ASSIGNMENT 2

1) List the directory contents size wise sorted.

```
[madhurgupta@Madhurs-MacBook-Air My_GitData % ls -Sl
total 0
drwxr-xr-x  29 madhurgupta  staff  928 Dec   6 19:20 DBT
drwxr-xr-x@ 10 madhurgupta  staff  320 Dec   6 19:23 DSA
drwxr-xr-x@  9 madhurgupta  staff  288 Dec   6 19:23 DSA_Classwork
drwxr-xr-x   6 madhurgupta  staff  192 Oct   8 09:29 CPP
drwxr-xr-x@  5 madhurgupta  staff  160 Dec   6 19:23 Java
drwxr-xr-x   5 madhurgupta  staff  160 Dec   6 22:03 WBT
drwxr-xr-x   4 madhurgupta  staff  128 Dec   6 19:23 Hackathon1
drwxr-xr-x   4 madhurgupta  staff  128 Dec   6 21:41 OSC_SDM
[madhurgupta@Madhurs-MacBook-Air My_GitData % ls -Sl -r
total 0
drwxr-xr-x   4 madhurgupta  staff  128 Dec   6 21:41 OSC_SDM
drwxr-xr-x   4 madhurgupta  staff  128 Dec   6 19:23 Hackathon1
drwxr-xr-x   5 madhurgupta  staff  160 Dec   6 22:03 WBT
drwxr-xr-x@  5 madhurgupta  staff  160 Dec   6 19:23 Java
drwxr-xr-x   6 madhurgupta  staff  192 Oct   8 09:29 CPP
drwxr-xr-x@  9 madhurgupta  staff  288 Dec   6 19:23 DSA_Classwork
drwxr-xr-x@ 10 madhurgupta  staff  320 Dec   6 19:23 DSA
drwxr-xr-x  29 madhurgupta  staff  928 Dec   6 19:20 DBT
```

2) List the directory content date wise sorted

```
[madhurgupta@Madhurs-MacBook-Air CPP % ls -lt -r
total 288
-rw-r--r--  1 madhurgupta  staff      5 Sep 22 18:35 README.md
-rw-r--r--  1 madhurgupta  staff   1412 Sep 23 18:27 A_1Q_1.c
-rw-r--r--  1 madhurgupta  staff   1987 Sep 23 18:29 A_1Q_2-2.cpp
-rw-r--r--  1 madhurgupta  staff   1988 Sep 23 18:29 A_1Q_2.cpp
-rw-r--r--  1 madhurgupta  staff   1496 Sep 23 18:29 A_1Q_3.cpp
-rw-r--r--@ 1 madhurgupta  staff   1433 Sep 23 18:32 A_2_Q_1.cpp
-rw-r--r--  1 madhurgupta  staff   3157 Sep 23 18:32 A_2_Q_2.cpp
-rw-r--r--  1 madhurgupta  staff   1743 Sep 23 18:52 A_3Q_1.cpp
-rw-r--r--  1 madhurgupta  staff   1479 Sep 24 07:39 A_3Q_2.cpp
-rw-r--r--@ 1 madhurgupta  staff   2765 Sep 24 16:36 A_3Q_3.cpp
drwxr-xr-x  8 madhurgupta  staff    256 Sep 24 17:12 A_3Q_3
-rw-r--r--  1 madhurgupta  staff   1630 Sep 26 13:33 A_4_Q_1.cpp
-rw-r--r--@ 1 madhurgupta  staff   3039 Sep 26 19:40 A_4Q_3.cpp
-rw-r--r--  1 madhurgupta  staff   1844 Sep 26 19:41 A_4Q_2.cpp
-rw-r--r--  1 madhurgupta  staff   4711 Sep 29 14:15 A_6Q_1.cpp
-rw-r--r--  1 madhurgupta  staff   4394 Oct  1 16:24 A_7Q_1.cpp
-rw-r--r--  1 madhurgupta  staff   4065 Oct  1 17:37 A_7Q_2.cpp
-rw-r--r--  1 madhurgupta  staff   8808 Oct  1 22:12 A_7Q_3.cpp
-rw-r--r--  1 madhurgupta  staff    490 Oct  1 23:30 A_9Q_1.cpp
-rw-r--r--  1 madhurgupta  staff   6362 Oct  3 00:33 A_9Q_2.cpp
-rwxr-xr-x  1 madhurgupta  staff  42472 Oct  4 16:32 a.out
-rw-r--r--@ 1 madhurgupta  staff   4062 Oct 16 17:07 A_6Q_2.cpp
madhurgupta@Madhurs-MacBook-Air CPP % 
```

