

112103006

Aishwarya koli

Div_1 [S1]

DTL ASSIGNMENT

[Linux and Shell bash]

LINUX : Linux is an open source operating system (OS). An operating system is the software that directly manages a system's hardware and resources, like CPU, memory, and storage. The OS sits between applications and hardware and makes the connections between all of your software and the physical resources that do the work.

SHELL BASH: Bash is a command line interpreter that typically runs in a text window where user can interpret commands to carry out various actions. The combination of these commands as a series within a file is known as a Shell Script. Bash can read and execute the commands from a Shell Script.

```

root@DESKTOP-D9SJ2TQ:~/dtl# mkdir linux
root@DESKTOP-D9SJ2TQ:~/dtl# mkdir 194009
root@DESKTOP-D9SJ2TQ:~/dtl# mv 194009 Linux
root@DESKTOP-D9SJ2TQ:~/dtl# ls
1.text Hello Linux ass4 forDeleting linux myte
root@DESKTOP-D9SJ2TQ:~/dtl# Linux
Linux: command not found
root@DESKTOP-D9SJ2TQ:~/dtl# cd Linux
root@DESKTOP-D9SJ2TQ:~/dtl/Linux# Linux
Linux: command not found
root@DESKTOP-D9SJ2TQ:~/dtl/Linux# ls -la
total 12
drwxr-xr-x 3 root root 4096 Jan 20 00:12 .
drwxr-xr-x 6 root root 4096 Jan 20 00:12 ..
drwxr-xr-x 2 root root 4096 Jan 20 00:12 194009

```

Mkdir,ls command

```

root@DESKTOP-D9SJ2TQ:~/dtl# ls -la
total 24
drwxr-xr-x 3 root root 4096 Jan 19 23:12 .
drwx----- 5 root root 4096 Jan 19 20:39 ..
drwxr-xr-x 3 root root 4096 Jan 19 23:12 Linux
-rw-r--r-- 1 root root 0 Jan 19 20:38 ass4
-rw-r--r-- 1 root root 1882 Jan 19 20:38 file.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:39 file1.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:42 file2.txt
root@DESKTOP-D9SJ2TQ:~/dtl# mkdir Hello
root@DESKTOP-D9SJ2TQ:~/dtl# ls
Hello Linux ass4 file.txt file1.txt file2.txt
root@DESKTOP-D9SJ2TQ:~/dtl# ls -d
.
root@DESKTOP-D9SJ2TQ:~/dtl# ld -f
ld: unrecognized option '-f'
ld: use the --help option for usage information
root@DESKTOP-D9SJ2TQ:~/dtl# ls -la
total 28
drwxr-xr-x 4 root root 4096 Jan 19 23:13 .
drwx----- 5 root root 4096 Jan 19 20:39 ..
drwxr-xr-x 2 root root 4096 Jan 19 23:13 Hello
drwxr-xr-x 3 root root 4096 Jan 19 23:12 Linux
-rw-r--r-- 1 root root 0 Jan 19 20:38 ass4
-rw-r--r-- 1 root root 1882 Jan 19 20:38 file.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:39 file1.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:42 file2.txt
root@DESKTOP-D9SJ2TQ:~/dtl# echo "Aishwarya Prakash Koli"
Aishwarya Prakash Koli
root@DESKTOP-D9SJ2TQ:~/dtl# touch mytext.txt
root@DESKTOP-D9SJ2TQ:~/dtl# ls -la
total 28
drwxr-xr-x 4 root root 4096 Jan 19 23:15 .
drwx----- 5 root root 4096 Jan 19 20:39 ..
drwxr-xr-x 2 root root 4096 Jan 19 23:13 Hello
drwxr-xr-x 3 root root 4096 Jan 19 23:12 Linux
-rw-r--r-- 1 root root 0 Jan 19 20:38 ass4
-rw-r--r-- 1 root root 1882 Jan 19 20:38 file.txt

```

```

root@DESKTOP-D9SJ2TQ:~/dtl# ls -la
total 28
drwxr-xr-x 4 root root 4096 Jan 19 23:15 .
drwx----- 5 root root 4096 Jan 19 20:39 ..
drwxr-xr-x 2 root root 4096 Jan 19 23:13 Hello
drwxr-xr-x 3 root root 4096 Jan 19 23:12 Linux
-rw-r--r-- 1 root root    0 Jan 19 20:38 ass4
-rw-r--r-- 1 root root 1882 Jan 19 20:38 file.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:39 file1.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:42 file2.txt
-rw-r--r-- 1 root root    0 Jan 19 23:15 mytext.txt
root@DESKTOP-D9SJ2TQ:~/dtl# 194009
194009: command not found
root@DESKTOP-D9SJ2TQ:~/dtl# nano mytext1.txt
root@DESKTOP-D9SJ2TQ:~/dtl# cat mytext1.txt
cat: mytext1.txt: No such file or directory
root@DESKTOP-D9SJ2TQ:~/dtl# nano mytext1.txt
root@DESKTOP-D9SJ2TQ:~/dtl# cat mytext1.txt
hello,name _Aishwarya Koli
MIS_112103006

```

Echo command,touch command

No VM guests are running outdated hypervisor (qemu) binaries on this host.

```

root@DESKTOP-D9SJ2TQ:~/dtl# batcat mytext1.txt

```

	File: mytext1.txt
1	hello,name _Aishwarya Koli
2	MIS_112103006
3	
4	appending

```

root@DESKTOP-D9SJ2TQ:~/dtl# mkdir forDeleting
root@DESKTOP-D9SJ2TQ:~/dtl# ls -la
total 44
drwxr-xr-x 5 root root 4096 Jan 19 23:57 .
drwx----- 6 root root 4096 Jan 19 23:55 ..
-rw-r--r-- 1 root root   26 Jan 19 23:50 1.txt
drwxr-xr-x 2 root root 4096 Jan 19 23:13 Hello
drwxr-xr-x 3 root root 4096 Jan 19 23:12 Linux
-rw-r--r-- 1 root root    0 Jan 19 20:38 ass4
-rw-r--r-- 1 root root 1882 Jan 19 20:38 file.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:39 file1.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:42 file2.txt
drwxr-xr-x 2 root root 4096 Jan 19 23:57 forDeleting
-rw-r--r-- 1 root root   59 Jan 19 23:22 myte
-rw-r--r-- 1 root root    0 Jan 19 23:15 mytext.txt
-rw-r--r-- 1 root root   53 Jan 19 23:52 mytext1.txt
root@DESKTOP-D9SJ2TQ:~/dtl# touch 1.txt
root@DESKTOP-D9SJ2TQ:~/dtl# touchMy.txt
touchMy.txt: command not found
root@DESKTOP-D9SJ2TQ:~/dtl# touch my.txt
root@DESKTOP-D9SJ2TQ:~/dtl# ls -la
total 44

