin:/mnt/c/Users/acer/.dotnet/tools:/snap/bin
```

```
cdac@Shital:~/Feb25/LinuxAssignment2$
```



```
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod u+x file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ ls -l file.txt
-rwxr--r-- 1 cdac cdac 46 Feb 28 17:32 file.txt
cdac@Shital:~/Feb25/LinuxAssignment2$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/usr/lib/wsl/lib:/mnt/c/Program Files/Common Files/Oracle/Java/javapath:/mnt/c/oracle/xe/app/oracle/product/10.2.0/server/bin:/mnt/c/Windows/system32:/mnt/c/Windows:/mnt/c/Windows/System32/Wbem:/mnt/c/Windows/System32/WindowsPowerShell/v1.0:/mnt/c/Windows/System32/OpenSSH:/mnt/c/Program Files (x86)/NVIDIA Corporation/PhysX/Common:/mnt/c/Program Files/NVIDIA Corporation/NVIDIA NvDLISR:/mnt/c/Program Files/Microsoft SQL Server/150/Tools/Binn:/mnt/c/Program Files/Microsoft SQL Server/Client SDK/ODBC/170/Tools/Binn:/mnt/c/Program Files/dotnet:/mnt/c/Users/acer/AppData/Local/Microsoft/WindowsApps:/mnt/c/Users/acer/AppData/Local/Programs/Microsoft VS Code/bin:/mnt/c/Users/acer/.dotnet/tools:/snap/bin
cdac@Shital:~/Feb25/LinuxAssignment2$
```

Part B

Identify True or False:

1. ls is used to list files and directories in a directory.

Ans.: True

2. mv is used to move files and directories.

Ans.: True

3. cd is used to copy files and directories.

Ans.: False

4. pwd stands for "print working directory" and displays the current directory.

Ans.: True

5. `grep` is used to search for patterns in files.

Ans.: True

6. `chmod 755 file.txt` gives read, write, and execute permissions to the owner, and read and execute permissions to group and others.

Ans.: True

7. `mkdir -p directory1/directory2` creates nested directories, creating `directory2` inside `directory1`

if `directory1` does not exist.

Ans.: True

8. `rm -rf file.txt` deletes a file forcefully without confirmation.

Ans.: True

*****Identify the Incorrect Commands:*****

1. `chmodx` is used to change file permissions.

Ans.: Correct command: `chmod` (not `chmodx`).

2. `cpy` is used to copy files and directories.

Ans.: Correct command: `cp` (not `cpy`).

3. `mkfile` is used to create a new file.

Ans.: Correct commands:

- `touch filename` → Creates an empty file.
- `echo "text" > filename` → Creates a file with text.

4. `catx` is used to concatenate files.

Ans.: Correct command: `cat` (not `catx`).

5. `rn` is used to rename files.

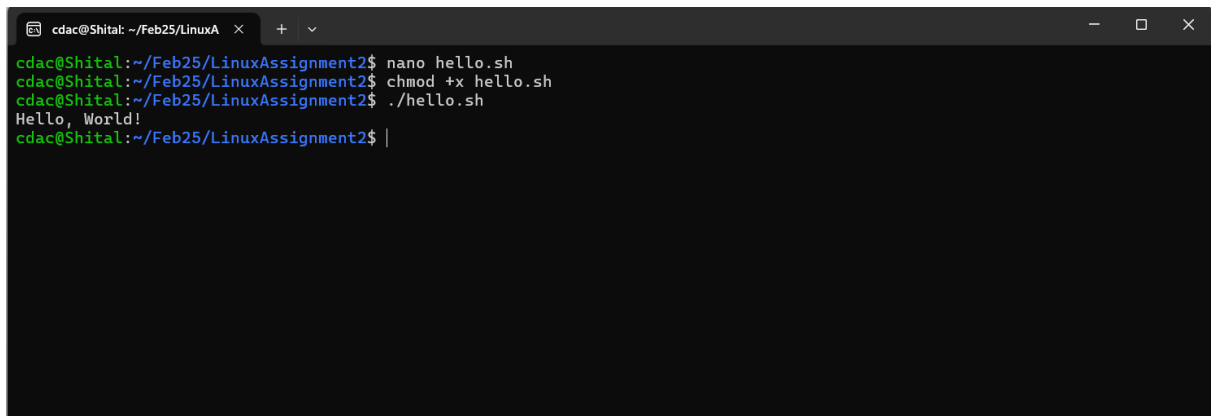
Ans.: Correct command: `mv oldname newname` (Linux does not have an `rn` command)

Part C

Question 1: Write a shell script that prints "Hello, World!" to the terminal.

Ans.: `cdac@Shital:~/Feb25/LinuxAssignment2$ nano hello.sh`
`cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x hello.sh`
`cdac@Shital:~/Feb25/LinuxAssignment2$./hello.sh`
Hello, World!

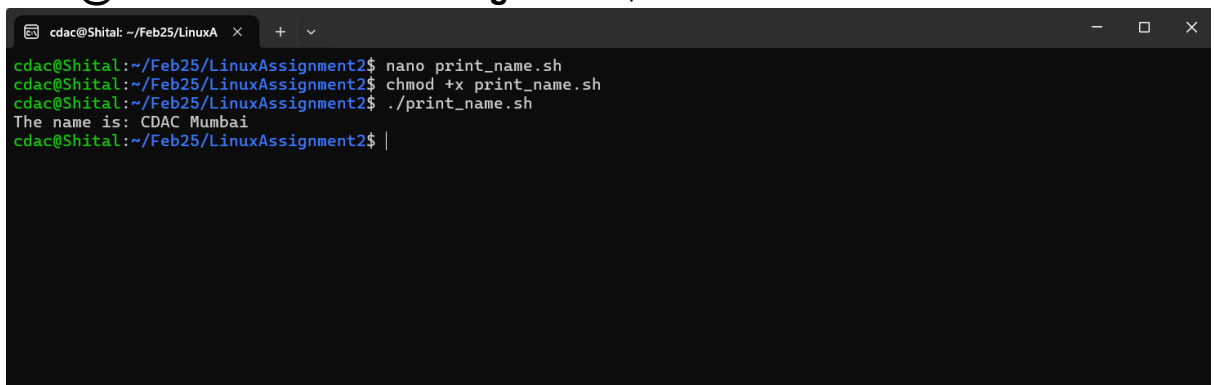
cdac@Shital:~/Feb25/LinuxAssignment2\$



