

Experiment No:1

Problem Statement: : Basic Linux Command

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General Purpose Commands

1. date: To display current date & time of the system.

date

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ date
Tue Jul 16 12:35:15 AM IST 2024
```

2. cal :To display calendar of current month.

cal

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ cal
      July 2024
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
```

cal -y

Option y Display a calendar for the specified year. This option is implied when a year but no month are specified on the command line.

```

omkar@omkar-VMware-Virtual-Platform:~/Desktop$ cal -y
2024
    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      1  2  3      1  2
    7  8  9 10 11 12 13    4  5  6  7  8  9 10    3  4  5  6  7  8  9
   14 15 16 17 18 19 20   11 12 13 14 15 16 17   10 11 12 13 14 15 16
   21 22 23 24 25 26 27   18 19 20 21 22 23 24   17 18 19 20 21 22 23
   28 29 30 31           25 26 27 28 29           24 25 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  2  3  4  5  6      1  2  3  4      1
    7  8  9 10 11 12 13    5  6  7  8  9 10 11    2  3  4  5  6  7  8
   14 15 16 17 18 19 20   12 13 14 15 16 17 18    9 10 11 12 13 14 15
   21 22 23 24 25 26 27   19 20 21 22 23 24 25   16 17 18 19 20 21 22
   28 29 30           26 27 28 29 30 31           23 24 25 26 27 28 29
                                     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  2  3  4  5  6      1  2  3      1  2  3  4  5  6  7
    7  8  9 10 11 12 13    4  5  6  7  8  9 10    8  9 10 11 12 13 14
   14 15 16 17 18 19 20   11 12 13 14 15 16 17   15 16 17 18 19 20 21
   21 22 23 24 25 26 27   18 19 20 21 22 23 24   22 23 24 25 26 27 28
   28 29 30 31           25 26 27 28 29 30 31   29 30

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

```

cal -3

Option 3 display the 3 months where 1st month is previous 2nd is present and 3rd is next

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ cal -3
      June 2024      July 2024      August 2024
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 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 25 26 27 28 29 30 31
23 24 25 26 27 28 29 30 31
```

3. who:List who is currently logged on to the system.

who

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ who
omkar      seat0      2024-07-16 00:26 (login screen)
omkar      tty2        2024-07-16 00:26 (tty2)
```

who -q

Option q gives all login names and number of users logged on

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ who -q
omkar omkar
# users=2
```

4. Whoami:Report what user you are logged on as.

whoami

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ whoami
omkar
```

5. echo :Echo a string (or list of arguments) to the terminal

echo

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ echo {"omkar","soham","raj"}
{"omkar","soham","raj"}
```

echo -n

Option n is use to print the echo statement without any new line all statement get printed without any new line

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ echo -n {"omkar","soham","raj"}
omkar soham rajomkar@omkar-VMware-Virtual-Platform:~/Desktop$
```

echo -e

Option e help us to use "escape sequence character"

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ echo "\n omkar"
\n omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ echo -e "\n omkar"

omkar
```

6. bc:To perform mathematical operations

bc

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ 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'.
10 + 20
30
10^3
1000
quit
```

```
a = 10
b = 30
c = a * b
c
300
d = a + b
d
40
```

7. clear: To clear the screen

clear

8. alias : Used to tailor commands

Alias

Ex alias erase=rm Generate an employee report using AWK programming.

alias grep="grep -i"

alias cp="cp -i"

alias newname=' command'

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ alias FileDetail
ls='ls -la'
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ FileDetails
total 40
drwxrwxr-x 6 omkar omkar 4096 Jul 18 22:54 .
drwxr-xr-x 4 omkar omkar 4096 Jul 10 17:27 ..
-rw-rw-r-- 1 omkar omkar  46 Jul 18 18:38 ab1.txt
-rw-rw-r-- 1 omkar omkar  26 Jul 18 18:38 ab.txt
-rw-rw-r-- 1 omkar omkar   4 Jul 12 13:02 ab.xt
drwxrwxr-x 4 omkar omkar 4096 Jul 15 17:45 cmd
-rw-rw-r-- 1 omkar omkar   0 Jul 18 18:58 linkab
-rw-rw-r-- 1 omkar omkar  37 Jul 18 18:36 myName.txt
drwxrwxr-x 5 omkar omkar 4096 Jul 10 23:56 summer
drwxrwxr-x 5 omkar omkar 4096 Jul 11 18:39 summerCP
drwxrwxr-x 3 omkar omkar 4096 Jul 11 00:00 winter
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$
```

9. man <cmd name>: To get help for any command

man

