Name: Farhan Khan

Enrollment Number: A2305221537

Section: Btech 4CSE9x

# *Practical-2*

Aim: Use of basic UNIX Shell Commands/Linux Commands

Commands:-

1) ls: Lists the files and directories in the current directory

```
lucien@DESKTOP-QQ2HK30:~/New_Folder$ ls
Sample.txt
```

2) cd: Changes the current working directory

```
lucien@DESKTOP-QQ2HK30:~$ cd New_Folder
lucien@DESKTOP-QQ2HK30:~/New_Folder$
```

3) mkdir: Creates a new directory

```
lucien@DESKTOP-QQ2HK30:~$ mkdir New_Folder
```

4) rmdir: Removes an empty directory

```
lucien@DESKTOP-QQ2HK30:~/New_Folder$ cd /home/lucien
lucien@DESKTOP-QQ2HK30:~$ ls
New_Folder  newfolder
lucien@DESKTOP-QQ2HK30:~$ rmdir New_Folder
lucien@DESKTOP-QQ2HK30:~$ ls
newfolder
```

5) touch: Creates a new file

```
lucien@DESKTOP-QQ2HK30:~/New_Folder$ touch Sample.txt
```

6) rm: Removes a file or directory

```
lucien@DESKTOP-QQ2HK30:~/New_Folder$ touch Sample.txt
lucien@DESKTOP-QQ2HK30:~/New_Folder$ touch Sample2.txt
lucien@DESKTOP-QQ2HK30:~/New_Folder$ ls
Sample.txt  Sample2.txt
lucien@DESKTOP-QQ2HK30:~/New_Folder$ rm Sample.txt
lucien@DESKTOP-QQ2HK30:~/New_Folder$ ls
Sample2.txt
```

7) pwd: Prints the current working directory

```
lucien@DESKTOP-QQ2HK30:~$ pwd
/home/lucien
```

8) mv: Moves or renames a file or directory

```
lucien@DESKTOP-QQ2HK30:~$ mv newfolder NEWFOLDER
lucien@DESKTOP-QQ2HK30:~$ ls
NEWFOLDER
```

9) cp: Copies a file or directory

```
lucien@DESKTOP-QQ2HK30:~$ cd NEWFOLDER
lucien@DESKTOP-QQ2HK30:~/NEWFOLDER$ ls
NewFolder_2  copyfile.txt
lucien@DESKTOP-QQ2HK30:~/NEWFOLDER$ cp copyfile.txt /home/lucien
lucien@DESKTOP-QQ2HK30:~/NEWFOLDER$ cd /home/lucien
lucien@DESKTOP-QQ2HK30:~$ ls
NEWFOLDER  New_Folder2  copyfile.txt  sample
```

10) chmod: Changes the permissions of a file or directory

```
lucien@DESKTOP-QQ2HK30:~/sample$ chmod u+rwx newfile.txt
```

11) echo:Used to display text or the value of a variable on the screen.

```
lucien@DESKTOP-QQ2HK30:~/sample$ echo "Hi guys,channel to my welcome!" < newfile.txt
 Hi guys,channel to my welcome!
```

12) cat: Print the contents of a file to the terminal

```
lucien@DESKTOP-QQ2HK30:~/sample$ cat > newfile.txt
Hi this is a line being written to this txt file and i will press ctrl+d to save it and exit
lucien@DESKTOP-QQ2HK30:~/sample$ cat newfile.txt
Hi this is a line being written to this txt file and i will press ctrl+d to save it and exit
```

13) grep: Searches for a specified pattern in a file or output

```
lucien@DESKTOP-QQ2HK30:~/sample$ grep 'line' newfile.txt
Hi this is a line being written to this txt file and i will press ctrl+d to save it and exit
```

14) find: Finds files and directories based on specified criteria

```
lucien@DESKTOP-QQ2HK30:~/sample$ ls
newfile  newfile.txt  oldfile.txt
lucien@DESKTOP-QQ2HK30:~/sample$ find newfile.txt
newfile.txt
lucien@DESKTOP-QQ2HK30:~/sample$ find nofile.txt
find: 'nofile.txt': No such file or directory
```

15) ps: Shows the currently running processes

```
lucien@DESKTOP-QQ2HK30:~/New_Folder2$ ps
  PID TTY          TIME CMD
  131 pts/0    00:00:00 bash
  177 pts/0    00:00:00 ps
```

