

```
nipun@LAPTOP-1HNTD447: /usr/local
nipun@LAPTOP-1HNTD447:~$ pwd
/home/nipun
nipun@LAPTOP-1HNTD447:~$ cd
nipun@LAPTOP-1HNTD447:~$ ls
AbcImpex      array.sh      file.txt      hobsdir      myinfo.txt    new.txt      shscripts
Hashmum       banana.txt    folder1       lemon.txt     name.sh       nipun_playbook test2
Zing          cat          git_test     mycommands.sh new            people.txt   world
allcontent.txt employees.txt hello.sh      myfileswithvars.sh new.sh.save   practice
nipun@LAPTOP-1HNTD447:~$ cd new
nipun@LAPTOP-1HNTD447:~/new$ ls
multicontent.txt
nipun@LAPTOP-1HNTD447:~/new$ cd ..
nipun@LAPTOP-1HNTD447:~$ cd ~
nipun@LAPTOP-1HNTD447:~$ ls
AbcImpex      array.sh      file.txt      hobsdir      myinfo.txt    new.txt      shscripts
Hashmum       banana.txt    folder1       lemon.txt     name.sh       nipun_playbook test2
Zing          cat          git_test     mycommands.sh new            people.txt   world
allcontent.txt employees.txt hello.sh      myfileswithvars.sh new.sh.save   practice
nipun@LAPTOP-1HNTD447:~$ cd ..
nipun@LAPTOP-1HNTD447:/home$ cd usr
-bash: cd: usr: No such file or directory
nipun@LAPTOP-1HNTD447:/home$ ls
a berry hash1 hash2 nipun timjag user1 user2 user3 user4 zing1 zing2
nipun@LAPTOP-1HNTD447:/home$ cd ..
nipun@LAPTOP-1HNTD447:/$ cd usr
nipun@LAPTOP-1HNTD447:/usr$ ls
bin config games include lib lib32 lib64 libexec libx32 local sbin share src
nipun@LAPTOP-1HNTD447:/usr$ cd ../sys
nipun@LAPTOP-1HNTD447:/sys$ ls
block bus class dev devices firmware fs kernel module
nipun@LAPTOP-1HNTD447:/sys$ cd ../usr/local
nipun@LAPTOP-1HNTD447:/usr/local$ ls
bin etc games include lib man sbin share src
```

```
nipun@LAPTOP-1HNTD447:~$ cd
nipun@LAPTOP-1HNTD447:/usr/local$ cd
nipun@LAPTOP-1HNTD447:~$ pwd
/home/nipun
nipun@LAPTOP-1HNTD447:~$ mkdir -p parent/child
nipun@LAPTOP-1HNTD447:~$ ls
AbcImpex      allcontent.txt cat          folder1      hobsdir      myfileswithvars.sh new      nipun_playbook practice world
Hashmum       array.sh      employees.txt git_test     lemon.txt     myinfo.txt    new.sh.save parent   shscripts
Zing          banana.txt    file.txt     hello.sh     mycommands.sh name.sh       new.txt   people.txt test2
nipun@LAPTOP-1HNTD447:~$ cd parent
nipun@LAPTOP-1HNTD447:~/parent$ ls
child
nipun@LAPTOP-1HNTD447:~/parent$ cd child
nipun@LAPTOP-1HNTD447:~/parent/child$ ls
nipun@LAPTOP-1HNTD447:~/parent/child$ cd ~
nipun@LAPTOP-1HNTD447:~$ ls > homecontents.txt
nipun@LAPTOP-1HNTD447:~$ cat homecontents.txt
AbcImpex
Hashmum
Zing
allcontent.txt
array.sh
banana.txt
cat
employees.txt
file.txt
folder1
git_test
hello.sh
hobsdir
homecontents.txt
lemon.txt
mycommands.sh
```



```

nipun@LAPTOP-1HNTD447: ~$ mv temp folder1
nipun@LAPTOP-1HNTD447: ~$ cd folder1
nipun@LAPTOP-1HNTD447: ~/folder1$ ls
a.txt b.txt combo.txt subfolder temp
nipun@LAPTOP-1HNTD447: ~/folder1$ cd ..