```
cdac@Shital:~/Feb25/LinuxAssignment2$ nano hello.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x hello.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./hello.sh
Hello, World!
cdac@Shital:~/Feb25/LinuxAssignment2$
```

Question 2: Declare a variable named "name" and assign the value "CDAC Mumbai" to it. Print the value of the variable.

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ nano print_name.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$ chmod +x print_name.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$./print_name.sh
The name is: CDAC Mumbai
cdac@Shital:~/Feb25/LinuxAssignment2\$



```
cdac@Shital:~/Feb25/LinuxAssignment2$ nano print_name.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x print_name.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./print_name.sh
The name is: CDAC Mumbai
cdac@Shital:~/Feb25/LinuxAssignment2$
```

Question 3: Write a shell script that takes a number as input from the user and prints it.

Ans.:
cdac@Shital:~/Feb25/LinuxAssignment2\$ nano print_number.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$ chmod +x print_number.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$./print_number.sh
Enter a number:
10
You entered: 10
cdac@Shital:~/Feb25/LinuxAssignment2\$

```
cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ nano print_number.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x print_number.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./print_number.sh
Enter a number:
10
You entered: 10
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

Question 4: Write a shell script that performs addition of two numbers (e.g., 5 and 3) and prints the result.

Ans.:

```
cdac@Shital:~/Feb25/LinuxAssignment2$ nano add_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x add_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./add_numbers.sh
The sum of 5 and 3 is: 8
cdac@Shital:~/Feb25/LinuxAssignment2$
```

```
cdac@Shital: ~/Feb25/LinuxA x + v
cdac@Shital:~/Feb25/LinuxAssignment2$ nano add_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x add_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./add_numbers.sh
The sum of 5 and 3 is: 8
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

Question 5: Write a shell script that takes a number as input and prints "Even" if it is even, otherwise prints "Odd".

Ans.:

```
cdac@Shital:~/Feb25/LinuxAssignment2$ nano even_odd.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./even_odd.sh
-bash: ./even_odd.sh: Permission denied
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x even_odd.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./even_odd.sh
Enter a number:
10
Even
cdac@Shital:~/Feb25/LinuxAssignment2$ ./even_odd.sh
Enter a number:
5
Odd
cdac@Shital:~/Feb25/LinuxAssignment2$
```

```
cdac@Shital: ~/Feb25/LinuxA × + v
cdac@Shital:~/Feb25/LinuxAssignment2$ nano even_odd.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./even_odd.sh
-bash: ./even_odd.sh: Permission denied
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x even_odd.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./even_odd.sh
Enter a number:
10
Even
cdac@Shital:~/Feb25/LinuxAssignment2$ ./even_odd.sh
Enter a number:
5
Odd
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

Question 6: Write a shell script that uses a for loop to print numbers from 1 to 5.

