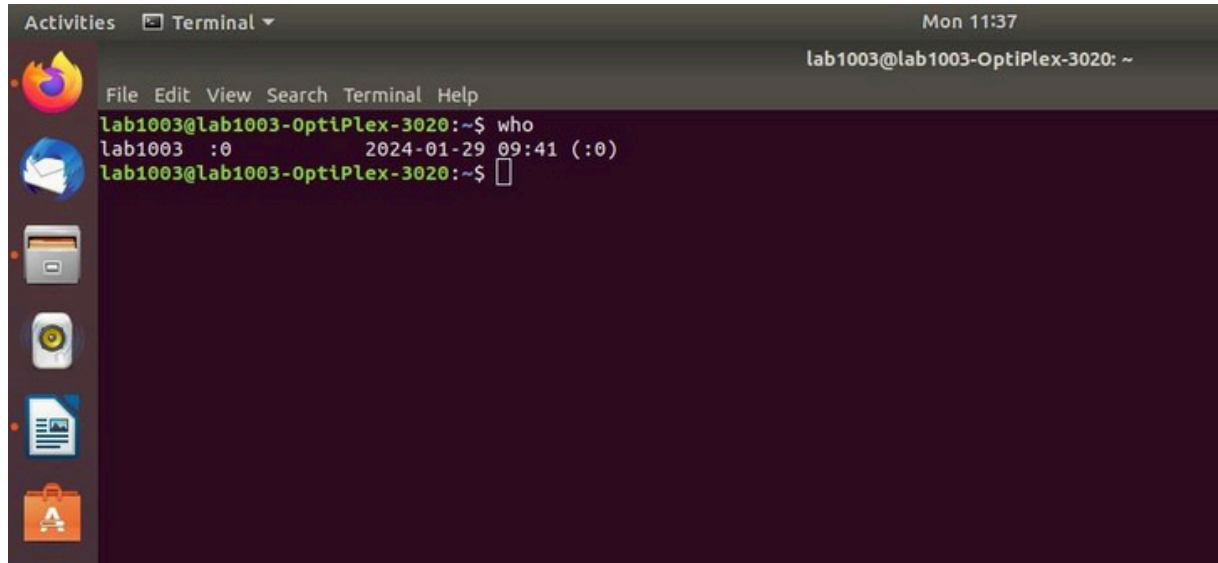


Assignment 04-

To Study User Management Commands

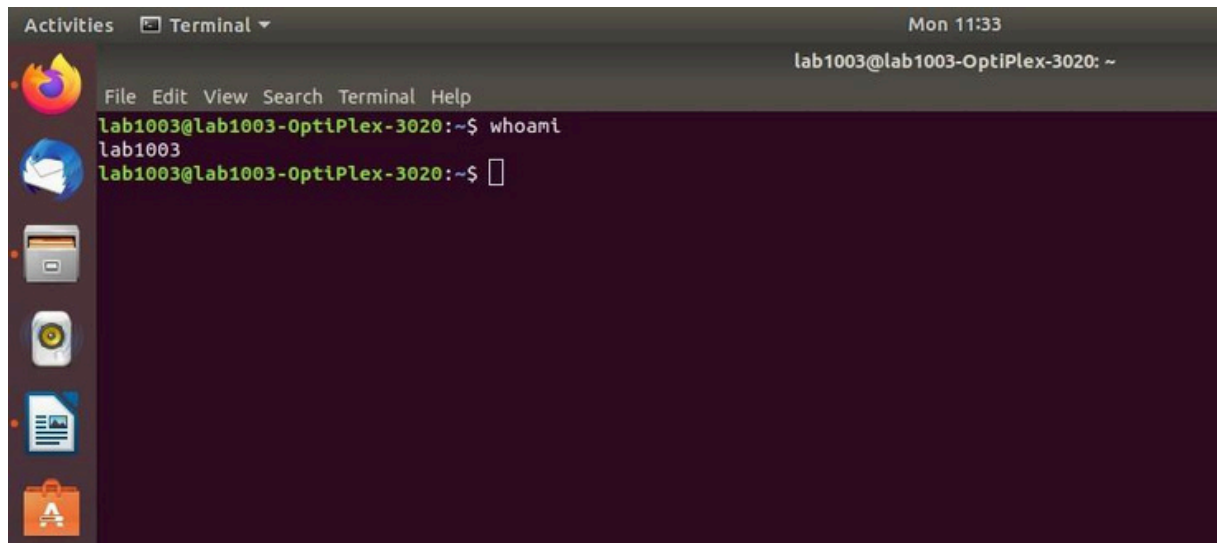
USER MANAGEMENT :

Who : The who command is a simple and effective way to display information about currently logged-in users.

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Mon 11:37, lab1003@lab1003-OptiPlex-3020: ~). The terminal shows the command 'who' being executed, resulting in the output: 'lab1003 :0 2024-01-29 09:41 (:0)'.

```
lab1003@lab1003-OptiPlex-3020:~$ who
lab1003 :0 2024-01-29 09:41 (:0)
lab1003@lab1003-OptiPlex-3020:~$
```

Whoami : The 'whoami' command is a simple yet powerful utility designed to reveal the current username associated with the active user session

A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Mon 11:33, lab1003@lab1003-OptiPlex-3020: ~). The terminal shows the command 'whoami' being executed, resulting in the output: 'lab1003'.