nipun@LAPTOP-1HNTD447: ~$ cp temp copyoftemp
cp: cannot stat 'temp': No such file or directory
nipun@LAPTOP-1HNTD447: ~$ cp temp copyoftemp.txt
cp: cannot stat 'temp': No such file or directory
nipun@LAPTOP-1HNTD447: ~$ cp a.txt copy.txt
cp: cannot stat 'a.txt': No such file or directory
nipun@LAPTOP-1HNTD447: ~$ ls
AbcImpex      array.sh      file.txt      hello2.txt      mix.txt        new           parent        test2
Hashmum       banana.txt    folder1       hobsdir         mycommands.sh  new.sh.save   people.txt    world
Zing          cat           git_test      homecontents.txt myfileswithvars.sh new.txt        practice
allcontent.txt employees.txt hello.txt      lemon.txt        name.sh        nipun_playbook shscripts
nipun@LAPTOP-1HNTD447: ~$ cp lemon.txt lime.txt
nipun@LAPTOP-1HNTD447: ~$ cat lime.txt
This is the content of lemon.txt
Writing to lemon.txt
nipun@LAPTOP-1HNTD447: ~$ cat lemon.txt
This is the content of lemon.txt
Writing to lemon.txt
nipun@LAPTOP-1HNTD447: ~$ whoami
nipun
nipun@LAPTOP-1HNTD447: ~$ who
nipun@LAPTOP-1HNTD447: ~$ w
 17:11:10 up  7:08,  0 users,  load average: 0.05, 0.09, 0.09
USER      TTY      FROM          LOGIN@      IDLE   JCPU   PCPU   WHAT
nipun@LAPTOP-1HNTD447: ~$ id
uid=1000(nipun) gid=1000(nipun) groups=1000(nipun),4(adm),20(dialout),24(cdrom),25(floppy),27(sudo),29(audio),30(dip),44(video),46(plugdev),117(netdev),1007(docker)
nipun@LAPTOP-1HNTD447: ~$

```

```

nipun@LAPTOP-1HNTD447: ~$ passwd
Changing password for nipun.
Current password:
New password:
Retype new password:
Password unchanged
New password:
Retype new password:
Sorry, passwords do not match.
passwd: Authentication token manipulation error
passwd: password unchanged
nipun@LAPTOP-1HNTD447: ~$ man man
nipun@LAPTOP-1HNTD447: ~$ cd /
nipun@LAPTOP-1HNTD447: /$ ls
AbcImpex      bin  dev  home  lib  lib64  lost+found  mnt  opt  root  sbin  srv  tmp  var
InitialGalaxy boot etc  init  lib32 libx32  media  new_mount  proc  run  snap  sys  usr
nipun@LAPTOP-1HNTD447: /$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailng List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin

```

Output of man cmd

```
nipun@LAPTOP-1HN7D447: ~
MAN(1) Manual pager utils MAN(1)

NAME
  man - an interface to the system reference manuals

SYNOPSIS
  man [man options] [[section] page ...] ...
  man -k [apropos options] regexp ...
  man -K [man options] [section] term ...
  man -f [whatis options] page ...
  man -l [man options] file ...
  man -w|-W [man options] page ...

DESCRIPTION
  man is the system's manual pager. Each page argument given to man is normally the name of a program, utility or function. The manual page associated with each of these arguments is then found and displayed. A section, if provided, will direct man to look only in that section of the manual. The default action is to search in all of the available sections following a pre-defined order (see DEFAULTS), and to show only the first page found, even if page exists in several sections.

  The table below shows the section numbers of the manual followed by the types of pages they contain.