Ans.:

```
cdac@Shital:~/Feb25/LinuxAssignment2$ nano print_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x print_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./print_numbers.sh
```

1
2
3
4
5

```
cdac@Shital:~/Feb25/LinuxAssignment2$
```

```
cdac@Shital: ~/Feb25/LinuxA × + v
cdac@Shital:~/Feb25/LinuxAssignment2$ nano print_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x print_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./print_numbers.sh
1
2
3
4
5
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

Question 7: Write a shell script that uses a while loop to print numbers from 1 to 5.

```
Ans.: cdac@Shital:~/Feb25/LinuxAssignment2$ nano while_loop.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x while_loop.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./while_loop.sh
```

1
2
3
4

5

cdac@Shital:~/Feb25/LinuxAssignment2\$

```
cdac@Shital:~/Feb25/LinuxAssignment2$ nano while_loop.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x while_loop.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./while_loop.sh
1
2
3
4
5
cdac@Shital:~/Feb25/LinuxAssignment2$
```

Question 8: Write a shell script that checks if a file named "file.txt" exists in the current directory. If it does, print "File exists", otherwise, print "File does not exist".

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ nano check_file.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$ chmod +x check_file.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$./check_file.sh
File exists
cdac@Shital:~/Feb25/LinuxAssignment2\$

```
cdac@Shital:~/Feb25/LinuxAssignment2$ nano check_file.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x check_file.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./check_file.sh
File exists
cdac@Shital:~/Feb25/LinuxAssignment2$
```

Question 9: Write a shell script that uses the if statement to check if a number is greater than 10 and prints a message accordingly.

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ nano check_number.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$ chmod +x check_number.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$./check_number.sh
Enter a number:
10
The number is not greater than 10.
cdac@Shital:~/Feb25/LinuxAssignment2\$./check_number.sh
Enter a number:
3

The number is not greater than 10.

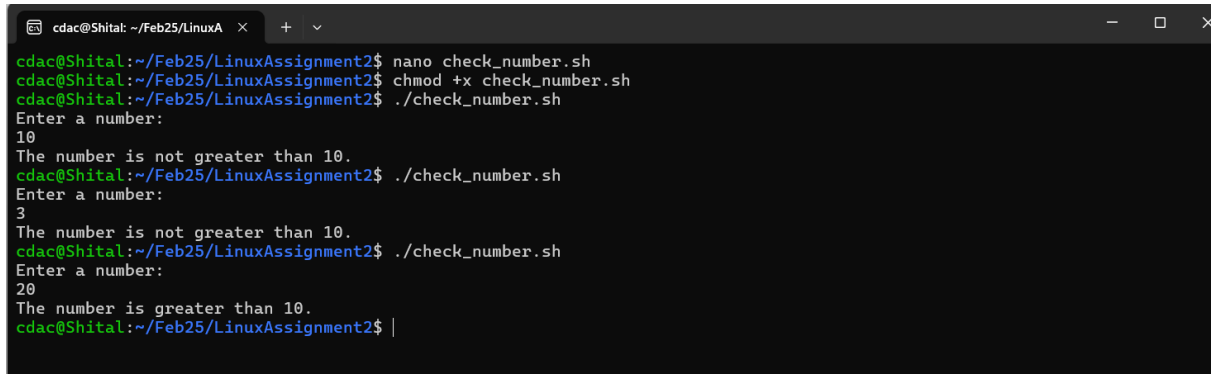
```
cdac@Shital:~/Feb25/LinuxAssignment2$ ./check_number.sh
```

Enter a number:

20

The number is greater than 10.

```
cdac@Shital:~/Feb25/LinuxAssignment2$
```



```
cdac@Shital: ~/Feb25/LinuxA  X  +  v
cdac@Shital:~/Feb25/LinuxAssignment2$ nano check_number.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x check_number.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./check_number.sh
Enter a number:
10
The number is not greater than 10.
cdac@Shital:~/Feb25/LinuxAssignment2$ ./check_number.sh
Enter a number:
3
The number is not greater than 10.
cdac@Shital:~/Feb25/LinuxAssignment2$ ./check_number.sh
Enter a number:
20
The number is greater than 10.
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

Question 10: Write a shell script that uses nested for loops to print a multiplication table for numbers from 1 to 5. The output should be formatted nicely, with each row representing a number and each column representing the multiplication result for that number.