```

Batcat command

```

root@DESKTOP-D9SJ2TQ:~/dtl# touchMy.txt
touchMy.txt: command not found
root@DESKTOP-D9SJ2TQ:~/dtl# touch my.txt
root@DESKTOP-D9SJ2TQ:~/dtl# ls -la
total 44
drwxr-xr-x 5 root root 4096 Jan 19 23:58 .
drwx----- 6 root root 4096 Jan 19 23:55 ..
-rw-r--r-- 1 root root 26 Jan 19 23:50 1.txt
-rw-r--r-- 1 root root 0 Jan 19 23:57 1.txt
drwxr-xr-x 2 root root 4096 Jan 19 23:13 Hello
drwxr-xr-x 3 root root 4096 Jan 19 23:12 Linux
-rw-r--r-- 1 root root 0 Jan 19 20:38 ass4
-rw-r--r-- 1 root root 1882 Jan 19 20:38 file.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:39 file1.txt
-rw-r--r-- 1 root root 1882 Jan 19 20:42 file2.txt
drwxr-xr-x 2 root root 4096 Jan 19 23:57 forDeleting
-rw-r--r-- 1 root root 0 Jan 19 23:58 my.txt
-rw-r--r-- 1 root root 59 Jan 19 23:22 myte
-rw-r--r-- 1 root root 0 Jan 19 23:15 mytext.txt
-rw-r--r-- 1 root root 53 Jan 19 23:52 mytext1.txt
root@DESKTOP-D9SJ2TQ:~/dtl# ls
1.txt 1.txt Hello Linux ass4 file.txt file1.txt file2.txt forDeleting my.txt myte mytext.txt mytext1.txt
root@DESKTOP-D9SJ2TQ:~/dtl# rm *.txt
root@DESKTOP-D9SJ2TQ:~/dtl# ls
1.txt Hello Linux ass4 forDeleting myte
root@DESKTOP-D9SJ2TQ:~/dtl# echo Aishwarya Koli
Aishwarya Koli
root@DESKTOP-D9SJ2TQ:~/dtl# echo -e "Aishwarya Koli"
Aishwarya Koli
root@DESKTOP-D9SJ2TQ:~/dtl# ls
1.txt Hello Linux ass4 forDeleting myte

```

For deleting

```

root@DESKTOP-D9SJ2TQ:~/dtl/Linux/194009#
root@DESKTOP-D9SJ2TQ:~/dtl/Linux/194009#
root@DESKTOP-D9SJ2TQ:~/dtl/Linux/194009#
root@DESKTOP-D9SJ2TQ:~/dtl/Linux/194009#
root@DESKTOP-D9SJ2TQ:~/dtl/Linux/194009#
root@DESKTOP-D9SJ2TQ:~/dtl/Linux/194009#
root@DESKTOP-D9SJ2TQ:~/dtl/Linux/194009#
root@DESKTOP-D9SJ2TQ:~/dtl/Linux/194009# clear

```

Clear command

```

→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:29
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23
-rwxrwxrwx 1 samtech2543 samtech2543 81 Mar 25 14:29 mytext1.txt
→ 194009 clear

```

```

Linux/194009
→ 194009 |

```

```

→ 194009 cat --help
Usage: cat [OPTION]... [FILE]...
Concatenate FILE(s) to standard output.

With no FILE, or when FILE is -, read standard input.

-A, --show-all           equivalent to -vET
-b, --number-nonblank     number nonempty output lines, overrides -n
-e                        equivalent to -vE
-E, --show-ends           display $ at end of each line
-n, --number              number all output lines
-s, --squeeze-blank       suppress repeated empty output lines
-t                        equivalent to -vT
-T, --show-tabs           display TAB characters as ^I
-u                        (ignored)
-v, --show-nonprinting    use ^ and M- notation, except for LFD and TAB
--help                   display this help and exit
--version                 output version information and exit

Examples:
cat f - g  Output f's contents, then standard input, then g's contents.
cat        Copy standard input to standard output.

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Report cat translation bugs to <https://translationproject.org/team/>
Full documentation at: <https://www.gnu.org/software/coreutils/cat>
or available locally via: info '(coreutils) cat invocation'
→ 194009 |

```

Cat command

```

→ 194009 cat > 1.txt
My name is 1.txt!!
^Z
[6] + 684 suspended cat > 1.txt
→ 194009 cat > My.txt
Hello Guys, my name is My.txt!!!!

^Z
[7] + 687 suspended cat > My.txt
→ 194009 cat 1.txt
My name is 1.txt!!
→ 194009 cat My.txt
Hello Guys, my name is My.txt!!!!

→ 194009 |

```

Addind text

```
→ 194009 cat > mytext1.txt
Hello!
Basic Cat Command is working!
^Z
[1] + 211 suspended cat > mytext1.txt
→ 194009 cat mytext1.txt
Hello!
Basic Cat Command is working!
→ 194009 |
```

```
→ 194009 cat >> mytext1.txt
Appending again!
^Z
[2] + 220 suspended cat >> mytext1.txt
→ 194009 cat mytext1.txt
Hello!
Basic Cat Command is working!
Appending again!
→ 194009 |
```

```
→ 194009 mkdir forDeleting
→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:38 .
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 ..
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:38 forDeleting
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
→ 194009 rmdir forDeleting
→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:38 .
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 ..
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
→ 194009 |
```

```

→ 194009 touch 1.txt
→ 194009 touch My.txt
→ 194009 touch my.txt
→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:40 .
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 ..
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 1.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 My.txt
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
→ 194009 |

```

```

→ 194009 ls
1.txt  My.txt  data.csv  data2.csv  for_vi.txt  mytext1.txt  toCopy.txt  vi.docx  vi_demo.txt
→ 194009 rm *.txt
→ 194009 ls
data.csv  data2.csv  vi.docx
→ 194009 |

```

```

→ Linux more Sarvesh.txt
Hello, My name is Sarvesh Anand Mankar!
I'm studying in DCP [T.Y.] from CWIT, Pune.
My Roll No is 194009.
I scored 98% in 5th Semester.
Thank You!
→ Linux |

