Experiment No.: 7 **Date: 20-03-2023**

AIM: Familiarization of linux commands.

CO2: Perform system administration task.

Procedure:

1. Expr : Evaluate the given expression and display the result

```
student@t2:~/Philip$ expr 12 + 9
21
student@t2:~/Philip$ expr 12 \* 3
36
student@t2:~/Philip$ expr 12 / 4
3
student@t2:~/Philip$
```

```
student@t2:~/Philip$ read x
21
student@t2:~/Philip$ read y
23
student@t2:~/Philip$ expr $x + $y
44
student@t2:~/Philip$
```

2. df : Get a report on system disk space usage

```
student@t2:~/Philip$ df
Filesystem     1K-blocks     Used Available Use% Mounted on
udev             3966888        0   3966888   0% /dev
tmpfs             799004     1736    797268   1% /run
/dev/sda6      143135900 23521248 112274060  18% /
tmpfs            3995016    27876   3967140   1% /dev/shm
```

3. du : used to checks how much space a file or dir takes in the current directory

```
student@t2:~/Philip$ du  file1.txt
4       file1.txt
student@t2:~/Philip$
```

4. Create new user

```
mca@t2:~/Philip$ sudo useradd Philip
[sudo] password for mca:
mca@t2:~/Philip$ sudo useradd Philip
useradd: user 'Philip' already exists
```

Change password of new user

```
mca@t2:~/Philip$ sudo passwd Philip
New password:
Retype new password:
passwd: password updated successfully
mca@t2:~/Philip$
```

Create new group

```
mca@t2:~/Philip$ sudo groupadd -g 1007 mcastudent
mca@t2:~/Philip$
```

Sudo usermod -G : Add user to group

```
mca@t2:~/Philip$ sudo usermod -G mcastudent Philip
mca@t2:~/Philip$
```

id username : Used to find user group name and numeric id

```
mca@t2:~/Philip$ id Philip
uid=1004(Philip) gid=1005(Philip) groups=1005(Philip),1007(mcastudent)
mca@t2:~/Philip$
```

To display all the groups

```
mca@t2:~/Philip$ compgen -g
root
daemon
bin
```

chmod : used to change the access permission of the file and directories.
It stands for change mod
Read – r
Write – w
Execute – x
Denying the permission

```
mca@t2:~/Philip$ chmod -wx file1.txt
mca@t2:~/Philip$ cat >> file1.txt
bash: file1.txt: Permission denied
mca@t2:~/Philip$
```

Allowing the permissions

```
mca@t2:~/Philip$ chmod +rwx file1.txt
mca@t2:~/Philip$ cat >> file1.txt
welcome
^Z
[2]+  Stopped                 cat >> file1.txt
mca@t2:~/Philip$
```

Chown : Used to change the file ownership or directory ownership for a user or group
And chown stands for change owner

```
mca@t2:~/Philip$ sudo chown Philip file1.txt
[sudo] password for mca:
mca@t2:~/Philip$ ls
file1.txt
mca@t2:~/Philip$ chmod +rwx file1.txt
chmod: changing permissions of 'file1.txt': Operation not permitted
mca@t2:~/Philip$ ls -l file1.txt
-rwxrwxr-x 1 Philip mca 14 Mar 20 11:56 file1.txt
mca@t2:~/Philip$
```

Delete user

```
mca@t2:~/Philip$ sudo userdel Philip
[sudo] password for mca:
mca@t2:~/Philip$ sudo userdel Philip
userdel: user 'Philip' does not exist
mca@t2:~/Philip$
```

Delete group

```
mca@t2:~/Philip$ sudo groupdel mcastudent
mca@t2:~/Philip$ sudo groupdel mcastudent
groupdel: group 'mcastudent' does not exist
mca@t2:~/Philip$
```

Result

The program was executed and the result was successfully obtained. Thus CO2 was obtained