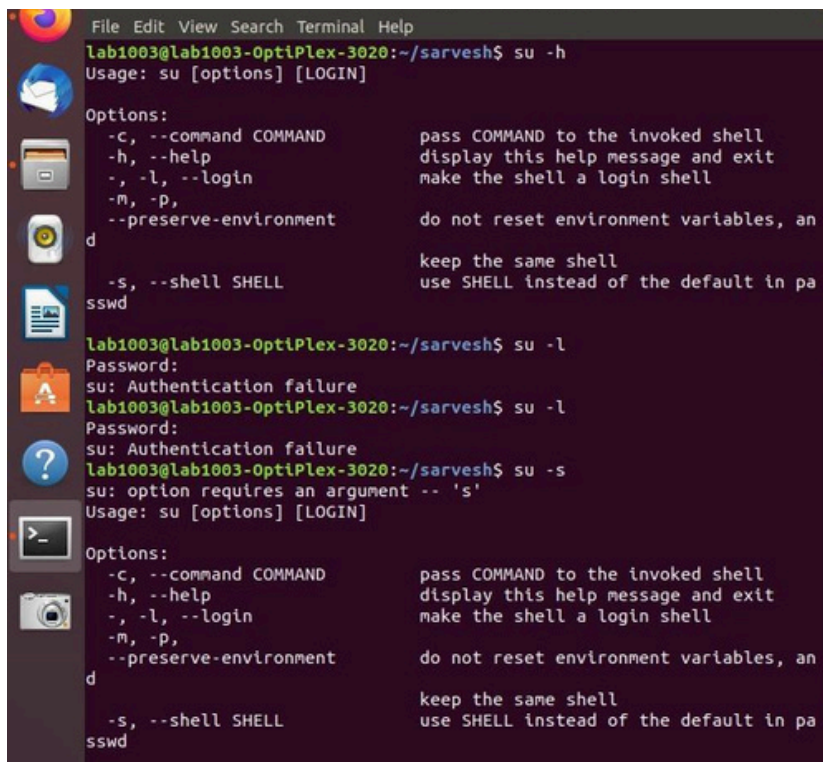
```
lab1003@lab1003-OptiPlex-3020:~$ whoami
lab1003
lab1003@lab1003-OptiPlex-3020:~$
```

Su : The Unix command su, which stands for 'substitute user' (or historically 'superuser'), is used by a computer user to execute commands with the privileges of another user account.

-l: makes a login shell

-h : Help command

-s: uses shell instead of default password.



```
lab1003@lab1003-OptiPlex-3020:~/sarvesh$ su -h
Usage: su [options] [LOGIN]

Options:
  -c, --command COMMAND    pass COMMAND to the invoked shell
  -h, --help                display this help message and exit
  -, -l, --login            make the shell a login shell
  -m, -p,                  do not reset environment variables, an
                           d
                           keep the same shell
  -s, --shell SHELL        use SHELL instead of the default in pa
                           sswd

lab1003@lab1003-OptiPlex-3020:~/sarvesh$ su -l
Password:
su: Authentication failure
lab1003@lab1003-OptiPlex-3020:~/sarvesh$ su -l
Password:
su: Authentication failure
lab1003@lab1003-OptiPlex-3020:~/sarvesh$ su -s
su: option requires an argument -- 's'
Usage: su [options] [LOGIN]

Options:
  -c, --command COMMAND    pass COMMAND to the invoked shell
  -h, --help                display this help message and exit
  -, -l, --login            make the shell a login shell
  -m, -p,                  do not reset environment variables, an
                           d
                           keep the same shell
  -s, --shell SHELL        use SHELL instead of the default in pa
                           sswd
```

Sudo : sudo is a program for Unix-like computer operating systems that enables users to run programs with the security privileges of another user, by default the superuser —

Sudo -l: will print out the commands allowed (and forbidden) the user on the current host.

Sudo -v: If, given the -v (validate) option, sudo will update the user's timestamp, prompting for the user's password if necessary.

Sudo -k: The -k (kill) option to sudo invalidates the user's timestamp. So, the next time sudo is run a password will be required.

Sudo -s: The -s option runs the shell specified by the SHELL environment variable if it is set

```
Activities Terminal Wed
lab1003@lab1003-OptiPlex-3020: ~
File Edit View Search Terminal Help
Archive: files.zip
lab1003@lab1003-OptiPlex-3020:~$ clear
lab1003@lab1003-OptiPlex-3020:~$ sudo -l
[sudo] password for lab1003:
Matching Defaults entries for lab1003 on lab1003-OptiPlex-3020:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin
User lab1003 may run the following commands on lab1003-OptiPlex-3020:
    (ALL : ALL) ALL
lab1003@lab1003-OptiPlex-3020:~$ sudo -v
lab1003@lab1003-OptiPlex-3020:~$ sudo -l
Matching Defaults entries for lab1003 on lab1003-OptiPlex-3020:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin
User lab1003 may run the following commands on lab1003-OptiPlex-3020:
    (ALL : ALL) ALL
lab1003@lab1003-OptiPlex-3020:~$ sudo -k
lab1003@lab1003-OptiPlex-3020:~$ sudo -l
[sudo] password for lab1003:
Matching Defaults entries for lab1003 on lab1003-OptiPlex-3020:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin
User lab1003 may run the following commands on lab1003-OptiPlex-3020:
    (ALL : ALL) ALL
```

```
lab1003@lab1003-OptiPlex-3020:~$ sudo -i
root@lab1003-OptiPlex-3020:~#
root@lab1003-OptiPlex-3020:~# ^C
root@lab1003-OptiPlex-3020:~# exit
logout
lab1003@lab1003-OptiPlex-3020:~$ sudo -s
root@lab1003-OptiPlex-3020:~#
root@lab1003-OptiPlex-3020:~# exit
exit
```

Login : login is used when signing onto a system. It can also be used to switch from one user to another at any time

Login -f: Used to skip a second login authentication. This specifically does not work for root

Logout : The logout command in Unix is used to log out the currently logged-in user from the system in that session. It works programmatically and is typically executed in a login shell.

