

Experiment No- 04

Aim: Execution of User Management Commands

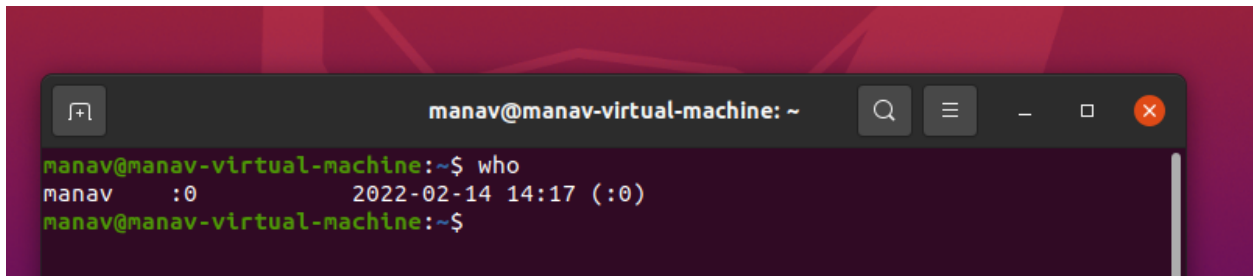
Roll No.	17
Name	Manav Jawrani
Class	D10A
Subject	Unix Lab
Lab Outcome	LO3: Apply Unix commands for system administrative tasks such as file system management and user management.
Date of Performance/ Submission	19/1/2022-26/1/2022

Aim: To execute user management commands of UNIX.

Introduction: User management includes everything from creating a user to deleting a user on your system. Graphical tools are easy and suitable for new users, as it makes sure you'll not run into any trouble. Command line tools include commands like useradd, userdel, passwd, etc. These are mostly used by the server administrators.

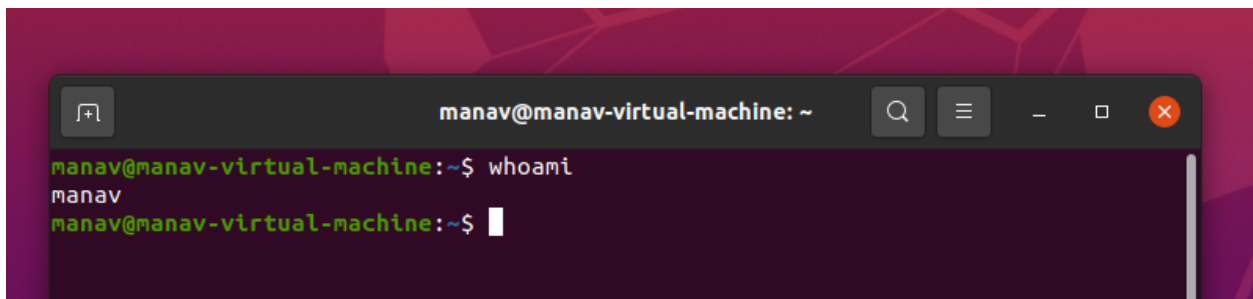
Theory:

1. who - The Linux "who" command lets you display the users currently logged in to your UNIX or Linux operating system. Whenever a user needs to know about how many users are using or are logged-in into a particular Linux-based operating system, he/she can use the "who" command to get that information.

A terminal window titled 'manav@manav-virtual-machine: ~' showing the execution of the 'who' command. The output displays the user 'manav' with a session ID of ':0', logged in on '2022-02-14 14:17' from '(:0)'.