```
ECHO(1)                                User Commands                                ECHO(1)
NAME
    echo - display a line of text
SYNOPSIS
    echo [SHORT-OPTION]... [STRING]...
    echo LONG-OPTION
DESCRIPTION
    Echo the STRING(s) to standard output.
    -n      do not output the trailing newline
    -e      enable interpretation of backslash escapes
    -E      disable interpretation of backslash escapes (default)
    --help  display this help and exit
    --version
            output version information and exit
    If -e is in effect, the following sequences are recognized:
    \\      backslash
    \a      alert (BEL)
    \b      backspace
    \c      produce no further output
    \e      escape
    \f      form feed
    \n      new line
```

10. passwd: To change the password

passwd

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ passwd
Changing password for omkar.
Current password:
New password:
BAD PASSWORD: The password is the same as the old one
New password:
BAD PASSWORD: The password contains the user name in some form
New password:
Retype new password:
passwd: password updated successfully
```

Passwd - all

```

omkar@omkar-VMware-Virtual-Platform:~/Desktop$ passwd -all
Usage: passwd [options] [LOGIN]

Options:
  -a, --all                report password status on all accounts
  -d, --delete             delete the password for the named account
  -e, --expire             force expire the password for the named account
  -h, --help              display this help message and exit
  -k, --keep-tokens        change password only if expired
  -i, --inactive INACTIVE set password inactive after expiration
                           to INACTIVE
  -l, --lock               lock the password of the named account
  -n, --mindays MIN_DAYS  set minimum number of days before password
                           change to MIN_DAYS
  -q, --quiet              quiet mode
  -r, --repository REPOSITORY change password in REPOSITORY repository
  -R, --root CHROOT_DIR   directory to chroot into
  -S, --status             report password status on the named account
  -u, --unlock             unlock the password of the named account
  -w, --warndays WARN_DAYS set expiration warning days to WARN_DAYS
  -x, --maxdays MAX_DAYS set maximum number of days before password
                           change to MAX_DAYS

```

11. exit: To logout from the terminal

exit

12. cp <fromfile> <tofile>: Copy from the <fromfile> to the <tofile>

cp fromFile toFile

```

omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ cat cpyFile.c
#include<stdio.h>

int main()
{
    printf("Hello World!");
    return 0;
}omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ cp cpyFile.c copyFile
.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ cat copyFile.c
#include<stdio.h>

int main()
{
    printf("Hello World!");
    return 0;
}omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ █

```

cp -r fromFile toFile

Option -r : Use to copy directory recursively

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
code  greenHouse
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ cp code CpyCode
cp: -r not specified; omitting directory 'code'
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ cp -r code CpyC0de
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
code  CpyC0de  greenHouse
```

cp -rv fromFile toFile

Option -v : is for the verbose means it tell us about each and every step

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ cp -vr BackUp code
'BackUp' -> 'code'
'BackUp/new.c' -> 'code/new.c'
'BackUp/new' -> 'code/new'
'BackUp/copyFile.c' -> 'code/copyFile.c'
```

13. mv <fromfile> <tofile> : Move/rename the <fromfile> to the <tofile>

mv fromFile toFile

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls code
CopyFile.c  new  new.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ mv code/CopyFile.c code/cp
yFile.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
code  greenHouse
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls code
cpyFile.c  new  new.c
```

mv -n fromFile toFile

Option -n is use to avoid overwriting on the already existing the file

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ ls
copyFile.c  MyFile.txt  new  new.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ mv -n MyFile.txt new.
c
mv: not replacing 'new.c'
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ mv MyFile.txt new.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ ls
copyFile.c  new  new.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ cat new.c
Hello My name is omkar
```


mv -t fromDir toDir

Option -t is use to move the particular directory inside another directory

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
BackUp  code  cpy1  greenHouse  HardLinkCPY
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ mv -t HardLinkCPY BackUp
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
code  cpy1  greenHouse  HardLinkCPY
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls HardLinkCPY/
BackUp  code  copyFile.c  new  new.c
```

14. rm <file>:Remove the file named <file>

rm fileName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ ls
copyFile.c  cpyFile.c  new  new.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ rm cpyFile.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ ls
copyFile.c  new  new.c
```

rm -r fileName

Option -r is the recursively remove the all files present inside the directory and also the remove the entire directory