  1 Executable programs or shell commands
  2 System calls (functions provided by the kernel)
  3 Library calls (functions within program libraries)
  4 Special files (usually found in /dev)
  5 File formats and conventions, e.g. /etc/passwd
  6 Games
  7 Miscellaneous (including macro packages and conventions), e.g. man(7), groff(7)
  8 System administration commands (usually only for root)
  9 Kernel routines [Non standard]

  A manual page consists of several sections.
  Manual page man(1) line 1 (press h for help or q to quit)
```

```
nipun@LAPTOP-1HNTD447:/$ sudo adduser user32
[sudo] password for nipun:
Adding user `user32' ...
Adding new group `user32' (1016) ...
Adding new user `user32' (1013) with group `user32' ...
Creating home directory `/home/user32' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for user32
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
nipun@LAPTOP-1HNTD447:/$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,nipun
tty:x:5:syslog
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
kmem:x:15:
```

```
nipun@LAPTOP-1HNTD447:/$ cat /etc/passwd
systemd-timesync:x:104:
crontab:x:105:
messagebus:x:106:
input:x:107:
kvm:x:108:
render:x:109:
syslog:x:110:
tss:x:111:
uuidd:x:112:
tcpdump:x:113:
ssh:x:114:
landscape:x:115:
admin:x:116:
netdev:x:117:nipun
lxd:x:118:
nipun:x:1000:
newuser:x:1001:
new_group:x:1002:
user1:x:1003:
user2:x:1004:
user3:x:1005:
user4:x:1006:
docker:x:1007:nipun
timjag:x:1008:
berry:x:1009:
devops:x:1010:berry
zing1:x:1011:
zing2:x:1012:
hash1:x:1013:
hash2:x:1014:
a:x:1015:
user32:x:1016:
nipun@LAPTOP-1HNTD447:/$
```

```

nipun@LAPTOP-1HNTD447:~$ a:x:1015:
user32:x:1016:
nipun@LAPTOP-1HNTD447:/$ groupadd
Usage: groupadd [options] GROUP

Options:
  -f, --force                exit successfully if the group already exists,
                             and cancel -g if the GID is already used
  -g, --gid GID              use GID for the new group
  -h, --help                 display this help message and exit
  -K, --key KEY=VALUE        override /etc/login.defs defaults
  -o, --non-unique            allow to create groups with duplicate
                             (non-unique) GID
  -p, --password PASSWORD    use this encrypted password for the new group
  -r, --system               create a system account
  -R, --root CHROOT_DIR      directory to chroot into
  -P, --prefix PREFIX_DIR    directory prefix
  --extrausers               Use the extra users database

nipun@LAPTOP-1HNTD447:/$ groupmod
Usage: groupmod [options] GROUP

Options:
  -g, --gid GID              change the group ID to GID
  -h, --help                 display this help message and exit
  -n, --new-name NEW_GROUP   change the name to NEW_GROUP
  -o, --non-unique            allow to use a duplicate (non-unique) GID
  -p, --password PASSWORD    change the password to this (encrypted)
                             PASSWORD
  -R, --root CHROOT_DIR      directory to chroot into
  -P, --prefix PREFIX_DIR    prefix directory where are located the /etc/* files

nipun@LAPTOP-1HNTD447:/$

```

```

nipun@LAPTOP-1HNTD447:~$ nipun@LAPTOP-1HNTD447:/$ cd
nipun@LAPTOP-1HNTD447:~$ usermod
Usage: usermod [options] LOGIN

Options:
  -b, --badnames             allow bad names
  -c, --comment COMMENT      new value of the GECOS field
  -d, --home HOME_DIR        new home directory for the user account
  -e, --expiredate EXPIRE_DATE set account expiration date to EXPIRE_DATE
  -f, --inactive INACTIVE    set password inactive after expiration
                             to INACTIVE
  -g, --gid GROUP             force use GROUP as new primary group
  -G, --groups GROUPS         new list of supplementary GROUPS
  -a, --append                append the user to the supplemental GROUPS