3) List directory names along with their inode numbers

```
[madhurgupta@Madhurs-MacBook-Air CPP % ls -i
18245825 A_1Q_1.c        18346246 A_3Q_1.cpp     18461962 A_4_Q_1.cpp    18958406 A_9Q_1.cpp
18274518 A_1Q_2-2.cpp    18346658 A_3Q_2.cpp     18711232 A_6Q_1.cpp     18965230 A_9Q_2.cpp
18245828 A_1Q_2.cpp      18421137 A_3Q_3         18669185 A_6Q_2.cpp     18245674 README.md
18274201 A_1Q_3.cpp      18401626 A_3Q_3.cpp     18865473 A_7Q_1.cpp     19053873 a.out
18275332 A_2_Q_1.cpp     18542479 A_4Q_2.cpp     18879156 A_7Q_2.cpp
18278564 A_2_Q_2.cpp     18562078 A_4Q_3.cpp     18912143 A_7Q_3.cpp
```

4) List the contents of the subdirectory

```
[madhurgupta@Madhurs-MacBook-Air Assignments % ls
 CPP
[madhurgupta@Madhurs-MacBook-Air Assignments % ls CPP
 A_1Q_1.c        A_2_Q_1.cpp     A_3Q_3          A_4_Q_1.cpp     A_7Q_2.cpp      README.md
 A_1Q_2-2.cpp    A_2_Q_2.cpp     A_3Q_3.cpp      A_6Q_1.cpp      A_7Q_3.cpp      a.out
 A_1Q_2.cpp      A_3Q_1.cpp      A_4Q_2.cpp      A_6Q_2.cpp      A_9Q_1.cpp
 A_1Q_3.cpp      A_3Q_2.cpp      A_4Q_3.cpp      A_7Q_1.cpp      A_9Q_2.cpp
```

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.

```
[madhurgupta@Madhurs-MacBook-Air OS % cat > name.txt
 Madhur Gupta
[madhurgupta@Madhurs-MacBook-Air OS % cat name.txt
 Madhur Gupta
[madhurgupta@Madhurs-MacBook-Air OS % cat >> name.txt
 Address : Noida
[madhurgupta@Madhurs-MacBook-Air OS % cat name.txt
 Madhur Gupta
 Address : Noida
```

6) how to change the time stamp of file

```
madhurgupta@Madhurs-MacBook-Air OS % touch -a -m -t 203801181205.09 timestamp.txt
madhurgupta@Madhurs-MacBook-Air OS % ls -l
total 8
-rw-r--r--  1 madhurgupta  staff  29 Dec  7 17:49 name.txt
-rw-r--r--  1 madhurgupta  staff   0 Jan 18  2038 timestamp.txt
madhurgupta@Madhurs-MacBook-Air OS %
```

7) Create directory structure : Give following commands

```
[madhurgupta@Madhurs-MacBook-Air OS % mkdir one
[madhurgupta@Madhurs-MacBook-Air OS % cd one
[madhurgupta@Madhurs-MacBook-Air one % touch 1.txt 11.txt 111.txt
[madhurgupta@Madhurs-MacBook-Air one % mkdir two
[madhurgupta@Madhurs-MacBook-Air one % cd two
[madhurgupta@Madhurs-MacBook-Air two % touch 2.txt 22.txt 222.txt
[madhurgupta@Madhurs-MacBook-Air two % mkdir three
[madhurgupta@Madhurs-MacBook-Air two % cd three
[madhurgupta@Madhurs-MacBook-Air three % touch 3.txt 33.txt 333.txt
[madhurgupta@Madhurs-MacBook-Air three % mkdir four
[madhurgupta@Madhurs-MacBook-Air three % cd four
[madhurgupta@Madhurs-MacBook-Air four % touch 4.txt 44.txt 444.txt
[madhurgupta@Madhurs-MacBook-Air four % mkdir five
[madhurgupta@Madhurs-MacBook-Air four % cd five
[madhurgupta@Madhurs-MacBook-Air five % touch 5.txt 55.txt 555.txt
[madhurgupta@Madhurs-MacBook-Air five % cd -r
 cd: no such file or directory: -r
[madhurgupta@Madhurs-MacBook-Air five % cd ~
 madhurgupta@Madhurs-MacBook-Air ~ %
```

