22AIE202 - Operating Systems

Lab sheet - 1

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- Display the path of your current directory.

```
root@Giriirig:~# pwd
/root
root@Giriirig:~#
```

- Make a new directory named main.

```
root@Giriirig:~# mkdir main
root@Giriirig:~# ls
main  snap  test1
root@Giriirig:~#
```

- Now go to the directory main.

```
root@Giriirig:~# cd main
root@Giriirig:~/main#
```

- Make the directories in the following hierarchy using a single command.

Dir1 -> Dir 2 -> Dir3

```
root@Giriirig:~/main# mkdir -p dir1/dir2/dir3
root@Giriirig:~/main# ls
dir1
root@Giriirig:~/main# cd dir1
root@Giriirig:~/main/dir1# ls
dir2
root@Giriirig:~/main/dir1# cd dir2
root@Giriirig:~/main/dir1/dir2# ls
dir3
root@Giriirig:~/main/dir1/dir2# cd dir3
root@Giriirig:~/main/dir1/dir2/dir3# pwd
/root/main/dir1/dir2/dir3
root@Giriirig:~/main/dir1/dir2/dir3#
```

- **Print the path of the current directory.**

```
root@Giriirig:~/main# pwd
/root/main
root@Giriirig:~/main#
```

- **Go to Dir3 using a single command.**

```
root@Giriirig:~/main# cd dir1/dir2/dir3
root@Giriirig:~/main/dir1/dir2/dir3#
```

- **Create a new file demo1, type and save the following contents,**
  This is my first file in shell.
  I can edit this file!!!

```
root@Giriirig:~/main/dir1/dir2/dir3# nano demo1
root@Giriirig:~/main/dir1/dir2/dir3# cat demo1
this is my first file in shell.
I can edit this file!!!
root@Giriirig:~/main/dir1/dir2/dir3#
```

- **Create a new file demo2, type and save the following contents,**
  Hi !!! This is the second file.
  I am doing shell commands.
  I can edit this file!!!

```
root@Giriirig:~/main/dir1/dir2/dir3# nano demo2
root@Giriirig:~/main/dir1/dir2/dir3# cat demo2
Hi !!! This is the second file.
I am doing shell commands.
I can edit this file!!!
root@Giriirig:~/main/dir1/dir2/dir3#
```

- **Display the contents of file demo1 in terminal.**

```
root@Giriirig:~/main/dir1/dir2/dir3# cat demo1
this is my first file in shell.
I can edit this file!!!
root@Giriirig:~/main/dir1/dir2/dir3#
```

- **List the files and folders present in Dir3.**

```
root@Giriirig:~/main/dir1/dir2/dir3# ls
demo1  demo2
root@Giriirig:~/main/dir1/dir2/dir3#
```

- **Go to Dir 2.**

```
root@Giriirig:~/main/dir1/dir2/dir3# cd ..
root@Giriirig:~/main/dir1/dir2#
```

❖ **Go to your home directory.**

```
root@Giriirig:~/main/dir1/dir2# cd
root@Giriirig:~#
```

❖ **Stay where you are, and list the contents of Dir3.**

```
root@Giriirig:~# ls main/dir1/dir2/dir3
demo1  demo2
root@Giriirig:~#
```

❖ **List all the files (including hidden files) in your home directory.**

```
root@Giriirig:~# ls -a
.  ..  .bash_history  .bashrc  .cache  .lesshst  .local  .motd_shown  .profile  main  snap  test1
root@Giriirig:~#
```

❖ **Create a new file test1, type and save the contents into your file**
I am working with linux shell.
Good bye

```
root@Giriirig:~# nano test1
root@Giriirig:~# cat test1
I am working with linux shell.
Good bye
root@Giriirig:~#
```

❖ **Copy the contents of test1 to test2 in the same directory.**

```
root@Giriirig:~# cp test1 test2
root@Giriirig:~# ls
main  snap  test1  test2
root@Giriirig:~# cat test2
I am working with linux shell.
Good bye
root@Giriirig:~#
```

❖ **Rename test2 as test3.**

```
root@Giriirig:~# mv test2 test3
root@Giriirig:~# ls
main  snap  test1  test3
root@Giriirig:~#
```

❖ **Determine the file type of test3.**

```
root@Giriirig:~# file test3
test3: ASCII text
root@Giriirig:~#
```

- **Move the file test3 to the directory Dir3.**

```
root@Giriirig:~# mv test3 main/dir1/dir2/di
root@Giriirig:~# cd main/dir1/dir2/dir3
root@Giriirig:~/main/dir1/dir2/dir3# ls
demo1  demo2  test3
```

