

1. ls

```
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls
file10.txt file1.txt file2.txt file3.txt file4.txt file5.txt file6.txt file7.txt file8.txt file9.txt
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l
```

2.renameRename all *.txt files to *.htm

```
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ rename 's/\.txt$/\.html/' *.txt
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls
file10.html file1.html file2.html file3.html file4.html file5.html file6.html file7.html file8.html file9.html
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l
```

3.ln -sCreate symbolic link (shortcut) for a file

```
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ln -s file1.html symlink.html
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls
file10.html file1.html file2.html file3.html file4.html file5.html file6.html file7.html file8.html file9.html symlink.html
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l
```

4.lnCreate hard link for a file

```
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ln file2.html hardlink.html
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls
file10.html file1.html file2.html file3.html file4.html file5.html file6.html file7.html file8.html file9.html hardlink.html symlink.html
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ man stat
```

5.statDisplay time stamp of the file

```
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ stat -f file1.txt
  File: "file1.txt"
  ID: e92cac1c536fid8a Namelen: 255      Type: ext2/ext3
Block size: 4096      Fundamental block size: 4096
Blocks: Total: 25152780 Free: 20362424 Available: 19073183
Inodes: Total: 6430720 Free: 6163441
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ stat %d file1.txt
stat: cannot statx '%d': No such file or directory
  File: file1.txt
  Size: 0          Blocks: 0          IO Block: 4096   regular empty file
Device: 259,6 Inode: 1707140 Links: 1
Access: (0664/-rw-rw-r-- )  Uid: ( 1000/ shubham)   Gid: ( 1000/ shubham)
Access: 2025-10-29 06:19:43.987986029 +0530
Modify: 2025-10-29 06:19:43.987986029 +0530
Change: 2025-10-29 06:33:36.424774982 +0530
Birth: 2025-10-29 06:19:43.987986029 +0530
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

6.touchChange the time stamp of the file

```
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ touch -t 202510111212.12 file2.txt
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l
total 0
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:37 202510111212.12
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:19 file10.txt
-rw-rw-r-- 1 shubham shubham 0 Oct 11 12:12 file1.txt
-rw-rw-r-- 2 shubham shubham 0 Oct 11 12:12 file2.txt
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:19 file3.txt
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:19 file4.txt
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:19 file5.txt
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:19 file6.txt
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:19 file7.txt
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:19 file8.txt
-rw-rw-r-- 1 shubham shubham 0 Oct 29 06:19 file9.txt
-rw-rw-r-- 2 shubham shubham 0 Oct 11 12:12 hardlink.txt
lrwxrwxrwx 1 shubham shubham 10 Oct 29 06:28 symlink.txt -> file1.html
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

7.touchCreate empty file

```
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ touch demo.txt
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls
202510111212.12 demo.txt file10.txt file1.txt file2.txt file3.txt file4.txt file5.txt file6.txt file7.txt file8.txt file9.txt hardlink.txt symlink.html
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

8.tailPrint all lines in a file from fifth line onwards

```
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ tail -n +5 demo.txt
piyu
om
onkar
abhi
pote
nana
didi
ran
shayn
dev
opchat
karan
shubham@03-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

9.init 0, poweroffShutdown (Only for super-user)

10.init 6, rebootReboot (Only for super-user)

12.whoamiFind current user

```
shubham@D3-Shubhan-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ whoami
shubham
shubham@D3-Shubhan-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

13.ttyFind current terminal

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ tty
/dev/pts/0
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

14.who am iFind current user and terminal

```
shubham@03-Shubham-92819:~/Downloads/05/Assignments/SDM/Assignment-3$ whoami
shubham
shubham@03-Shubham-92819:~/Downloads/05/Assignments/SDM/Assignment-3$
```

15.usersFind all users logged into the system

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ users
shubham shubham
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

16.whoFind all users logged in and terminals in use

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ who
shubham  seat0      2025-10-25 18:28 (login screen)
shubham  tty2        2025-10-25 18:28 (tty2)
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

17.grep, egrep, fgrepFind a given word/pattern from the file

```

shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5
This line is a lowercase error.
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ vi file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
file.txt file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file
file.txt file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
Hello World!
The quick brown fox jumped over the lazy dog.
A-B-C Alpha, Beta, Charlie.
poh i see it is
This sentence has some Error.
The year is 2025.
is this is ball
This line is a lowercase error.
karan is good boy
and Piyu is not good Boy.
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w -in "is" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
The year is 2025.
This line is a lowercase error.
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep "is" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
This sentence has some Error.
The year is 2025.
This line is a lowercase error.
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w "is" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
This line is a lowercase error.
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w -in "is" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
The year is 2025.
This line is a lowercase error.
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w -in "i" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
The year is 2025.
This line is a lowercase error.
karan is good boy
and Piyu is not good Boy.
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w "is's" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w "is'" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w "s" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w "oo" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w "joo" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w "joo" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ grep -w "se" file.txt
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$ cat file.txt
poh i see it is
shubham@D3-Shubham-92819: ~/Downloads/OS/Assignments/SDM/Assignment-5$

```

```

shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "dac" file2.txt
dac
dacccc
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "da+c" file2.txt
dac
daac
daaac
daaaac
dacccc
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "da?c" file2.txt
dac
dacccc
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "da{2}c" file2.txt
daac
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "da{3}c" file2.txt
daaac
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "da{4}c" file2.txt
daaaac
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "da{2,}c" file2.txt
daac
daaac
daaaac
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "da{,4}c" file2.txt
dac
daac
daaac
dacccc
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "da{2,4}c" file2.txt
daac
daaac
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ egrep "d(m|a)c" file2.txt
dac
dmc
dacccc
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$

shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ fgrep "dac" file2.txt
dac
dacccc
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$

```

18.chmod Make a file as read-only