16) kill: Sends a signal to a process to terminate it

```
lucien@DESKTOP-QQ2HK30:~/sample$ kill -l
 1) SIGHUP       2) SIGINT       3) SIGQUIT      4) SIGILL       5) SIGTRAP
 6) SIGABRT      7) SIGBUS       8) SIGFPE       9) SIGKILL     10) SIGUSR1
11) SIGSEGV     12) SIGUSR2     13) SIGPIPE     14) SIGALRM     15) SIGTERM
16) SIGSTKFLT   17) SIGCHLD     18) SIGCONT     19) SIGSTOP     20) SIGTSTP
21) SIGTTIN     22) SIGTTOU     23) SIGURG      24) SIGXCPU     25) SIGXFSZ
26) SIGVTALRM   27) SIGPROF     28) SIGWINCH    29) SIGIO       30) SIGPWR
31) SIGSYS      34) SIGRTMIN    35) SIGRTMIN+1  36) SIGRTMIN+2  37) SIGRTMIN+3
38) SIGRTMIN+4  39) SIGRTMIN+5  40) SIGRTMIN+6  41) SIGRTMIN+7  42) SIGRTMIN+8
43) SIGRTMIN+9  44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12 47) SIGRTMIN+13
48) SIGRTMIN+14 49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13 52) SIGRTMAX-12
53) SIGRTMAX-11 54) SIGRTMAX-10 55) SIGRTMAX-9  56) SIGRTMAX-8  57) SIGRTMAX-7
58) SIGRTMAX-6  59) SIGRTMAX-5  60) SIGRTMAX-4  61) SIGRTMAX-3  62) SIGRTMAX-2
63) SIGRTMAX-1  64) SIGRTMAX
```

17) top: Shows the top processes by CPU or memory usage

```
lucien@DESKTOP-QQ2HK30:~$ top
top - 20:31:21 up  1:00,  0 users,  load average: 0.02, 0.01, 0.00
Tasks:   6 total,   1 running,   5 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.0 us,  0.0 sy,  0.0 ni,100.0 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :   3782.0 total,   3295.3 free,    312.6 used,    174.1 buff/cache
MiB Swap:   1024.0 total,   1024.0 free,      0.0 used.   3321.8 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
  193 lucien    20   0    7800   3656   3056 R   0.3   0.1   0:00.02 top
    1 root      20   0    2284   1604   1508 S   0.0   0.0   0:00.01 init
    4 root      20   0    2440     68     68 S   0.0   0.0   0:00.02 init
  179 root      20   0    2300    104      0 S   0.0   0.0   0:00.00 init
  180 root      20   0    2300    112      0 S   0.0   0.0   0:00.00 init
  181 lucien    20   0    6208   5188   3468 S   0.0   0.1   0:00.06 bash
```

18) df: Shows the available disk space on the system

```
lucien@DESKTOP-QQ2HK30:~$ df
Filesystem      1K-blocks       Used  Available Use% Mounted on
none              1936360          4    1936356   1% /mnt/wsl
drivers         478646268  333895684  144750584  70% /usr/lib/wsl/drivers
none              1936360          0    1936360   0% /usr/lib/wsl/lib
/dev/sdc       1055762868    1036100 1001023296   1% /
none              1936360         80    1936280   1% /mnt/wslg
rootfs            1933124       1900    1931224   1% /init
none              1936360          0    1936360   0% /run
none              1936360          0    1936360   0% /run/lock
none              1936360          0    1936360   0% /run/shm
none              1936360          0    1936360   0% /run/user
tmpfs             1936360          0    1936360   0% /sys/fs/cgroup
none              1936360         76    1936284   1% /mnt/wslg/versions.txt
none              1936360         76    1936284   1% /mnt/wslg/doc
drvfs           478646268  333895684  144750584  70% /mnt/c
```

19) du: Shows the disk usage of a file or directory

```
lucien@DESKTOP-QQ2HK30:~$ du
4       ./New_Folder2
4       ./NEWFOLDER
4       ./.config/procps
8       ./.config
40      .
```

20) zip and unzip : Compresses and decompresses files

```
lucien@DESKTOP-QQ2HK30:~/sample$ unzip -q
UnZip 6.00 of 20 April 2009, by Debian. Original by Info-ZIP.
```