

1. List the directory contents date wise sorted. (man ls)

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ ls -t
os                empty3.txt        tush.txt          out.txt          num.txt
file2.txt         empty.txt          renamedfile1.txt  err.txt
file1.txt         renamedfile1.txt  repeat.txt        name.txt
empty1.txt        copydir1          select.txt        lserr.txt
empty2.txt        newdir            test.txt          lsout.txt
```

2. List the directory contents size wise sorted.(man ls)

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ ls -s
total 60
4 copydir1      0 err.txt      4 name.txt     4 renamedfile1.txt      4 tush.txt
0 empty1.txt    4 file1.txt    4 newdir       0 renamedfile1.txt
0 empty2.txt    4 file2.txt    4 num.txt      4 repeat.txt
0 empty3.txt    4 lserr.txt    4 os           4 select.txt
0 empty.txt     4 lsout.txt    4 out.txt      4 test.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ ls -ls
total 60
4 drwxrwxr-x 3 tushar tushar 4096 Dec 26 17:29 copydir1
0 -rw-rw-r-- 1 tushar tushar   0 Dec 26 18:44 empty1.txt
0 -rw-rw-r-- 1 tushar tushar   0 Dec 26 18:44 empty2.txt
0 -rw-rw-r-- 1 tushar tushar   0 Dec 26 18:44 empty3.txt
0 -rw-rw-r-- 1 tushar tushar   0 Dec 26 18:44 empty.txt
0 -rw-rw-r-- 1 tushar tushar   0 Dec 26 14:40 err.txt
4 -rw-rw-r-- 1 tushar tushar  18 Dec 26 21:54 file1.txt
4 -rw-rw-r-- 1 tushar tushar  47 Dec 26 21:58 file2.txt
4 -rw-rw-r-- 1 tushar tushar  64 Dec 26 14:34 lserr.txt
4 -rw-rw-r-- 1 tushar tushar 164 Dec 26 14:31 lsout.txt
4 -rw-rw-r-- 1 tushar tushar   6 Dec 26 14:39 name.txt
4 drwxrwxr-x 2 tushar tushar 4096 Dec 26 17:24 newdir
4 -rw-rw-r-- 1 tushar tushar  45 Dec 26 14:07 num.txt
4 drwxrwxr-x 2 tushar tushar 4096 Dec 26 22:14 os
4 -rw-rw-r-- 1 tushar tushar   6 Dec 26 14:40 out.txt
4 -rw-rw-r-- 1 tushar tushar  44 Dec 26 15:56 renamedfile1.txt
0 -rw-rw-r-- 1 tushar tushar   0 Dec 26 18:41 renamedfile1.txt
4 -rw-rw-r-- 1 tushar tushar  52 Dec 26 15:18 repeat.txt
4 -rw-rw-r-- 1 tushar tushar  26 Dec 26 15:09 select.txt
4 -rw-rw-r-- 1 tushar tushar  55 Dec 26 15:01 test.txt
4 -rw-rw-r-- 1 tushar tushar  44 Dec 26 16:28 tush.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$
```

3. List directory contents along with their inode no. (man ls)

```
4 -rw-rw-r-- 1 tushar tushar  44 Dec 26 16:28 tush.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ ls -li
11805886 copydir1 11805945 empty.txt 11805872 lserr.txt 11805865 num.txt      11805940 renamedfile1.txt 11805346 tush.txt
11805942 empty1.txt 11805875 err.txt 11805871 lsout.txt 11806853 os          11805878 repeat.txt
11805954 empty2.txt 11805861 file1.txt 11805873 name.txt 11805874 out.txt     11805877 select.txt
11805956 empty3.txt 11805862 file2.txt 11805891 newdir    11805344 renamedfile1.txt 11805876 test.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$
```

4. List the contents of the subdirectory.

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ ls -R
.:
copydir1  err.txt  name.txt  renamedfile1.txt  tush.txt
empty1.txt file1.txt newdir    renamedfile1.txt
empty2.txt file2.txt num.txt   repeat.txt
empty3.txt lserr.txt os        select.txt
empty.txt  lsout.txt out.txt   test.txt

./copydir1:
dir1

./copydir1/dir1:
tush.txt

./newdir:

./os:
Assignment_01.pdf
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$
```

5. Create a file, write your surname and name in it and save.

i. now open the same file and add your address in it and save.

ii. reopen the same file and check your name and address in it.

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ cat > myinfo.txt
Kharat Tushar
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ cat myinfo.txt
Kharat Tushar
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ cat >> myinfo.txtA/P Karmala
bash: myinfo.txtA/P: No such file or directory
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ cat >> myinfo.txtA/P Karmala
bash: myinfo.txtA/P: No such file or directory
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ cat >> myinfo.txt
A/P karmala
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ cat myinfo.txt
Kharat Tushar
A/P karmala
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$
```

6. how to change the time stamp of file (man touch)

