Using UNIX Basic Commands:

1. To display the current working directory, the command is:

   pwd

   The output is as follows.

   /home/trg1

```
[admin@hostname01 ~]$ pwd
/home/admin
[admin@hostname01 ~]$ █
```

2. Display the path to and name of your HOME directory.

```
[admin@hostname01 home]$ echo $HOME
/home/admin
```

3. Display the login name using which you have logged into the system

```
[admin@hostname01 home]$ whoami
admin
```

4. Display the hidden files of your current directory.

```
[admin@hostname01 ~]$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
[admin@hostname01 ~]$ ls -a
.   .bash_history  .bash_profile  .cache    Desktop    Downloads  .local     Music      Public     Video
..  .bash_logout   .bashrc        .config  Documents  .lesshsQ   .mozilla  Pictures  Templates
```

5. List the names of all the files in your home directory.

```
[admin@hostname01 home]$ ls
admin  vinsys
```

6. Using the long listing format to display the files in your directory.

```
[admin@hostname01 home]$ ls -l
total 4
drwx------. 14 admin  admin  4096 Jan  9 16:20 admin
drwx------.  3 vinsys vinsys   78 Aug 25  2022 vinsys
```

7. List the files beginning with chap followed by any number or any lower case alphabet. (Example , it should display all files whose names are like chap1, chap2, chap3 ...., chapa,ahapb,chapc,........)

```
[admin@hostname01 ~]$ ls chap[0-9a-z]*
chap1  chap2  chap3
```

8. Give appropriate command to create a directory called C_prog under your home directory. (Note: Check the directory using ls)

```
[admin@hostname01 ~]$ mkdir ~/C_prog
[admin@hostname01 ~]$ ls
chap1  chap2  chap3  C_prog  Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
```

9. Create the following directories under your home directory. (Note: Check using ls)

newdir

newdirectory

```
[admin@hostname01 home]$ mkdir ~/newdir; mkdir ~/newdirectory
[admin@hostname01 home]$ ls
admin  vinsys
[admin@hostname01 home]$ cd admin
[admin@hostname01 ~]$ ls
chap1  chap2  chap3  C_prog  Desktop  Documents  Downloads  Music  newdir  newdirectory  Pictures  Public  Templates  Videos
```

10. List the names of all the files, including the contents of the sub directories under your home directory.

```
[admin@hostname01 ~]$ tree ~
/home/admin
├── chap1
├── chap2
├── chap3
├── C_prog
├── Desktop
├── Documents
├── Downloads
│   └── photo-1603366615917-1fa6dad5c4fa.jpg
├── Music
├── newdir
├── newdirectory
├── Pictures
├── Public
├── Templates
```

11. Remove the directory called newdirectory from your working directory.

```
11 directories, 4 files
[admin@hostname01 ~]$ ls
chap1  chap2  chap3  C_prog  Desktop  Documents  Downloads  Music  newdir  newdirectory  Pictures  Public  Templates  Videos
[admin@hostname01 ~]$ cd ..
[admin@hostname01 home]$ rmdir ~/newdirectory
[admin@hostname01 home]$ ls
admin  vinsys
[admin@hostname01 home]$ cd admin
[admin@hostname01 ~]$ ls
chap1  chap2  chap3  C_prog  Desktop  Documents  Downloads  Music  newdir  Pictures  Public  Templates  Videos
[admin@hostname01 ~]$
```

12. Create a directory called temp under your home directory.

```
[admin@hostname01 home]$ rmdir ~/temp
[admin@hostname01 home]$ mkdir ~/temp
[admin@hostname01 home]$ cd admin
[admin@hostname01 ~]$ ls
chap1  chap2  chap3  C_prog  Desktop  Documents  Downloads  Music  newdir  Pictures  Public  temp  Templates  Videos
```

13. Remove the directory called newdir under your home directory and verify the above with the help of the directory listing command.

```
[admin@hostname01 home]$ rmdir ~/newdir
[admin@hostname01 home]$ cd admin
[admin@hostname01 ~]$ ls
chap1  chap2  chap3  C_prog  Desktop  Documents  Downloads  Music  Pictures  Public  temp  Templates  Videos
[admin@hostname01 ~]$
```

14. Create another directory directorynew under the temp directory.

```
[admin@hostname01 temp]$ mkdir directorynew
[admin@hostname01 temp]$ ls
directorynew  new
```

15. Change the directory to your home directory.

```
[admin@hostname01 temp]$ cd /home
[admin@hostname01 home]$ ls
admin  vinsys
```

16. From your home directory, change the directory to directorynew using relative and absolute path.

```
[admin@hostname01 home]$ cd admin/temp/directorynew
[admin@hostname01 directorynew]$
```

```
[admin@hostname01 home]$ cd admin/temp/directorynew
[admin@hostname01 directorynew]$ cd /home
[admin@hostname01 home]$ cd /home/admin/temp/directorynew
[admin@hostname01 directorynew]$
```

