

1. Create a directory

```
lt-ishans@LT-ISHANS:~$ mkdir exercise
lt-ishans@LT-ISHANS:~$ ls
abc exercise
lt-ishans@LT-ISHANS:~$ cd exercise
lt-ishans@LT-ISHANS:~/exercise$ ls
lt-ishans@LT-ISHANS:~/exercise$
```

2. Switch to this directory

```
lt-ishans@LT-ISHANS:~$ mkdir exercise
lt-ishans@LT-ISHANS:~$ ls
abc exercise
lt-ishans@LT-ISHANS:~$ cd exercise
lt-ishans@LT-ISHANS:~/exercise$ ls
lt-ishans@LT-ISHANS:~/exercise$
```

3. Create a normal text file

```
lt-ishans@LT-ISHANS:~/exercise$ touch visible.txt
lt-ishans@LT-ISHANS:~/exercise$ ll
total 8
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:29 ./
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:28 ../
-rw-r--r-- 1 lt-ishans lt-ishans    0 Apr 10 18:29 visible.txt
lt-ishans@LT-ISHANS:~/exercise$
```

4. Create a hidden text file

```
lt-ishans@LT-ISHANS:~/exercise$ touch .hidden.txt
lt-ishans@LT-ISHANS:~/exercise$ ll
total 8
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:29 ./
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:28 ../
-rw-r--r-- 1 lt-ishans lt-ishans    0 Apr 10 18:29 .hidden.txt
-rw-r--r-- 1 lt-ishans lt-ishans    0 Apr 10 18:29 visible.txt
lt-ishans@LT-ISHANS:~/exercise$
```

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

```
lt-ishans@LT-ISHANS:~/exercise$ sudo chown root:root .hidden.txt
[sudo] password for lt-ishans:
lt-ishans@LT-ISHANS:~/exercise$ ll
total 8
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:29 ./
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:28 ../
-rw-r--r-- 1 root      root        0 Apr 10 18:29 .hidden.txt
-rw-r--r-- 1 lt-ishans lt-ishans    0 Apr 10 18:29 visible.txt
lt-ishans@LT-ISHANS:~/exercise$
```

```
lt-ishans@LT-ISHANS:~/exercise$ sudo chmod 200 .hidden.txt
lt-ishans@LT-ISHANS:~/exercise$ ll
total 8
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:29 ./
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:28 ../
--w----- 1 root      root      0 Apr 10 18:29 .hidden.txt
-rw-r--r-- 1 lt-ishans lt-ishans  0 Apr 10 18:29 visible.txt
lt-ishans@LT-ISHANS:~/exercise$
```

6. Move the hidden file to a your desktop.

```
lt-ishans@LT-ISHANS:~/exercise$ sudo mv .hidden.txt /home
lt-ishans@LT-ISHANS:~/exercise$ cd /home
lt-ishans@LT-ISHANS:/home$ ll
total 12
drwxr-xr-x  3 root      root      4096 Apr 10 18:33 ./
drwxr-xr-x 19 root      root      4096 Apr 10 18:27 ../
--w-----  1 root      root      0 Apr 10 18:29 .hidden.txt
drwxr-x---  5 lt-ishans lt-ishans 4096 Apr 10 18:28 lt-ishans/
lt-ishans@LT-ISHANS:/home$
```

