

Assignment 3

1. ls Display hidden files

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt b.txt c.txt d.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls -a
.  .. a.txt b.txt c.txt d.txt .e.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

2. rename Rename all *.txt files to *.htm

for file in *.txt; do mv "\$file" "\${file%.txt}.htm"; done

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt b.txt c.txt d.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ for file in *.txt; do mv "$file"
"${file%.txt}.htm"; done
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.htm b.htm c.htm d.htm
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

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

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat > a.txt
Sunbeam Hinjewadi
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat a.txt
Sunbeam Hinjewadi
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ln -s a.txt s.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt s.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat s.txt
Sunbeam Hinjewadi
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

4. ln Create hard link for a file

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat a.txt
Sunbeam Hinjewadi
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ln a.txt h.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt h.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat h.txt
Sunbeam Hinjewadi
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat > h.txt
Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat h.txt
Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat a.txt
Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

5. stat Display time stamp of the file

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ stat a.txt
  File: a.txt
  Size: 5                Blocks: 8                IO Block: 4096   regular file
Device: 804h/2052d      Inode: 4201912       Links: 2
Access: (0664/-rw-rw-r--)  Uid: ( 1000/  sunbeam)   Gid: ( 1000/  sunbeam)
Access: 2025-10-28 15:12:31.990370606 +0530
Modify: 2025-10-28 15:12:24.115557292 +0530
Change: 2025-10-28 15:12:24.115557292 +0530
 Birth: 2025-10-28 15:08:31.140875375 +0530
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ stat h.txt
  File: h.txt
  Size: 5                Blocks: 8                IO Block: 4096   regular file
Device: 804h/2052d      Inode: 4201912       Links: 2
Access: (0664/-rw-rw-r--)  Uid: ( 1000/  sunbeam)   Gid: ( 1000/  sunbeam)
Access: 2025-10-28 15:12:31.990370606 +0530
Modify: 2025-10-28 15:12:24.115557292 +0530
Change: 2025-10-28 15:12:24.115557292 +0530
 Birth: 2025-10-28 15:08:31.140875375 +0530
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

6. touch Change the time stamp of the file

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ stat a.txt
  File: a.txt
  Size: 5                Blocks: 8                IO Block: 4096   regular file
Device: 804h/2052d      Inode: 4201912       Links: 2
Access: (0664/-rw-rw-r--)  Uid: ( 1000/  sunbeam)   Gid: ( 1000/  sunbeam)
Access: 2025-10-28 15:12:31.990370606 +0530
Modify: 2025-10-28 15:12:24.115557292 +0530
Change: 2025-10-28 15:12:24.115557292 +0530
 Birth: 2025-10-28 15:08:31.140875375 +0530
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ touch a.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ stat a.txt
  File: a.txt
  Size: 5                Blocks: 8                IO Block: 4096   regular file
Device: 804h/2052d      Inode: 4201912       Links: 2
Access: (0664/-rw-rw-r--)  Uid: ( 1000/  sunbeam)   Gid: ( 1000/  sunbeam)
Access: 2025-10-28 15:15:10.508280816 +0530
Modify: 2025-10-28 15:15:10.508280816 +0530
Change: 2025-10-28 15:15:10.508280816 +0530
 Birth: 2025-10-28 15:08:31.140875375 +0530
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

7. touch Create empty file

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt h.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ touch b.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt b.txt h.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

8. tail Print all lines in a file from fifth line onwards

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat b.txt
Sunbeam
Pune
Hinjewadi
Karad
Marketyard
C-DAC
PG-DAC
PG-DBDA
PG-DMC
PG-AI
PG-DITISS
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ tail -n +5 b.txt
Marketyard
C-DAC
PG-DAC
PG-DBDA
PG-DMC
PG-AI
PG-DITISS
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

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

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

12. whoami Find current user

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~$ whoami
sunbeam
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~$
```

13. tty Find current terminal

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~$ tty
/dev/pts/0
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~$
```

14. who am i Find current user and terminal

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ who am i
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

15. users Find all users logged into the system

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ users
sunbeam
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

16. who Find all users logged in and terminals in use

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ users
sunbeam
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ who
sunbeam  tty2          2025-10-28 15:28 (tty2)
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

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

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ grep "Pune" b.txt
Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ grep "Pune" b.txt
Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ egrep "Pune" b.txt
Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ fgrep "Pune" b.txt
Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

18. chmod Make a file as read-only

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt b.txt h.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ chmod -w b.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ stat b.txt
  File: b.txt
  Size: 84          Blocks: 8          IO Block: 4096   regular file
Device: 804h/2052d Inode: 4202927       Links: 1
Access: (0444/-r--r--r--)  Uid: ( 1000/ sunbeam)   Gid: ( 1000/ sunbeam)
Access: 2025-10-28 15:20:16.794355106 +0530
Modify: 2025-10-28 15:20:04.422729725 +0530
Change: 2025-10-28 16:43:35.259385674 +0530
Birth: 2025-10-28 15:17:48.779775742 +0530
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