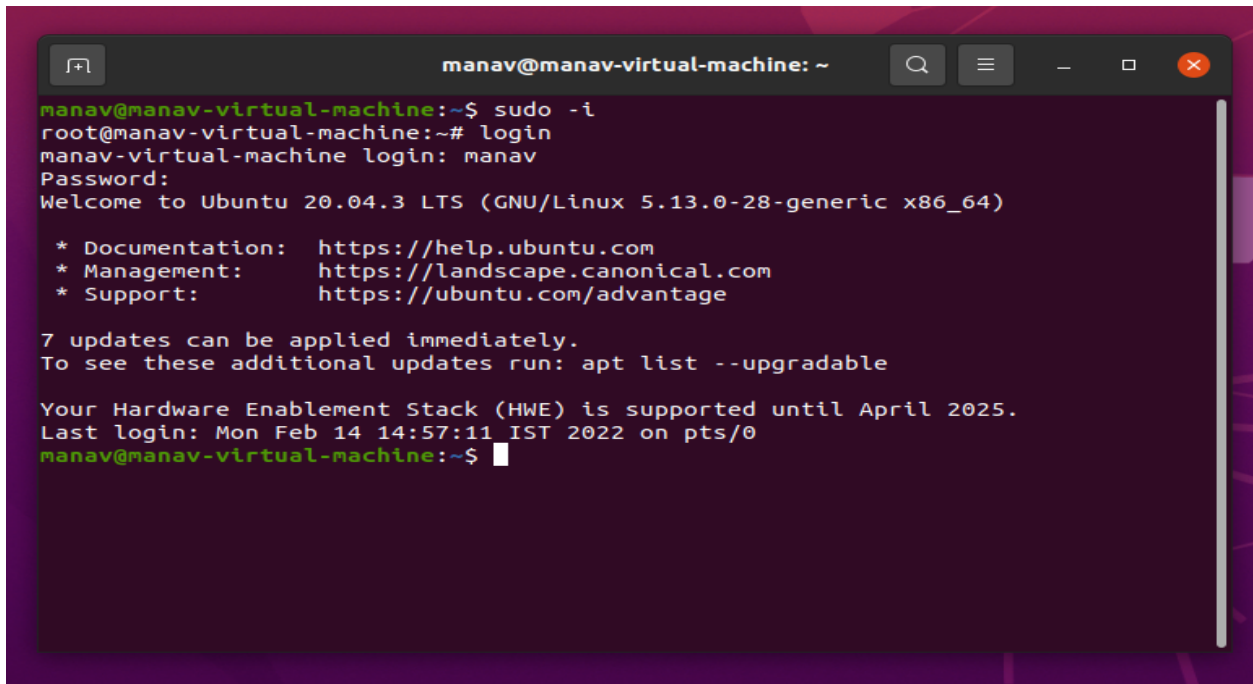
```
manav@manav-virtual-machine: ~  
manav@manav-virtual-machine:~$ who  
manav      :0                2022-02-14 14:17 (:0)  
manav@manav-virtual-machine:~$
```

2. whoami - As its name suggests, the whoami command prints the user name of the effective user ID. In other words, it displays the name of the currently logged-in user.

A terminal window titled 'manav@manav-virtual-machine: ~' showing the execution of the 'whoami' command. The output is 'manav'.

```
manav@manav-virtual-machine: ~  
manav@manav-virtual-machine:~$ whoami  
manav  
manav@manav-virtual-machine:~$
```

3. login - On UNIX operating systems, the login command begins a new login session on the system.

A terminal window titled 'manav@manav-virtual-machine: ~' with standard Ubuntu window controls. The terminal shows a user logging in as 'manav' using 'sudo -i'. The prompt changes to root. The user enters 'login', and the system prompts for a password. After the password is entered, a welcome message for Ubuntu 20.04.3 LTS is displayed, including links for documentation, management, and support. It also mentions 7 updates can be applied immediately and provides the hardware enablement stack support date (April 2025). The last login time is shown as Mon Feb 14 14:57:11 IST 2022 on pts/0. The prompt returns to the user as 'manav@manav-virtual-machine:~\$' with a cursor.