                             mentioned by the -G option without removing
                             the user from other groups
  -h, --help                 display this help message and exit
  -l, --login NEW_LOGIN       new value of the login name
  -L, --lock                  lock the user account
  -m, --move-home             move contents of the home directory to the
                             new location (use only with -d)
  -o, --non-unique            allow using duplicate (non-unique) UID
  -p, --password PASSWORD    use encrypted password for the new password
  -R, --root CHROOT_DIR      directory to chroot into
  -P, --prefix PREFIX_DIR    prefix directory where are located the /etc/* files
  -s, --shell SHELL          new login shell for the user account
  -u, --uid UID               new UID for the user account
  -U, --unlock                unlock the user account
  -v, --add-subuids FIRST-LAST add range of subordinate uids
  -V, --del-subuids FIRST-LAST remove range of subordinate uids
  -w, --add-subgids FIRST-LAST add range of subordinate gids
  -W, --del-subgids FIRST-LAST remove range of subordinate gids
  -Z, --selinux-user SEUSER   new SELinux user mapping for the user account

```

```
nipun@LAPTOP-1HNTD447:~$ sudo groupadd training
nipun@LAPTOP-1HNTD447:~$ cat /etc/grps
```

```
nipun@LAPTOP-1HNTD447:~$ cat /etc/passwd
tss:x:111:
uidd:x:112:
tcpdump:x:113:
ssh:x:114:
landscape:x:115:
admin:x:116:
netdev:x:117:nipun
lxd:x:118:
nipun:x:1000:
newuser:x:1001:
new_group:x:1002:
user1:x:1003:
user2:x:1004:
user3:x:1005:
user4:x:1006:
docker:x:1007:nipun
timjag:x:1008:
berry:x:1009:
devops:x:1010:berry
zing1:x:1011:
zing2:x:1012:
hash1:x:1013:
hash2:x:1014:
a:x:1015:
user32:x:1016:
training:x:1017:
nipun@LAPTOP-1HNTD447:~$
```

```
nipun@LAPTOP-1HNTD447:~/folder1$ cd temp
-bash: cd: temp: No such file or directory
nipun@LAPTOP-1HNTD447:~$ ls
AbcImplex      array.sh      file.txt      hello2.txt    lime.txt      name.sh       nipun_playbook  shscripts
Hashmum        banana.txt   folder1       hobsdir       mix.txt       new           parent          test2
Zing           cat          git_test     homecontents.txt  mycommands.sh  new.sh.save   people.txt      world
allcontent.txt employees.txt hello.txt     lemon.txt     myfileswithvars.sh  new.txt      practice
nipun@LAPTOP-1HNTD447:~$ cd folder1
nipun@LAPTOP-1HNTD447:~/folder1$ ls
a.txt  b.txt  combo.txt  subfolder  temp
nipun@LAPTOP-1HNTD447:~/folder1$ ls -il
total 20
39168 -rw-r--r-- 1 nipun nipun   6 Dec 1 14:34 a.txt
39169 -rw-r--r-- 1 nipun nipun   7 Dec 1 14:34 b.txt
39170 -rw-r--r-- 1 nipun nipun  24 Dec 1 16:44 combo.txt
39171 drwxr-xr-x 2 nipun nipun 4096 Dec 1 14:15 subfolder
39243 -rwxr-xr-x 1 nipun nipun   74 Dec 10 10:11 temp
nipun@LAPTOP-1HNTD447:~/folder1$ ls -la
.  ..  a.txt  b.txt  combo.txt  subfolder  temp
nipun@LAPTOP-1HNTD447:~/folder1$ chmod +x a.txt
nipun@LAPTOP-1HNTD447:~/folder1$ ls
a.txt  b.txt  combo.txt  subfolder  temp
nipun@LAPTOP-1HNTD447:~/folder1$ ls -l
total 20
-rwxr-xr-x 1 nipun nipun   6 Dec 1 14:34 a.txt
-rw-r--r-- 1 nipun nipun   7 Dec 1 14:34 b.txt
-rw-r--r-- 1 nipun nipun  24 Dec 1 16:44 combo.txt
drwxr-xr-x 2 nipun nipun 4096 Dec 1 14:15 subfolder
-rwxr-xr-x 1 nipun nipun   74 Dec 10 10:11 temp
nipun@LAPTOP-1HNTD447:~/folder1$ touch new.txt
nipun@LAPTOP-1HNTD447:~/folder1$ ls
a.txt  b.txt  combo.txt  new.txt  subfolder  temp
nipun@LAPTOP-1HNTD447:~/folder1$
```

```

nipun@LAPTOP-1HNTD447: ~/folder1
nipun@LAPTOP-1HNTD447:~/folder1$ ls
a.txt b.txt combo.txt new.txt subfolder temp
nipun@LAPTOP-1HNTD447:~/folder1$ rm new.txt
nipun@LAPTOP-1HNTD447:~/folder1$ ls
a.txt b.txt combo.txt subfolder temp
nipun@LAPTOP-1HNTD447:~/folder1$ find . -name "*.*"
.