```

```

→ 194009 ls [0-9]*
1.txt
→ 194009 |

```

Regex command

```
→ 194009 ls [a-z]*
mytext1.txt
→ 194009 |
```

```
→ 194009 ls [A-Z]*
My.txt
→ 194009 |
```

```
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:40 L
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 L
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 1.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 My.txt
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
→ 194009 touch data.csv
→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:42 L
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 L
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 1.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 My.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:42 data.csv
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
→ 194009 touch data2.csv
→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:43 L
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 L
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 1.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 My.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:42 data.csv
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:43 data2.csv
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
→ 194009 |
```



```

→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:43 L
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 L
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 1.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 My.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:42 data.csv
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:43 data2.csv
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
→ 194009 ls ???.txt
My.txt
→ 194009 |

```

```

→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:43 L
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 L
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 1.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 My.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:42 data.csv
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:43 data2.csv
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
→ 194009 ls *.csv
data.csv data2.csv
→ 194009 ls *.txt
1.txt My.txt mytext1.txt
→ 194009 |

```

```

→ Linux bc
bc 1.07.1
Copyright 1991-1994, 1997, 1998, 2000, 2004, 2006, 2008, 2012-2017 Free Software Foundation, Inc.
This is free software with ABSOLUTELY NO WARRANTY.
For details type 'warranty'.
3+89
92
567/9
63
→ Linux |

```

Bc command

```

MKDIR(1)                                User Commands

NAME
    mkdir - make directories

SYNOPSIS
    mkdir [OPTION]... DIRECTORY...

DESCRIPTION
    Create the DIRECTORY(ies), if they do not already exist.

    Mandatory arguments to long options are mandatory for short options too.

    -m, --mode=MODE
        set file mode (as in chmod), not a-rwx - umask

    -p, --parents
        no error if existing, make parent directories as needed

    -v, --verbose
        print a message for each created directory

    -Z      set SELinux security context of each created directory to the default type

    --context[=CTX]
        like -Z, or if CTX is specified then set the SELinux or SMACK security context to CTX

    --help display this help and exit

    --version
        output version information and exit

AUTHOR

```

Man command

```

→ Linux calendar
Apr 01 Yourdon, Inc. founded, 1974 (It figures.)
Apr 01 People of superb intelligence, savoir-faire, etc. born this day.
Apr 01 Youth Day in Benin
Apr 01 Sergej Rachmaninow is born in Oneg, Russia, 1873
Apr 01 Ben Collins became Debian Project Leader, 2001
Apr 01 Primera misa en territorio argentino, 1520
Apr 01 World fair in Bruxelles : 45,000,000 of visitors, 1958
Apr 01 1 april
Apr 01 Matthew Jacob <mjacob@FreeBSD.org> born in San Francisco, California, United States, 1958
Apr 01 Alexander V. Chernikov <mellifaro@FreeBSD.org> born in Moscow, Russian Federation, 1984
Apr 01 Bill Fenner <fenner@FreeBSD.org> born in Bellefonte, Pennsylvania, United States, 1971
Apr 01 Peter Edwards <peadar@FreeBSD.org> born in Dublin, Ireland, 1973
Apr 01 Votre fichier calendar est corrompu.
Apr 01 N'oubliez pas les Hugues !
Apr 01 Avril entrant,
      Coucou chantant,
      Sonnaillles tintant.
Apr 01 Organisierter Boykott jüdischer Geschäfte, 1933
Apr 01 Sergej Rachmaninow in Oneg geboren, 1873
Apr 01 Hugo
Apr 01 День специалиста по ядерному обеспечению
Apr 01 День космических войск
Apr 01 Новогодние каникулы
Apr 01 День народного единства
Apr 01 День освобождения Москвы силами народного ополчения под руководством Кузьмы Минина и Дмитрия Пожарского от польских интервент
ов (1612 год)
Apr 01 Введение во храм Пресвятой Богородицы
Apr 01 Civil Service Day ( วันข้าราชการพลเรือน ) in Thailand
Apr 01 April Fool's Day

```

calender command

```

→ 194009 date
Fri Mar 25 14:47:38 IST 2022
→ 194009 |

```

```
→ Linux date +%d
01
→ Linux date +%m
04
→ Linux date +%Y
2022
→ Linux |
```

```
→ 194009 touch toCopy.txt
→ 194009 ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:48 .
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 ..
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 1.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:40 My.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:42 data.csv
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:43 data2.csv
-rwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:48 toCopy.txt
→ 194009 cp toCopy.txt ..
→ 194009 cd ..
→ Linux ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:48 .
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23 ..
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:48 194009
-rwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:48 toCopy.txt
→ Linux |
```

```
🔥 ../Linux/194009
→ 194009 wc mytext1.txt
4 8 55 mytext1.txt
→ 194009 |
```

```
🔥 ..ester-6/Linux
→ Linux vi 194009.txt
→ Linux wc 194009.txt
5 28 147 194009.txt
→ Linux wc -l 194009.txt
5 194009.txt
→ Linux wc -c 194009.txt
147 194009.txt
→ Linux wc -w 194009.txt
28 194009.txt
→ Linux |
```

```
→ 194009 pwd  
/mnt/d/Best_Projects/Semester-6/Linux/194009  
→ 194009 |
```

Password command

```
→ Linux passwd  
Changing password for samtech2543.  
Current password:  
New password:  
Retype new password:  
passwd: password updated successfully  
→ Linux sudo su  
[sudo] password for samtech2543:  
root@DESKTOP-7K7PU8Q:/mnt/d/Best_Projects/Semester-6/Linux#
```

```
555 ls *.txt  
556 clear  
557 ls -la  
558 ls [9]*  
559 clear  
560 ls -la  
561 ls [z]*  
562 cls  
563 clear  
564 ls -la  
565 cat --help  
566 clear  
567 cat --help  
568 clear  
569 date  
570 clear  
571 touch toCopy.txt  
572 ls -la  
573 cp toCopy.txt ..  
574 cd ..  
575 ls -la  
576 cd 194009  
577 clear  
578 wc --help  
579 clear  
580 wc mytext1.txt  
581 clear  
582 pwd --help  
583 pwd  
584 clear  
585 pwd  
586 history  
587 clear  
→ 194009 |
```

```
→ 194009 cmp 1.txt My.txt
1.txt My.txt differ: byte 1, line 1
→ 194009 |
```

```
🐧 ../Linux/194009 × + ▾
→ 194009 zsh --version
zsh 5.8 (x86_64-ubuntu-linux-gnu)
→ 194009 |
```

```
🐧 ../Linux/194009 × + ▾
→ 194009 exit
zsh: you have suspended jobs.
→ 194009 |
```