Exit: exit command in Unix is used to exit the shell where it is currently running

Passwd : The passwd command in Unix provides a straightforward and effective way to modify user passwords

```
lab1003@lab1003-OptiPlex-3020:~$ passwd
Changing password for lab1003.
(current) UNIX password:
Enter new UNIX password:
Retype new UNIX password:
Password unchanged
Enter new UNIX password:
Retype new UNIX password:
Password unchanged
Enter new UNIX password:
Retype new UNIX password:
You must choose a longer password
passwd: Authentication token manipulation error
passwd: password unchanged
lab1003@lab1003-OptiPlex-3020:~$
```

Useradd : useradd is a command in Unix that is used to add user accounts to your system

sudo useradd -d /home/lab1003 lab1003 :To give a home directory path for new users.

sudo useradd -u 1234 lab1003: To create a new user with a custom UID

sudo useradd -g 1000 lab1003:To create a new user and assign a specific group ID

sudo useradd -c "comment":To add a comment or description for a user sudo useradd -p name1 name2:

To set an unencrypted password for the user

```
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd lab1003
[sudo] password for lab1003:
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -d /home/lab1003:/bin/sh
useradd: invalid home directory '/home/lab1003:/bin/sh'
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -d /Home/lab1003:/bin/sh
useradd: invalid home directory '/Home/lab1003:/bin/sh'
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -d /home/lab1003:/bin/sh
useradd: invalid home directory '/home/lab1003:/bin/sh'
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -d /home/lab1003 lab1003
useradd: user 'lab1003' already exists
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -u 1234 test
useradd: user 'test' already exists
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -u 1234 lab1003
useradd: user 'lab1003' already exists
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -g 1000 test
useradd: user 'test' already exists
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -g 1000 test2
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -e 2023-02-08 test3
lab1003@lab1003-OptiPlex-3020:~$ sudo chage -l test3
Last password change          : Feb 07, 2024
Password expires               : never
Password inactive              : never
Account expires                : Feb 08, 2023
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -c "this is comment" test4
lab1003@lab1003-OptiPlex-3020:~$ sudo cat /etc/passwd | grep test4
test4:x:1237:1237:this is comment:/home/test4:/bin/sh
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd -p test5 test5
lab1003@lab1003-OptiPlex-3020:~$ sudo cat /etc/shadow | grep test5
test5:test5:19760:0:99999:7:::
```


Usermod : usermod command or modify user is a command in Unix that is used to change the properties of a user in Unix through the command line.

sudo usermod -c "comment" name:To add a comment for a user

ysuydyo- musmer-mod -d /home/dir_name name :To change the home directory of a user sudo

usermod -e

dd test_user :To change the expiry date of a user sudo usermod -L test_user :To lock a user

sudo usermod -U test_user :To Unlock a user

```
lab1003@lab1003-OptiPlex-3020:~$ ls
1                indexac  Music          outputaq
abcd             indexad  output2.txt.gz output.txt.bz2
ball            indexae  outputaa       output.txt.gz
demo            indexaf  outputab       Pictures
Desktop         indexag  outputac       Public
dir             indexah  outputad       rishabh1
dirct          indexai  outputae       rishabh2
Documents       indexaj  outputaf       rishabh222
Downloads       indexak  outputag       rishabh3
examples.desktop indexal  outputah       rishabh4
file1.txt       indexam  outputai       sarvesh
file2.txt       indexan  outputaj       Templates
file3.txt       indexao  outputak       trial.vimrc
file4.txt       indexap  outputal       trial.zip
file5.txt       indexaq  outputam       unix1
files.zip       it89    outputan       Videos
indexaa        'ls -a' outputao       xaa
indexab        mihir  outputap
```

```
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -e 2023-05-09 test4
lab1003@lab1003-OptiPlex-3020:~$ sudo chage -l test4
Last password change           : Feb 07, 2024
Password expires               : never
Password inactive              : never
Account expires                : May 09, 2023
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -l testaa test5
lab1003@lab1003-OptiPlex-3020:~$ id testaa
uid=1238(testaa) gid=1238(test5) groups=1238(test5)
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -L test2
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -U test2
usermod: unlocking the user's password would result in a passwordless
account.
You should set a password with usermod -p to unlock this user's passwo
rd.
lab1003@lab1003-OptiPlex-3020:~$
```

```
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -c "this is comment" tes
t6
usermod: user 'test6' does not exist
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -c "this is comment" tes
t5
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -d /home/sarvesh test5
lab1003@lab1003-OptiPlex-3020:~$ ls
1                indexac  Music          outputaq
abcd             indexad  output2.txt.gz output.txt.bz2
ball            indexae  outputaa       output.txt.gz
demo            indexaf  outputab       Pictures
Desktop         indexag  outputac       Public
dir             indexah  outputad       rishabh1
dirct          indexai  outputae       rishabh2
Documents       indexaj  outputaf       rishabh222
Downloads       indexak  outputag       rishabh3
examples.desktop indexal  outputah       rishabh4
file1.txt       indexam  outputai       sarvesh
file2.txt       indexan  outputaj       Templates
file3.txt       indexao  outputak       trial.vimrc
file4.txt       indexap  outputal       trial.zip
file5.txt       indexaq  outputam       unix1
files.zip       it89    outputan       Videos
indexaa        'ls -a' outputao       xaa
indexab        mihir  outputap
```

