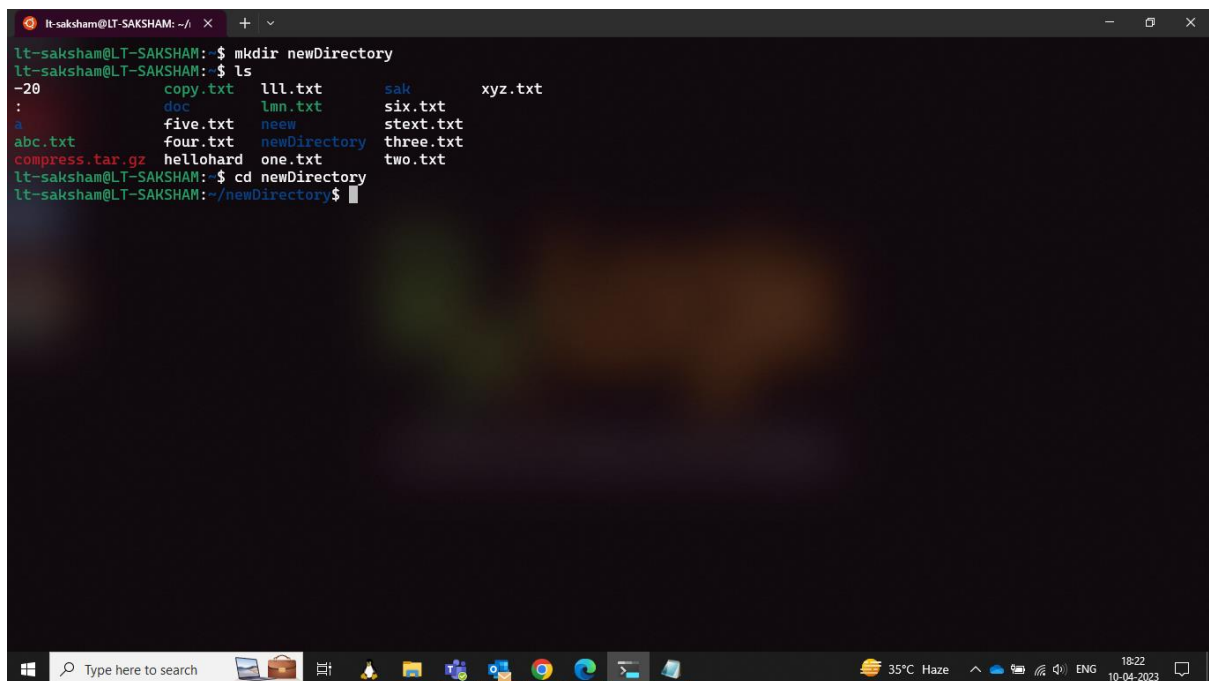


SAKSHAM CHAUHAN

LINUX ASSIGNMENT

1. Create a directory
2. Switch to this directory

A screenshot of a Linux terminal window. The terminal shows the user 'lt-saksham@LT-SAKSHAM' in the home directory '~/'. The user enters 'mkdir newDirectory' to create a new directory. Then, they enter 'ls' to list the contents of the current directory, which shows various files and subdirectories including 'copy.txt', 'doc', 'five.txt', 'four.txt', 'hellohard', 'newDirectory', 'one.txt', 'three.txt', 'two.txt', 'xyz.txt', and 'sak'. Finally, the user enters 'cd newDirectory' to switch to the newly created directory, and the prompt changes to '~/newDirectory\$'.

```
lt-saksham@LT-SAKSHAM: ~/$ mkdir newDirectory
lt-saksham@LT-SAKSHAM: ~/$ ls
-20      copy.txt  lll.txt    sak        xyz.txt
:         doc      lmn.txt    six.txt
:         five.txt new         stext.txt
abc.txt  four.txt  newDirectory three.txt
compress.tar.gz hellohard  one.txt    two.txt
lt-saksham@LT-SAKSHAM: ~/$ cd newDirectory
lt-saksham@LT-SAKSHAM: ~/newDirectory$
```