Cmp command

```
🐧 ../Linux/194009 × + ▾ - □ ×
→ Linux ls
'Linux Practical-1.pdf' 'Linux Practical-2.docx' Sarvesh.txt toCopy.txt vi.docx
'Linux Practical-1.pdf' Linux.docx typescript '~$nux Practical-2.docx'
→ Linux cd 194009
→ 194009 ls
data.csv data2.csv for_vi.txt
→ 194009 cd ..
→ Linux cp toCopy.txt 194009
→ Linux cd 194009
→ 194009 ls
data.csv data2.csv for_vi.txt toCopy.txt
→ 194009 |
```

```

→ Semester-6 mkdir 194009
→ Semester-6 ls -la
total 3396
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:22
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 24 00:17
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:22
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 15 01:43
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:18
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 11 01:30
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 23 01:44
-rwxrwxrwx 1 samtech2543 samtech2543 3477413 Sep 24 2020 'Syllabus .pdf'
→ Semester-6

```

Mkdir command

```

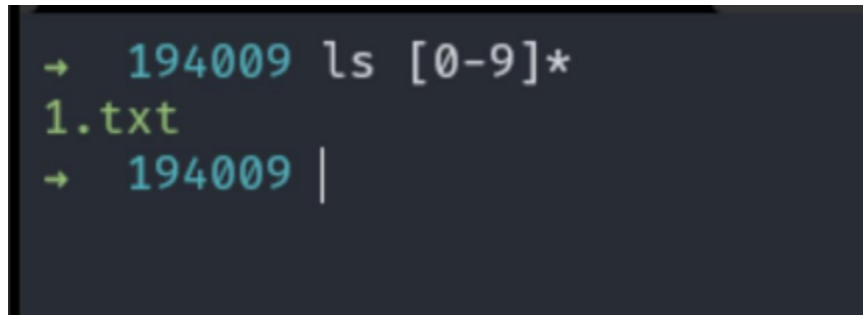
→ Semester-6 mv 194009 Linux
→ Semester-6 ls -la
total 3396
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 24 00:17
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 15 01:43
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 11 01:30
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 23 01:44
-rwxrwxrwx 1 samtech2543 samtech2543 3477413 Sep 24 2020 'Syllabus .pdf'
→ Semester-6 cd Linux
→ Linux ls -la
total 0
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:23
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:22
→ Linux |

```

```

./Linux/194009
194009 mkdir Hello
194009 ls
txt My.txt data.csv data2.csv for_vi.txt mytext1.txt toCopy.txt vi.docx vi_demo.txt
194009 ls -d
194009 ls -f
.demo_vi.txt.swo .vi_demo.txt.swo 1.txt data2.csv Hello mytext1.txt vi.docx
.demo_vi.txt.swp .vi_demo.txt.swp data.csv for_vi.txt My.txt toCopy.txt vi_demo.txt
194009 ls -la
total 688
drwxrwxrwx 1 samtech2543 samtech2543 512 Apr 1 14:13
drwxrwxrwx 1 samtech2543 samtech2543 512 Mar 25 14:48
drwxrwxrwx 1 samtech2543 samtech2543 4096 Mar 29 14:18 .demo_vi.txt.swo
drwxrwxrwx 1 samtech2543 samtech2543 12288 Mar 29 14:17 .demo_vi.txt.swp
drwxrwxrwx 1 samtech2543 samtech2543 12288 Mar 29 15:23 .vi_demo.txt.swo
drwxrwxrwx 1 samtech2543 samtech2543 12288 Mar 29 15:10 .vi_demo.txt.swp
drwxrwxrwx 1 samtech2543 samtech2543 19 Mar 25 15:09 1.txt
drwxrwxrwx 1 samtech2543 samtech2543 512 Apr 1 14:13
drwxrwxrwx 1 samtech2543 samtech2543 183 Mar 29 14:55 My.txt
drwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:42 data.csv
drwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:43 data2.csv
drwxrwxrwx 1 samtech2543 samtech2543 1030 Mar 29 14:50 for_vi.txt
drwxrwxrwx 1 samtech2543 samtech2543 55 Mar 25 14:35 mytext1.txt
drwxrwxrwx 1 samtech2543 samtech2543 0 Mar 25 14:48 toCopy.txt
drwxrwxrwx 1 samtech2543 samtech2543 654325 Mar 29 15:22 vi.docx
drwxrwxrwx 1 samtech2543 samtech2543 1032 Mar 29 15:21 vi_demo.txt
194009 |

```



WILDCARD COMMAND

```
The Visual Editor is the primary editor used on Unix was the line editor. User was able to see/edit only one line of text at a time.
The Vi editor is not a text formatter. We cannot set margins. We also cannot center the headings.

There are three modes of Vi Editor:
  1.)Command Mode
  2.)Insert Mode
  3.)Line Mode

Command Mode:
By default we are in the Command mode, in this most letters, or short sequences of letters that you type will be interpreted as commands, without explicitly pressing Enter. To navigate to Command Mode, press "Esc" Key.

Insert Mode:
To navigate to Insert Mode, press "i" or "a" key.
And to go back to Command Mode press "Esc".

Line Mode:
We use Line Mode from Command Mod, type a ":" (colon). The cursor moves to the bottom of screen, by a colon prompt.
Type a line mode command and then press "Enter".

Commands in vi:-
1.) To open file in vi.
   vi filename
2.) Saving file in vi.
   :wq (In Command Mode)
3.) Quit without changes:
   :q!
4,) Writing the content into another file.
   :w!

-- INSERT --                                     34,1      Bot
```

