Experiment no:3 **Date:09-03-2023**

Aim: Familiarization with Linux command.

CO2: Perform system administration tasks.

Procedure:

1. pwd: to print the working directory.
   . print the path of the working directory.
   $pwd
   Output:

```
student@t2:~$ pwd
/home/student
```

2. ls: Used to list the files and contents
   $ls
   Output:

```
student@t2:~$ ls
 1
 Desktop
 dir1
 directory
 Documents
 Downloads
 Music
 Pictures
 Public
 PycharmProjects
 snap
'snap Desktop Documents Downloads Music Pictures Public Templates Videos'
 sreerag
 sreerag1
 Templates
 test
 Videos
```

   i. ls -R: This will list all the subdirectories
   $ls -R
   Output:

```
student@t2:~$ ls -R
.:
 1
 Desktop
 dir1
 directory
 Documents
 Downloads
 Music
 Pictures
 Public
 PycharmProjects
 snap
'snap Desktop Documents Downloads Music Pictures Public Templates Videos'
 sreerag
 sreerag1
 Templates
```

ii. ls -l: long listing,

$ls -l

Output:

```
student@t2:~$ ls -l
total 80
drwxrwxr-x 2 student student  4096 Mar  7 16:12  1
drwxr-xr-x 2 student student  4096 Jun 17  2022  Desktop
drwxrwxr-x 2 student student  4096 Mar  7 16:13  dir1
drwxrwxr-x 2 student student  4096 Mar  7 16:12  directory
drwxr-xr-x 2 student student  4096 Jun 17  2022  Documents
drwxr-xr-x 2 student student  4096 Jun 17  2022  Downloads
drwxr-xr-x 2 student student  4096 Jun 17  2022  Music
drwxr-xr-x 2 student student  4096 Jun 17  2022  Pictures
drwxr-xr-x 2 student student  4096 Jun 17  2022  Public
drwxrwxr-x 3 student student  4096 Jun 17  2022  PycharmProjects
drwx------ 4 student student  4096 Mar  7 16:01  snap
```

iii. ls -a: To view the hidden files.

$ls -a

Output:

```
student@t2:~$ ls -a
 .
 ..
 1
 .bash_history
 .bash_logout
 .bashrc
 .cache
 .config
 Desktop
 dir1
 directory
 Documents
 Downloads
 .gnupg
 .java
 .lesshst
 .local
 .mozilla
 Music
 Pictures
 .pki
 .profile
 Public
 PycharmProjects
 snap
'snap Desktop Documents Downloads Music Pictures Public Templates Videos'
```

iv. ls -al: list the files and directories with detailed information including hidden files.

$ls -al

Output:

```
student@t2:~$ ls -al
total 144
drwxr-xr-x 27 student student  4096 Mar  7 16:43  .
drwxr-xr-x  6 root    root     4096 Jun 17  2022  ..
drwxrwxr-x  2 student student  4096 Mar  7 16:12  1
-rw-------  1 student student  3732 Mar  9 14:22  .bash_history
```

v. ls -t: list the files in sorted in the order of last modified.

$ ls -t

Output:

```
student@t2:~$ ls -t
test  directory  sreerag                                                          Desktop    Music      Templates
dir1  snap       'snap Desktop Documents Downloads Music Pictures Public Templates Videos'  Documents  Pictures   Videos
1     sreerag1   PycharmProjects                                                  Downloads  Public
```

vi. ls -r: reverse the actual sorting order.

$ls -r

Output:

```
student@t2:~$ ls -r
Videos     sreerag1                                                          snap            Pictures   Documents  Desktop
test       sreerag                                                           PycharmProjects  Music      directory  1
Templates  'snap Desktop Documents Downloads Music Pictures Public Templates Videos'  Public          Downloads  dir1
```

3. mkdir: to make the directory
   $mkdir [filename]
   Output:

```
student@t2:~$ mkdir diya
student@t2:~$ ls
1         directory   Downloads   Public          'snap Desktop Documents Downloads Music Pictures Public Templates Videos'   Templates
Desktop   diya        Music       PycharmProjects   sreerag                                                                    test
dir1      Documents   Pictures    snap              sreerag1                                                                   Videos
```

4. cd: to navigate through the directory.
   $cd [filename]
   Output:

```
student@t2:~$ cd diya
student@t2:~/diya$
```

5. cd -- / cd ..: to go to the previous directory.
   $cd ..
   Output:

```
student@t2:~/diya$ cd ..
student@t2:~$
```

6. history: to view the history and the commands which you have been executed for certain period of time.
   $history
   Output:

```
student@t2:~/diya$ history
    1  ./studio.sh
    2  ./studio.sh
    3  su mca
    4  pwd
    5  ls
    6  ls-R
    7  ls -R
    8  ects  snap  Templates  Videos
    9  ls -l
   10  ls -a
   11  ls -al
   12  ls -t
   13  ls -s
   14  ls -r
   15  history
   16  man ls
   17  wq
   18  man ls
   19  mkdir sreerag
   20  pwd
   21  cd sreerag
   22  pwd
   23  cd ..
   24  rmdir sreerag
   25  cd -
```

7. man: we can learn and understand about the shell using man command.
   $man ls
   Output:

```
LS(1)                                    User Commands                                    LS(1)

NAME
       ls - list directory contents

SYNOPSIS
       ls [OPTION]... [FILE]...

DESCRIPTION
       List  information  about the FILEs (the current directory by default).  Sort entries alphabetically if none of -cftuvSUX nor --sort
       is specified.
```

8. cat: to create file.
   i. $cat > [filename]
   Output:

```
student@t2:~/diya$ cat > dinla1
happy
bad
right
^Z
[1]+  Stopped                 cat > dinla1
```

   ii. cat [filename]: to display the file contents.
   $ cat dinla1
   Output:

```
student@t2:~/diya$ cat dinla1
happy
bad
right
```

   iii. cat >> [filename]: to append the file.
   $cat >> dinla1
   Output:

```
student@t2:~/diya$ cat >> dinla1
dilna
desti
^Z
[2]+  Stopped                 cat >> dinla1
```

   iv. cat -n [filename]: to display the line number.
   $cat -n dinla1
   Output:

```
student@t2:~/diya$ cat -n dinla1
     1  happy
     2  bad
     3  right
     4  dilna
     5  desti
```

   v. cat -b [filename]: to remove numbering from empty line.
   $cat -b dinla1
   Output:

```
student@t2:~/diya$ cat -b dinla1
     1  happy
     2  bad
     3  right
     4  dilna
     5  desti


     6  thing
     7  money heist
```