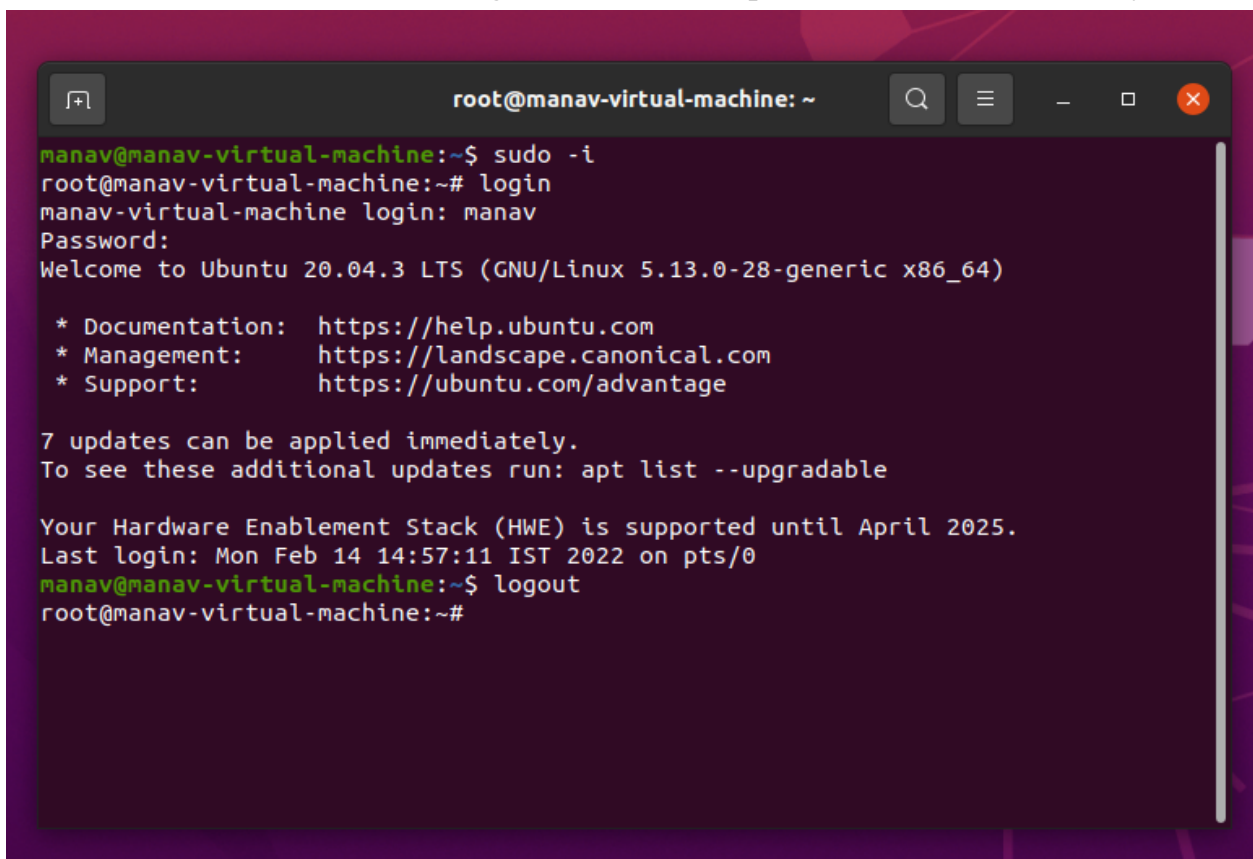
```
manav@manav-virtual-machine:~$ sudo -i
root@manav-virtual-machine:~# login
manav-virtual-machine login: manav
Password:
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.13.0-28-generic x86_64)

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

7 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Mon Feb 14 14:57:11 IST 2022 on pts/0
manav@manav-virtual-machine:~$
```

4. `logout` - `logout` command allows you to programmatically logout from your session. causes the session manager to take the requested action immediately.

A terminal window titled 'root@manav-virtual-machine: ~' with standard Ubuntu window controls. The terminal shows the same sequence of events as the first image: login as 'manav' via 'sudo -i', entering 'login', password prompt, welcome message, and system information. The prompt is now 'manav@manav-virtual-machine:~\$'. The user enters 'logout', and the prompt changes to 'root@manav-virtual-machine:~#'.