Creating a file in vi editor

```
The Visual Editor is the primary editor used on Unix was the line editor. User was able to see/edit only one line of text at a time.
The Vi editor is not a text formatter. We cannot set margins. We also cannot center the headings.

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And to go back to Command Mode press "Esc".

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Type a line mode command and then press "Enter".

Commands in vi:-
1.) To open file in vi.
   vi filename
2.) Saving file in vi.
   :wq (In Command Mode)
3.) Quit without changes:
   :q!
4,) Writing the content into another file.
   :w!

:wq|
```



```

The Visual Editor is the primary editor used on Unix was the line editor. User was able to see/edit only one line of text at a time.
- 194009 vi vi_demo.txt
- 194009 batcat vi_demo.txt
File: vi_demo.txt
1 Vi Editor!
2
3 The Visual Editor is the primary editor used on Unix was the line editor. User was able to see/edit only one line of text at
4 a time.
5 The Vi editor is not a text formatter. We cannot set margins. We also cannot center the headings.
6
7 There are three modes of Vi Editor:
8 1.)Command Mode
9 2.)Insert Mode
10 3.)Line Mode
11
12 Command Mode:
13 By default we are in the Command mode, in this most letters, or short sequences of letters that you type will be interpreted
14 as commands, without explicitly pressing Enter. To navigate to Command Mode, press "Esc" Key.
15
16 Insert Mode:
17 To navigate to Insert Mode, press "i" or "a" key.
18 And to go back to Command Mode press "Esc".
19
20 Line Mode:
21 We use Line Mode from Command Mod, type a ":" (colon). The cursor moves to the bottom of screen, by a colon prompt.
22 Type a line mode command and then press "Enter".
23
24 Commands in vi:-
25 1.) To open file in vi.
26 vi filename

```

```

The Visual Editor is the primary editor used on Unix was the line editor. User was able to see/edit only one line of text at a time.
The Vi editor is not a text formatter. We cannot set margins. We also cannot center the headings.

There are three modes of Vi Editor:
1.)Command Mode
2.)Insert Mode
3.)Line Mode

Command Mode:
By default we are in the Command mode, in this most letters, or short sequences of letters that you type will be interpreted as comma
nds, without explicitly pressing Enter. To navigate to Command Mode, press "Esc" Key.

Insert Mode:
To navigate to Insert Mode, press "i" or "a" key.
And to go back to Command Mode press "Esc".

Line Mode:
We use Line Mode from Command Mod, type a ":" (colon). The cursor moves to the bottom of screen, by a colon prompt.
Type a line mode command and then press "Enter".

Commands in vi:-
1.) To open file in vi.
vi filename
2.) Saving file in vi.
:wq (In Command Mode)
3.) Quit without changes:
:q!
4.) Writing the content into another file.
:w!

:w! for_vi.txt

```

```

Vi Editor!

The Visual Editor is the primary editor used on Unix was the line editor. User was able to see/edit only one line of text at
a time.
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To navigate to Insert Mode, press "i" or "a" key.
And to go back to Command Mode press "Esc".

Line Mode:
We use Line Mode from Command Mod, type a ":" (colon). The cursor moves to the bottom of screen, by a colon prompt.
Type a line mode command and then press "Enter".

Commands in vi:-
1.) To open file in vi.
vi filename
2.) Saving file in vi.
:wq (In Command Mode)

```

:w! command to write the above content to particular file


```
+ 194009 batcat for_vi.txt
File: for_vi.txt
1 The vi Editor is the primay editor used on Unix was the line editor, User was able to view/edit onl
y one line at a time. The vi Editor is no a text formatter. We cannot enter the margins and also ca
nnot enter the text as center heading.
2
3 There are three modes in vi editor:
4 1.) Command Mode
5 2.) Insert Mode
6 3.) Line Mode
7
8 Command Mode:
9 By default mode were we can execute the commands to manipulate through the text.
10
11 Insert Mode:
12 In this mode we can enter the text to the file.
13
14 Line Mode:
15 We use Line Mode from Command Mode, type colon (:). The Cursor moves to the bottom of the prompt. T
ype line mode command and press "Enter".
+ 194009 |
```

:q! – Quit file without sa

```
The Visual Editor is the primary editor used on Unix was the line editor. User was able to see/edit only one line of text at a time.
The Vi editor is not a text formatter. We cannot set margins. We also cannot center the headings.

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To navigate to Insert Mode, press "i" or "a" key.
And to go back to Command Mode press "Esc".

Line Mode:
We use Line Mode from Command Mod, type a ":" (colon). The cursor moves to the bottom of screen, by a colon prompt.
Type a line mode command and then press "Enter".

Commands in vi:-
1.) To open file in vi.
vi filename
2.) Saving file in vi.
:wq (In Command Mode)
3.) Quit without changes:
:q!
4.) Writing the content into another file.
```

Search text in vi editor

```
The vi Editor is the primay editor used on Unix was the line editor, User was able to view/edit
only one line at a time. The vi Editor is no a text formatter. We cannot enter the margins and a
lso cannot enter the text as center heading.

There are three modes in vi editor:
1.) Command Mode
2.) Insert Mode
3.) Line Mode

oCmmand Mode:
By default mode were we can execute the commands to manipulate through the text.
```

Transposing two characters

```

The vi Editor is the primay editor used on Unix was the line editor, User was able to view/edit only one line at a time. The vi Editor is no a text formatter. We cannot enter the margins and also cannot enter the text as center heading.

There are three modes in vi editor:
    1.) Command Mode
    2.) Insert Mode
    3.) Line Mode

oCommand Mode:
By default mode were we can execute the commands to manipulate through the text.

Insert Mode:
In this mode we can enter the text to the file.

|Insert Mode:
In this mode we can enter the text to the file.

Line Mode:
We use Line Mode from Command Mode, type colon (:). The Cursor moves to the bottom of the prompt. Type line mode command and press "Enter".
~
~
~
~
~
3 more lines
14,1 All

```

yy Command : Copy to General Buffer “3yy” and then “p

```

The vi Editor is the primay editor used on Unix was the line editor, User was able to view/edit only one line at a time. The vi Editor is no a text formatter. We cannot enter the margins and also cannot enter the text as center heading.

There are three modes in vi editor:
    1.) Command Mode
    2.) Insert Mode
    3.) Line Mode

    1.) Command Mode
    2.) Insert Mode
oCommand Mode:
By default mode were we can execute the commands to manipulate through the text.

Insert Mode:
In this mode we can enter the text to the file.

Line Mode:
We use Line Mode from Command Mode, type colon (:). The Cursor moves to the bottom of the prompt. Type line mode command and press "Enter".