8) Considering above directory structure , Do following operations :

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

```
[madhurgupta@Madhurs-MacBook-Air ~ % ls Desktop/CDAC_Practice/OS/one/two/three/four/five
 5.txt    55.txt   555.txt
```

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

```
[madhurgupta@Madhurs-MacBook-Air ~ % cat > Desktop/CDAC_Practice/OS/one/two/three/four/44.txt
 Madhur Gupta
[madhurgupta@Madhurs-MacBook-Air ~ % cat Desktop/CDAC_Practice/OS/one/two/three/four/44.txt
 Madhur Gupta
```

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

```
[madhurgupta@Madhurs-MacBook-Air ~ % rm Desktop/CDAC_Practice/OS/one/two/three/four/five/555.txt
[madhurgupta@Madhurs-MacBook-Air ~ % ls Desktop/CDAC_Practice/OS/one/two/three/four/five/
 5.txt    55.txt
```

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

```
[madhurgupta@Madhurs-MacBook-Air ~ % cd Desktop/CDAC_Practice/OS/one/two/three/four/five
 madhurgupta@Madhurs-MacBook-Air 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.

```
[madhurgupta@Madhurs-MacBook-Air five % cat >  ../../3.txt
 PDDAC Sept 2023
[madhurgupta@Madhurs-MacBook-Air five % cat ../../3.txt
 PDDAC Sept 2023
```

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

```
[madhurgupta@Madhurs-MacBook-Air five % ls ../../..
 2.txt    22.txt   222.txt three
```

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

```
[madhurgupta@Madhurs-MacBook-Air five % rm ../../../222.txt
[madhurgupta@Madhurs-MacBook-Air five % ls ../../../
 2.txt    22.txt   three
```

viii. now change the directory to "one"

```
[madhurgupta@Madhurs-MacBook-Air five % cd ../../../..
 madhurgupta@Madhurs-MacBook-Air one % ▉
```

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

```
[madhurgupta@Madhurs-MacBook-Air one % rm two/three/four/five/*                    ]
 zsh: sure you want to delete all 2 files in /Users/madhurgupta/Desktop/CDAC_Practice/OS/one/two/thre
 e/four/five [yn]? y
 madhurgupta@Madhurs-MacBook-Air one % ls two/three/four/five
[madhurgupta@Madhurs-MacBook-Air one % ▉                                           ]
```

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

```
[madhurgupta@Madhurs-MacBook-Air one % rmdir two/three/four/five
[madhurgupta@Madhurs-MacBook-Air one % ls
 1.txt   11.txt  111.txt two
[madhurgupta@Madhurs-MacBook-Air one % ls two/three/four/
 4.txt    44.txt   444.txt
 madhurgupta@Madhurs-MacBook-Air one % ▉
```

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

```
[madhurgupta@Madhurs-MacBook-Air one % rm -r two/three/four
[madhurgupta@Madhurs-MacBook-Air one % ls two/three/
 3.txt    33.txt   333.txt
 madhurgupta@Madhurs-MacBook-Air one % ▉
```

xii. change to your home directory.

```
[madhurgupta@Madhurs-MacBook-Air one % cd ~
```

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

```
madhurgupta@Madhurs-MacBook-Air three % touch -m 3.txt

madhurgupta@Madhurs-MacBook-Air three % ls -l
total 8
-rw-r--r--  1 madhurgupta  staff  16 Dec  7 18:52 3.txt
-rw-r--r--  1 madhurgupta  staff   0 Dec  7 18:12 33.txt
-rw-r--r--  1 madhurgupta  staff   0 Dec  7 18:12 333.txt
```