LAB – 2

AIM – More Linux Commands

1) cd - Changes into the given directory

```
shruti@shruti-VirtualBox:~$ cd Documents/
shruti@shruti-VirtualBox:~/Documents$ ls
DemoFiles  linuxReads
shruti@shruti-VirtualBox:~/Documents$ pwd
/home/shruti/Documents
shruti@shruti-VirtualBox:~/Documents$
```

2) cmp - compare given files

```
shruti@shruti-VirtualBox:~/Documents$ cd LabFiles/
shruti@shruti-VirtualBox:~/Documents/LabFiles$ ls
file1.txt  file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ cmp file1.txt file2.txt
file1.txt file2.txt differ: byte 7, line 1
shruti@shruti-VirtualBox:~/Documents/LabFiles$
```

3) cat - displays the content of a file

```
shruti@shruti-VirtualBox:~/Documents/LabFiles$ cat file1.txt file2.txt
Hello Ubuntu
Its file 1
Hello Linux
Its file 2.
shruti@shruti-VirtualBox:~/Documents/LabFiles$
```

4) passwd – changes the user password

```
shruti@shruti-VirtualBox:~$ passwd
Changing password for shruti.
Current password:
New password:
Retype new password:
passwd: password updated successfully
shruti@shruti-VirtualBox:~$
```

5) cal -y – displays the full year calender

```
shruti@shruti-VirtualBox:~/Documents/LabFiles$ cal -y
                              2023
        January               February               March
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7             1  2  3  4             1  2  3  4
 8  9 10 11 12 13 14    5  6  7  8  9 10 11    5  6  7  8  9 10 11
15 16 17 18 19 20 21   12 13 14 15 16 17 18   12 13 14 15 16 17 18
22 23 24 25 26 27 28   19 20 21 22 23 24 25   19 20 21 22 23 24 25
29 30 31               26 27 28               26 27 28 29 30 31


        April                   May                   June
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
                   1       1  2  3  4  5  6                   1  2  3
 2  3  4  5  6  7  8    7  8  9 10 11 12 13    4  5  6  7  8  9 10
 9 10 11 12 13 14 15   14 15 16 17 18 19 20   11 12 13 14 15 16 17
16 17 18 19 20 21 22   21 22 23 24 25 26 27   18 19 20 21 22 23 24
23 24 25 26 27 28 29   28 29 30 31           25 26 27 28 29 30
30
         July                 August               September
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
                   1       1  2  3  4  5                   1  2
 2  3  4  5  6  7  8    6  7  8  9 10 11 12    3  4  5  6  7  8  9
 9 10 11 12 13 14 15   13 14 15 16 17 18 19   10 11 12 13 14 15 16
16 17 18 19 20 21 22   20 21 22 23 24 25 26   17 18 19 20 21 22 23
23 24 25 26 27 28 29   27 28 29 30 31        24 25 26 27 28 29 30
30 31
        October              November              December
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7             1  2  3  4                   1  2
 8  9 10 11 12 13 14    5  6  7  8  9 10 11    3  4  5  6  7  8  9
15 16 17 18 19 20 21   12 13 14 15 16 17 18   10 11 12 13 14 15 16
22 23 24 25 26 27 28   19 20 21 22 23 24 25   17 18 19 20 21 22 23
29 30 31               26 27 28 29 30         24 25 26 27 28 29 30
                                              31
shruti@shruti-VirtualBox:~/Documents/LabFiles$
```

6) grep - used to search a string of characters in a file

```
shruti@shruti-VirtualBox:~$ cd Documents/LabFiles/
shruti@shruti-VirtualBox:~/Documents/LabFiles$ grep Hello file1.txt
Hello Ubuntu
shruti@shruti-VirtualBox:~/Documents/LabFiles$
```

7) uname - displays the information about the system

```
shruti@shruti-VirtualBox:~/Documents/LabFiles$ uname
Linux
shruti@shruti-VirtualBox:~/Documents/LabFiles$
```

8) groups - names of the primary and supplementary groups for username

```
shruti@shruti-VirtualBox:~$ groups shruti
shruti : shruti adm cdrom sudo dip plugdev lpadmin lxd sambashare
shruti@shruti-VirtualBox:~$ 
```

9) comm – compare command

```
shruti@shruti-VirtualBox:~/Documents/LabFiles$ comm file1.txt file2.txt
        Hello Linux
Hello Ubuntu
Its file 1
        Its file 2.
shruti@shruti-VirtualBox:~/Documents/LabFiles$ 
```