```

“bp to print text which is in buffered n

All

All

All

:set no showmode Command, does not show the mode of vi editor

```
The vi Editor is the primary editor used on Unix systems. It can view/edit only one line at a time. The vi Editor is not a text formatter. We cannot enter margins and also cannot enter text as center heading.
```

```
There are three modes in vi editor:
```

```
    1.) Command Mode
```

```
    2.) Insert Mode
```

```
    3.) Line Mode
```

```
Command Mode:
```

```
By default mode where we can execute commands to manipulate through the text.
```

```
Insert Mode:
```

```
In this mode we can enter the text to the file.
```

```
Line Mode:
```

```
We use Line Mode from Command Mode, type colon (:). The cursor moves to the bottom of the prompt. Type line mode command and press "Enter".
```

```
%set ic                                     3,12      All
```

Set ic – for ignoring case

```
The vi Editor is the primary editor used on Unix was the line editor, User was able to view/edit only one line at a time. The vi Editor is not a text formatter. We cannot enter the margins and also cannot enter the text as center heading.
```

```
There are three modes in vi editor:
```

```
1.) Command Mode
2.) Insert Mode
3.) Line Mode
```

```
Command Mode:
By default mode where we can execute the commands to manipulate through the text.
```

```
Insert Mode:
In this mode we can enter the text to the file.
```

```
Line Mode:
We use Line Mode from Command Mode, type colon (:). The Cursor moves to the bottom of the prompt. Type line mode command and press "Enter".
```

```
:set noic – For setting mode as Case sensitive
```

```
File: greater.sh

1  echo -e "Enter First Number: \c"
2  read num1
3
4  echo -e "Enter Second Number: \c"
5  read num2
6
7  if [ $num1 -gt $num2 ]
8  then
9      echo "Greater Number is:" $num1
10 else
11     echo "Greater Number is:" $num2
12 fi

[sarvesh@fedora 194009]$ bash greater.sh
Enter First Number: 67
Enter Second Number: 88
Greater Number is: 88
[sarvesh@fedora 194009]$
```

Print the greatest number

```
File: table.sh

1 echo -e "Enter a Number: \c"
2 read num
3
4 for i in `seq 1 10`
5 do
6     let a=$i*$num
7     echo $num "x" $i "=" $a
8 done

[sarvesh@fedora 194009]$ bash table.sh
Enter a Number: 4
4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
4 x 6 = 24
4 x 7 = 28
4 x 8 = 32
4 x 9 = 36
4 x 10 = 40
[sarvesh@fedora 194009]$
```

Number tables

```
File: prime.sh

1  echo -e "Enter a Number: \c"
2  read number
3
4  i=2
5  flag=0
6
7  while test $i -le `expr $number / 2`
8  do
9      if test `expr $number % $i` -eq 0
10     then
11         flag=1
12     fi
13
14     i=`expr $i + 1`
15 done
16 if test $flag -eq 1
17 then
18     echo "The number is Composite"
19 else
20     echo "The number is Prime"
21 fi

[sarvesh@fedora 194009]$ bash prime.sh
Enter a Number: 42
The number is Composite
[sarvesh@fedora 194009]$ bash prime.sh
Enter a Number: 53
The number is Prime
[sarvesh@fedora 194009]$
```

Number is prime or composite

```
File: factorial.sh

1  echo -e "Enter a Number: \c"
2  read num
3
4  echo -e "Factorial of number $num is: \c"
5
6  fact=1
7
8  while [ $num -gt 1 ]
9  do
10     fact=$((fact * num))
11     num=$((num - 1))
12 done
13
14 echo $fact

[sarvesh@fedora 194009]$ bash factorial.sh
Enter a Number: 6
Factorial of number 6 is: 720
[sarvesh@fedora 194009]$ bash factorial.sh
Enter a Number: 4
Factorial of number 4 is: 24
[sarvesh@fedora 194009]$ bash factorial.sh
Enter a Number: 8
Factorial of number 8 is: 40320
[sarvesh@fedora 194009]$
```

Factorial of anumber


```
File: fibonacci.sh

1  echo -e "Enter number of items required in Fiboancci Series: \c"
2  read num
3
4  n1=0
5  n2=1
6  n3=0
7
8  for i in `seq 1 $num`
9  do
10     n3=$((n1+n2))
11     echo $n3
12     n1=$((n2))
13     n2=$((n3))
14 done
15

[sarvesh@fedora 194009]$ bash fibonacci.sh
Enter number of items required in Fiboancci Series: 5
1
2
3
5
8
[sarvesh@fedora 194009]$ bash fibonacci.sh
Enter number of items required in Fiboancci Series: 9
1
2
3
5
8
13
21
34
55
```

Fibonacci series

```
File: menu.sh

echo -e "Enter a choice:
  1 : List File and Directory names
  2 : List the all Users
  3 : List the current User Name
  4 : Display OS Details
  5 : Display Date
  6 : Display Calendar"

read choice

echo -e "\n"
case "$choice" in
  1) ls ;;
  2) who ;;
  3) whoami ;;
  4) uname -a ;;
  5) date ;;
  6) cal ;;
esac
```

Palindrome string

```
Enter a choice:
  1 : List File and Directory names
  2 : List the Users
  3 : List the current User Name
  4 : Display OS Details
  5 : Display Date
  6 : Display Calendar
1

factorial.sh  file1.txt  for_loop.sh  menu.sh  newfile.txt  prime.sh  table.sh
fibonacci.sh  file.tar  greater.sh  myfile.txt  palindrome.sh  script.sh
```

Menu driven by case condition

Enter a choice:

- 1 : List File and Directory names
- 2 : List the all Users
- 3 : List the current User Name
- 4 : Display OS Details
- 5 : Display Date
- 6 : Display Calendar

6

May 2022

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

```
File: armstrong.sh

1  echo -e "Enter a Number: \c"
2  read num
3
4  revr=""
5
6  l=${#num}
7  s=0
8
9  i=0
10 until [ $i -ge $((l+1)) ]
11 do
12     r=${num:i:1}
13     a=$((r*r*r))
14     s=$((s+a))
15     i=$((i+1))
16 done
17
18 if [ $num = $s ]
19 then
20     echo "Armstrong Number!"
21 else
22     echo "Not an Armstrong Number!"
23 fi

[sarvesh@fedora 194009]$ bash armstrong.sh
Enter a Number: 153
Armstrong Number!
[sarvesh@fedora 194009]$ bash armstrong.sh
Enter a Number: 124
```

Armstrong number

```
File: mylist.lst

1  10 | Sarvesh Mankar | DCP | 98
2  20 | Anand Mankar  | DCP | 96
3  30 | Om Mankar     | DEE | 95
4  40 | Shyam Saksena  | DME | 94
5  50 | J.B. Saksena    | DCE | 96

[sarvesh@fedora 194009]$ awk -F "|" '/Sa[kx]s*ena/' mylist.lst
40 | Shyam Saksena | DME | 94
50 | J.B. Saksena  | DCE | 96
```