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
code  cpy1  greenHouse  HardLinkCPY
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ rm -r cpy1
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
code  greenHouse  HardLinkCPY
```

rm -ri fileName

Option -I give the prompt before the every removal

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ rm -ri HardLinkCPY
rm: descend into directory 'HardLinkCPY'? y
rm: descend into directory 'HardLinkCPY/BackUp'? y
rm: remove regular file 'HardLinkCPY/BackUp/new'? y
rm: remove regular file 'HardLinkCPY/BackUp/copyFile.c'? y
rm: remove regular file 'HardLinkCPY/BackUp/new.c'? y
rm: remove directory 'HardLinkCPY/BackUp'? y
rm: remove regular file 'HardLinkCPY/new'? y
rm: descend into directory 'HardLinkCPY/code'? y
rm: remove regular file 'HardLinkCPY/code/new'? y
rm: remove regular file 'HardLinkCPY/code/copyFile.c'? y
rm: remove regular file 'HardLinkCPY/code/new.c'? y
rm: remove directory 'HardLinkCPY/code'? y
rm: remove regular file 'HardLinkCPY/copyFile.c'? y
rm: remove regular file 'HardLinkCPY/new.c'? y
rm: remove directory 'HardLinkCPY'? y
```

rm -v fileName

Option -v explain what is being done

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
code greenHouse NewCpy
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ rm -rv NewCpy
removed 'NewCpy/new'
removed 'NewCpy/qq'
removed directory 'NewCpy/newDir'
removed 'NewCpy/copyFile.c'
removed 'NewCpy/new.c'
removed directory 'NewCpy'
```

15. mkdir <newdir>:Make a new directory called <newdir>

mkdir folderName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ ls
copyFile.c new new.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ mkdir NewDir
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ ls
copyFile.c new new.c NewDir
```

mkdir -m=mode folderName

Option -m is use to set the mode to the specific directory

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ mkdir -m=r cpy2
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls -l
total 16
drwxrwxr-x 3 omkar omkar 4096 Jul 19 23:59 code
drwxrwxr-x 3 omkar omkar 4096 Jul 20 00:17 cpy1
dr--r--r-- 2 omkar omkar 4096 Jul 20 00:18 cpy2
drwxrwxr-x 6 omkar omkar 4096 Jul 18 22:54 greenHouse
```

16. rmdir <dir>:Remove an (empty) directory

rmdir folderName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ ls
copyFile.c  new  new.c  NewDir
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ rmdir NewDir
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ ls
copyFile.c  new  new.c
```

17. cd <dir> :Change the current working directory to dir

cd folderName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/code$ cd ..
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ ls
code  greenHouse
omkar@omkar-VMware-Virtual-Platform:~/Desktop$ cd greenHouse/
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$
```

18. pwd : Print (display) the working directory

pwd

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ pwd
/home/omkar/Desktop/greenHouse
```

pwd -P

Option -P is use to show original file on the path when we are in it's Link it actually ignores the link

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/SoftLink$ pwd
/home/omkar/Desktop/SoftLink
omkar@omkar-VMware-Virtual-Platform:~/Desktop/SoftLink$ pwd -P
/home/omkar/Desktop/greenHouse
```

19. cat > <file> :To create new file n save it by pressing ^d

cat >

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt
Hii Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat myName.txt
My Name is Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt > my
Name.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt
Hii Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat myName.txt
Hii Omkar
```

20. cat >> <file>: To append contents into file

cat >>

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt
Hii Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls
ab.txt  ab.xt  cmd  myName.txt  summer  summerCP  winter
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt >> m
yName.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat myName.txt
Hii Omkar
Hii Omkar
```

21. cat <file>:To see the contents of existing file

cat

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat myName.txt
Hii Omkar
Hii Omkar
```

cat -A

Option -A display all with \$ at end of each line

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/SoftLink$ cat -A myName.txt
Hii Omkar$
Hii Omkar$
Hello I am Soham$
```

cat -n

Option -n display the line number at the start of every line

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/SoftLink$ cat -n myName.txt
 1 Hii Omkar
 2 Hii Omkar
 3 Hello I am Soham
```

cat -b

Option -b is use to number only non blank files

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/SoftLink$ cat -b myName.txt
 1 Hii Omkar
 2 Hii Omkar
 3 Hello I am Soham

 4 My Brother name is Soham
 5 My mother Name is Nandana

 6 My Father Name is Sunil
```

22. file <file>:To check the type of file

file fileName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls
ab.txt  ab.txt  cmd  myName.txt  summer  summerCP  winter
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ file ab.txt
ab.txt: ASCII text
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ file summer
summer: directory
```

