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Subject: Operating System
Lab#04

gedit

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~/Os_lab_4/cs54$ cd ~
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd OS_Lab/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ gedit file1.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ ls
file1.txt
```

Cat

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ cat file1.txt
My name is Mussab
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$
```

Example 1

There's a file atomic-notes in current directory. Copy this file to sub-directory with new name at-notes in sub folder nuclear under the directory physics

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cp atomic-notes.txt physics/nuclear/at-note
s
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd physics/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics$ ls
nuclear
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics$ cd nuclear/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics/nuclear$ ls
at-notes
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics/nuclear$
```

Task 1

copy a file from working directory to into home directory

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~/books$ gedit mussab.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/books$ mv mussab.txt ~
ubuntu@ubuntu-HP-EliteBook-820-G2:~/books$ cd ~
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ ls
AdvancedProgramming                     MyJavaDirectory
assignment.txt                          New Document.pdf
atomic-notes.txt                        OperatingSystem
books                                   OS_Lab
cc                                      physics
CompilerConstruction                    Pictures
comp.txt                                Public
Desktop                                 Screenshot from 2021-03-26 09-12-07.png
DifferentialEquation                    snap
Documents                               SoftwareEngineering
Downloads                               Templates
eclipse-workspace                       ubuntu-16.04.7-desktop-amd64.iso.gz
examples.desktop                        Ubuntubasics
google-chrome-stable_current_amd64.deb  Umair 2.png
Lec#1.pptx                              Umair4.png
Lec#2.pptx                              Videos
Music                                   Web-development
mussab.txt
```

Task 2

Change the name of directory to another directory

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ mv books/ pencils
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ ls
AdvancedProgramming                     New Document.pdf
assignment.txt                          OperatingSystem
atomic-notes.txt                        OS_Lab
cc                                      pencils
CompilerConstruction                    physics
comp.txt                                Pictures
Desktop                                 Public
DifferentialEquation                    Screenshot from 2021-03-26 09-12-07.png
Documents                               snap
Downloads                               SoftwareEngineering
eclipse-workspace                       Templates
examples.desktop                        ubuntu-16.04.7-desktop-amd64.iso.gz
google-chrome-stable_current_amd64.deb  Ubuntubasics
Lec#1.pptx                              Umair 2.png
Lec#2.pptx                              Umair4.png
Music                                   Videos
mussab.txt                              Web-development
MyJavaDirectory
```

Example 2

Rename file at-notes with my-notes in the any subdirectory directory

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics$ cd nuclear/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics/nuclear$ ls
at-notes
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics/nuclear$ mv at-notes my-notes
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics/nuclear$ ls
my-notes
```

Task 3

 Move the directory from one to other.

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ mv pencils/ physics/
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd physics/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/physics$ ls
nuclear  pencils
```

Task 4

You must remember the sequence in which the above information displayed.

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OperatingSystem$ ls -l
total 10208
-rw-rw-r-- 1 ubuntu ubuntu 7938673 مارح  7 15:20 Abraham Silberschatz-Operating
 System Concepts (9th,2012.12).pdf
-rw-rw-r-- 1 ubuntu ubuntu   43479 مارح  7 15:15 Assignment-01-S2021.pdf
-rw-rw-r-- 1 ubuntu ubuntu   49299 مارح 25 14:20 Assignment-02-S2021.pdf
-rw-rw-r-- 1 ubuntu ubuntu       0 مارح  9 08:14 lect3
-rw-rw-r-- 1 ubuntu ubuntu      89 مارح  9 08:15 os
-rw-r--r-- 1 ubuntu ubuntu   22572 مارح  6 02:10 OS Assignment-01-S2021.odt
-rw-rw-r-- 1 ubuntu ubuntu     593 مارح  8 08:21 os-lect1
-rw-rw-r-- 1 ubuntu ubuntu     222 مارح  7 21:31 os-lect1.save
-rw-rw-r-- 1 ubuntu ubuntu    1546 مارح 16 09:05 Os lect2
-rw-rw-r-- 1 ubuntu ubuntu 2364640 مارح  7 15:00 OS_lecture_Ch-01.pdf
-rw-rw-r-- 1 ubuntu ubuntu     101 مارح  9 10:16 os.save
```

Take example of first file here we will remember this by 8 types of info as I have shown below

-rw-rw-r-- 1 ubuntu ubuntu 7938673 march(in urdu) 7 15:20 Abraham Silberschatz-Operating

I will remember it by observing the
1.first 10 characters with dashes. First onew is for user then second for group and last for other users. And the first dash indicates it is file.
2. file links in our case is only one file.
3. Owner of file is ubuntu
4. Group user
5. size of file is 7938673

6. date is march 7
7. Time is 15:20
8. last one is file name

Example 3

-rw-r- - r- - 1 saleem stud 700 June 19 08:00 data.file

first character is indicating it is a file. Permissions are as read and write for owner saleem. And only read for both the group and othe user. File link is only one file. Group user is stud. Size is 700. month is june and time is 8:00. file name is data.file.