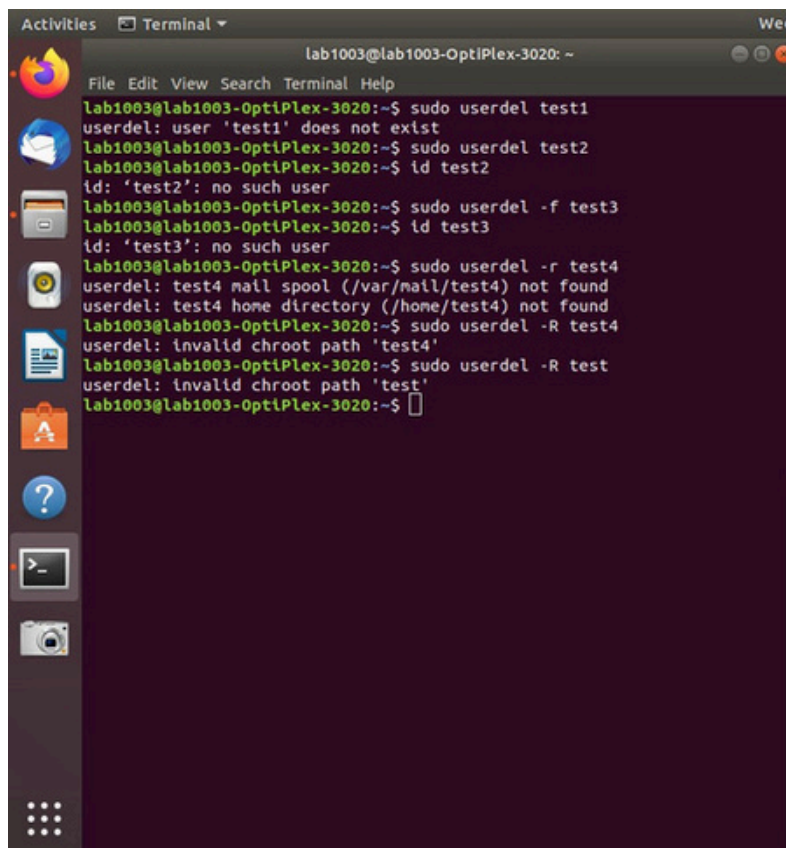
```
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -e 2023-05-09 test4
lab1003@lab1003-OptiPlex-3020:~$ sudo chage -l test4
Last password change           : Feb 07, 2024
Password expires               : never
Password inactive              : never
Account expires                : May 09, 2023
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
lab1003@lab1003-OptiPlex-3020:~$ sudo usermod -l testaa test5
lab1003@lab1003-OptiPlex-3020:~$ id testaa
uid=1238(testaa) gid=1238(test5) groups=1238(test5)
lab1003@lab1003-OptiPlex-3020:~$
```

Userdel : userdel command in unix system is used to delete a user account and related files.

-f : Force removal of the user account, including home directory and mail spool, even if the user is logged

in. -r: Remove the user's home directory along with the account. Useful for a complete cleanup.

-R: Apply changes in the specified CHROOT_DIR, useful for user deletion operations within a chroot environment.

A screenshot of a Linux terminal window titled 'lab1003@lab1003-OptiPlex-3020: ~'. The terminal shows a series of commands and their outputs. The user 'test1' does not exist. 'test2' also does not exist. 'test3' is successfully deleted using the -f flag. 'test4' is not found. Attempts to use the -R flag with 'test4' and 'test' result in 'invalid chroot path' errors. The terminal interface includes a menu bar (File, Edit, View, Search, Terminal, Help) and a sidebar with application icons (Firefox, Mail, Files, etc.).

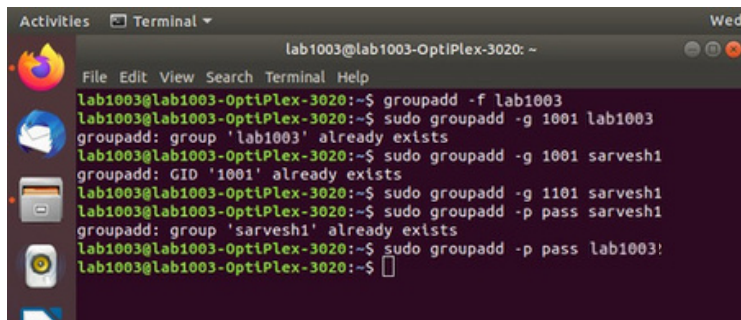
```
lab1003@lab1003-OptiPlex-3020:~$ sudo userdel test1
userdel: user 'test1' does not exist
lab1003@lab1003-OptiPlex-3020:~$ sudo userdel test2
lab1003@lab1003-OptiPlex-3020:~$ id test2
id: 'test2': no such user
lab1003@lab1003-OptiPlex-3020:~$ sudo userdel -f test3
lab1003@lab1003-OptiPlex-3020:~$ id test3
id: 'test3': no such user
lab1003@lab1003-OptiPlex-3020:~$ sudo userdel -r test4
userdel: test4 mail spool (/var/mail/test4) not found
userdel: test4 home directory (/home/test4) not found
lab1003@lab1003-OptiPlex-3020:~$ sudo userdel -R test4
userdel: invalid chroot path 'test4'
lab1003@lab1003-OptiPlex-3020:~$ sudo userdel -R test
userdel: invalid chroot path 'test'
lab1003@lab1003-OptiPlex-3020:~$
```

Groupadd : The groupadd command creates a new group account using the values specified on the command line, plus the default values from the system. The new group is entered into the system files as needed.