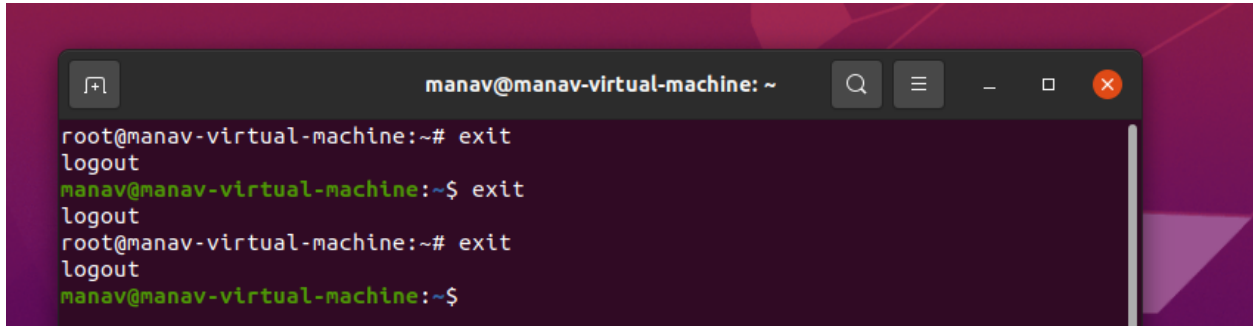
```
manav@manav-virtual-machine:~$ sudo -i
root@manav-virtual-machine:~# login
manav-virtual-machine login: manav
Password:
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.13.0-28-generic x86_64)

 * Documentation:  https://help.ubuntu.com
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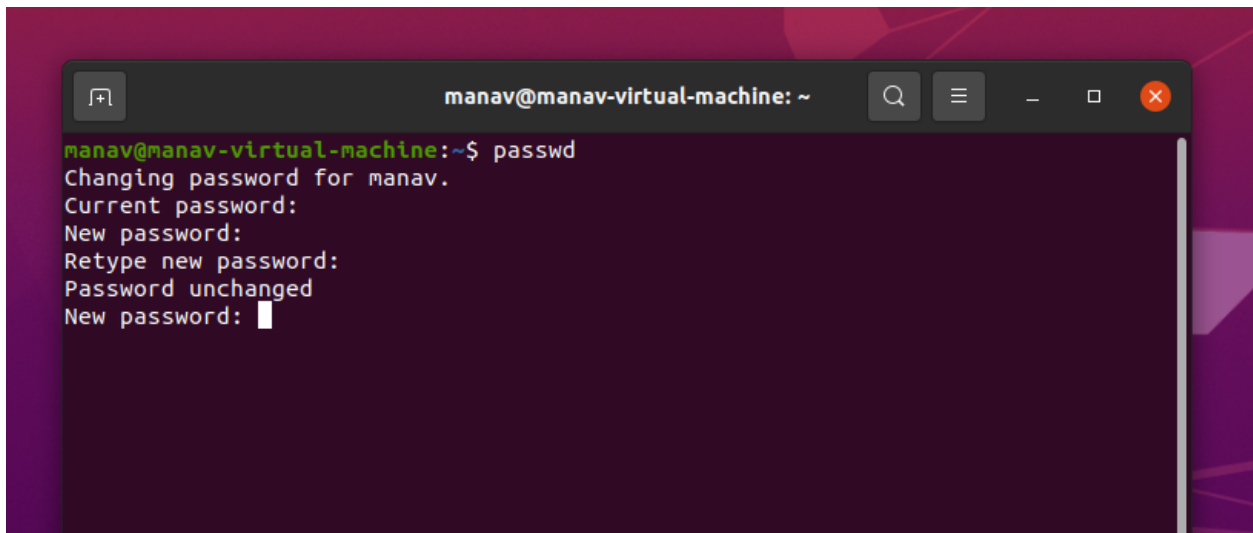
Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Mon Feb 14 14:57:11 IST 2022 on pts/0
manav@manav-virtual-machine:~$ logout
root@manav-virtual-machine:~#
```

5. `exit` - `exit` command in linux is used to exit the shell where it is currently running. It takes one more parameter as $[N]$ and exits the shell with a return of status N . If n is not provided, then it simply returns the status of last command that is executed.

A terminal window titled 'manav@manav-virtual-machine: ~' showing a sequence of commands and their outputs. The user 'root' runs 'exit', resulting in 'logout'. Then the user 'manav' runs 'exit', also resulting in 'logout'. Finally, 'root' runs 'exit' again, resulting in 'logout'. The prompt returns to 'manav@manav-virtual-machine:~\$' at the end.

```
manav@manav-virtual-machine: ~  
root@manav-virtual-machine:~# exit  
logout  
manav@manav-virtual-machine:~$ exit  
logout  
root@manav-virtual-machine:~# exit  
logout  
manav@manav-virtual-machine:~$
```

6. `passwd` - The `passwd` command changes passwords for user accounts. A normal user may only change the password for their own account, while the superuser may change the password for any account. `passwd` also changes the account or associated password validity period.