3. Create a normal text file

4. Create a hidden text file

```
lt-saksham@LT-SAKSHAM: ~$ touch newText.txt
lt-saksham@LT-SAKSHAM: ~$ vi newText.txt
lt-saksham@LT-SAKSHAM: ~$ cat newText.txt
This is a new Text file
lt-saksham@LT-SAKSHAM: ~$ touch .hiddenText.txt
lt-saksham@LT-SAKSHAM: ~$ ls -a
-20      .bash_logout      .lessshst      .viminfo      copy.txt      lll.txt      one.txt      two.txt
         .bashrc           .motd_shown    :             doc           lmn.txt      sak          xyz.txt
         .hidden        .profile       a             abc.txt       five.txt     new          six.txt
         .hidden2      .ssh          abc.txt       four.txt     newDirectory stext.txt
.bash_history .hiddenText.txt .sudo_as_admin_successful compress.tar.gz hellohard    newText.txt three.txt
lt-saksham@LT-SAKSHAM: ~$ ls
-20 a      compress.tar.gz doc      four.txt  lll.txt  new      newText.txt sak      stext.txt two.txt
:   abc.txt  copy.txt   five.txt  hellohard lmn.txt  newDirectory one.txt  six.txt  three.txt xyz.txt
lt-saksham@LT-SAKSHAM: ~$
```

```
lt-saksham@LT-SAKSHAM: ~$ ls -la
-rw-r--r-- 1 lt-saksham lt-saksham 12288 Apr 10 15:40 .abc.txt.swp
-rw-r--r-- 1 lt-saksham lt-saksham 1348 Apr 10 15:40 .bash_history
-rw-r--r-- 1 lt-saksham lt-saksham 220 Apr 10 11:23 .bash_logout
-rw-r--r-- 1 lt-saksham lt-saksham 3771 Apr 10 17:52 .bashrc
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 12:46 .hidden/
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 14:15 .hidden2/
-rw-r--r-- 1 lt-saksham lt-saksham 0 Apr 10 18:28 .hiddenText.txt
-rw-r--r-- 1 lt-saksham lt-saksham 20 Apr 10 17:26 .lessshst
-rw-r--r-- 1 lt-saksham lt-saksham 0 Apr 10 11:24 .motd_shown
-rw-r--r-- 1 lt-saksham lt-saksham 807 Apr 10 11:23 .profile
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 15:14 .ssh/
-rw-r--r-- 1 lt-saksham lt-saksham 0 Apr 10 15:04 .sudo_as_admin_successful
-rw-r--r-- 1 lt-saksham lt-saksham 7390 Apr 10 18:23 .viminfo
-rw-r--r-- 1 lt-saksham lt-saksham 36 Apr 10 15:23 :
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 11:25 /
-rwxr-xr-x 1 lt-saksham lt-saksham 203 Apr 10 17:02 abc.txt*
-rw-r--r-- 1 lt-saksham lt-saksham 10240 Apr 10 16:17 compress.tar.gz
-rwxrwxrwx 1 root      lt-saksham 0 Apr 10 15:57 copy.txt*
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 17:17 doc/
-rw-r--r-- 1 lt-saksham lt-saksham 71 Apr 10 17:43 five.txt
-rw-r--r-- 1 lt-saksham lt-saksham 68 Apr 10 17:37 four.txt
-rw-r--r-- 1 lt-saksham lt-saksham 26 Apr 10 12:31 hellohard
-rw-r--r-- 1 lt-saksham lt-saksham 0 Apr 10 17:20 lll.txt
-r-xr-xr-x 1 lt-saksham lt-saksham 51 Apr 10 15:52 lmn.txt*
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 17:17 new/
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 18:15 newDirectory/
-rw-r--r-- 1 lt-saksham lt-saksham 24 Apr 10 18:23 newText.txt
-rw-r--r-- 1 lt-saksham lt-saksham 68 Apr 10 17:25 one.txt
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 15:54 sak/
-rw-r--r-- 1 lt-saksham lt-saksham 12 Apr 10 17:48 six.txt
-rw-r--r-- 1 lt-saksham lt-saksham 45 Apr 10 11:57 stext.txt
-rw-r--r-- 1 lt-saksham lt-saksham 68 Apr 10 17:31 three.txt
-rw-r--r-- 1 lt-saksham lt-saksham 13 Apr 10 17:21 two.txt
-rw-r--r-- 1 lt-saksham lt-saksham 36 Apr 10 15:23 xyz.txt
```