17. Remove the directory called c_prog, which is in your home directory.

```
[admin@hostname01 temp]$ rmdir ~/C_prog
[admin@hostname01 temp]$ cd ..
[admin@hostname01 ~]$ ls
admin  chap1  chap2  chap3  Desktop  directorynew  Documents  Downloads  Music  Pictures  Public  temp  Templates  Videos
[admin@hostname01 ~]$
```

18. Change to the directory /etc and display the files present in it.

```
[admin@hostname01 ~]$ cd /
[admin@hostname01 /]$ ls
afs  bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
[admin@hostname01 /]$ cd etc
[admin@hostname01 etc]$ ls
accountsservice          dbus-1                  gshadow-      mailcap                  profile           subuid-
adjtime                  dconf                   gss           makedumpfile.conf.sample profile.d         sudo.conf
aliases                  debuginfod              host.conf     man_db.conf              protocols         sudoers
alsa                     default                 hostname      mcelog                   pulse             sudoers.d
alternatives             depmod.d                hosts         microcode_ctl            qemu-ga           sudo-ldap.conf
anacrontab               dhcp                    hp            mime.types               ras               sysconfig
appstream.conf           DIR_COLORS              inittab       mke2fs.conf              rc.d              sysctl.conf
asound.conf              DIR_COLORS.lightbgcolor  inputrc       modprobe.d               rc.local          sysctl.d
at.deny                  dnf                     iproute2      modules-load.d           redhat-release    systemd
audit                    dnsmasq.conf            iscsi         motd                     request-key.conf  system-release
```

19. List the names of all the files that begin with a dot in the /usr/bin directory.

```
[admin@hostname01 bin]$ ls -d .*
.  ..
```

20. Create a file first.unix with the following contents.

    Hi! Good Morning everybody.

    Welcome to the First exercise on UNIX.

    Hope you enjoy doing the assignments.

```
[admin@hostname01 /]$ cd home/admin
[admin@hostname01 ~]$ gedit first.unix
[admin@hostname01 ~]$ ls
admin  chap2  Desktop       Documents  first.unix  Pictures  temp       Videos
chap1  chap3  directorynew  Downloads  Music       Public    Templates
[admin@hostname01 ~]$ nano first.unix
[admin@hostname01 ~]$ echo first.unix
first.unix
[admin@hostname01 ~]$ cat first.unix
Hi! Good morning everybody
Welcome to the First exercise on UNIX.
Hope you enjoy the assignments.
```

21. Copy the file first.unix in your home directory to first.unics.

    (Note: checked using ls, first.unix file also should exist along with first.unics)

```
[admin@hostname01 ~]$ cp first.unix first.unics
[admin@hostname01 ~]$ ls
admin  chap2  Desktop       Documents  first.unics  Music     Public  Templates
chap1  chap3  directorynew  Downloads  first.unix   Pictures  temp    Videos
[admin@hostname01 ~]$
```

22. List the contents of first.unix and first.unics with a single command.

```
[admin@hostname01 ~]$ cat -n first.unix first.unics
     1  Hi! Good morning everybody
     2  Welcome to the First exercise on UNIX.
     3  Hope you enjoy the assignments.
     4  Hi! Good morning everybody
     5  Welcome to the First exercise on UNIX.
     6  Hope you enjoy the assignments.
```

23. Create a new directory under the temp directory.

```
[admin@hostname01 temp]$ mkdir new
[admin@hostname01 temp]$ ls
directorynew  new
```

24. From your home directory, copy all the files to the directory created under the temp sub directory.

```
[admin@hostname01 ~]$ cp * temp/new
cp: -r not specified; omitting directory 'admin'
cp: -r not specified; omitting directory 'Desktop'
cp: -r not specified; omitting directory 'directorynew'
cp: -r not specified; omitting directory 'Documents'
cp: -r not specified; omitting directory 'Downloads'
cp: -r not specified; omitting directory 'Music'
cp: -r not specified; omitting directory 'Pictures'
cp: -r not specified; omitting directory 'Public'
cp: -r not specified; omitting directory 'temp'
cp: -r not specified; omitting directory 'Templates'
cp: -r not specified; omitting directory 'Videos'
[admin@hostname01 ~]$ cd temp/new
[admin@hostname01 new]$ ls
admin  chap1  chap2  chap3  first.unics  first.unix
```

25. Move the file first.unix to the directory temp as second.unix

```
[admin@hostname01 ~]$ mv first.unix temp/second.unix
[admin@hostname01 ~]$ ls
admin   chap2  Desktop       Documents  first.unics  Pictures  temp        Videos
chap1   chap3  directorynew  Downloads  Music        Public    Templates
[admin@hostname01 ~]$ cd temp
[admin@hostname01 temp]$ ls
directorynew  new  second.unix
```

26. Remove the file called first.unics from the home directory.

```
[admin@hostname01 ~]$ ls
admin   chap2  Desktop       Documents  first.unics  Pictures  temp        Videos
chap1   chap3  directorynew  Downloads  Music        Public    Templates
[admin@hostname01 ~]$ rm first.unics
[admin@hostname01 ~]$ ls
admin   chap1  chap2  chap3  Desktop  directorynew  Documents  Downloads  Music  Pictures  Public  temp  Templates  Videos
```