10) chmod – change access rights to files and directories

```
shruti@shruti-VirtualBox:~/Documents/LabFiles$ ls
file1.txt  file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ ls -al
total 16
drwxrwxr-x 2 shruti shruti 4096 Feb  6 20:03 .
drwxr-xr-x 5 shruti shruti 4096 Feb  6 20:01 ..
-rw-rw-r-- 1 shruti shruti   24 Feb  6 20:03 file1.txt
-rw-rw-r-- 1 shruti shruti   24 Feb  6 20:03 file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ sudo chmod 766 file1.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ ls
file1.txt  file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ ls -al
total 16
drwxrwxr-x 2 shruti shruti 4096 Feb  6 20:03 .
drwxr-xr-x 5 shruti shruti 4096 Feb  6 20:01 ..
-rwxrw-rw- 1 shruti shruti   24 Feb  6 20:03 file1.txt
-rw-rw-r-- 1 shruti shruti   24 Feb  6 20:03 file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$
```

11) wc - counts and displays the number of lines, words, character and number of bytes enclosed in a file

```
shruti@shruti-VirtualBox:~/Documents/LabFiles$ ls -a
.  ..  file1.txt  file2.txt  myfile.txt  text.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ wc file2.txt
 2  5 24 file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ wc -l file2.txt
2 file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ wc -w file2.txt
5 file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$ wc -c file2.txt
24 file2.txt
shruti@shruti-VirtualBox:~/Documents/LabFiles$
```

12) ps - used to report the process status

```
shruti@shruti-VirtualBox:~/Documents/LabFiles$ ps
    PID TTY          TIME CMD
   2518 pts/0    00:00:00 bash
   3733 pts/0    00:00:00 ps
shruti@shruti-VirtualBox:~/Documents/LabFiles$
```

13) top – specify all processes

```
top - 20:28:38 up 40 min,  1 user,  load average: 0.01, 0.06, 0.08
Tasks: 214 total,   1 running, 213 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.3 us,  0.3 sy,  0.0 ni, 99.4 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :   6479.6 total,   3567.6 free,   1039.7 used,   1872.3 buff/cache
MiB Swap:   2048.0 total,   2048.0 free,      0.0 used.   5153.2 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   1776 shruti    20   0 5303312 394696 144684 S   4.7   5.9   2:35.04 gnome-shell
   2500 shruti    20   0  577632  67152  46300 S   1.3   1.0   0:14.15 gnome-terminal-
   2345 shruti    20   0  227512   2524   2172 S   0.7   0.0   0:16.39 VBoxClient
     21 root      rt   0       0      0      0 S   0.3   0.0   0:01.23 migration/1
    508 systemd+  20   0   14824   6184   5388 S   0.3   0.1   0:04.44 systemd-oomd
    660 message+  20   0   11072   6808   4140 S   0.3   0.1   0:01.33 dbus-daemon
   1066 root      20   0  298324   1236   1096 S   0.3   0.0   0:02.45 VBoxDRMClient
   2331 shruti    20   0  226996   2448   2092 S   0.3   0.0   0:02.74 VBoxClient
   3736 shruti    20   0   21844   4232   3408 R   0.3   0.1   0:00.05 top
      1 root      20   0  167908  13268   8280 S   0.0   0.2   0:02.02 systemd
      2 root      20   0       0      0      0 S   0.0   0.0   0:00.02 kthreadd
      3 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_gp
      4 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_par_gp
      5 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 slub_flushwq
      6 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 netns
      8 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
     10 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
     11 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_rude_
     12 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_trace
     13 root      20   0       0      0      0 S   0.0   0.0   0:00.06 ksoftirqd/0
     14 root      20   0       0      0      0 I   0.0   0.0   0:03.02 rcu_sched
     15 root      rt   0       0      0      0 S   0.0   0.0   0:00.11 migration/0
     16 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/0
     18 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
     19 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/1
     20 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/1
     22 root      20   0       0      0      0 S   0.0   0.0   0:00.05 ksoftirqd/1
     24 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/1:0H-events_highpri
     25 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/2
     26 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/2
     27 root      rt   0       0      0      0 S   0.0   0.0   0:01.22 migration/2
     28 root      20   0       0      0      0 S   0.0   0.0   0:00.06 ksoftirqd/2
     30 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/2:0H-events_highpri
     31 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/3
     32 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/3
     33 root      rt   0       0      0      0 S   0.0   0.0   0:01.22 migration/3
     34 root      20   0       0      0      0 S   0.0   0.0   0:00.55 ksoftirqd/3
     36 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/3:0H-events_highpri
     37 root      20   0       0      0      0 S   0.0   0.0   0:00.02 kdevtmpfs
     38 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 inet_frag_wq
     39 root      20   0       0      0      0 S   0.0   0.0   0:00.01 kauditd
     40 root      20   0       0      0      0 S   0.0   0.0   0:00.00 khungtaskd
     41 root      20   0       0      0      0 S   0.0   0.0   0:00.00 oom_reaper
     42 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 writeback
     43 root      20   0       0      0      0 S   0.0   0.0   0:00.33 kcompactd0
```