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ nano multiplication_table.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$ chmod +x multiplication_table.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$./multiplication_table.sh
Multiplication Table (1 to 5)

```
-----
1 x 1 = 1   1 x 2 = 2   1 x 3 = 3   1 x 4 = 4   1 x 5 = 5   1 x 6 = 6
1 x 7 = 7   1 x 8 = 8   1 x 9 = 9   1 x 10 = 10
2 x 1 = 2   2 x 2 = 4   2 x 3 = 6   2 x 4 = 8   2 x 5 = 10   2 x 6 =
12   2 x 7 = 14   2 x 8 = 16   2 x 9 = 18   2 x 10 = 20
3 x 1 = 3   3 x 2 = 6   3 x 3 = 9   3 x 4 = 12   3 x 5 = 15   3 x 6 =
18   3 x 7 = 21   3 x 8 = 24   3 x 9 = 27   3 x 10 = 30
4 x 1 = 4   4 x 2 = 8   4 x 3 = 12   4 x 4 = 16   4 x 5 = 20   4 x 6 =
24   4 x 7 = 28   4 x 8 = 32   4 x 9 = 36   4 x 10 = 40
5 x 1 = 5   5 x 2 = 10   5 x 3 = 15   5 x 4 = 20   5 x 5 = 25   5 x 6 =
30   5 x 7 = 35   5 x 8 = 40   5 x 9 = 45   5 x 10 = 50
cdac@Shital:~/Feb25/LinuxAssignment2$
```

```
cdac@Shital: ~/Feb25/LinuxA × + v
cdac@Shital:~/Feb25/LinuxAssignment2$ nano multiplication_table.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x multiplication_table.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./multiplication_table.sh
Multiplication Table (1 to 5)
-----
1 x 1 = 1    1 x 2 = 2    1 x 3 = 3    1 x 4 = 4    1 x 5 = 5    1 x 6 = 6    1 x 7 = 7    1 x 8
= 8    1 x 9 = 9    1 x 10 = 10
2 x 1 = 2    2 x 2 = 4    2 x 3 = 6    2 x 4 = 8    2 x 5 = 10    2 x 6 = 12    2 x 7 = 14    2 x 8
= 16    2 x 9 = 18    2 x 10 = 20
3 x 1 = 3    3 x 2 = 6    3 x 3 = 9    3 x 4 = 12    3 x 5 = 15    3 x 6 = 18    3 x 7 = 21    3 x 8
= 24    3 x 9 = 27    3 x 10 = 30
4 x 1 = 4    4 x 2 = 8    4 x 3 = 12    4 x 4 = 16    4 x 5 = 20    4 x 6 = 24    4 x 7 = 28    4 x 8
= 32    4 x 9 = 36    4 x 10 = 40
5 x 1 = 5    5 x 2 = 10    5 x 3 = 15    5 x 4 = 20    5 x 5 = 25    5 x 6 = 30    5 x 7 = 35    5 x 8
= 40    5 x 9 = 45    5 x 10 = 50
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```

Question 11: Write a shell script that uses a while loop to read numbers from the user until the user enters a negative number. For each positive number entered, print its square. Use the break statement to exit the loop when a negative number is entered.

Ans.: cdac@Shital:~/Feb25/LinuxAssignment2\$ nano square_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$ chmod +x square_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2\$./square_numbers.sh
Enter numbers to find their square (Enter a negative number to exit):
Enter a number: 3
Square of 3 is: 9
Enter a number: 5
Square of 5 is: 25
Enter a number: 6
Square of 6 is: 36
Enter a number: 10
Square of 10 is: 100
Enter a number: 11
Square of 11 is: 121
Enter a number: 12
Square of 12 is: 144
Enter a number: 8
Square of 8 is: 64
Enter a number: 9
Square of 9 is: 81
Enter a number: -5
Negative number entered. Exiting...
cdac@Shital:~/Feb25/LinuxAssignment2\$

```
cdac@Shital: ~/Feb25/LinuxA × + ▾
cdac@Shital:~/Feb25/LinuxAssignment2$ nano square_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ chmod +x square_numbers.sh
cdac@Shital:~/Feb25/LinuxAssignment2$ ./square_numbers.sh
Enter numbers to find their square (Enter a negative number to exit):
Enter a number: 3
Square of 3 is: 9
Enter a number: 5
Square of 5 is: 25
Enter a number: 6
Square of 6 is: 36
Enter a number: 10
Square of 10 is: 100
Enter a number: 11
Square of 11 is: 121
Enter a number: 12
Square of 12 is: 144
Enter a number: 8
Square of 8 is: 64
Enter a number: 9
Square of 9 is: 81
Enter a number: -5
Negative number entered. Exiting...
cdac@Shital:~/Feb25/LinuxAssignment2$ |
```