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

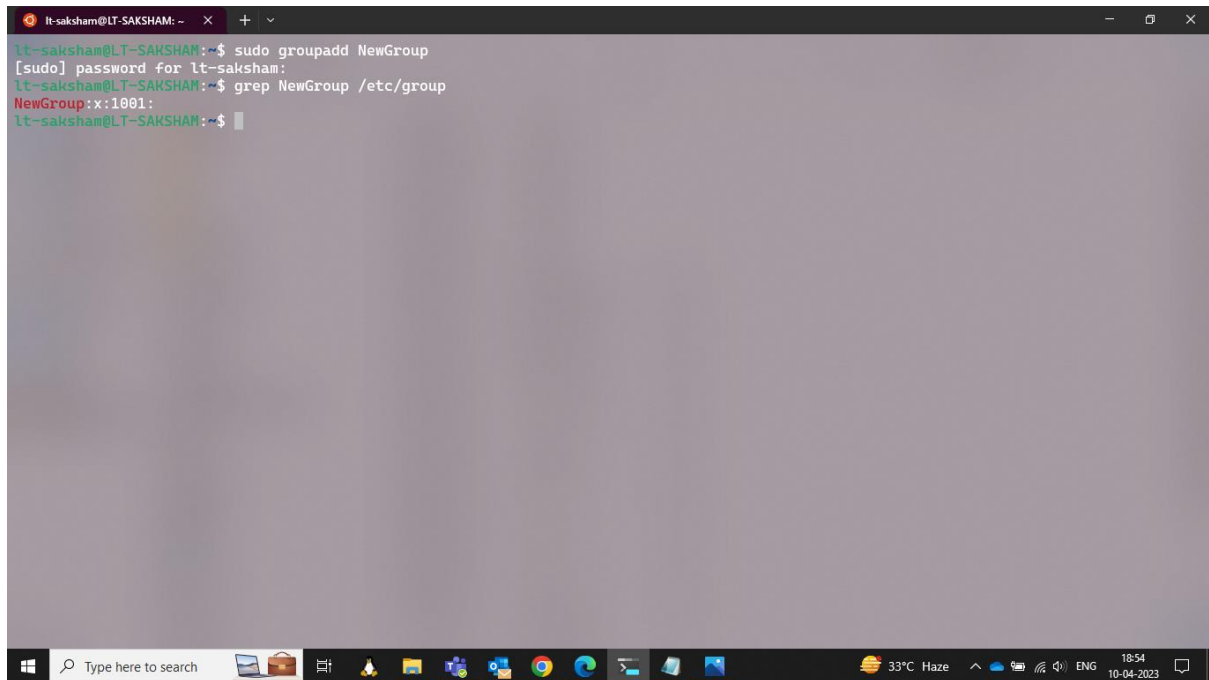
```
lt-saksham@LT-SAKSHAM: ~  
lt-saksham@LT-SAKSHAM: $ chmod 644 .hiddenText.txt  
lt-saksham@LT-SAKSHAM: $ ll  
total 148  
-rw-r--r-- 1 lt-saksham lt-saksham 147 Apr 10 17:30 -20  
drwxr-xr-x 10 lt-saksham lt-saksham 4096 Apr 10 18:28 /  
drwxr-xr-x 3 root root 4096 Apr 10 11:23 ../  
-rw----- 1 lt-saksham lt-saksham 12288 Apr 10 15:40 .abc.txt.swp  
-rw----- 1 lt-saksham lt-saksham 1348 Apr 10 15:40 .bash_history  
-rw-r--r-- 1 lt-saksham lt-saksham 220 Apr 10 11:23 .bash_logout  
-rw-r--r-- 1 lt-saksham lt-saksham 3771 Apr 10 17:52 .bashrc  
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 12:46 .hidden/  
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 14:15 .hidden/  
-rw-r--r-- 1 lt-saksham lt-saksham 0 Apr 10 18:28 .hiddenText.txt  
-rw-r--r-- 1 lt-saksham lt-saksham 20 Apr 10 17:26 .lessrc  
-rw-r--r-- 1 lt-saksham lt-saksham 0 Apr 10 11:24 .motd_shown  
-rw-r--r-- 1 lt-saksham lt-saksham 807 Apr 10 11:23 .profile  
drwx-- 2 lt-saksham lt-saksham 4096 Apr 10 15:14 .ssh/  
-rw-r--r-- 1 lt-saksham lt-saksham 0 Apr 10 15:04 .sudo_as_admin_successful  
-rw----- 1 lt-saksham lt-saksham 7390 Apr 10 18:23 .viminfo  
-rw-r--r-- 1 lt-saksham lt-saksham 36 Apr 10 15:23 :  
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 11:25 ./  
-rw-r--r-- 1 lt-saksham lt-saksham 203 Apr 10 17:02 abc.txt*  
-rw-r--r-- 1 lt-saksham lt-saksham 10240 Apr 10 16:17 compress.tar.gz  
-rwxrwxrwx 1 root lt-saksham 0 Apr 10 15:57 copy.txt*  
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 17:17 doc/  
-rw-r--r-- 1 lt-saksham lt-saksham 71 Apr 10 17:43 five.txt  
-rw-r--r-- 1 lt-saksham lt-saksham 68 Apr 10 17:37 four.txt  
-rw-r--r-- 1 lt-saksham lt-saksham 26 Apr 10 12:31 hellohard  
-rw-r--r-- 1 lt-saksham lt-saksham 0 Apr 10 17:20 lll.txt  
-r-xrwxrwx 1 lt-saksham lt-saksham 51 Apr 10 15:52 lmn.txt*  
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 17:17 neew/  
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 18:15 newDirectory/  
-rw-r--r-- 1 lt-saksham lt-saksham 24 Apr 10 18:23 newText.txt  
-rw-r--r-- 1 lt-saksham lt-saksham 68 Apr 10 17:25 one.txt
```