Simple awk problems

```

File: mylist.lst
1 10 | Sarvesh Mankar | DCP | 98
2 20 | Anand Mankar | DCP | 96
3 30 | Om Mankar | DEE | 95
4 40 | Shyam Saksena | DME | 94
5 50 | J.B. Saksena | DCE | 96

[sarvesh@fedora 194009]$ awk -F "|" '/DCP/' mylist.lst
10 | Sarvesh Mankar | DCP | 98
20 | Anand Mankar | DCP | 96

```

```

File: mylist.lst
1 10 | Sarvesh Mankar | DCP | 98
2 20 | Anand Mankar | DCP | 96
3 30 | Om Mankar | DEE | 95
4 40 | Shyam Saksena | DME | 94
5 50 | J.B. Saksena | DCE | 96

[sarvesh@fedora 194009]$ awk -F "|" '{print $1 $2 $3 $4}' mylist.lst
10 Sarvesh Mankar DCP 98
20 Anand Mankar DCP 96
30 Om Mankar DEE 95
40 Shyam Saksena DME 94
50 J.B. Saksena DCE 96

[sarvesh@fedora 194009]$ awk -F "|" '{printf "%5d %-20s %5d %5d\n", $1, $2, $3, $4}' mylist.lst
10 Sarvesh Mankar 0 98
20 Anand Mankar 0 96
30 Om Mankar 0 95
40 Shyam Saksena 0 94
50 J.B. Saksena 0 96

```

```

File: add.awk
1 {
2     n1=10
3     n2=20
4
5     print n1 "+" n2 "=" n1+n2
6     exit
7 }

[sarvesh@fedora 194009]$ awk -f add.awk
10+20=30

```

```
File: greater.awk

1  {
2      n1=10
3      n2=10
4
5      print "Number 1 = " n1
6      print "Number 2 = " n2
7
8      if (n1>n2){
9          print "n1>n2"
10     }
11     else if (n1<n2){
12         print "n1<n2"
13     }
14     else{
15         print "n1=n2"
16     }
17     exit 0
18 }
19

[sarvesh@fedora 194009]$ awk -f greater.awk

Number 1 = 10
Number 2 = 10
n1=n2
```

```
File: mobile.awk

1  BEGIN {
2      print "Enter a 10 Digit Mobile Number: "
3      getline num > "-"
4  }
5  {
6      print num
7      if (num ~ /[0-9]/ && length(num)==10){
8          print "Valid!"
9      }
10     else{
11         print "Invalid!"
12     }
13     exit 0
14 }
```

```
[sarvesh@fedora 194009]$ ls -l
total 0
-rw-rw-r--. 1 sarvesh sarvesh 0 Apr 28 20:53 myfile.txt
[sarvesh@fedora 194009]$ chmod u+x myfile.txt
[sarvesh@fedora 194009]$ ls -l
total 0
-rwxrw-r--. 1 sarvesh sarvesh 0 Apr 28 20:53 myfile.txt
[sarvesh@fedora 194009]$
```

Chmod command

```
[sarvesh@fedora 194009]$ ls -l
total 0
-rwxrw-r--. 1 sarvesh sarvesh 0 Apr 28 20:35 myfile.txt
[sarvesh@fedora 194009]$ chmod g-w myfile.txt
[sarvesh@fedora 194009]$ ls -l
total 0
-rwxr--r--. 1 sarvesh sarvesh 0 Apr 28 20:35 myfile.txt
[sarvesh@fedora 194009]$
```

```
[sarvesh@fedora 194009]$ ls -l
total 0
-rwxr-xr-x. 1 sarvesh sarvesh 0 Apr 28 20:35 myfile.txt
[sarvesh@fedora 194009]$ chmod 711 myfile.txt
[sarvesh@fedora 194009]$ ls -l
total 0
-rwx--x--x. 1 sarvesh sarvesh 0 Apr 28 20:35 myfile.txt
[sarvesh@fedora 194009]$
```

```
[root@fedora home]# ls
myUser1 sarvesh test
[root@fedora home]# useradd -u 1111 MyUser2
[root@fedora home]# ls
myUser1 MyUser2 sarvesh test
[root@fedora home]#
```

Create and manage a user

```
[root@fedora home]# usermod -e 2022-5-27 MyUser2
[root@fedora home]# id MyUser2
uid=1111(MyUser2) gid=1111(MyUser2) groups=1111(MyUser2)
[root@fedora home]#
```

Updating a user

```
[root@fedora sarvesh]# getent group
```

Adding a group

```
pipewire:x:989:
geoclue:x:988:
brlapi:x:987:
chrony:x:986:
saslauth:x:76:
radvd:x:75:
rpc:x:32:
libvirt:x:985:
openvpn:x:984:
nm-openvpn:x:983:
colord:x:982:
rpcuser:x:29:
abrt:x:173:
flatpak:x:981:
gdm:x:42:
gnome-initial-setup:x:980:
vboxsf:x:979:
sshd:x:74:
power:x:978:
tcpdump:x:72:
slocate:x:21:
sarvesh:x:1000:
myUser1:x:1001:
MyUser2:x:1111:
myGroup1:x:1112:
MyGroup:x:1113:
```

```
[sarvesh@fedora ~]$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
devtmpfs         4096         0      4096    0% /dev
tmpfs           1989008         0  1989008    0% /dev/shm
tmpfs           795604      1856   793748    1% /run
/dev/nvme0n1p2  51379200 4879072 46188608   10% /
tmpfs           1989008         56  1988952    1% /tmp
/dev/nvme0n1p2  51379200 4879072 46188608   10% /home
/dev/nvme0n1p1   996780  270620   657348   30% /boot
tmpfs           397800       120   397680    1% /run/user/1000
[sarvesh@fedora ~]$
```