./combo.txt
./a.txt
./b.txt
nipun@LAPTOP-1HNTD447:~/folder1$ find . -name "*.txt*"
./combo.txt
./a.txt
./b.txt
nipun@LAPTOP-1HNTD447:~/folder1$ find . -name "a.txt" -delete
nipun@LAPTOP-1HNTD447:~/folder1$ ls
b.txt combo.txt subfolder temp
nipun@LAPTOP-1HNTD447:~/folder1$ free
               total        used        free      shared  buff/cache   available
Mem:      12967604      1770776       7117800       378944       4079028      10505452
Swap:      4194304           0       4194304
nipun@LAPTOP-1HNTD447:~/folder1$ uptime
Command 'uptime' not found, did you mean:
  command 'uptime' from deb procs (2:3.3.16-1ubuntu2.3)
Try: sudo apt install <deb name>
nipun@LAPTOP-1HNTD447:~/folder1$ uptime
 17:20:14 up  7:17,  0 users,  load average: 0.11, 0.09, 0.08
nipun@LAPTOP-1HNTD447:~/folder1$

```

```

nipun@LAPTOP-1HNTD447: ~/folder1
nipun@LAPTOP-1HNTD447:~/folder1$ python
Python 3.8.10 (default, Jun  2 2021, 10:49:15)
[GCC 9.4.0] on linux
Type "help", "copyright", "credits" or "license()" for more information.
>>> a = 10
>>> if (a>5):
...     print("yes")
File "<stdin>", line 2
    print("yes")
        ^
SyntaxError: EOL while scanning string literal
>>> if (a>5):
...     print("yes")
... else:
...     print("no")
...
yes
>>> a = [3,56,75634,43,52]
>>> a[3]
... ]
43
>>> a[4]
52
>>> a[0]
3
>>> name = input("Enter name:")
Enter name:nipun
>>> print(name)
nipun
>>> from math import *
>>> print(sqrt(2))
1.4142135623730951
>>> print(pow(2,3))

```



```
>>> def calc(n):
...     if(n>100):
...         print(n*n)
...     else:
...         print(n+n)
...
>>> calc(200)
40000
>>> calc(40)
80
>>>
```

```
nipun@LAPTOP-1HNTD447:~$ python
Python 3.8.10 (default, Jun  2 2021, 10:49:15)
[GCC 9.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> class product:
...     def setProduct(self,name,price,qty):
...         self.name = name
...         self.price = price
...         self.qty = qty
...     def getProduct(self):
...         print(self.name, self.price, self.qty)
...