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

```
lt-ishans@LT-ISHANS:~/exercise$ mkdir folder
lt-ishans@LT-ISHANS:~/exercise$ ll
total 12
drwxr-xr-x 3 lt-ishans lt-ishans 4096 Apr 10 18:34 ./
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:28 ../
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:34 folder/
-rw-r--r-- 1 lt-ishans lt-ishans  0 Apr 10 18:29 visible.txt
lt-ishans@LT-ISHANS:~/exercise$ cd folder
lt-ishans@LT-ISHANS:~/exercise/folder$ touch a.txt b.txt c.txt
lt-ishans@LT-ISHANS:~/exercise/folder$ ll
total 8
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:35 ./
drwxr-xr-x 3 lt-ishans lt-ishans 4096 Apr 10 18:34 ../
-rw-r--r-- 1 lt-ishans lt-ishans  0 Apr 10 18:35 a.txt
-rw-r--r-- 1 lt-ishans lt-ishans  0 Apr 10 18:35 b.txt
-rw-r--r-- 1 lt-ishans lt-ishans  0 Apr 10 18:35 c.txt
lt-ishans@LT-ISHANS:~/exercise/folder$ cd ..
lt-ishans@LT-ISHANS:~/exercise$ ll
total 12
drwxr-xr-x 3 lt-ishans lt-ishans 4096 Apr 10 18:34 ./
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:28 ../
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:35 folder/
-rw-r--r-- 1 lt-ishans lt-ishans  0 Apr 10 18:29 visible.txt
lt-ishans@LT-ISHANS:~/exercise$ rm -r folder
lt-ishans@LT-ISHANS:~/exercise$ ll
total 8
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:35 ./
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:28 ../
-rw-r--r-- 1 lt-ishans lt-ishans  0 Apr 10 18:29 visible.txt
lt-ishans@LT-ISHANS:~/exercise$
```



8. Create a new user group.

```
lt-ishans@LT-ISHANS:~/exercise$ sudo groupadd testgroup
lt-ishans@LT-ISHANS:~/exercise$ grep testgroup /etc/group
testgroup:x:1003:
lt-ishans@LT-ISHANS:~/exercise$
```

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

```
lt-ishans@LT-ISHANS:~/exercise$ sudo useradd -mg testgroup art3mix
lt-ishans@LT-ISHANS:~/exercise$ grep art3mix /etc/passwd
LOGIN:x:1001:1002::/lt-art3mix:/bin/sh
art3mix:x:1002:1003::/home/art3mix:/bin/sh
lt-ishans@LT-ISHANS:~/exercise$
```

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

```
lt-ishans@LT-ISHANS:~/exercise$ ll
total 8
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:35 ./
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:39 ../
-rw-r--r-- 1 lt-ishans lt-ishans   0 Apr 10 18:29 visible.txt
lt-ishans@LT-ISHANS:~/exercise$ cd ..
lt-ishans@LT-ISHANS:~$ ll
total 56
drwxr-x--- 5 lt-ishans lt-ishans 4096 Apr 10 18:39 ./
drwxr-xr-x 4 root      root      4096 Apr 10 18:37 ../
-rw----- 1 lt-ishans lt-ishans 4812 Apr 10 18:19 .bash_history
-rw-r--r-- 1 lt-ishans lt-ishans  220 Apr 10 11:21 .bash_logout
-rw-r--r-- 1 lt-ishans lt-ishans 3771 Apr 10 11:21 .bashrc
drwx----- 4 lt-ishans lt-ishans 4096 Apr 10 12:11 .cmfag/
-rw----- 1 lt-ishans lt-ishans   20 Apr 10 15:05 .lessht
-rw-r--r-- 1 lt-ishans lt-ishans   0 Apr 10 11:22 .motd_shown
-rw-r--r-- 1 lt-ishans lt-ishans  807 Apr 10 11:21 .profile
-rw-r--r-- 1 lt-ishans lt-ishans   0 Apr 10 11:22 .sudo_as_admin_successful
-rw----- 1 lt-ishans lt-ishans 8205 Apr 10 18:39 .viminfo
drwxr-xr-x 5 lt-ishans lt-ishans 4096 Apr 10 17:29 abc/
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:35 exercise/
lt-ishans@LT-ISHANS:~$ mkdir folder
lt-ishans@LT-ISHANS:~$ cd folder
lt-ishans@LT-ISHANS:~/folder$ ln -s ../exercise/visible.txt softvisible.txt
lt-ishans@LT-ISHANS:~/folder$ ll
total 8
drwxr-xr-x 2 lt-ishans lt-ishans 4096 Apr 10 18:42 ./
drwxr-x--- 6 lt-ishans lt-ishans 4096 Apr 10 18:41 ../
lrwxrwxrwx 1 lt-ishans lt-ishans   23 Apr 10 18:42 softvisible.txt -> ../exercise/visible.txt
lt-ishans@LT-ISHANS:~/folder$
```

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.

NOT AVAILABLE IN WINDOWS.

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

NOT AVAILABLE IN WINDOWS.