Example 4

$chmod u-w result.comp Write permission for owner (user) removed from file result.comp. $chmod go+r stock Group and other users get read access for file stock. $chmod g=r+x myfile It will set group access for reading and executing, but not write to i

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ ls -l
total 12
-rw--w--w- 1 ubuntu ubuntu   18 مارج  26 09:44 file1.txt
drwxrwxr-x 2 ubuntu ubuntu 4096 مارج  26 09:52 nuclear
drwxrwxr-x 2 ubuntu ubuntu 4096 مارج  26 09:51 physics
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ chmod u-w file1.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ ls -l
total 12
-r---w--w- 1 ubuntu ubuntu   18 مارج  26 09:44 file1.txt
drwxrwxr-x 2 ubuntu ubuntu 4096 مارج  26 09:52 nuclear
drwxrwxr-x 2 ubuntu ubuntu 4096 مارج  26 09:51 physics
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ chmod go+r file1.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ ls -k
file1.txt  nuclear  physics
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ ls -l
total 12
-r--rw-rw- 1 ubuntu ubuntu   18 مارج  26 09:44 file1.txt
drwxrwxr-x 2 ubuntu ubuntu 4096 مارج  26 09:52 nuclear
drwxrwxr-x 2 ubuntu ubuntu 4096 مارج  26 09:51 physics
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ chmod g=r+x file1.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ ls -l
total 12
-r--r-xrw- 1 ubuntu ubuntu   18 مارج  26 09:44 file1.txt
drwxrwxr-x 2 ubuntu ubuntu 4096 مارج  26 09:52 nuclear
```

Example 5

Change access permission to allow the read, write, and execute permission to all users.

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ chmod 777 file1.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/OS_Lab$ ls -l
total 12
-rwxrwxrwx 1 ubuntu ubuntu   18 مارح 26 09:44 file1.txt
drwxrwxr-x 2 ubuntu ubuntu 4096 مارح 26 09:52 nuclear
drwxrwxr-x 2 ubuntu ubuntu 4096 مارح 26 09:51 physics
```

Task 5

Create a directory called lab5 and create four files say quiz, report and cprogram inside the directory. Now try to set the following rights; -rw-r- - r- - quiz -rw-rw - r- - report -rwxrwx r- x cprogram also try to change access permission of lab5 directory as well and see how it affects files inside directory.

As you can see when we set permissions on directory we are unable to access the files within it.

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ mkdir lab5
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ gedit quiz.txt report.txt cprogram.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ ls
cprogram.txt  quiz.txt  report.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ chmod 644 quiz.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ chmod 664 report.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ chmod 775 cprogram.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ ls -l
total 12
-rwxrwxr-x 1 ubuntu ubuntu 9 مارح 26 10:29 cprogram.txt
-rw-r--r-- 1 ubuntu ubuntu 6 مارح 26 10:29 quiz.txt
-rw-rw-r-- 1 ubuntu ubuntu 8 مارح 26 10:29 report.txt
```

```
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ chmod 644 lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd lab5/
bash: cd: lab5/: Permission denied
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ chmod 144 lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ ls -l
ls: cannot open directory '.': Permission denied
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ cd ~
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ chmod 777 lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ ls -l
total 12
-rwxrwxr-x 1 ubuntu ubuntu 9 مارح  26 10:29 cprogram.txt
-rw-r--r-- 1 ubuntu ubuntu 6 مارح  26 10:29 quiz.txt
-rw-rw-r-- 1 ubuntu ubuntu 8 مارح  26 10:29 report.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ cd ~
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ chmod 111 lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ ls -l
ls: cannot open directory '.': Permission denied
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ cd ~
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ chmod 666 lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd lab5/
bash: cd: lab5/: Permission denied
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ chmod 766 lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~$ cd lab5/
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ ls -l
total 12
-rwxrwxr-x 1 ubuntu ubuntu 9 مارح  26 10:29 cprogram.txt
-rw-r--r-- 1 ubuntu ubuntu 6 مارح  26 10:29 quiz.txt
-rw-rw-r-- 1 ubuntu ubuntu 8 مارح  26 10:29 report.txt
ubuntu@ubuntu-HP-EliteBook-820-G2:~/lab5$ 
```