6. Move the hidden file to your desktop.

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

```
lt-saksham@LT-SAKSHAM: ~  
lt-saksham@LT-SAKSHAM:~$ mkdir NewDir  
lt-saksham@LT-SAKSHAM:~$ cd NewDir  
lt-saksham@LT-SAKSHAM:~/NewDir$ touch file1.txt file2.txt file3.txt  
lt-saksham@LT-SAKSHAM:~/NewDir$ ls  
file1.txt file2.txt file3.txt  
lt-saksham@LT-SAKSHAM:~/NewDir$ rm -r  
rm: missing operand  
Try 'rm --help' for more information.  
lt-saksham@LT-SAKSHAM:~/NewDir$ rm -r NewDir  
rm: cannot remove 'NewDir': No such file or directory  
lt-saksham@LT-SAKSHAM:~/NewDir$ cd  
lt-saksham@LT-SAKSHAM:~$ rm -r NewDir  
lt-saksham@LT-SAKSHAM:~$ ls  
-20 Desktop a compress.tar.gz doc four.txt lll.txt neew newText.txt sak stext.txt two.txt  
: Dirnew abc.txt copy.txt five.txt hellohard lmn.txt newDirectory one.txt six.txt three.txt xyz.txt  
lt-saksham@LT-SAKSHAM:~$
```

8. Create a new user group.

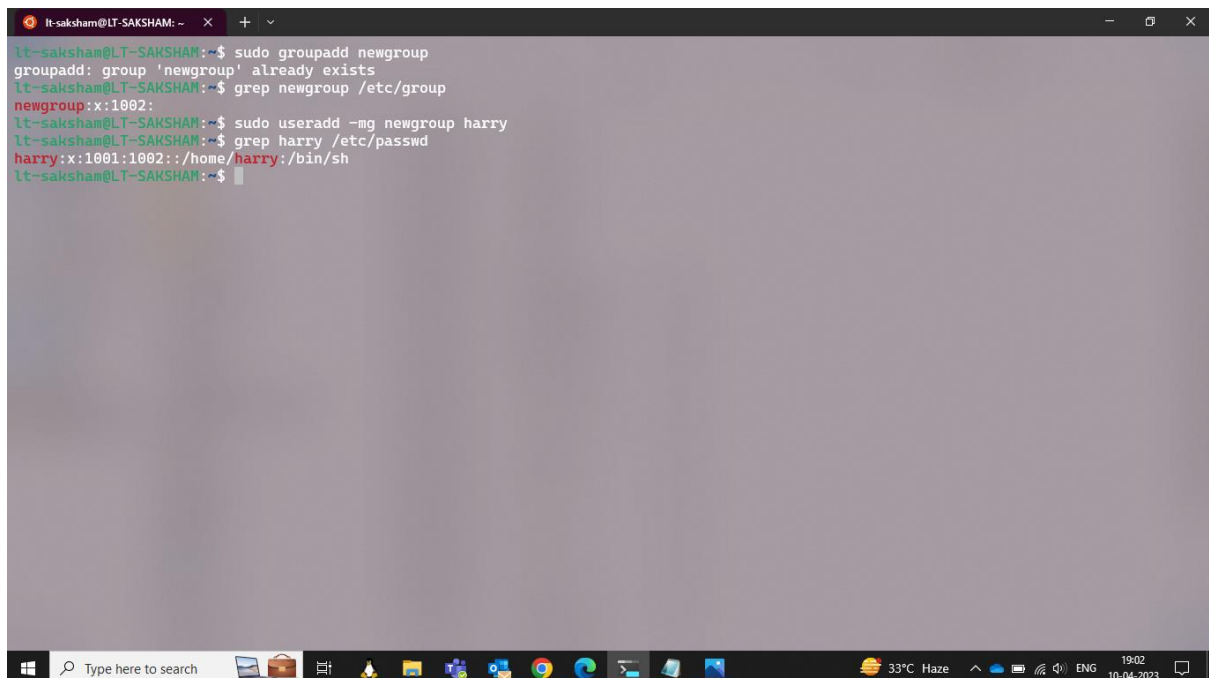


```
lt-saksham@LT-SAKSHAM: ~  
lt-saksham@LT-SAKSHAM:~$ sudo groupadd NewGroup  
[sudo] password for lt-saksham:  
lt-saksham@LT-SAKSHAM:~$ grep NewGroup /etc/group  
NewGroup:x:1001:  
lt-saksham@LT-SAKSHAM:~$
```