A terminal window titled 'manav@manav-virtual-machine: ~' showing the execution of the 'passwd' command. The prompt is 'manav@manav-virtual-machine:~\$'. The command 'passwd' is entered, followed by the message 'Changing password for manav.'. Then 'Current password:' is shown. 'New password:' is entered. 'Retype new password:' is shown. 'Password unchanged' is displayed. Finally, 'New password:' is shown with a cursor.

```
manav@manav-virtual-machine:~$ passwd  
Changing password for manav.  
Current password:  
New password:  
Retype new password:  
Password unchanged  
New password: █
```

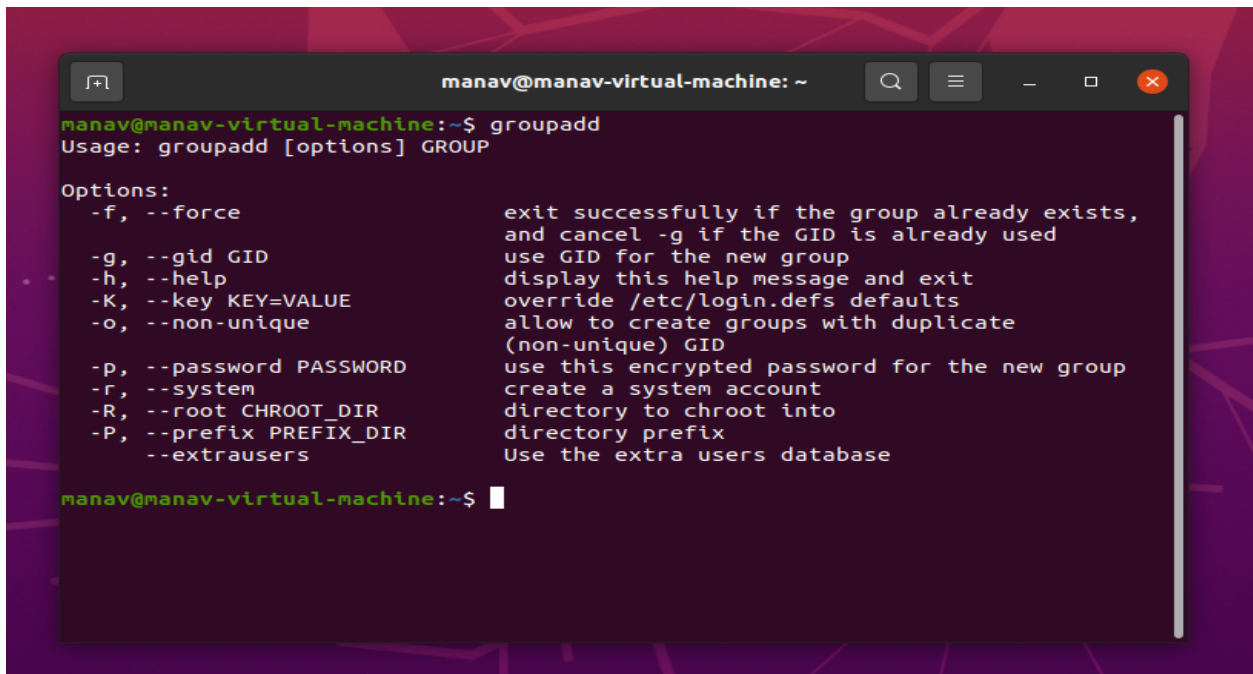
7. `usermod` - `usermod` command or `modify user` is a command in Linux that is used to change the properties of a user in Linux through the command line. After creating a user we have to sometimes change their attributes like password or login directory etc. so in order to do that we use the `Usermod` command.

```
manav@manav-virtual-machine: ~  
manav@manav-virtual-machine:~$ usermod  
Usage: usermod [options] LOGIN  
  
Options:  
-b, --badnames          allow bad names  
-c, --comment COMMENT   new value of the GECOS field  
-d, --home HOME_DIR     new home directory for the user account  
-e, --expiredate EXPIRE_DATE set account expiration date to EXPIRE_DATE  
-f, --inactive INACTIVE set password inactive after expiration  
                        to INACTIVE  
-g, --gid GROUP         force use GROUP as new primary group  
-G, --groups GROUPS     new list of supplementary GROUPS  
-a, --append            append the user to the supplemental GROUPS  
                        mentioned by the -G option without removing  
                        the user from other groups  
-h, --help             display this help message and exit  
-l, --login NEW_LOGIN   new value of the login name  
-L, --lock             lock the user account  
-m, --move-home        move contents of the home directory to the  
                        new location (use only with -d)  
-o, --non-unique        allow using duplicate (non-unique) UID  
-p, --password PASSWORD use encrypted password for the new password  
-R, --root CHROOT_DIR   directory to chroot into  
-P, --prefix PREFIX_DIR prefix directory where are located the /etc/* fi
```

8. **userdel** - **userdel** command in Linux system is used to delete a user account and related files. This command basically modifies the system account files, deleting all the entries which refer to the username LOGIN.

