

NETWORKING & SYSTEM ADMINISTRATION LAB**Experiment No.: 3****Aim**

Familiarization of Linux Commands.

Procedure

1. Pwd - Print the Current working directory path, starting from the root.

\$pwd

Output ScreenshotA terminal window with a dark background. The title bar at the top right says 'student@S41: ~/sree'. Below the title bar is a menu bar with 'File Edit View Search Terminal Help'. The terminal shows the prompt 'student@S41:~\$' followed by the command 'pwd' and the output '/home/student' on the next line.

```
student@S41: ~/sree
File Edit View Search Terminal Help
student@S41:~$ pwd
/home/student
```

2. Mkdir - Allow users to create or make a new directories.

\$mkdir sree

\$pwd

Output ScreenshotA terminal window with a dark background. The terminal shows the prompt 'student@S41:~\$' followed by the command 'mkdir sree' on the first line, and the prompt 'student@S41:~\$' followed by the command 'pwd' and the output '/home/student' on the second line.

```
student@S41:~$ mkdir sree
student@S41:~$ pwd
/home/student
```

3. ls - The command used to list files or directories in linux based operating system.

\$ls

Output Screenshot

```
/home/student
student@S41:~$ ls
compiler  Downloads  frequency.c  last.c  Pictures  sample  sentencerev  snap  string1.c  Videos
Desktop  examples.desktop  frequency.o  last.o  Public  sample.c  sentencerev.c  sree  string1.o
Documents  frequency  last  Music  PycharmProjects  sample.o  sentencerev.o  string1  Templates
```

3.1 ls -l - It is used to list information about files and directories with in the file system.

\$ls -l

Output Screenshot

```
student@S41:~$ ls -l
total 160
drwxr-xr-x 4 student student 4096 Nov 20 2019 compiler
drwxr-xr-x 4 student student 4096 Nov 20 2019 Desktop
drwxr-xr-x 3 student student 4096 Feb 25 11:27 Documents
drwxr-xr-x 2 student student 4096 May 9 2019 Downloads
-rw-r--r-- 1 student student 8980 May 9 2019 examples.desktop
-rwxrwxr-x 1 student student 8432 Jul 17 2019 frequency
-rw-rw-r-- 1 student student 512 Jul 17 2019 frequency.c
-rw-rw-r-- 1 student student 2064 Jul 17 2019 frequency.o
-rwxrwxr-x 1 student student 8392 Jul 17 2019 last
-rw-rw-r-- 1 student student 1103 Jul 17 2019 last.c
-rw-rw-r-- 1 student student 2616 Jul 17 2019 last.o
drwxr-xr-x 2 student student 4096 May 9 2019 Music
drwxr-xr-x 2 student student 4096 May 9 2019 Pictures
drwxr-xr-x 2 student student 4096 May 9 2019 Public
drwxrwxr-x 4 student student 4096 Nov 1 18:45 PycharmProjects
-rwxrwxr-x 1 student student 8392 Jul 17 2019 sample
-rw-rw-r-- 1 student student 371 Jul 17 2019 sample.c
-rw-rw-r-- 1 student student 2016 Jul 17 2019 sample.o
-rwxrwxr-x 1 student student 8448 Jul 17 2019 sentencerev
-rw-rw-r-- 1 student student 790 Jul 17 2019 sentencerev.c
-rw-rw-r-- 1 student student 2576 Jul 17 2019 sentencerev.o
drwx----- 3 student student 4096 Nov 1 17:14 snap
drwxr-xr-x 2 student student 4096 Mar 24 14:29 sree
-rwxrwxr-x 1 student student 8448 Jul 17 2019 string1
```

3.2 ls -R - The ls command list the files inside a folder.

\$ls -R

Output Screenshot

```
student@S41:~$ ls -R
.:
compiler  Downloads  frequency.c last.c  Pictures  sample  sentencerev  snap  string1.c  Videos
Desktop  examples.desktop  frequency.o last.o  Public  sample.c  sentencerev.c  sree  string1.o
Documents frequency  last  Music  PycharmProjects  sample.o  sentencerev.o  string1  Templates

./compiler:
avg  avg.c  avg.o  bin  compiler.cbp  compiler.depend  compiler.layout  obj  recog.c  spcount.c  'struct node.c'  Untitled2

./compiler/bin:
Debug

./compiler/bin/Debug:
compiler

./compiler/obj:
Debug

./compiler/obj/Debug:
recog.o  spcount.o

./Desktop:
exam  princy

./Desktop/exam:
count.c  newsum  newsum.c  newsum.o  q1.py  quadrant  quadrant.c  quadrant.o  sum  sum.c  sum.o

./Desktop/princy:
matrix  matrix.c  matrix.o
```

3.3 `ls -a` - The command will enlist the whole list of the current directory including the hidden files.

\$ls -a

Output Screenshot

```
student@S41:~$ ls -a
.  compiler  examples.desktop  .ICEauthority  last.o  .profile  sample.c  snap  string1.o
.. .config  frequency  .idlerc  .local  Public  sample.o  sree  Templates
.bash_logout  Desktop  frequency.c  .java  .mozilla  .PyCharmCE2019.2  sentencerev  .ssh  .thunderbird
.bashrc  Documents  frequency.o  last  Music  PycharmProjects  sentencerev.c  string1  Videos
.cache  Downloads  .gnupg  last.c  Pictures  sample  sentencerev.o  string1.c
```

3.4 `ls -al` - Is used on linux operating systems to list information about files.

