

1. Explain about etc/passwd file.  
/etc/passwd file contains all information of users.

It contains

- 1.Username
- 2.Encrypted password
- 3.User ID (UID)
- 4.Group ID (GID)
- 5.GCOS field
- 6.Home directory
- 7.Login shell

Above information is separated with colon.

2. What is the usage of chage command in linux?

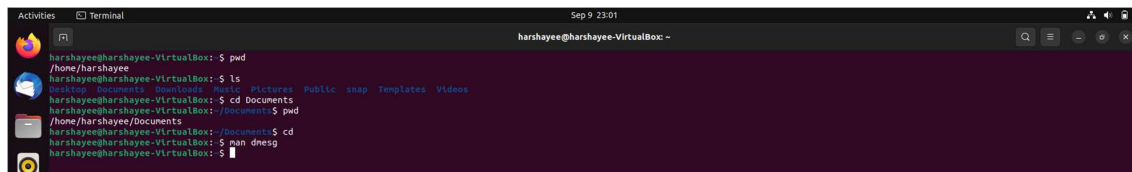
Chage command is used by user to set the expiry of account or when should password be changed.

User can also view last changed password date and can also set expiry.

If password expiry has been set it gives reminder to user to change the password before expiry.

3. Run the following commands in your system and give the output.  
man, cd, mkdir, rmdir, echo, history, ls, pwd, cp, mv, touch, cat, who, w, cal, date.

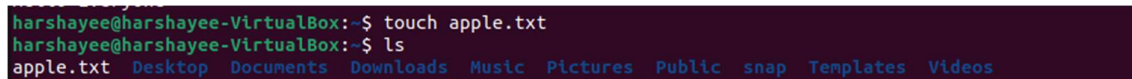
man, cd, pwd

A terminal window titled 'harshayee@harshayee-VirtualBox' showing a sequence of commands and their outputs. The commands are: pwd (output: /home/harshayee), ls (output: Desktop Documents Downloads Music Pictures Public snap Templates Videos), cd Documents (output: /home/harshayee/Documents), cd (output: /home/harshayee/Documents), and man dmesg (output: harshayee@harshayee-VirtualBox:~\$ man dmesg).

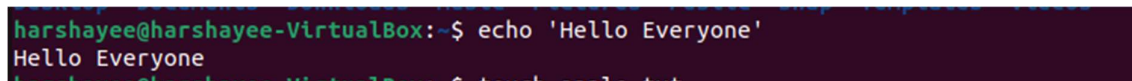
mkdir

A terminal window showing the execution of mkdir and ls. The command mkdir apple is entered, followed by ls, which now lists 'apple' as a new directory alongside the previous ones.

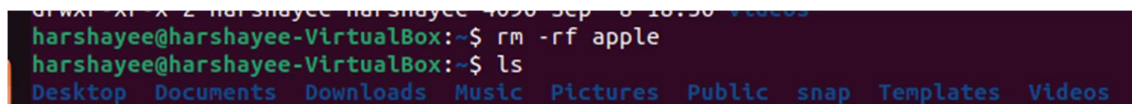
touch

A terminal window showing the execution of touch and ls. The command touch apple.txt is entered, followed by ls, which now lists 'apple.txt' as a new file.

echo

A terminal window showing the execution of the echo command. The command echo 'Hello Everyone' is entered, and the output 'Hello Everyone' is displayed on the next line.

rmdir

A terminal window showing the execution of rm and ls. The command rm -rf apple is entered, followed by ls, which no longer lists 'apple' or 'apple.txt'.

w

```
harshayee@harshayee-VirtualBox:~$ w
23:03:17 up 9 min,  1 user,  load average: 0.12, 0.23, 0.17
USER   TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
harshayee tty2      tty2            22:55    9:00   0.03s   0.03s  /usr/libexec/gnome-session-binary --session=ubuntu
```

ls

```
harshayee@harshayee-VirtualBox:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
```

who

```
harshayee@harshayee-VirtualBox:~$ who
harshayee tty2          2023-09-09 22:55 (tty2)
```

cp

```
apple.txt  Desktop  documents  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
harshayee@harshayee-VirtualBox:~$ cp apple.txt documents
harshayee@harshayee-VirtualBox:~$ ls documents
apple.txt
```

cal

```
harshayee@harshayee-VirtualBox:~$ cal 2023
                2023
    January      February      March
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7      1  2  3  4      1  2  3  4
 8  9 10 11 12 13 14      5  6  7  8  9 10 11      5  6  7  8  9 10 11
15 16 17 18 19 20 21      12 13 14 15 16 17 18      12 13 14 15 16 17 18
22 23 24 25 26 27 28      19 20 21 22 23 24 25      19 20 21 22 23 24 25
29 30 31      26 27 28      26 27 28 29 30 31

    April        May          June
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
                1      1  2  3  4  5  6      1  2  3
 2  3  4  5  6  7  8      7  8  9 10 11 12 13      4  5  6  7  8  9 10
 9 10 11 12 13 14 15      14 15 16 17 18 19 20      11 12 13 14 15 16 17
16 17 18 19 20 21 22      21 22 23 24 25 26 27      18 19 20 21 22 23 24
23 24 25 26 27 28 29      28 29 30 31      25 26 27 28 29 30
30

    July         August       September
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
                1      1  2  3  4  5      1  2
 2  3  4  5  6  7  8      6  7  8  9 10 11 12      3  4  5  6  7  8  9
 9 10 11 12 13 14 15      13 14 15 16 17 18 19      10 11 12 13 14 15 16
16 17 18 19 20 21 22      20 21 22 23 24 25 26      17 18 19 20 21 22 23
23 24 25 26 27 28 29      27 28 29 30 31      24 25 26 27 28 29 30
30 31

    October      November     December
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7      1  2  3  4      1  2
 8  9 10 11 12 13 14      5  6  7  8  9 10 11      3  4  5  6  7  8  9
15 16 17 18 19 20 21      12 13 14 15 16 17 18      10 11 12 13 14 15 16
22 23 24 25 26 27 28      19 20 21 22 23 24 25      17 18 19 20 21 22 23
29 30 31      26 27 28 29 30      24 25 26 27 28 29 30
31
```

date

```
harshayee@harshayee-VirtualBox:~$ date
Saturday 09 September 2023 11:16:02 PM IST
```

mv

```
harshayee@harshayee-VirtualBox:~$ mv apple.txt documents
harshayee@harshayee-VirtualBox:~$ ls documents
apple.txt
harshayee@harshayee-VirtualBox:~$
```

4. Write a shell program to display your details read hobby from keyboard.

```
harshayee@harshayee-VirtualBox:~$ bash hobby.sh
Harshayee Jadhav is studying in C-DAC
Dancing
Harshayee Jadhav hobby is Dancing
This is the end of program
harshayee@harshayee-VirtualBox:~$ cat hobby.sh
#!/bin/bash
name='Harshayee Jadhav'
org=C-DAC

echo $name is studying in $org

read hobby

echo "$name hobby is $hobby"

echo "This is the end of program"

harshayee@harshayee-VirtualBox:~$
```

5.Explain about Linux file system.

The linux file system is the structure that the linux operating system uses to organize and store files and data on a system. It is hierarchical file system. Its structure is just like inverted tree called as root partition. At top is the root directory and below root directory there are other subdirectories. Each subdirectories has its own purpose. Everthing in linux is considered as file including hardware.