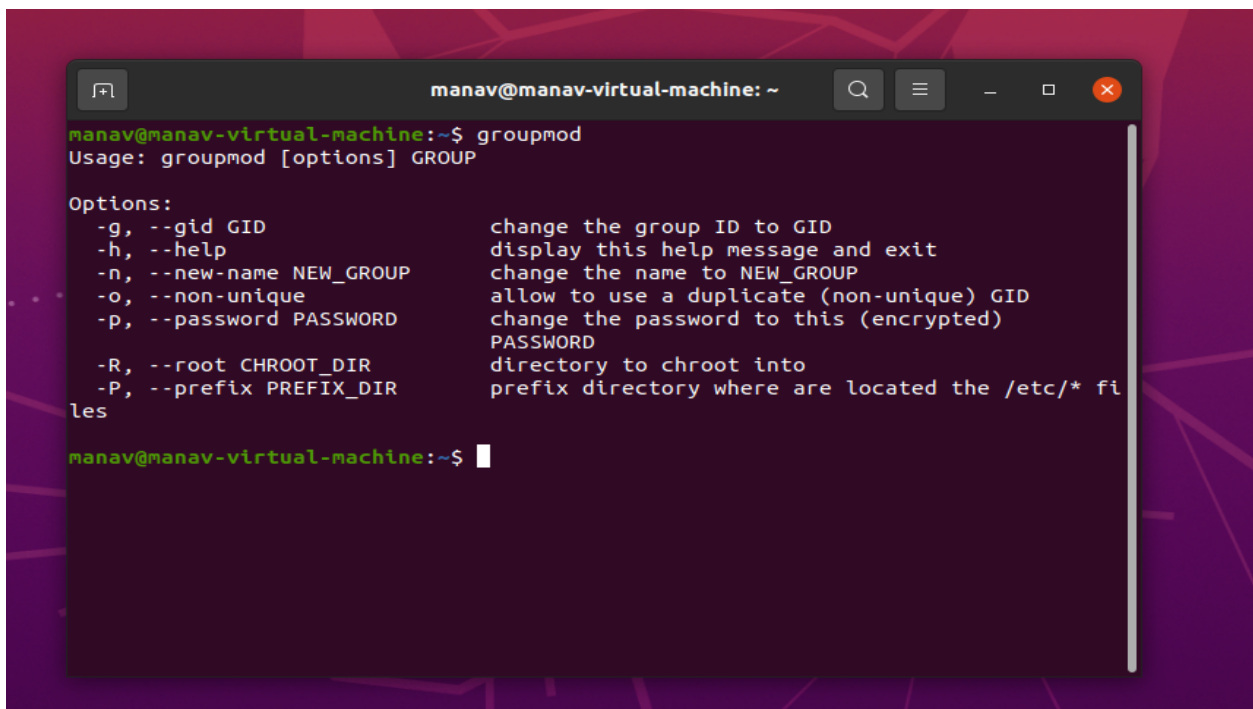
```
manav@manav-virtual-machine: ~  
manav@manav-virtual-machine:~$ userdel  
Usage: userdel [options] LOGIN  
  
Options:  
-f, --force            force removal of files,  
                        even if not owned by user  
-h, --help            display this help message and exit  
-r, --remove          remove home directory and mail spool  
-R, --root CHROOT_DIR directory to chroot into  
-P, --prefix PREFIX_DIR prefix directory where are located the /etc/* fi  
les  
--extrausers          Use the extra users database  
-Z, --selinux-user    remove any SELinux user mapping for the user  
  
manav@manav-virtual-machine:~$
```