>>> item = product()
>>> item.setProduct('juice',5,2)
>>> item.getProduct()
juice 5 2
```

```
>>> f = open("//home//nipun//lemon.txt")
>>> print(f)
<_io.TextIOWrapper name='//home//nipun//lemon.txt' mode='r' encoding='UTF-8'>
>>>
```

```
nipun@LAPTOP-1HNTD447: ~/folder1
nipun@LAPTOP-1HNTD447:~/folder1$ top
top - 17:23:48 up 7:21, 0 users, load average: 0.01, 0.07, 0.08
Tasks: 11 total, 1 running, 9 sleeping, 1 stopped, 0 zombie
%Cpu(s): 0.3 us, 0.3 sy, 0.0 ni, 99.2 id, 0.0 wa, 0.0 hi, 0.1 si, 0.0 st
MiB Mem : 12663.7 total, 6769.2 free, 1729.1 used, 4165.4 buff/cache
MiB Swap: 4096.0 total, 4096.0 free, 0.0 used. 10259.4 avail Mem

  PID USER      PR  NI   VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
    1 root        20   0   1024     600    468 S   0.0   0.0   0:02.37 init
   113 root        20   0    908      84     20 S   0.0   0.0   0:00.00 init
   114 root        20   0    908      92     20 S   0.0   0.0   0:00.02 init
   115 root        20   0 1680260 32852  13176 S   0.0   0.3   0:02.80 docker-desktop-
   125 root        20   0    908      92     20 S   0.0   0.0   0:00.00 init
   126 nipun       20   0 765032 47988  29312 S   0.0   0.4   0:02.53 docker
   865 root        20   0    908      84     20 S   0.0   0.0   0:00.00 init
   866 root        20   0    908      92     20 S   0.0   0.0   0:00.39 init
   867 nipun       20   0   10640  5724  3404 S   0.0   0.0   0:00.36 bash
  11919 root        20   0   10520  4264  3812 T   0.0   0.0   0:00.00 sudo
  12410 nipun       20   0   10884  3656  3128 R   0.0   0.0   0:00.00 top
```

Htop cmd

```
nipun@LAPTOP-1HNTD447: ~
1 [          0.0%] 4 [          0.0%] 7 [          0.0%] 10 [          0.0%]
2 [          0.0%] 5 [          0.0%] 8 [          0.0%] 11 [          0.0%]
3 [          0.0%] 6 [          0.0%] 9 [          0.0%] 12 [          0.0%]
Mem[|||]          96.0M/12.4G Tasks: 5, 1 thr; 1 running
Swp[          0K/4.00G] Load average: 0.00 0.00 0.00
Uptime: 00:07:07

  PID USER      PRI  NI   VIRT    RES    SHR S  %CPU  %MEM    TIME+  Command
    7 root        20   0    900    528    464 S   0.0   0.0   0:00.00 /init
    1 root        20   0    900    528    464 S   0.0   0.0   0:00.02 /init
    8 root        20   0    908      84     20 S   0.0   0.0   0:00.00 /init
    9 root        20   0    908      92     20 S   0.0   0.0   0:00.17 /init
   10 nipun       20   0 10124  5108  3324 S   0.0   0.0   0:00.11 -bash
   83 nipun       20   0 8164  3700  3036 R   0.0   0.0   0:00.00 htop

F1Help F2Setup F3Search F4Filter F5Tree F6SortBy F7Nice -F8Nice +F9Kill F10Quit
```

```
nipun@LAPTOP-1HNTD447: ~/folder1
nipun@LAPTOP-1HNTD447:~/folder1$ last

wtmp begins Fri Dec 3 14:19:11 2021
nipun@LAPTOP-1HNTD447:~/folder1$ ps
  PID TTY          TIME CMD
   867 pts/2    00:00:00 bash
 12414 pts/2    00:00:00 ps
nipun@LAPTOP-1HNTD447:~/folder1$ info

[2]+  Stopped                  info
nipun@LAPTOP-1HNTD447:~/folder1$ env
SHELL=/bin/bash
WSL_DISTRO_NAME=Ubuntu-20.04
NAME=LAPTOP-1HNTD447
PWD=/home/nipun/folder1
LOGNAME=nipun
HOME=/home/nipun
LANG=C.UTF-8
WSL_INTEROP=/run/WSL/866_interop
LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:mi=00:su=37;41:sg=30;43:ca=30;41:
tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lz4=01;31:*.lzh=01;31:*.l
zma=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;3
1:*.xz=01;31:*.zst=01;31:*.tztst=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.tz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.