-f: This option forces the command to silently abort if the group with the given name already exists.

-g: This option assigns a specific numeric group id to the newly created group.

-p: Sets an encrypted password for the group.



```

lab1003@lab1003-OptiPlex-3020:~$ groupadd -f lab1003
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd -g 1001 lab1003
groupadd: group 'lab1003' already exists
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd -g 1001 sarvesh1
groupadd: GID '1001' already exists
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd -g 1101 sarvesh1
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd -p pass sarvesh1
groupadd: group 'sarvesh1' already exists
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd -p pass lab1003!
lab1003@lab1003-OptiPlex-3020:~$

```

Groupmod : groupmod command in unix is used to modify or change the existing group on unix system. It can be handled by superuser or root user.

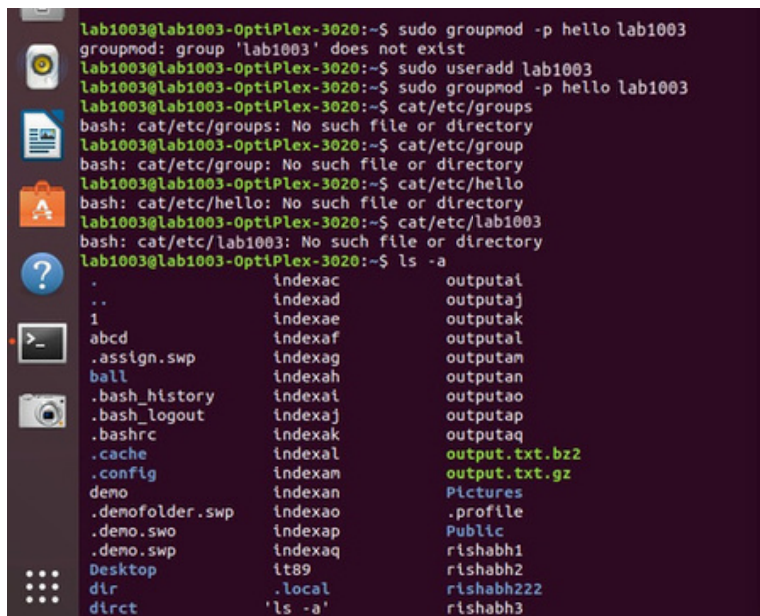
/etc/group: Group Account Information.

/etc/gshadow: Secured group account information.

/etc/login.def: Shadow passwd suite configuration.

/etc/passwd: User account information.

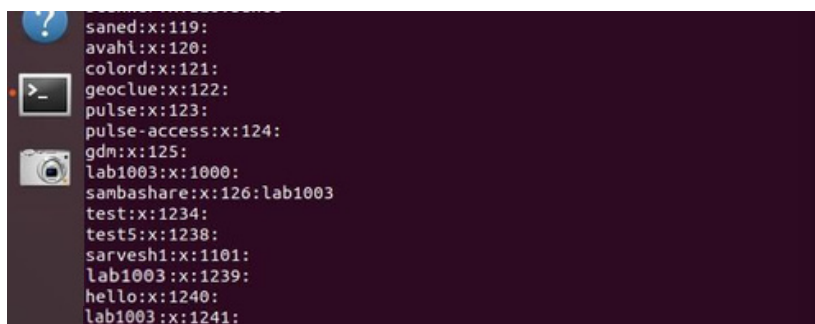
-p: This gives the encrypted password.



```

lab1003@lab1003-OptiPlex-3020:~$ sudo groupmod -p hello lab1003
groupmod: group 'lab1003' does not exist
lab1003@lab1003-OptiPlex-3020:~$ sudo useradd lab1003
lab1003@lab1003-OptiPlex-3020:~$ sudo groupmod -p hello lab1003
lab1003@lab1003-OptiPlex-3020:~$ cat/etc/groups
bash: cat/etc/groups: No such file or directory
lab1003@lab1003-OptiPlex-3020:~$ cat/etc/group
bash: cat/etc/group: No such file or directory
lab1003@lab1003-OptiPlex-3020:~$ cat/etc/hello
bash: cat/etc/hello: No such file or directory
lab1003@lab1003-OptiPlex-3020:~$ cat/etc/lab1003
bash: cat/etc/lab1003: No such file or directory
lab1003@lab1003-OptiPlex-3020:~$ ls -a
.                indexac          outputal
..               indexad          outputaj
1                indexae          outputak
abcd             indexaf          outputal
.assign.swp      indexag          outputam
ball             indexah          outputan
.bash_history    indexai          outputao
.bash_logout     indexaj          outputap
.bashrc          indexak          outputaq
.cache           indexal          output.txt.bz2
.config          indexam          output.txt.gz
demo             indexan          Pictures
.demofolder.swp indexao          .profile
.demo.swo        indexap          Public
.demo.swp        indexaq          rishabh1
Desktop          lt89            rishabh2
dir              .local          rishabh222
direct           'ls -a'         rishabh3