9. groupadd - groupadd command creates a new group account using the values specified on the command line and the default values from the system. The new group will be entered into the system files as needed.



```
manav@manav-virtual-machine: ~  
manav@manav-virtual-machine:~$ groupadd  
Usage: groupadd [options] GROUP  
  
Options:  
-f, --force                exit successfully if the group already exists,  
                           and cancel -g if the GID is already used  
-g, --gid GID              use GID for the new group  
-h, --help                 display this help message and exit  
-K, --key KEY=VALUE        override /etc/login.defs defaults  
-o, --non-unique            allow to create groups with duplicate  
                           (non-unique) GID  
-p, --password PASSWORD    use this encrypted password for the new group  
-r, --system               create a system account  
-R, --root CHROOT_DIR      directory to chroot into  
-P, --prefix PREFIX_DIR    directory prefix  
                           Use the extra users database  
  
manav@manav-virtual-machine:~$
```

10. groupmod - groupmod command modifies the definition of the specified GROUP by modifying the appropriate entry in the group database.



```
manav@manav-virtual-machine: ~  
manav@manav-virtual-machine:~$ groupmod  
Usage: groupmod [options] GROUP  
  
Options:  
-g, --gid GID              change the group ID to GID  
-h, --help                 display this help message and exit  
-n, --new-name NEW_GROUP   change the name to NEW_GROUP  
-o, --non-unique            allow to use a duplicate (non-unique) GID  
-p, --password PASSWORD    change the password to this (encrypted)  
                           PASSWORD  
-R, --root CHROOT_DIR      directory to chroot into  
-P, --prefix PREFIX_DIR    prefix directory where are located the /etc/* fi  
les  
  
manav@manav-virtual-machine:~$
```