- **Create a file count, with content one to twenty in words with one line having only one number using a single command.**

```
root@Giriirig:~# echo -e "One\nTwo\nThree\nFour\nFive\nSix\nSeven\nEight\nNine\nTen\nEleven\nTwelve\nThirteen\nFourteen\
nFifteen\nSixteen\nSeventeen\nEighteen\nNineteen\nTwenty" > count
root@Giriirig:~# cat count
One
Two
Three
Four
Five
Six
Seven
Eight
Nine
Ten
Eleven
Twelve
Thirteen
Fourteen
Fifteen
Sixteen
Seventeen
Eighteen
Nineteen
Twenty
root@Giriirig:~#
```

- **Copy the file count to count2 using cat command.**

```
root@Giriirig:~/main/dir1/dir2/dir3# touch count2
root@Giriirig:~/main/dir1/dir2/dir3# cat count > count2
root@Giriirig:~/main/dir1/dir2/dir3# cat count2
One
Two
Three
Four
Five
Six
Seven
Eight
Nine
Ten
Eleven
Twelve
Thirteen
Fourteen
Fifteen
Sixteen
Seventeen
Eighteen
Nineteen
Twenty
```

- **Create another file count3 with numbers twenty one to twenty five (in five lines).**

```
root@Giriirig:~/main/dir1/dir2/dir3# echo -e "twenty one\ntwenty two\ntwenty three\ntwenty four\ntwenty five" > count3
root@Giriirig:~/main/dir1/dir2/dir3# cat count3
twenty one
twenty two
twenty three
twenty four
twenty five
```

- **Concatenate the contents of files count2 and count3 and write it into the file countfinal.**

```
root@Giriirig:~/main/dir1/dir2/dir3# cat count2 count3 > countfinal
root@Giriirig:~/main/dir1/dir2/dir3# cat countfinal
One
Two
Three
Four
Five
Six
Seven
Eight
Nine
Ten
Eleven
Twelve
Thirteen
Fourteen
Fifteen
Sixteen
Seventeen
Eighteen
Nineteen
Twenty
twenty one
twenty two
twenty three
twenty four
twenty five
```

- **Remove the files demo1 and demo2 in directory Dir3.**

```
root@Giriirig:~/main/dir1/dir2/dir3# rm demo1 demo2
root@Giriirig:~/main/dir1/dir2/dir3# ls
count  count2  count3  countfinal  test3
root@Giriirig:~/main/dir1/dir2/dir3#
```

- **Go to Dir2 and remove the subdirectory Dir3.**

```
root@Giriirig:~/main/dir1/dir2/dir3# cd ..
root@Giriirig:~/main/dir1/dir2# rm -r dir3
root@Giriirig:~/main/dir1/dir2# ls
root@Giriirig:~/main/dir1/dir2#
```

❖ **Come back to your home folder and remove Dir2.**

```
root@Giriirig:~/main/dir1/dir2# cd
root@Giriirig:~# rmdir main/dir1/dir2
root@Giriirig:~# ls main/dir1
root@Giriirig:~#
```

❖ **Display first 10 lines of the file countfinal in terminal.**

```
root@Giriirig:~# head countfinal
One
Two
Three
Four
Five
Six
Seven
Eight
Nine
Ten
root@Giriirig:~#
```

❖ **Display last 10 lines of the file countfinal in terminal.**

```
root@Giriirig:~# tail countfinal
Sixteen
Seventeen
Eighteen
Nineteen
Twenty
Twenty one
Twenty two
Twenty three
Twenty four
Twenty five
root@Giriirig:~#
```

❖ **Display first 5 lines of the file countfinal in terminal.**

```
root@Giriirig:~# head -n 5 countfinal
One
Two
Three
Four
Five
root@Giriirig:~#
```

❖ **Display last 4 lines of the file countfinal in terminal.**

```
root@Giriirig:~# tail -n 4 countfinal
Twenty two
Twenty three
Twenty four
Twenty five
root@Giriirig:~#
```

- **Display the contents of the file countfinal in the inverted form.(last line first and first line last)**

```
root@Giriirig:~# tac countfinal
Twenty five
Twenty four
Twenty three
Twenty two
Twenty one
Twenty
Nineteen
Eighteen
Seventeen
Sixteen
Fifteen
Fourteen
Thirteen
Twelve
Eleven
Ten
Nine
Eight
Seven
Six
Five
Four
Three
Two
One
root@Giriirig:~#
```