```



```

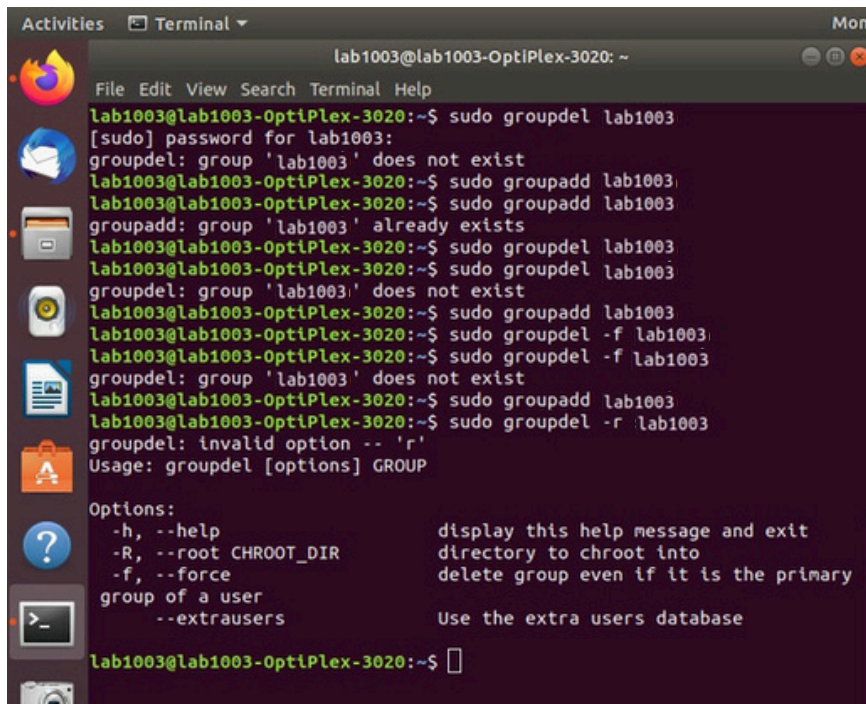
sane:x:119:
avahi:x:120:
colord:x:121:
geoclue:x:122:
pulse:x:123:
pulse-access:x:124:
gdm:x:125:
lab1003:x:1000:
sambashare:x:126:lab1003
test:x:1234:
test5:x:1238:
sarvesh1:x:1101:
lab1003:x:1239:
hello:x:1240:
lab1003:x:1241:

```

Groupdel : The 'groupdel' command is a powerful tool in unix that allows system administrators to delete existing groups.

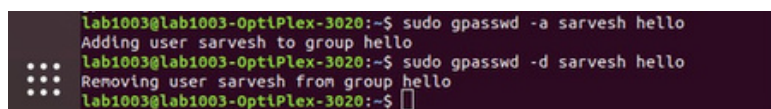
-f:deletes the group even if it is a primary one.

-h: displays help message.



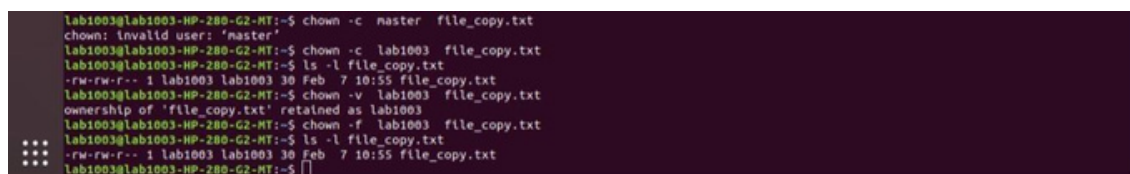
```
lab1003@lab1003-OptiPlex-3020: ~  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupdel lab1003  
[sudo] password for lab1003:  
groupdel: group 'lab1003' does not exist  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd lab1003  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd lab1003  
groupadd: group 'lab1003' already exists  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupdel lab1003  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupdel lab1003  
groupdel: group 'lab1003' does not exist  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd lab1003  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupdel -f lab1003  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupdel -f lab1003  
groupdel: group 'lab1003' does not exist  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupadd lab1003  
lab1003@lab1003-OptiPlex-3020:~$ sudo groupdel -r lab1003  
groupdel: invalid option -- 'r'  
Usage: groupdel [options] GROUP  
  
Options:  
-h, --help                display this help message and exit  
-R, --root CHROOT_DIR    directory to chroot into  
-f, --force                delete group even if it is the primary  
                           group of a user  
--extrausers              Use the extra users database  
  
lab1003@lab1003-OptiPlex-3020:~$
```

Gpasswd : gpasswd command is used to administer the /etc/group and /etc/gshadow. As every group in unix has administrators, members, and a password. -a:Used for adding a password to a group
-d:used for deleting a password from a group.



```
lab1003@lab1003-OptiPlex-3020:~$ sudo gpasswd -a sarvesh hello  
Adding user sarvesh to group hello  
lab1003@lab1003-OptiPlex-3020:~$ sudo gpasswd -d sarvesh hello  
Removing user sarvesh from group hello  
lab1003@lab1003-OptiPlex-3020:~$
```

