

NETWORKING & SYSTEM ADMINISTRATION LAB

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Aim

Familiarization of basic linux commands

Procedure

1.\$ pwd

Shows the present working directory

Syntax: \$pwd

Output:

```
abin@DESKTOP-1S21EPL: ~  
abin@DESKTOP-1S21EPL:~$ pwd  
/home/abin  
abin@DESKTOP-1S21EPL:~$
```

2.\$mkdir

Make a directory

Syntax: \$mkdir <directory_name>

Output:

```
abin@DESKTOP-1S21EPL:~$ mkdir sample  
abin@DESKTOP-1S21EPL:~$
```

3.\$ ls

List the contents of a directory , By default it display all the contents of present working directory.

Syntax: \$ls

Output:

```
abin@DESKTOP-1S21EPL:~$ mkdir sample
abin@DESKTOP-1S21EPL:~$ ls
sample
abin@DESKTOP-1S21EPL:~$
```

4.\$ ls -l

Used for long listing. List all the files in sub-directories as well

Syntax: \$ls -l

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -l
total 0
drwxr-xr-x 1 abin abin 4096 Apr  6 08:57 sample
abin@DESKTOP-1S21EPL:~$
```

5.\$ ls -F

List files and directories with ‘/’ character at the end

Syntax: \$ls -F

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -F
.  ..  .bashrc  .bash_logout  .landscape  .motd_shown  .profile  sample/
abin@DESKTOP-1S21EPL:~$
```

6.\$ ls -r

List files in reverse order in linux

Syntax: \$ls -r

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -r
sample
abin@DESKTOP-1S21EPL:~$
```

7.\$ls -R

Recursively list sub-directories in linux

Syntax: \$ls -R

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -R
.:
sample

./sample:
abin@DESKTOP-1S21EPL:~$
```

8.\$ ls -ltr

List files and directories in reverse order in linux

Syntax: \$ls -ltr

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -ltr
total 0
drwxr-xr-x 1 abin abin 4096 Apr  6 08:57 sample
abin@DESKTOP-1S21EPL:~$
```

9.\$ ls -lS

Sort files by file size in linux

Syntax: \$ls -lS

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -lS
sample
abin@DESKTOP-1S21EPL:~$
```

10.\$ ls -li

Display inode number of file or directory

Syntax: \$ls -li

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -li
7881299348184638 sample
abin@DESKTOP-1S21EPL:~$
```

11.\$ls -la

This command is used to display all files including hidden files.

Syntax: \$ls -la

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -la
.  ..  .bash_logout  .bashrc  .landscape  .motd_shown  .profile  sample
abin@DESKTOP-1S21EPL:~$
```

12. \$ls -al

This command will list all the files and directories with detailed information like

Permission,size,owner etc.

Syntax: \$ls -al

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -al
total 8
drwxr-xr-x 1 abin abin 4096 Apr  6 08:57 .
drwxr-xr-x 1 root root 4096 Apr  6 08:39 ..
-rw-r--r-- 1 abin abin  220 Apr  6 08:39 .bash_logout
-rw-r--r-- 1 abin abin 3771 Apr  6 08:39 .bashrc
drwxr-xr-x 1 abin abin 4096 Apr  6 08:39 .landscape
-rw-r--r-- 1 abin abin    0 Apr  6 08:39 .motd_shown
-rw-r--r-- 1 abin abin  807 Apr  6 08:39 .profile
drwxr-xr-x 1 abin abin 4096 Apr  6 08:57 sample
abin@DESKTOP-1S21EPL:~$
```

13. \$ls -t

The command used to display the files sorted in the order of last modification

Syntax: \$ls -t

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -t
sample
abin@DESKTOP-1S21EPL:~$
```

14.\$ ls --version

Shows version of ls command

Syntax: \$ls --version

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -version
ls: invalid option -- 'e'
Try 'ls --help' for more information.
abin@DESKTOP-1S21EPL:~$
```

15.\$ ls --help

Show ls command help page

Syntax: \$ls --help

Output:

```
abin@DESKTOP-1S21EPL:~$ ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILES (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.
-a, --all                        do not ignore entries starting with .
-A, --almost-all               do not list implied . and ..
    --author                    with -l, print the author of each file
-b, --escape                    print C-style escapes for nongraphic characters
    --block-size=SIZE          with -l, scale sizes by SIZE when printing them;
                                e.g., '--block-size=M'; see SIZE format below
-B, --ignore-backups            do not list implied entries ending with ~
-c                              with -lt: sort by, and show, ctime (time of last
                                modification of file status information);
                                with -l: show ctime and sort by name;
                                otherwise: sort by ctime, newest first
-C                              list entries by columns
    --color[=WHEN]             colorize the output; WHEN can be 'always' (default
                                if omitted), 'auto', or 'never'; more info below
-d, --directory                list directories themselves, not their contents
-D, --dired                    generate output designed for Emacs' dired mode
-f                              do not sort, enable -aU, disable -ls --color
-F, --classify                 append indicator (one of */=>@|) to entries
    --file-type                likewise, except do not append '*'
    --format=WORD               across -X, commas -m, horizontal -x, long -l,
                                single-column -1, verbose -l, vertical -C
    --full-time                 like -l --time-style=full-iso
-g                              like -l, but do not list owner
    --group-directories-first  group directories before files;
                                can be augmented with a --sort option, but any
```

16.\$ ls -l /tmp

List directory information in linux

Syntax: \$ls -l /tmp

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -l /tmp
total 0
abin@DESKTOP-1S21EPL:~$
```

17.\$ ls -n

Display UID and GID of files

Syntax: `$ls -n`

Output:

```
abin@DESKTOP-1S21EPL:~$ ls -n
total 0
drwxr-xr-x 1 1000 1000 4096 Apr  6 08:57 sample
abin@DESKTOP-1S21EPL:~$
```

18.\$ `cd`

Change directory

Syntax: `$cd <path>`

Output:

```
abin@DESKTOP-1S21EPL:~$ cd sample
abin@DESKTOP-1S21EPL:~/sample$
```

19.\$ `mkdir <foldername>`

To make new directory

Syntax: `$mkdir <directoryname>`

Output:

```
abin@DESKTOP-1S21EPL:~$ mkdir sample
abin@DESKTOP-1S21EPL:~$ ls
sample
abin@DESKTOP-1S21EPL:~$
```

20.\$ `touch <filename>`

To create a file in a directory

Syntax: `$touch <filename>`

Output:

```
abin@DESKTOP-1S21EPL:~/sample$ touch newfile.txt
abin@DESKTOP-1S21EPL:~/sample$
```

21. \$ rm <filename>

To delete a file from the directory

Syntax: \$rm <filename>

Output:

```
abin@DESKTOP-1S21EPL:~/sample$ ls
newfile.txt
abin@DESKTOP-1S21EPL:~/sample$ rm newfile.txt
abin@DESKTOP-1S21EPL:~/sample$ ls
abin@DESKTOP-1S21EPL:~/sample$
```

22. \$cat > filename

This command is used to create a file and add contents to it if necessary

Syntax: \$cat > filename

Output:

```
abin@DESKTOP-1S21EPL:~/sample$ cat >file.txt
hello
world
^Z
[1]+  Stopped                  cat > file.txt
abin@DESKTOP-1S21EPL:~/sample$
```

23. \$cat >> filename

This command is used to add some contents to an already existing file

Syntax: \$cat >> filename

Output:

```
abin@DESKTOP-1S21EPL:~/sample$ cat >file.txt
hello
world
^Z
[1]+  Stopped                  cat > file.txt
abin@DESKTOP-1S21EPL:~/sample$ cat >>file.txt
welcome...
^Z
[2]+  Stopped                  cat >> file.txt
abin@DESKTOP-1S21EPL:~/sample$
```

24. \$cat filename1 > filename2

This command is used to copy the content of one file to another file

Syntax: \$cat filename1 > filename2

Output:

```
abin@DESKTOP-1S21EPL:~/sample$ cat file.txt > file1.txt
abin@DESKTOP-1S21EPL:~/sample$ cat file1.txt
hello
world
welcome...
abin@DESKTOP-1S21EPL:~/sample$
```