war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wim=
01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm
=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=
01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=
01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35
:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=00;36:*.flac=00;36:*.m
4a=00;36:*.mid=00;36:*.midi=00;36:*.mka=00;36:*.mp3=00;36:*.mpc=00;36:*.ogg=00;36:*.ra=00;36:*.wav=00;36:*.oga=00;36:*.opus=00;36:*.spx
=00;36:*.xspf=00;36:
LESSCLOSE=/usr/bin/lesspipe %s %s
TERM=xterm-256color
```

```
nipun@LAPTOP-1HNTD447: ~/folder1
nipun@LAPTOP-1HNTD447:~/folder1$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
/dev/sdd        263174212    1925308 247810748   1% /
tmpfs           6483800      373264  6110536    6% /mnt/wsl
/dev/sdc        263174212    4507380 245228676   2% /mnt/wsl/docker-desktop-data/isocache
none           6483800       12    6483788   1% /mnt/wsl/docker-desktop/shared-sockets/host-services
/dev/sdb        263174212    124948 249611108   1% /mnt/wsl/docker-desktop/docker-desktop-proxy
/dev/loop0      342106      342106      0 100% /mnt/wsl/docker-desktop/cli-tools
tools          498952516   364319000 134633516  74% /init
none           6481716       0    6481716   0% /dev
none           6483800       12    6483788   1% /run
none           6483800       0    6483800   0% /run/lock
none           6483800       0    6483800   0% /run/shm
none           6483800       0    6483800   0% /run/user
tmpfs          6483800       0    6483800   0% /sys/fs/cgroup
drivers        498952516   364319000 134633516  74% /usr/lib/wsl/drivers
lib            498952516   364319000 134633516  74% /usr/lib/wsl/lib
C:\            498952516   364319000 134633516  74% /mnt/c
D:\            419745144   263160380 156584764  63% /mnt/d
nipun@LAPTOP-1HNTD447:~/folder1$
```

```
nipun@LAPTOP-1HNTD447: ~
D:\ 419745144 263160380 156584764 63% /mnt/d
nipun@LAPTOP-1HNTD447:~/folder1$ echo $SHELL
/bin/bash
nipun@LAPTOP-1HNTD447:~/folder1$ cd ,,
-bash: cd: ,,: No such file or directory
nipun@LAPTOP-1HNTD447:~/folder1$ cd ..
nipun@LAPTOP-1HNTD447:~$ ls
AbcImpex      array.sh      file.txt      hello2.txt    lime.txt      name.sh       nipun_playbook  shscripts
Hashmum       banana.txt    folder1       hobsdir       mix.txt       new           parent          test2
Zing          cat           git_test      homecontents.txt mycommands.sh new.sh.save    people.txt      world
allcontent.txt employees.txt hello.txt      lemon.txt     myfileswithvars.sh new.txt       practice
nipun@LAPTOP-1HNTD447:~$ ./name.sh
Welcome to shell scripting
AbcImpex      array.sh      file.txt      hello2.txt    lime.txt      name.sh       nipun_playbook  shscripts
Hashmum       banana.txt    folder1       hobsdir       mix.txt       new           parent          test2
Zing          cat           git_test      homecontents.txt mycommands.sh new.sh.save    people.txt      world
allcontent.txt employees.txt hello.txt      lemon.txt     myfileswithvars.sh new.txt       practice
Xa Kochi
Yes
./name.sh: line 13: q: command not found
nipun@LAPTOP-1HNTD447:~$ cat ./mycommands.sh
#!/bin/bash
echo "Executing commands in script..."
ls
pwd
ls -l
touch file.txt
echo "file.txt was created by a script" > file.txt
cat file.txt
nipun@LAPTOP-1HNTD447:~$
```

```
nipun@LAPTOP-1HNTD447: ~
GNU nano 4.8 mycommands.sh
#!/bin/bash
echo "Executing commands in script..."