Chown : The `chown` command, short for “change owner,” is a powerful tool that allows users to change the owner of files and directories.



```
lab1003@lab1003-HP-280-G2-MT:~$ chown -c naster file_copy.txt  
chown: invalid user: 'naster'  
lab1003@lab1003-HP-280-G2-MT:~$ chown -c lab1003 file_copy.txt  
lab1003@lab1003-HP-280-G2-MT:~$ ls -l file_copy.txt  
-rw-rw-r-- 1 lab1003 lab1003 30 Feb 7 10:55 file_copy.txt  
lab1003@lab1003-HP-280-G2-MT:~$ chown -v lab1003 file_copy.txt  
ownership of 'file_copy.txt' retained as lab1003  
lab1003@lab1003-HP-280-G2-MT:~$ chown -f lab1003 file_copy.txt  
lab1003@lab1003-HP-280-G2-MT:~$ ls -l file_copy.txt  
-rw-rw-r-- 1 lab1003 lab1003 30 Feb 7 10:55 file_copy.txt  
lab1003@lab1003-HP-280-G2-MT:~$
```

The `-c` option in the `chown` command is utilized to report when a file change is made.
The `-v` option enhances the verbosity of the `chown` command by showing detailed information for every processed file.

Chage : The chage command is used to view and change the user password expiry information. This command is used when the login is to be provided for a user for a limited amount of time or when it is necessary to change the login password from time to time

```
lab1003@lab1003-HP-280-G2-MT:~$ sudo chage -l root
Last password change                    : Jan 10, 2024
Password expires                       : never
Password inactive                      : never
Account expires                       : never
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
```

Chgrp : The `chgrp` command in unix is used to change the group ownership of a file or directory. All files in unix belong to an owner and a group.

```
Activities Terminal
lab1003@lab1003-HP-280-G2-MT: ~
File Edit View Search Terminal Help
total 4
drwxrwxr-x 2 lab1003 lab1003 4096 Feb  5 11:02 Ved
lab1003@lab1003-HP-280-G2-MT:~$ ls
ls: cannot access 's': No such file or directory
lab1003@lab1003-HP-280-G2-MT:~$ ls
46 abc4.txt abc5.txt abc9.txt demo dip Dolp files.zip Home Shivan tenpor
abc1.txt abc6.txt abx demo2 DirectorySample Downloads file.txt Music sort.txt Unixv-1.odt
abc2.txt abc7.txt abx tar deo dish examples.desktop file.txt.bz2 newdemo.txt Sujal Vedant1.txt
abc3.txt abc8.txt database.txt Desktop dish tar example.tar folder Pictures tandure VedDir
lab1003@lab1003-HP-280-G2-MT:~$ cd Dolp
lab1003@lab1003-HP-280-G2-MT:~/Dolp$ ls
lab1003@lab1003-HP-280-G2-MT:~/Dolp$ cd
lab1003@lab1003-HP-280-G2-MT:~$ cd Hola
lab1003@lab1003-HP-280-G2-MT:~/Hola$ ls
file_copy.txt file.txt Ved.txt
lab1003@lab1003-HP-280-G2-MT:~/Hola$ cd
lab1003@lab1003-HP-280-G2-MT:~$ sudo chgrp lab1003 Hola
lab1003@lab1003-HP-280-G2-MT:~$ ls -l Hola
total 12
-rw-rw-r-- 1 lab1003 lab1003 25 Feb  5 10:44 file_copy.txt
-rw-rw-r-- 1 lab1003 lab1003 25 Feb  5 10:43 file.txt
-rw-rw-r-- 1 lab1003 lab1003 26 Jan 29 10:52 Ved.txt
lab1003@lab1003-HP-280-G2-MT:~$ sudo chgrp -R lab1003 Hola
lab1003@lab1003-HP-280-G2-MT:~$ ls -l Hola
total 12
-rw-rw-r-- 1 lab1003 lab1003 25 Feb  5 10:44 file_copy.txt
-rw-rw-r-- 1 lab1003 lab1003 25 Feb  5 10:43 file.txt
-rw-rw-r-- 1 lab1003 lab1003 26 Jan 29 10:52 Ved.txt
lab1003@lab1003-HP-280-G2-MT:~$ sudo chage -l root
Last password change                    : Jan 10, 2024
Password expires                       : never
Password inactive                      : never
Account expires                       : never
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
lab1003@lab1003-HP-280-G2-MT:~$
```

