

1. Create a directory

```
lt-ratank@lt-ratank:~$ mkdir Ratan
lt-ratank@lt-ratank:~$
```

2. Switch to this directory

```
lt-ratank@lt-ratank:~$ cd Ratan
lt-ratank@lt-ratank:~/Ratan$
```

3. Create a normal text file

```
lt-ratank@lt-ratank:~$ cd Ratan
lt-ratank@lt-ratank:~/Ratan$ touch hello.txt
lt-ratank@lt-ratank:~/Ratan$
```

4. Create a hidden text file

```
lt-ratank@lt-ratank:~/Ratan$ touch .test.txt
lt-ratank@lt-ratank:~/Ratan$
```

5. Modify the access of the hidden text file so that it can be edited only by root user.

```
lt-ratank@lt-ratank:~/Ratan$ ls -l .test.txt
-rw-rw-r-- 1 lt-ratank lt-ratank 0 Jul 12 18:25 .test.txt
lt-ratank@lt-ratank:~/Ratan$ chmod 644 .test.txt
lt-ratank@lt-ratank:~/Ratan$ ls -l .test.txt
-rw-r--r-- 1 lt-ratank lt-ratank 0 Jul 12 18:25 .test.txt
lt-ratank@lt-ratank:~/Ratan$
```

6. Move the hidden file to a your desktop.

```
lt-ratank@lt-ratank:~/Ratan$ mv .fire.txt ~/Desktop
lt-ratank@lt-ratank:~/Ratan$
```

7. Create a directory, add 3 files into it and then remove the whole directory.

```
lt-ratank@lt-ratank:~$ mkdir tree
lt-ratank@lt-ratank:~$ cd tree
lt-ratank@lt-ratank:~/tree$ touch leaf.txt
lt-ratank@lt-ratank:~/tree$ touch branch.txt
lt-ratank@lt-ratank:~/tree$ touch root.txt
lt-ratank@lt-ratank:~/tree$ cd..
cd..: command not found
lt-ratank@lt-ratank:~/tree$ cd ..
lt-ratank@lt-ratank:~$ rm -r tree
lt-ratank@lt-ratank:~$
```

8. Create a new user group.

```
lt-ratank@lt-ratank:~$ groupadd -g 1001 -s /bin/bash -c "New Group"
july2022:x:1002:
(END)
```

9. Create a new user and assign a new user home and the previously created usergroup to the user.

```
lt-ratank@lt-ratank:~/Ratan$ sudo useradd -g july2022 -d ~/Downlods aakash
[sudo] password for lt-ratank:
lt-ratank@lt-ratank:~/Ratan$ sudo passwd aakash
New password:
Retype new password:
passwd: password updated successfully
lt-ratank@lt-ratank:~/Ratan$ whoami
lt-ratank
lt-ratank@lt-ratank:~/Ratan$ sudo su - aakash
su: warning: cannot change directory to /home/lt-ratank/Downlods: Permission denied
$ whoami
aakash
$ pwd ~
/home/lt-ratank/Ratan
$ groups
july2022
$
```

10. Create a symbolic link in a different location for the file created in step 3.

```
lt-ratank@lt-ratank:~$ cd Ratan
lt-ratank@lt-ratank:~/Ratan$ ln -s hello.txt L1
lt-ratank@lt-ratank:~/Ratan$ ls
hello.txt L1 Ratan Ratan.pub
lt-ratank@lt-ratank:~/Ratan$ ln -s ~/Ratan/hello.txt ~/Downloads/L2
lt-ratank@lt-ratank:~/Ratan$ cd Downloads
bash: cd: Downloads: No such file or directory
lt-ratank@lt-ratank:~/Ratan$ cd ~
lt-ratank@lt-ratank:~$ cd Downloads
lt-ratank@lt-ratank:~/Downloads$ ls -al
total 1000936
drwxr-xr-x  3 lt-ratank lt-ratank      4096 Jul 13 12:20 .
drwxr-x--- 25 lt-ratank lt-ratank      4096 Jul 13 11:57 ..
drwx-----  2 lt-ratank lt-ratank      4096 Jul  2 12:44 firefox.tmp
-rw-rw-r--  1 lt-ratank lt-ratank    285799 Jul 13 11:26 'GIT (1).pptx'
-rw-rw-r--  1 lt-ratank lt-ratank   85757216 Jul  2 12:25 'google-chrome-stable_current_amd64.deb'
-rw-rw-r--  1 lt-ratank lt-ratank     6615 Jul  5 14:28 'Group Insurance Details.xlsx'
-rw-rw-r--  1 lt-ratank lt-ratank   854324886 Jul 12 17:15 'ideaIC-2022.1.3.tar.gz'
lrwxrwxrwx  1 lt-ratank lt-ratank       31 Jul 13 12:20 L2 -> /home/lt-ratank/Ratan/hello.txt
-rw-rw-r--  1 lt-ratank lt-ratank       754 Jul 12 14:31 'Linux exercises'
-rw-rw-r--  1 lt-ratank lt-ratank     65032 Jul  4 11:21 'RxLogix Desktop Wallpaper.jpg'
-rw-rw-r--  1 lt-ratank lt-ratank   84485626 Jul  2 12:25 'teams_1.5.00.10453_amd64.deb'
lt-ratank@lt-ratank:~/Downloads$ ln -s ~/Ratan/hello.txt ~/Music/L3
lt-ratank@lt-ratank:~/Downloads$ cd ..
lt-ratank@lt-ratank:~$ cd Music
lt-ratank@lt-ratank:~/Music$ ls -al
total 8
drwxr-xr-x  2 lt-ratank lt-ratank    4096 Jul 13 12:22 .
drwxr-x--- 25 lt-ratank lt-ratank    4096 Jul 13 11:57 ..
lrwxrwxrwx  1 lt-ratank lt-ratank     31 Jul 13 12:22 L3 -> /home/lt-ratank/Ratan/hello.txt
lt-ratank@lt-ratank:~/Music$
```

11. Open google chrome or any other web browser, see its memory usage using top command and end the process using the ps and grep commands.

[illegible]

```
lt-ratank@lt-ratank:~$ kill 2864 2873
lt-ratank@lt-ratank:~$
```

12. Use ssh and scp commands to download and modify files on an external machine.

```
lt-ratank@lt-ratank:~/Music$ ssh lt-nishantk@172.28.1.17
lt-nishantk@172.28.1.17's password:
Welcome to Ubuntu 21.10 (GNU/Linux 5.13.0-52-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

5 updates can be applied immediately.
5 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

New release '22.04 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue Jul 12 12:52:33 2022 from 172.28.2.171
lt-nishantk@lt-nishantk:~$ cd ~/
lt-nishantk@lt-nishantk:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  RxL-Nishant-Kumar  RxL-Nishant-Kumar.pub  snap  Templates  Videos
lt-nishantk@lt-nishantk:~$ cd Downloads
lt-nishantk@lt-nishantk:~/Downloads$ ls
From_Nishant.txt  From_Ratan.txt  GIT.pptx  Link3  LinuxTest  Tay
lt-nishantk@lt-nishantk:~/Downloads$ scp ~/Downloads/From_Nishant.txt lt-ratank@172.28.2.22:~/Ratan
lt-ratank@172.28.2.22's password:
From_Nishant.txt
lt-nishantk@lt-nishantk:~/Downloads$ scp ~/Downloads/From_Nishant.txt lt-ratank@172.28.2.22:~/Ratan
```