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ touch -a -m -t 203801181205.09 myinfo.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ stat myinfo.txt
  File: myinfo.txt
  Size: 26          Blocks: 8          IO Block: 4096   regular file
Device: 807h/2055d Inode: 11806557   Links: 1
Access: (0664/-rw-rw-r--)  Uid: ( 1000/  tushar)   Gid: ( 1000/  tushar)
Access: 2038-01-18 12:05:09.000000000 +0530
Modify: 2038-01-18 12:05:09.000000000 +0530
Change: 2023-12-27 12:42:10.759175019 +0530
 Birth: 2023-12-27 12:12:38.649337924 +0530
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$
```

7. Create directory structure : Give following commands ,

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ mkdir one
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ ls
copydir1  empty3.txt  file1.txt  lsout.txt  newdir  os  renamedfile1.txt  test.txt
empty1.txt  empty.txt  file2.txt  myinfo.txt  num.txt  out.txt  repeat.txt  tush.txt
empty2.txt  err.txt  lserr.txt  name.txt  one  renamedfile1.txt  select.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments$ cd one
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ touch 1.txt 11.txt 111.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ ls
111.txt 11.txt 1.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ mkdir two
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ ls
111.txt 11.txt 1.txt two
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ cd two
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two$ touch 2.txt 22.txt 222.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two$ ls
222.txt 22.txt 2.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two$ mkdir three
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two$ ls
222.txt 22.txt 2.txt three
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two$ cd three
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three$ touch 3.txt 33.txt 333.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three$ ls
333.txt 33.txt 3.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three$ mkdir four
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three$ cd four
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four$ touch 4.txt 44.txt 444.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four$ ls
444.txt 44.txt 4.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four$ mkdir five
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four$ cd five
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$ touch 5.txt 55.txt 555.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$ ls
555.txt 55.txt 5.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$ cd ~
tushar@tushar-HP-Pavilion-Notebook:~$
```

8. Considering above directory structure , Do following operations :

i. list the directory contents of directory named "five" from current directory (i.e. home directory).

```
tushar@tushar-HP-Pavilion-Notebook:~$ ls Documents/os_assignments/one/two/three/four/five
555.txt 55.txt 5.txt
tushar@tushar-HP-Pavilion-Notebook:~$
```

ii. write your name in a file named "44.txt" of directory "four" from current directory.

```
555.txt 55.txt 5.txt
tushar@tushar-HP-Pavilion-Notebook:~$ echo "Tushar" > Documents/os_assignments/one/two/three/four
bash: Documents/os_assignments/one/two/three/four: Is a directory
tushar@tushar-HP-Pavilion-Notebook:~$ echo "Tushar" > Documents/os_assignments/one/two/three/four/44.txt
tushar@tushar-HP-Pavilion-Notebook:~$ cat Documents/os_assignments/one/two/three/four/44.txt
Tushar
tushar@tushar-HP-Pavilion-Notebook:~$
```

iii. remove the file named "555.txt" from directory "five" from current directory.

```
tushar@tushar-HP-Pavilion-Notebook:~$ rm Documents/os_assignments/one/two/three/four/five/555.txt
tushar@tushar-HP-Pavilion-Notebook:~$ ls Documents/os_assignments/one/two/three/four/five
55.txt  5.txt
tushar@tushar-HP-Pavilion-Notebook:~$
```

iv. change directory to five (i.e. cd one/two/three/four/five/).

```
tushar@tushar-HP-Pavilion-Notebook:~$ cd Documents/os_assignments/one/two/three/four/five
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$ pwd
/home/tushar/Documents/os_assignments/one/two/three/four/five
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$
```

v. write your course name in file named "3.txt" which resides in directory "three" from current directory (i.e. five).also read the same file.

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$ cat ../../3.txt
DMC
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$
```

vi. list the contents of directory "two" from current directory (i.e. five).

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$ ls ../../..
222.txt 22.txt 2.txt three
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$
```

vii. remove file named "222.txt" which belongs to directory "two" from current directory (i.e. five)

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$ ls ../../..
22.txt 2.txt three
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$
```

viii. now change the directory to "one"

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$ ls ../../../../..
111.txt 11.txt 1.txt two
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one/two/three/four/five$
```

ix. remove all files only from directory named "five" from current directory (i.e. one)


```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ rm two/three/
four/five/*
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ ls two/three/
four/five/*
ls: cannot access 'two/three/four/five/*': No such file or directory
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ ls
111.txt 11.txt 1.txt two
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ ls two/three/
four/five
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$
```

x. remove directory named "five" from current directory (i.e. one)

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ rm -r two/thr
ee/four/five
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ ls two/three/
four
444.txt 44.txt 4.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$
```

xi. remove whole directory named "four" from current directory (i.e. one)

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ ls two/three
333.txt 33.txt 3.txt
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$
```

xii. change to your home directory.

```
tushar@tushar-HP-Pavilion-Notebook:~/Documents/os_assignments/one$ cd ~
tushar@tushar-HP-Pavilion-Notebook:~$
```

9) change the time stamp of file named "3.txt" which resides in directory named "three".(man touch)

```
tushar@tushar-HP-Pavilion-Notebook:~$ touch -t 202312270948.09 Documents/os_assignments/one/two/three/3.txt
tushar@tushar-HP-Pavilion-Notebook:~$ ls -l Documents/os_assignments/one/two/three/3.txt
-rw-rw-r-- 1 tushar tushar 4 Dec 27 09:48 Documents/os_assignments/one/two/three/3.txt
tushar@tushar-HP-Pavilion-Notebook:~$
```