```

shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ chmod 0444 file3.txt
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l file3.txt
-r--r--r-- 1 shubham shubham 0 Oct 29 06:19 file3.txt
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$

```

19.chmod Make a file as write, read and execute

```

shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l file3.txt
-rwxrwxrwx 1 shubham shubham 0 Oct 29 06:19 file3.txt
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$

```

20.wc (using redirection)Take input from the file, count words and store output to other file

```

shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ wc file1.txt
 10  50 250 file1.txt
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ wc file1.txt > wordcount_file1.txt
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ cat wordcount_file1.txt
 10  50 250 file1.txt
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$

```

21.who | wc (using pipe)Count words in output of “who” command

```

shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ who
shubham  seat0          2025-10-25 18:28 (login screen)
shubham  tty2           2025-10-25 18:28 (tty2)
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ who|wc
      2      11     100
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$

```

22.head, tail (using pipe)Print lines 5 to 10 from the given file

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ cat -n file2.txt
 1  dac
 2  daac
 3  daaac
 4  dmc
 5  dmmc
 6  dmmmc
 7  dmmmmc
 8  daaaaac
 9  daccccc
10  dec
11  deec]
12  deccccc
13  deeec

shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ head -n 10 file2.txt
dmmmc
dmmmmc
daaaaac
daccccc
dec
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

23.sort , uniq (using pipe)Print the uniq values from the unsorted file

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ cat -n file2.txt
 1  dac
 2  daac
 3  daaac
 4  daaac
 5  dmc
 6  dmmc
 7  dmmmc
 8  dmmmc
 9  dmmmmc
10  daaaaac
11  daccccc
12  dac
13  dec
14  deec]
15  deccccc
16  deeec

shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ sort file2.txt | uniq
daaaaac
daaac
daac
dac
daccccc
dec
deccccc
deec]
deeec
dmc
dmmc
dmmmc
dmmmmc
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

24.who, grep (using pipe)Display all users not using tty2, tty3, tty4

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ who | egrep -v -w 'tty2|tty3|tty4'
shubham  seat0          2025-10-25 18:28 (login screen)
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

25.lsDisplay all files in ascending order of their file size

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l -s -r -S
total 20
0 file9.txt
0 file8.txt
0 file7.txt
0 file6.txt
0 file5.txt
0 file4.txt
0 file3.txt
0 file10.txt
0 202510111212.12
0 symlink.txt
4 wordcount_file1.txt
4 demo.txt
4 hardlink.txt
4 file2.txt
4 file1.txt
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

26.ls, grep (using pipe)Count number of files and directories from current directory

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l
total 20
-rw-rw-r-- 1 shubham shubham  0 Oct 29 06:37 202510111212.12
-rw-rw-r-- 1 shubham shubham 81 Oct 29 06:53 demo.txt
-rw-rw-r-- 1 shubham shubham  0 Oct 29 06:19 file10.txt
-rw-rw-r-- 1 shubham shubham 250 Oct 29 15:14 file1.txt
-rw-rw-r-- 2 shubham shubham 91 Oct 29 17:48 file2.txt
-rwxrwxrwx 1 shubham shubham  0 Oct 29 06:19 file3.txt
-rw-rw-r-- 1 shubham shubham  0 Oct 29 06:19 file4.txt
-rw-rw-r-- 1 shubham shubham  0 Oct 29 06:19 file5.txt
-rw-rw-r-- 1 shubham shubham  0 Oct 29 06:19 file6.txt
-rw-rw-r-- 1 shubham shubham  0 Oct 29 06:19 file7.txt
-rw-rw-r-- 1 shubham shubham  0 Oct 29 06:19 file8.txt
-rw-rw-r-- 1 shubham shubham  0 Oct 29 06:19 file9.txt
-rw-rw-r-- 2 shubham shubham 91 Oct 29 17:48 hardlink.txt
lrwxrwxrwx 1 shubham shubham 10 Oct 29 06:28 symlink.txt -> file1.html
-rw-rw-r-- 1 shubham shubham 22 Oct 29 17:28 wordcount_file1.txt
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -l | grep '^-' | wc -l
14
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```

27.ls, grep (using pipe)Display only hidden files in a directory

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ ls -a | grep '^\.
.
```

28.trConvert file contents into uppercase , also learn "-s" option of this command

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ tr '[:lower:]' '[:upper:]' < file2.txt
DAC
DAAC
DAAAC
DAAAC
DMC
DMMC
DMMMC
DMMMC
DMMMMC
DAAAAAC
DACCCE
DAC
DEC
DEEC]
DECCCC
DEEEC
```

29.cutSplit the file contents using delimiter and print required fields

```
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ cat file1.txt
Hello Linux world!
The quick brown fox jumped over the lazy dog.
A-B-C: Alpha, Beta, Charlie.
ohh i see it is
This sentence has some Error.
The year is 2025.
is this is ball
This line is a lowercase error.
karan IS good boy
and Piyu is not good Boy.
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$ cut -c 5-15 file1.txt
o Linux wor
quick brown
C: Alpha, B
i see it is
sentence h
year is 202
his is ball
line is a
n IS good b
Piyu is not
shubham@D3-Shubham-92819:~/Downloads/OS/Assignments/SDM/Assignment-3$
```