ls
pwd
ls -l
touch file.txt
echo "file.txt was created by a script" > file.txt
cat file.txt

[ Read 9 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text   ^J Justify   ^C Cur Pos   M-U Undo     M-A Mark Text
^X Exit      ^R Read File  ^_ Replace   ^U Paste Text ^T To Spell  ^_ Go To Line M-E Redo     M-G Copy Text
```

```
nipun@LAPTOP-1HNTD447:~$ cat name.sh
#!/bin/bash
```

```
echo "Welcome to shell scripting"
ls
name=Xa
city=Kochi
echo "$name $city"
if [ $city == "Kochi" ]
    then echo "Yes"
else
    echo "No"
fi
q
```

```
nipun@LAPTOP-1HNTD447:~$ ls
AbcImpex      array.sh      file.txt     hello2.txt   lime.txt     name.sh      nipun_playbook  shscripts
Hashmum       banana.txt   folder1      hobsdir      mix.txt      new          parent         test2
Zing          cat          git_test    homecontents.txt  mycommands.sh  new.sh.save  people.txt     world
allcontent.txt employees.txt hello.txt    lemon.txt    myfileswithvars.sh  new.txt     practice

nipun@LAPTOP-1HNTD447:~$ nano myfileswithvars.sh
nipun@LAPTOP-1HNTD447:~$ cat array.sh
#!/bin/bash

# To declare static Array
arr=(prakhar ankit 1 rishabh manish abhinav)

# To print all elements of array
echo ${arr[@]}
echo ${arr[*]}

for item in "${arr[@]}"
do
    echo $item
done
nipun@LAPTOP-1HNTD447:~$ ./array.sh
prakhar ankit 1 rishabh manish abhinav
prakhar ankit 1 rishabh manish abhinav
prakhar
ankit
1
rishabh
manish
abhinav
nipun@LAPTOP-1HNTD447:~$
```

```
nipun@LAPTOP-1HNTD447:~$ nano input.sh
nipun@LAPTOP-1HNTD447:~$ chmod +x input.sh
nipun@LAPTOP-1HNTD447:~$ ./input.sh
Enter your name here:
nipun
Hello nipun, it is nice to meet you!
```

```
nipun@LAPTOP-1HNTD447:~$ cat .bash_aliases
alias lh='ls -h'
alias la='ls -a'
alias ll='ls -l'
alias hello='echo hello'
alias python='python3'
alias py='python3'
nipun@LAPTOP-1HNTD447:~$ py
Python 3.8.10 (default, Jun  2 2021, 10:49:15)
[GCC 9.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
```

```
nipun@LAPTOP-1HNTD447:~$ nano loop.sh
nipun@LAPTOP-1HNTD447:~$ chmod +x loop.sh
nipun@LAPTOP-1HNTD447:~$ ./loop.sh
1
2
3
4
nipun@LAPTOP-1HNTD447:~$ cat loop.sh
#!/bin/bash

for ((c=1; c<5; c++))
do
    echo $c
done
```

```
nipun@LAPTOP-1HNTD447:~$ nano hello.sh
nipun@LAPTOP-1HNTD447:~$ chmod +x hello.sh
nipun@LAPTOP-1HNTD447:~$ ./hello.sh
./hello.sh: line 7: syntax error: unexpected end of file
nipun@LAPTOP-1HNTD447:~$ nano hello.sh
nipun@LAPTOP-1HNTD447:~$ ./hello.sh
Hello
nipun@LAPTOP-1HNTD447:~$ cat hello.sh
#!/bin/bash
hello(){
    echo "Hello"
}

hello
```

```
nipun@LAPTOP-1HNTD447:~$ nano hello.sh
nipun@LAPTOP-1HNTD447:~$ cat hello.sh
#!/bin/bash
hello(){
    echo Hello $1
}

hello $1
nipun@LAPTOP-1HNTD447:~$ ./hello.sh Tom
Hello Tom
```

```
nipun@LAPTOP-1HNTD447:~$ bash -x ./hello.sh
+ hello
+ echo Hello
Hello
```