23. wc <file>:To count lines,words,charaters of file

wc fileName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat myName.txt
Hii Omkar
Hii Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ wc myName.txt
 2  4 20 myName.txt
```

wc -w/-l/-c fileName

Option -w gives number of words

Option -l gives number of lines

Option -c gives number of characters

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ wc -w myName.tx
t
4 myName.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ wc -c myName.tx
t
20 myName.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ wc -l myName.tx
t
2 myName.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$
```

24. cmp <file1> <file2>:To compare two files

cmp file1 file2

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cp ab.txt ab1.t
xt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls
ab1.txt ab.txt ab.txt cmd myName.txt summer summerCP winter
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cmp ab1.txt ab.
txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt > ab
1.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab1.txt
Hii Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt >> a
b1.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab1.txt
Hii Omkar
Hii Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cmp ab1.txt ab.
txt
cmp: EOF on ab.txt after byte 10, line 1
```

cmp -l file1 file2

Option -l explain the byte by byte comparison

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cmp -l ab.txt a
b1.txt
12 145 151
13 154 151
14 154 40
15 157 117
16 40 155
17 111 153
18 40 141
19 141 162
20 155 12
21 40 110
22 122 151
23 141 151
24 152 40
25 165 117
26 12 155
cmp: EOF on ab.txt after byte 26
```

cmp -i skipBytes1:skipBytes2 file1 file2

Option -i is use to compare the 2 files by excluding or skipping some first bytes of file1 and file2

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cmp ab1.txt ab.
txt
cmp: EOF on ab.txt after byte 26, line 2
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab1.txt
Hii Omkar
Hello I am Raju
Hii Omkar
Hello I am Raju
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt
Hii Omkar
Hello I am Raju
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cmp -i 26:0 ab1
.txt ab.txt
```

25. `comm <file1> <file2>`:To display common values between two files

`comm fileName1 fileName2`

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ echo "Hello I am Raju" >> ab.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ comm ab.txt myName.txt
                Hii Omkar
Hello I am Raju
comm: file 1 is not in sorted order
                Hii Omkar
comm: file 2 is not in sorted order
                Hello I am Soham
comm: input is not in sorted order
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt myName.txt
Hii Omkar
Hello I am Raju
Hii Omkar
Hii Omkar
Hello I am Soham
```

`comm -total fileName1 fileName2`

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ comm --total ab.txt myName.txt
                Hii Omkar
                Hello I am Raju
Hii Omkar
comm: file 1 is not in sorted order
Hello I am Raju
2      0      2      total
comm: input is not in sorted order
```

26. `diff <file1> <file2>`:To convert one file to another

`diff fileName1 fileName2`

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat ab.txt
Hii Omkar
Hello I am Raju
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ cat myName.txt
Hii Omkar
Hii Omkar
Hello I am Soham
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ diff ab.txt myName.txt
2c2,3
< Hello I am Raju
---
> Hii Omkar
> Hello I am Soham
```


27. gzip <file>:To compress the file

gzip fileName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls
ab1.txt ab.txt ab.txt cmd myName.txt summer summerCP winter
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ gzip ab1.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls
ab1.txt.gz ab.txt ab.txt cmd myName.txt summer summerCP winter
```

28. gunzip <file>:To unzip the contents of zipped file

gunzip fileName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls
ab1.txt.gz ab.txt ab.txt cmd myName.txt summer summerCP winter
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ gunzip ab1.txt.gz
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls
ab1.txt ab.txt ab.txt cmd myName.txt summer summerCP winter
```

29. ls :List the files in the current working directory

ls

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls
ab1.txt ab.txt ab.txt cmd myName.txt summer summerCP winter
```

ls -all

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$ ls -all
total 32
drwxrwxr-x 6 omkar omkar 4096 Jul 18 22:54 .
drwxr-xr-x 6 omkar omkar 4096 Jul 20 00:37 ..
-rw-rw-r-- 1 omkar omkar  0 Jul 20 03:02 ab1.txt
-rw-rw-r-- 1 omkar omkar  0 Jul 20 03:02 ab.txt
-rw-rw-r-- 1 omkar omkar  4 Jul 12 13:02 ab.txt
drwxrwxr-x 4 omkar omkar 4096 Jul 15 17:45 cmd
-rw-rw-r-- 1 omkar omkar  0 Jul 18 18:58 linkab
-rw-rw-r-- 1 omkar omkar 118 Jul 20 00:59 myName.txt
drwxrwxr-x 5 omkar omkar 4096 Jul 10 23:56 summer
drwxrwxr-x 5 omkar omkar 4096 Jul 11 18:39 summerCP
drwxrwxr-x 3 omkar omkar 4096 Jul 11 00:00 winter
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse$
```