The screenshot shows a terminal window with the following commands and output:

- `lt-saksham@LT-SAKSHAM:~$ sudo groupadd NewGroup`: Command to create a new group named NewGroup.
- `[sudo] password for lt-saksham:`: Prompt for the user's password.
- `lt-saksham@LT-SAKSHAM:~$ grep NewGroup /etc/group`: Command to verify the group creation.
- `NewGroup:x:1001:`: Output showing the group details in the /etc/group file.
- `lt-saksham@LT-SAKSHAM:~$`: Prompt for the next command.

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



```
lt-saksham@LT-SAKSHAM: ~  
lt-saksham@LT-SAKSHAM:~$ sudo groupadd newgroup  
groupadd: group 'newgroup' already exists  
lt-saksham@LT-SAKSHAM:~$ grep newgroup /etc/group  
newgroup:x:1002:  
lt-saksham@LT-SAKSHAM:~$ sudo useradd -mg newgroup harry  
lt-saksham@LT-SAKSHAM:~$ grep harry /etc/passwd  
harry:x:1001:1002::/home/harry:/bin/sh  
lt-saksham@LT-SAKSHAM:~$
```

The screenshot shows a terminal window with the following commands and output:

- `lt-saksham@LT-SAKSHAM:~$ sudo groupadd newgroup`: Command to create a new group named newgroup.
- `groupadd: group 'newgroup' already exists`: Output message indicating the group already exists.
- `lt-saksham@LT-SAKSHAM:~$ grep newgroup /etc/group`: Command to verify the group creation.
- `newgroup:x:1002:`: Output showing the group details in the /etc/group file.
- `lt-saksham@LT-SAKSHAM:~$ sudo useradd -mg newgroup harry`: Command to create a new user named harry, assign it to the newgroup, and set the home directory to /home/harry.
- `lt-saksham@LT-SAKSHAM:~$ grep harry /etc/passwd`: Command to verify the user creation.
- `harry:x:1001:1002::/home/harry:/bin/sh`: Output showing the user details in the /etc/passwd file.
- `lt-saksham@LT-SAKSHAM:~$`: Prompt for the next command.

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

```
lt-saksham@LT-SAKSHAM: ~$ mkdir softlink
lt-saksham@LT-SAKSHAM: ~$ mv newText.txt softlink
lt-saksham@LT-SAKSHAM: ~$ cd softlink
lt-saksham@LT-SAKSHAM: ~/softlink$ ls
newText.txt
lt-saksham@LT-SAKSHAM: ~/softlink$ mkdir location
lt-saksham@LT-SAKSHAM: ~/softlink$ ls
location  newText.txt
lt-saksham@LT-SAKSHAM: ~/softlink$ cd location
lt-saksham@LT-SAKSHAM: ~/softlink/location$ ls
lt-saksham@LT-SAKSHAM: ~/softlink/location$ ln -s ../newText.txt softtext.txt
lt-saksham@LT-SAKSHAM: ~/softlink/location$ ls
softtext.txt
lt-saksham@LT-SAKSHAM: ~/softlink/location$ ll
total 8
drwxr-xr-x 2 lt-saksham lt-saksham 4096 Apr 10 19:07 /
drwxr-xr-x 3 lt-saksham lt-saksham 4096 Apr 10 19:06 ../
lrwxrwxrwx 1 lt-saksham lt-saksham 14 Apr 10 19:07 softtext.txt -> ../newText.txt
lt-saksham@LT-SAKSHAM: ~/softlink/location$
```