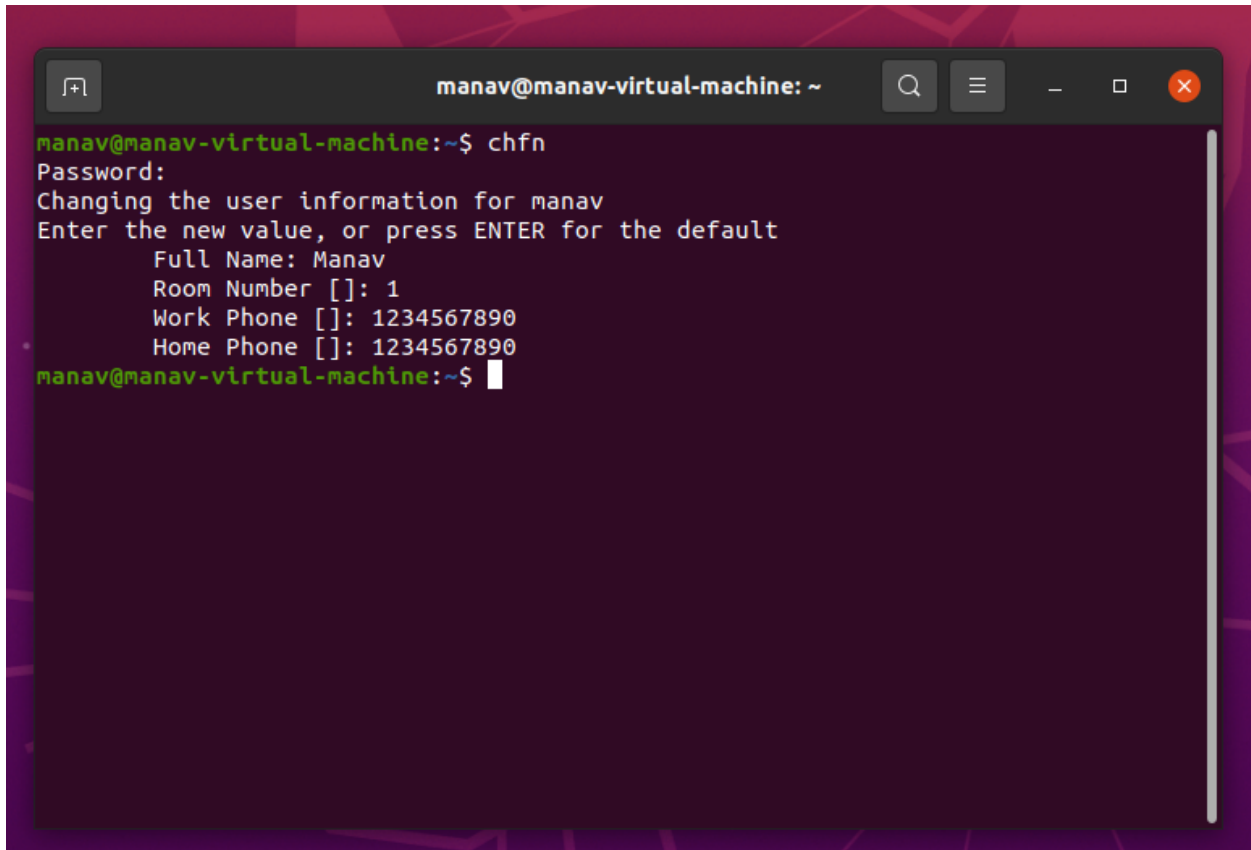

11. chown - Linux chown command is used to change a file's ownership, directory, or symbolic link for a user or group. The chown stands for change owner. In Linux, each file is associated with a corresponding owner or group.

```
manav@manav-virtual-machine: ~  
manav@manav-virtual-machine:~$ chown --help  
Usage: chown [OPTION]... [OWNER][:[GROUP]] FILE...  
or: chown [OPTION]... --reference=RFILE FILE...  
Change the owner and/or group of each FILE to OWNER and/or GROUP.  
With --reference, change the owner and group of each FILE to those of RFILE.  
  
-c, --changes           like verbose but report only when a change is made  
-f, --silent, --quiet  suppress most error messages  
-v, --verbose           output a diagnostic for every file processed  
                        --dereference          affect the referent of each symbolic link (this is  
                        the default), rather than the symbolic link itself  
-h, --no-dereference    affect symbolic links instead of any referenced file  
                        (useful only on systems that can change the  
                        ownership of a symlink)  
                        --from=CURRENT_OWNER:CURRENT_GROUP  
                        change the owner and/or group of each file only if  
                        its current owner and/or group match those specified  
                        here. Either may be omitted, in which case a match  
                        is not required for the omitted attribute  
--no-preserve-root      do not treat '/' specially (the default)  
--preserve-root         fail to operate recursively on '/'  
--reference=RFILE       use RFILE's owner and group rather than  
                        specifying OWNER:GROUP values  
-R, --recursive         operate on files and directories recursively
```

12. chage - The chage command changes the number of days between password changes and the date of the last password change. This information is used by the system to determine when a user must change their password.

```
manav@manav-virtual-machine: ~  
manav@manav-virtual-machine:~$ chage  
Usage: chage [options] LOGIN  
  
Options:  
-d, --lastday LAST_DAY  set date of last password change to LAST_DAY  
-E, --expiredate EXPIRE_DATE set account expiration date to EXPIRE_DATE  
-h, --help              display this help message and exit  
-i, --iso8601           use YYYY-MM-DD when printing dates  
-I, --inactive INACTIVE set password inactive after expiration  
                        to INACTIVE  
-l, --list              show account aging information  
-m, --mindays MIN_DAYS  set minimum number of days before password  
                        change to MIN_DAYS  
-M, --maxdays MAX_DAYS set maximum number of days before password  
                        change to MAX_DAYS  
-R, --root CHROOT_DIR   directory to chroot into  
-W, --warndays WARN_DAYS set expiration warning days to WARN_DAYS  
  
manav@manav-virtual-machine:~$
```

13. chfn - The chfn command changes user fullname, office room number, office phone number, and home phone number information for a user's account.

A terminal window titled 'manav@manav-virtual-machine: ~' with standard window controls. The terminal shows the execution of the 'chfn' command. It prompts for a password, then displays the message 'Changing the user information for manav'. It then asks to 'Enter the new value, or press ENTER for the default' and shows the current values: Full Name: Manav, Room Number [], Work Phone [], and Home Phone []. The user has entered '1' for the room number. The prompt returns to the shell.

```
manav@manav-virtual-machine:~$ chfn
Password:
Changing the user information for manav
Enter the new value, or press ENTER for the default
    Full Name: Manav
    Room Number []: 1
    Work Phone []: 1234567890
    Home Phone []: 1234567890
manav@manav-virtual-machine:~$
```

Conclusion: We have understood how to execute the user management commands of UNIX.