30. In <fromfile><tofile>: Creates a symbolic link to a file

In fromFile toFile

Linux have 2 types of links hard link & soft link

HardLink = If Original file is deleted still hardlink have the data of original file

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ cat Original.txt
Original File

Hello My Name is Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ rm HardLink.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ ls
Original.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ ln Original.txt HardLink.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ ls
HardLink.txt  Original.txt
```

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ cat HardLink.txt
Original File

Hello My Name is Omkar
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ echo "Welcome to Bash" >> Original.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ cat HardLink.txt
Original File

Hello My Name is Omkar
Welcome to Bash
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$
```

Ln -s fromFile toFile

SoftLink / Symbolic Link = this are such type of links which strictly linked with the file if the original file deleted then we cannot use this link like HardLinks

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ echo "This
is Original File" >> Original.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ ln -s Orig
inal.txt symbolicLink.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ ls
Original.txt  symbolicLink.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ cat symbol
icLink.txt
This is Original File
```

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ rm Original
.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ ls
Original.txt  symbolicLink.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$ cat symbol
icLink.txt
cat: symbolicLink.txt: No such file or directory
omkar@omkar-VMware-Virtual-Platform:~/Desktop/greenHouse/link$
```

Error Redirection for all commands

command 2> fileName

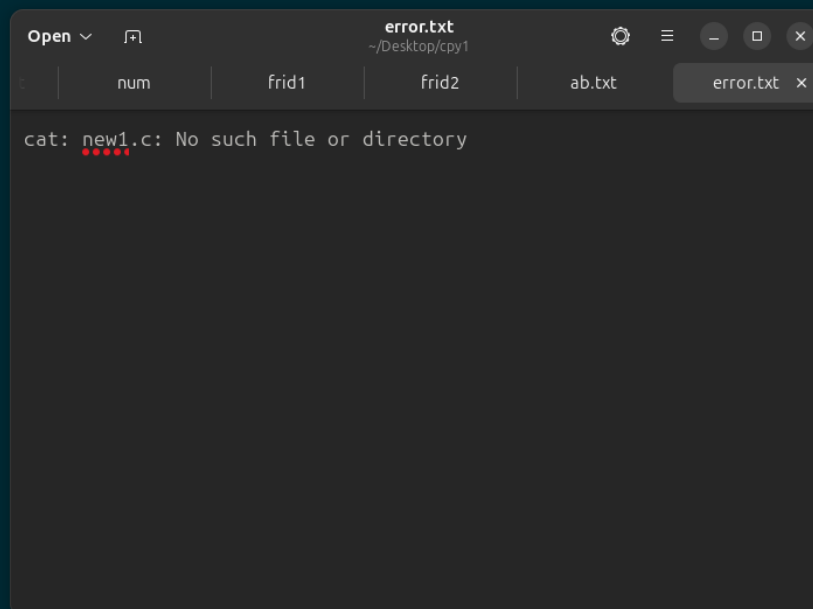
```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ ls
copyFile.c  new  new.c  newDir  qq
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ cat new1.c 2> error.t
xt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ cat error.txt
cat: new1.c: No such file or directory
```

Commands Explore by me

1. xdg-open use to open file

xdg-open fileName

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ xdg-open error.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$
```



2. find command is use to search for files in a directory hierarchy

find filename/R.E

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ find *.c
copyFile.c
new.c
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ find *.txt
error.txt
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ find *.log
find: '*.log': No such file or directory
```

3. fortune - print a random, hopefully interesting, adage

fortune

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ fortune
When in doubt, tell the truth.
    -- Mark Twain
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ fortune
When angry, count four; when very angry, swear.
    -- Mark Twain, "Pudd'nhead Wilson's Calendar"
```

4. date command is use to get the current date & time

date

```
omkar@omkar-VMware-Virtual-Platform:~/Desktop/cpy1$ date
Sat Jul 20 11:40:43 PM IST 2024
```

5. less - less command is use to read the long files because it provides the interactive window which contains the content of file but with some features

less fileName

```
Hii Omkar
Hii Omkar
Hello I am Soham

My Brother name is Soham
My mother Name is Nandana

My Father Name is Sunil
myName.txt (END)
```

Conclusion: we have studied basic Linux command