Operating System
Assignment No 3

1) ls

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ ls
copy.txt                                node_modules
dummy.txt                               os_demo
google-chrome-stable_current_amd64.deb  package.json
install.sh                              package-lock.json
Lokesh                                  Shell
new
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

2) rename

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls
copy.text  empty.txt  F3.txt    lokesh_patel.txt  one          os_concept.txt
DBT        F1.txt     File.txt  lokesh.text       OS           symbolic.txt
DSA        F2.txt     JAVA      number.txt        os_concept2.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ mv copy.txt rename.txt
mv: cannot stat 'copy.txt': No such file or directory
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ mv copy.text rename.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls
DBT        F1.txt  File.txt          lokesh.text  OS              rename.txt
DSA        F2.txt  JAVA              number.txt   os_concept2.txt symbolic.txt
empty.txt  F3.txt  lokesh_patel.txt  one          os_concept.txt
```

3) ls -s

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls -l
total 36
-rw-rw-r-- 1 sunbeam sunbeam   34 Dec 25 15:44 copy.text
drwxrwxr-x 2 sunbeam sunbeam 4096 Dec 25 15:28 DBT
drwxrwxr-x 2 sunbeam sunbeam 4096 Dec 25 15:28 DSA
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 28 19:29 empty.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 15:36 F1.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 15:36 F2.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 15:36 F3.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 15:35 File.txt
drwxrwxr-x 2 sunbeam sunbeam 4096 Dec 25 15:28 JAVA
-rw-rw-r-- 1 sunbeam sunbeam   32 Oct  6 12:06 lokesh_patel.txt
-rw-rw-r-- 1 sunbeam sunbeam   34 Dec 25 15:39 lokesh.text
-rw-rw-r-- 1 sunbeam sunbeam   41 Dec 26 16:21 number.txt
drwxrwxr-x 3 sunbeam sunbeam 4096 Dec 28 16:25 one
drwxrwxr-x 3 sunbeam sunbeam 4096 Dec 25 15:29 OS
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 27 22:21 os_concept2.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 17:15 os_concept.txt
lrwxrwxrwx 1 sunbeam sunbeam   12 Dec 28 19:21 symbolic.txt -> symbolic.txt
```

4) ln

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ln number.txt newnumber.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls
```

5) stat

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ stat lokesh_patel.txt
  File: lokesh_patel.txt
  Size: 32            Blocks: 8        IO Block: 4096   regular file
Device: 80ah/2058d     Inode: 7078200     Links: 1
Access: (0664/-rw-rw-r--)  Uid: ( 1000/ sunbeam)   Gid: ( 1000/ sunbeam)
Access: 2023-12-28 16:07:01.592345290 +0530
Modify: 2023-12-28 16:06:33.016579843 +0530
Change: 2023-12-28 16:06:33.016579843 +0530
 Birth: 2023-12-28 16:05:52.272938356 +0530
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$
```

6) touch (change time stamp)

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo/one/two/three$ ls -lht
total 4.0K
-rw-rw-r-- 1 sunbeam sunbeam  0 Dec 28 16:26 333.txt
-rw-rw-r-- 1 sunbeam sunbeam  0 Dec 28 16:26 33.txt
-rw-rw-r-- 1 sunbeam sunbeam 11 Dec 28 12:06 3.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo/one/two/three$ touch -t 202312280906 3.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo/one/two/three$ ls -lht
total 4.0K
-rw-rw-r-- 1 sunbeam sunbeam  0 Dec 28 16:26 333.txt
-rw-rw-r-- 1 sunbeam sunbeam  0 Dec 28 16:26 33.txt
-rw-rw-r-- 1 sunbeam sunbeam 11 Dec 28 09:06 3.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo/one/two/three$
```

7) touch (create empty file)

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ touch empty.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls
copy.text   F3.txt           one
DBT         File.txt         OS
DSA         JAVA             os_concept2.txt
empty.txt   lokesh_patel.txt os_concept.txt
F1.txt      lokesh.text      symbolic.txt
F2.txt      number.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$
```

8) tail

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ cat number.txt
1
45
67
45
34
23
23
45
67
2
22
22
222
89
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ tail -9 number.txt
23
23
45
67
2
22
22
222
89
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$
```

9) init 0, poweroff
ANS :-   init 0, poweroff

10) init 6, reboot
ANS :- init 6, reboot

11) whoami

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ whoami
sunbeam
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

12) tty

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ tty
/dev/pts/0
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

13) who am i

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ who am i
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

14) users

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ users
sunbeam
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

15) who

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ who
sunbeam   tty2           2023-12-28 19:01 (tty2)
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

16) grep, egrep, fgrep

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ grep "taste" dummy.txt
i like its taste.
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ grep "d[mm]c" grep.txt
grep: grep.txt: No such file or directory
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ grep "d[mm]c" dummy.txt
dmc
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ grep "d[*]c" dummy.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ grep "d*c" dummy.txt
dac
dmc
dmmc
dmmmmc
this is a tasty cake.
dmmmmmmmc
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ egrep "dm" dummy.txt
dmc
dmmc
dmmmmc
dmmmmmmmc
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ fgrep "dm" dummy.txt
dmc
dmmc
dmmmmc
dmmmmmmmc
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

17) chmod (Make a file as read-only) :-

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ chmod -r dummy.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ cat dummy.txt
cat: dummy.txt: Permission denied
```

18) chmod (Make a file as write, read and execute):-

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ chmod 777 empty.txt
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls -l
total 40
drwxrwxr-x 2 sunbeam sunbeam 4096 Dec 25 15:28 DBT
drwxrwxr-x 2 sunbeam sunbeam 4096 Dec 25 15:28 DSA
-rwxrwxrwx 1 sunbeam sunbeam    0 Dec 28 19:29 empty.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 15:36 F1.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 15:36 F2.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 15:36 F3.txt
-rw-rw-r-- 1 sunbeam sunbeam    0 Dec 25 15:35 File.txt
drwxrwxr-x 2 sunbeam sunbeam 4096 Dec 25 15:28 JAVA
```

19) wc (using redirection)

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ wc
I am  studing in sunbeam
      1       5      25
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$
```

20) who | wc

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop$ who | wc
      1       5      46
```

21) Print lines 5 to 10 from the given file

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ head -5 | tail -5 number.txt
22
22
222
89
1000
```

22) Print the uniq values from the unsorted file

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ sort number.txt|uniq
1
1000
2
22
222
23
34
45
67
89
```

23) Display all users not using tty2, tty3, tty4

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ who -u | grep sunbeam
sunbeam   tty2         2023-12-29 15:29 00:41        1681 (tty2)
```

24) Display all files in ascending order of their file size

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls
DBT         F1.txt   File.txt          lokesh.text      one              os_concept.txt
DSA         F2.txt   JAVA              newnumber.txt    OS               rename.txt
empty.txt   F3.txt   lokesh_patel.txt  number.txt       os_concept2.txt  symbolic.txt
```

25) Count number of files and directories from current directory

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls -1 | wc -l
18
```

26) Display only hidden files in a directory

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ ls -a | grep "^\."
.
..
.hidden.txt
```

27) Convert file contents into uppercase , also learn "-s" option of this command

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ echo "sunbeam pune" | tr  a-z A-z
SUNBEAM PUNE
```

28) Split the file contents using delimiter and print required fields.

```
sunbeam@sunbeam-Nitro-AN515-42:~/Desktop/os_demo$ echo "Lokesh" | cut -c 1-3
Lok
```