Monitor disk usage

Df command

```
Filesystem      1K-blocks    Used Available Use% Mounted on
proc              0         0          0   - /proc
sysfs             0         0          0   - /sys
devtmpfs         4096         0        4096  0% /dev
securityfs        0         0          0   - /sys/kernel/security
tmpfs            1989008         0    1989008  0% /dev/shm
devpts            0         0          0   - /dev/pts
tmpfs            795604     1856    793748  1% /run
cgroup2           0         0          0   - /sys/fs/cgroup
pstore            0         0          0   - /sys/fs/pstore
bpf               0         0          0   - /sys/fs/bpf
/dev/nvme0n1p2  51379200 4879792  46187888 10% /
selinuxfs         0         0          0   - /sys/fs/selinux
systemd-1         0         0          0   - /proc/sys/fs/binfmt_misc
hugetlbfs         0         0          0   - /dev/hugepages
mqueue           0         0          0   - /dev/mqueue
debugfs           0         0          0   - /sys/kernel/debug
tracefs           0         0          0   - /sys/kernel/tracing
fusectl           0         0          0   - /sys/fs/fuse/connections
configfs          0         0          0   - /sys/kernel/config
vmware-vmblock    0         0          0   - /run/vmblock-fuse
tmpfs            1989008         56    1988952  1% /tmp
/dev/nvme0n1p2  51379200 4879792  46187888 10% /home
/dev/nvme0n1p1   996780    270620    657348 30% /boot
sunrpc            0         0          0   - /var/lib/nfs/rpc_pipefs
tmpfs            397800     120    397680  1% /run/user/1000
gvfsd-fuse        0         0          0   - /run/user/1000/gvfs
```

```
.
./folder1
./folder1/f1
./folder1/f2
./folder1/f3
./folder3
./folder2
./folder2/f4
./folder2/f5
[sarvesh@fedora Chap6]$ find folder1
folder1
folder1/f1
folder1/f2
folder1/f3
```

Find command

```
2+0 records in
2+0 records out
1024 bytes (1.0 kB, 1.0 KiB) copied, 0.000194319 s, 5.3 MB/s
```

Dd command

	File: Hello.c
1	<code>#include<stdio.h></code>
2	<code>int main(){</code>
3	<code>printf("Hello! My name is Sarvesh Anand Mankar!\n");</code>
4	<code>return 0;</code>
5	<code>}</code>

```
[root@fedora 194009]# ls -l a.out
-rwxr-xr-x. 1 root root 24936 May 24 00:53 a.out
[root@fedora 194009]# ./a.out
Hello! My name is Sarvesh Anand Mankar![root@fedora 194009]#
```

Gcc command

```
[root@fedora 194009]# gcc Hello.c -o Hello
[root@fedora 194009]# ls -l Hello
-rwxr-xr-x. 1 root root 24936 May 24 00:57 Hello
[root@fedora 194009]#
```

```
root@tryit-exotic:~# ls
In p11 p12 p13 p14 p15
root@tryit-exotic:~# cat > p11
Hello! in p11!
root@tryit-exotic:~# cat p11
Hello! in p11!
```

```
root@tryit-exotic:~# ls -la | cat > p22
root@tryit-exotic:~# cat p22
total 4
drwx----- 1 root root  54 Jan 13 00:50 .
drwxr-xr-x  1 root root 172 Jan 13 00:46 ..
drwxr-x---  1 root root   6 Jan 13 00:46 .config
-rw-r--r--  1 root root   0 Jan 13 00:48 In
-rw-r--r--  1 root root  15 Jan 13 00:49 p11
-rw-r--r--  1 root root   0 Jan 13 00:46 p12
-rw-r--r--  1 root root   0 Jan 13 00:46 p13
-rw-r--r--  1 root root   0 Jan 13 00:46 p14
-rw-r--r--  1 root root   0 Jan 13 00:46 p15
-rw-r--r--  1 root root   0 Jan 13 00:50 p22
```

Redirection command

```
root@tryit-exotic:~# ls -la | wc | cat > p2
root@tryit-exotic:~# cat p2
      12      101      491
root@tryit-exotic:~# ls | wc | cat >> p2
root@tryit-exotic:~# cat p2
      12      101      491
       8       8       30
root@tryit-exotic:~# █
```

```
root@tryit-exotic:~# ls
In  p11  p12  p13  p14  p15  p2  p22
root@tryit-exotic:~# wc -c < p11
15
root@tryit-exotic:~# cat p11
Hello! in p11!
```

```

root@tryit-exotic:~# cat p22
total 4
drwx----- 1 root root  54 Jan 13 00:50 .
drwxr-xr-x 1 root root 172 Jan 13 00:46 ..
drwxr-x--- 1 root root   6 Jan 13 00:46 .config
-rw-r--r-- 1 root root   0 Jan 13 00:48 In
-rw-r--r-- 1 root root  15 Jan 13 00:49 p11
-rw-r--r-- 1 root root   0 Jan 13 00:46 p12
-rw-r--r-- 1 root root   0 Jan 13 00:46 p13
-rw-r--r-- 1 root root   0 Jan 13 00:46 p14
-rw-r--r-- 1 root root   0 Jan 13 00:46 p15
-rw-r--r-- 1 root root   0 Jan 13 00:50 p22
root@tryit-exotic:~# grep -i "p22" p22
-rw-r--r-- 1 root root   0 Jan 13 00:50 p22

```

Grep command

```

root@tryit-exotic:~# cat p22
total 4
drwx----- 1 root root  54 Jan 13 00:50 .
drwxr-xr-x 1 root root 172 Jan 13 00:46 ..
drwxr-x--- 1 root root   6 Jan 13 00:46 .config
-rw-r--r-- 1 root root   0 Jan 13 00:48 In
-rw-r--r-- 1 root root  15 Jan 13 00:49 p11
-rw-r--r-- 1 root root   0 Jan 13 00:46 p12
-rw-r--r-- 1 root root   0 Jan 13 00:46 p13
-rw-r--r-- 1 root root   0 Jan 13 00:46 p14
-rw-r--r-- 1 root root   0 Jan 13 00:46 p15
-rw-r--r-- 1 root root   0 Jan 13 00:50 p22
root@tryit-exotic:~# grep -c "00:46" p22
6

```

```
root@tryit-exotic:~# grep -i "r00T" p22
drwx----- 1 root root  54 Jan 13 00:50 .
drwxr-xr-x 1 root root 172 Jan 13 00:46 ..
drwxr-x--- 1 root root   6 Jan 13 00:46 .config
-rw-r--r-- 1 root root   0 Jan 13 00:48 In
-rw-r--r-- 1 root root  15 Jan 13 00:49 p11
-rw-r--r-- 1 root root   0 Jan 13 00:46 p12
-rw-r--r-- 1 root root   0 Jan 13 00:46 p13
-rw-r--r-- 1 root root   0 Jan 13 00:46 p14
-rw-r--r-- 1 root root   0 Jan 13 00:46 p15
-rw-r--r-- 1 root root   0 Jan 13 00:50 p22
```