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

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt b.txt h.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ chmod -w b.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ stat b.txt
  File: b.txt
  Size: 84          Blocks: 8          IO Block: 4096   regular file
Device: 804h/2052d Inode: 4202927       Links: 1
Access: (0444/-r--r--r--)  Uid: ( 1000/ sunbeam)   Gid: ( 1000/ sunbeam)
Access: 2025-10-28 15:20:16.794355106 +0530
Modify: 2025-10-28 15:20:04.422729725 +0530
Change: 2025-10-28 16:43:35.259385674 +0530
Birth: 2025-10-28 15:17:48.779775742 +0530
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ chmod +rwx b.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ stat b.txt
  File: b.txt
  Size: 84          Blocks: 8          IO Block: 4096   regular file
Device: 804h/2052d Inode: 4202927       Links: 1
Access: (0775/-rwxrwxr-x)  Uid: ( 1000/ sunbeam)   Gid: ( 1000/ sunbeam)
Access: 2025-10-28 15:20:16.794355106 +0530
Modify: 2025-10-28 15:20:04.422729725 +0530
Change: 2025-10-28 16:45:05.247556689 +0530
Birth: 2025-10-28 15:17:48.779775742 +0530
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

```

sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls -l d.txt
-rw-rw-r-- 1 sunbeam sunbeam 0 Oct 28 17:12 d.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ chmod 0000 d.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls -l d.txt
----- 1 sunbeam sunbeam 0 Oct 28 17:12 d.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ chmod 0777 d.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls -l d.txt
-rwxrwxrwx 1 sunbeam sunbeam 0 Oct 28 17:12 d.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ █

```

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

```

sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ touch c.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ wc b.txt | cat >> c.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat c.txt
11 11 84 b.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ █

```

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

```

sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ who
sunbeam tty2          2025-10-28 16:35 (tty2)
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ who | wc
 1      5      46
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ █

```

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

```

sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ head d.txt | cat >> e.txt | tail -n 5 e.txt
6. Line six
7. Line seven
8. Line eight
9. Line nine
10. Line ten
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ █

```

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

```

sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ sort d.txt | uniq
10. Line ten
11. Line eleven
12. Line twelve
13. Line thirteen
14. Line fourteen
15. Line fifteen
16. Line sixteen
17. Line seventeen
18. Line eighteen
1. Line one
2. Line two
3. Line three
4. Line four
5. Line five
6. Line six
7. Line seven
8. Line eight
9. Line nine
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ █

```


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

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ who | grep -v -E 'tty2|tty3|tty4'
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ grep -v -E 'tty2|tty3|tty4' | who
sunbeam  tty2          2025-10-28 16:35 (tty2)
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

25. ls Display all files in ascending order of their file size

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls -ls
total 20
-rwxrwxrwx 1 sunbeam sunbeam 268 Oct 28 17:32 d.txt
-rw-rw-r-- 1 sunbeam sunbeam 130 Oct 28 17:42 e.txt
-rwxrwxr-x 1 sunbeam sunbeam 84 Oct 28 15:20 b.txt
-rw-rw-r-- 1 sunbeam sunbeam 15 Oct 28 16:57 c.txt
-rw-rw-r-- 1 sunbeam sunbeam 5 Oct 28 15:15 a.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls -lsr
total 20
-rw-rw-r-- 1 sunbeam sunbeam 5 Oct 28 15:15 a.txt
-rw-rw-r-- 1 sunbeam sunbeam 15 Oct 28 16:57 c.txt
-rwxrwxr-x 1 sunbeam sunbeam 84 Oct 28 15:20 b.txt
-rw-rw-r-- 1 sunbeam sunbeam 130 Oct 28 17:42 e.txt
-rwxrwxrwx 1 sunbeam sunbeam 268 Oct 28 17:32 d.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

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

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt b.txt c.txt d.txt e.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls | wc -l
5
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

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

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls
a.txt b.txt c.txt d.txt e.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls -a
.  .. a.txt b.txt c.txt d.txt .e.txt e.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ ls -a | grep "^\. "
.
.
.e.txt
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

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

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat a.txt
Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat a.txt | tr "a-z" "A-Z"
PUNE
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```

29. cut Split the file contents using delimiter and print required fields

```
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cat a.txt
Pune
Sunbeam Hinjewadi Pune
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$ cut -d 'u' -f2 a.txt
ne
nbeam Hinjewadi P
sunbeam@sunbeam-VivoBook-ASUSLaptop-X515JA-X515JA:~/Desktop/assignment$
```