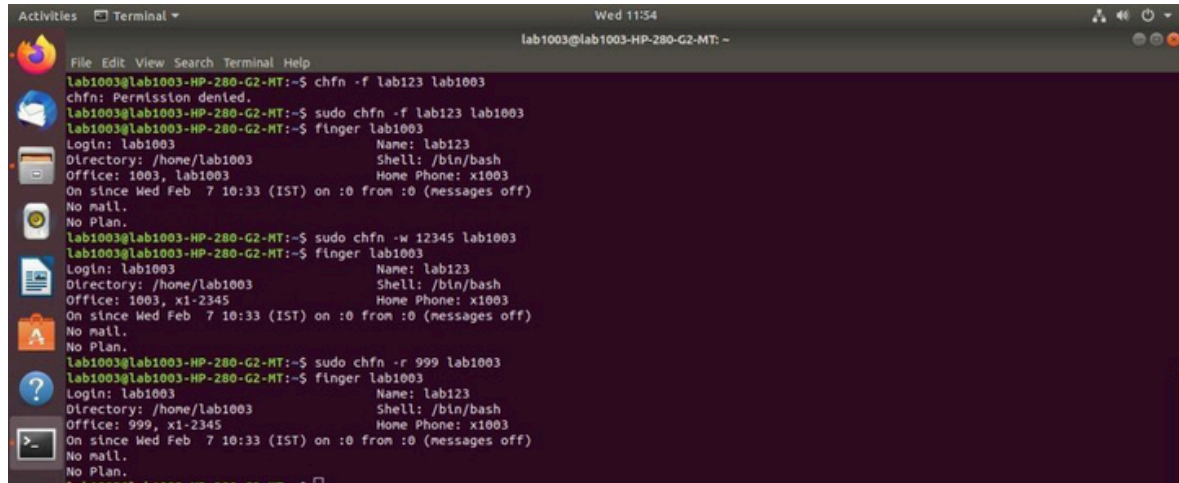
```
Activities Terminal
lab1003@lab1003-OptiPlex-3020: ~/sarvesh
File Edit View Search Terminal Help
sudo apt install ecere-dev
lab1003@lab1003-OptiPlex-3020:~$ clear
lab1003@lab1003-OptiPlex-3020:~$ sudo chgrp sarvesh file3.txt
lab1003@lab1003-OptiPlex-3020:~$ ls -l
total 300
-rw-rw-r-- 1 lab1003 lab1003 15 Jan 29 14:19 1
-rw-rw-r-- 1 lab1003 lab1003 2 Jan 29 14:28 abcd
drwxrwxr-x 2 lab1003 lab1003 4096 Jan 19 15:31 ball
-rw-rw-r-- 1 lab1003 lab1003 18 Jan 15 10:34 deno
drwxr-xr-x 5 lab1003 lab1003 4096 Feb 12 10:32 Desktop
drwxrwxr-x 2 lab1003 lab1003 4096 Feb  2 16:15 dir
drwxrwxr-x 2 lab1003 lab1003 4096 Feb  2 16:16 direct
drwxr-xr-x 2 lab1003 lab1003 4096 Feb  9 16:34 Documents
drwxr-xr-x 2 lab1003 lab1003 4096 Feb  9 16:33 Downloads
-rw-rw-r-- 1 lab1003 lab1003 8980 Jan  8 15:47 examples.desktop
-rw-rw-r-- 1 lab1003 lab1003 62 Feb  9 16:02 file089
-rw-rw-r-- 1 lab1003 lab1003 62 Feb  9 16:18 file2.txt
-rw-rw-r-- 1 lab1003 sarvesh 0 Feb  7 11:26 file3.txt
-rw-rw-r-- 1 lab1003 lab1003 0 Feb  7 11:26 file4.txt
-rw-rw-r-- 1 lab1003 lab1003 0 Feb  7 11:26 file5.txt
-rw-rw-r-- 1 lab1003 lab1003 1225 Feb  7 11:30 files.zip
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexaa
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexab
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexac
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexad
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexae
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexaf
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexag
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexah
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexai
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexaj
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexak
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexal
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexam
-rw-rw-r-- 1 lab1003 lab1003 2 Feb  5 11:14 indexan
```

Chfn : chfn modifies a user's "finger" information. This information is stored in the file /etc/passwd, and includes the user's real name, work room, work phone number, and home phone number.

-f full_name : Let you change the full name on the account

-w work_ph : Let you change the work phone number on the account

-r room_no : Let you change the room number on the account

A terminal window titled 'lab1003@lab1003-HP-280-G2-MT: ~' showing a series of commands and their outputs. The user attempts to change the full name of 'lab1003' to 'lab123' using 'chfn -f lab123 lab1003', which is denied. Then, they use 'sudo chfn -f lab123 lab1003' successfully. They then use 'finger lab1003' to display the user's information: Name: lab123, Directory: /home/lab1003, Shell: /bin/bash, Office: 1003, lab1003, Home Phone: x1003. Next, they change the work phone number to '12345' using 'sudo chfn -w 12345 lab1003' and verify it with 'finger lab1003', showing Office: 1003, x1-2345. Finally, they change the room number to '999' using 'sudo chfn -r 999 lab1003' and verify it with 'finger lab1003', showing Office: 999, x1-2345. The terminal output is as follows:

```
lab1003@lab1003-HP-280-G2-MT:~$ chfn -f lab123 lab1003
chfn: Permission denied.
lab1003@lab1003-HP-280-G2-MT:~$ sudo chfn -f lab123 lab1003
lab1003@lab1003-HP-280-G2-MT:~$ finger lab1003
Login: lab1003                Name: lab123
Directory: /home/lab1003      Shell: /bin/bash
Office: 1003, lab1003         Home Phone: x1003
On since Wed Feb  7 10:33 (IST) on :0 from :0 (messages off)
No mail.
No Plan.
lab1003@lab1003-HP-280-G2-MT:~$ sudo chfn -w 12345 lab1003
lab1003@lab1003-HP-280-G2-MT:~$ finger lab1003
Login: lab1003                Name: lab123
Directory: /home/lab1003      Shell: /bin/bash
Office: 1003, x1-2345         Home Phone: x1003
On since Wed Feb  7 10:33 (IST) on :0 from :0 (messages off)
No mail.
No Plan.
lab1003@lab1003-HP-280-G2-MT:~$ sudo chfn -r 999 lab1003
lab1003@lab1003-HP-280-G2-MT:~$ finger lab1003
Login: lab1003                Name: lab123
Directory: /home/lab1003      Shell: /bin/bash
Office: 999, x1-2345          Home Phone: x1003
On since Wed Feb  7 10:33 (IST) on :0 from :0 (messages off)
No mail.
No Plan.
```