\$ls -al

Output Screenshot

```
student@S41:~$ ls -al
total 224
drwxr-xr-x 24 student student 4096 Mar 24 14:29 .
drwxr-xr-x  7 root      root    4096 Jan 13 14:39 ..
-rw-r--r--  1 student student  220 May  9 2019 .bash_logout
-rw-r--r--  1 student student 3771 May  9 2019 .bashrc
drwx----- 15 student student 4096 May 10 2019 .cache
drwxr-xr-x  4 student student 4096 Nov 20 2019 compiler
drwx----- 16 student student 4096 Jul 17 2019 .config
drwxr-xr-x  4 student student 4096 Nov 20 2019 Desktop
drwxr-xr-x  3 student student 4096 Feb 25 11:27 Documents
drwxr-xr-x  2 student student 4096 May  9 2019 Downloads
-rw-r--r--  1 student student 8980 May  9 2019 examples.desktop
-rwxrwxr-x  1 student student 8432 Jul 17 2019 frequency
-rw-rw-r--  1 student student  512 Jul 17 2019 frequency.c
-rw-rw-r--  1 student student 2064 Jul 17 2019 frequency.o
drwx-----  3 student student 4096 May 10 2019 .gnupg
-rw-----  1 student student 3366 Mar 24 2022 .ICEauthority
drwxrwxr-x  2 student student 4096 May 10 2019 .idlerc
drwxrwxr-x  4 student student 4096 Nov  1 17:15 .java
-rwxrwxr-x  1 student student 8392 Jul 17 2019 last
-rw-rw-r--  1 student student 1103 Jul 17 2019 last.c
-rw-rw-r--  1 student student 2616 Jul 17 2019 last.o
drwx-----  3 student student 4096 May  9 2019 .local
drwx-----  5 student student 4096 May 10 2019 .mozilla
drwxr-xr-x  2 student student 4096 May  9 2019 Music
drwxr-xr-x  2 student student 4096 May  9 2019 Pictures
-rw-r--r--  1 student student  807 May  9 2019 .profile
drwxr-xr-x  2 student student 4096 May  9 2019 Public
```

3.5 `ls -t` - It sorts the file by modification time, showing the last edited file first.

`$ls -t`

Output Screenshot

```
drwx----- 4 student student 4096 May 10 2019 .thunderbird
drwxr-xr-x  2 student student 4096 May  9 2019 Videos
student@S41:~$ ls -t
sree      snap      last.c    sentencerev  sample      sample.c    string1  Downloads  Public    examples.desktop
Documents compiler  last      sentencerev.o sample.o    frequency  string1.o  Music    Templates
PycharmProjects Desktop  last.o    sentencerev.c frequency.c frequency.o string1.c  Pictures  Videos
```

4.cd -Change the current working directory.

`$cd sree`

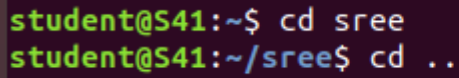
Output Screenshot

```
student@S41:~$ cd sree
student@S41:~/sree$ cd ..
```

5.cd.. -Move to the previous directory.

\$cd..

Output Screenshot

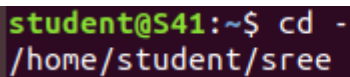


```
student@S41:~$ cd sree
student@S41:~/sree$ cd ..
```

6.cd- - Traverse the previous directory.

\$cd-

Output Screenshot

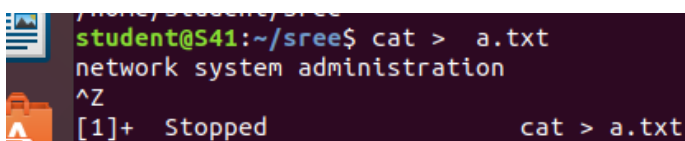


```
student@S41:~$ cd -
/home/student/sree
```

7.cat -Create a new file and add content to the file.

\$cat > a.txt

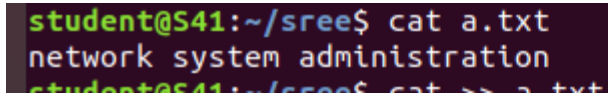
Output Screenshot



```
student@S41:~/sree$ cat > a.txt
network system administration
^Z
[1]+  Stopped                  cat > a.txt
```

8.cat filename -for viewing the file

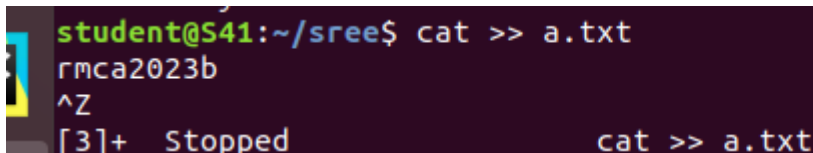
\$cat a.txt

Output Screenshot

```
student@S41:~/sree$ cat a.txt
network system administration
student@S41:~/sree$ cat >> a.txt
```

9.cat >> filename- For adding additional information to that file.

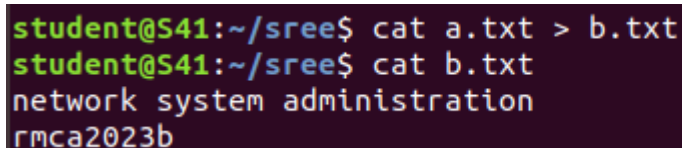
\$cat >> a.txt

Output Screenshot

```
student@S41:~/sree$ cat >> a.txt
rmca2023b
^Z
[3]+  Stopped                  cat >> a.txt
```

10.cat file1 > file2 - To copy file content of one file to another file.

\$cat a.txt > b.txt

11. \$cat b.txt - To put the line numbers.**Output Screenshot**

```
student@S41:~/sree$ cat a.txt > b.txt
student@S41:~/sree$ cat b.txt
network system administration
rmca2023b
```