27. Change your directory to temp and issue the command rm *. What do you observe?

```
[admin@hostname01 temp]$ ls
directorynew   new   second.unix
[admin@hostname01 temp]$ rm *
rm: cannot remove 'directorynew': Is a directory
rm: cannot remove 'new': Is a directory
[admin@hostname01 temp]$ ls
directorynew   new
[admin@hostname01 temp]$
```

28. Move all files whose names end with a, c and o to the HOME directory.

```
co   directorynew   mac   new   shiva   vois
[admin@hostname01 temp]$ mv *[aco] ~/
[admin@hostname01 temp]$ ls
directorynew   new   vois
[admin@hostname01 temp]$ cd /home/admin
[admin@hostname01 ~]$ ls
admin   chap2   co          directorynew   Downloads   Music      Public   temp        Videos
chap1   chap3   Desktop   Documents        mac           Pictures   shiva    Templates
[admin@hostname01 ~]$
```

29. Copy all files that end with a 'UNIX' to the temp directory.

```
[admin@hostname01 temp]$ cd new
[admin@hostname01 new]$ ls
admin   chap1   chap2   chap3   first.unics   first.unix
[admin@hostname01 new]$ cp *unix /home/admin/temp
[admin@hostname01 new]$ cd /home/admin/temp
[admin@hostname01 temp]$ ls
directorynew   first.unix   new   vois
```

30. Issuing a single command, remove all the files from the directory temp and the directory itself.

```
[admin@hostname01 temp]$ rm -r *
[admin@hostname01 temp]$ ls
[admin@hostname01 temp]$ ls
```

31. Try commands cp and mv with invalid number of arguments and note the results.

```
[admin@hostname01 temp]$ mv tp tq
mv: cannot stat 'tp': No such file or directory
[admin@hostname01 temp]$ cd ..
[admin@hostname01 ~]$ ls
admin   chap2   co          directorynew   Downloads   mac           new         Public   temp        Videos
chap1   chap3   Desktop   Documents        first.unix   Music   Pictures   shiva    Templates   vois
[admin@hostname01 ~]$ cp mac
cp: missing destination file operand after 'mac'
```

32. Use the cat command to create a file friends, with the following data:

Madhu	6966456	09/07/68
Jamil	2345215	08/09/67
Ajay	5546785	01/04/66
Mano	7820022	09/07/68
David	8281292	09/09/60
Simmi	7864563	12/12/70
Navin	2224311	30/05/68

The fields should be separated by a tab.

```
[admin@hostname01 ~]$ cat > friends <<EOF
> Madhu 6966456 09/07/68
Jamil    2345215 08/09/67
Ajay     5546785 01/04/66
Mano     7820022 09/07/68
David    8281292 09/09/60
Simmi    7864563 12/12/70
Navin    2224311 30/05/68
EOF
[admin@hostname01 ~]$ ls
```

33. Display contents of the file friends.

```
[admin@hostname01 ~]$ cat friends
Madhu    6966456 09/07/68
Jamil    2345215 08/09/67
Ajay     5546785 01/04/66
Mano     7820022 09/07/68
David    8281292 09/09/60
Simmi    7864563 12/12/70
Navin    2224311 30/05/68
[admin@hostname01 ~]$ █
```

34. Copy contents of friends to newfriend without using the cp command.

```
[admin@hostname01 ~]$ cat friends > newfriend
[admin@hostname01 ~]$ cat newfriend
Madhu    6966456 09/07/68
Jamil    2345215 08/09/67
Ajay     5546785 01/04/66
Mano     7820022 09/07/68
David    8281292 09/09/60
Simmi    7864563 12/12/70
Navin    2224311 30/05/68
```

35. Display contents of the file friends and newfriends in a single command.

```
[admin@hostname01 ~]$ cat friends newfriend
Madhu    6966456 09/07/68
Jamil    2345215 08/09/67
Ajay     5546785 01/04/66
Mano     7820022 09/07/68
David    8281292 09/09/60
Simmi    7864563 12/12/70
Navin    2224311 30/05/68
Madhu    6966456 09/07/68
Jamil    2345215 08/09/67
Ajay     5546785 01/04/66
Mano     7820022 09/07/68
David    8281292 09/09/60
Simmi    7864563 12/12/70
Navin    2224311 30/05/68
[admin@hostname01 ~]$
```

36. Find all users currently working on the system and store the output in a file named
    as users.

```
Navin    2224311 30/05/68
[admin@hostname01 ~]$ who
admin     seat0         2025-01-09 11:48 (login screen)
admin     tty2          2025-01-09 11:48 (tty2)
[admin@hostname01 ~]$ whoami
admin
[admin@hostname01 ~]$ who > users
[admin@hostname01 ~]$ cat users
admin     seat0         2025-01-09 11:48 (login screen)
admin     tty2          2025-01-09 11:48 (tty2)
[admin@hostname01 ~]$
```

37. Append contents of friends file to the file, users.

```
[admin@hostname01 ~]$ cat friends >> users
[admin@hostname01 ~]$ cat users
admin     seat0          2025-01-09 11:48 (login screen)
admin     tty2           2025-01-09 11:48 (tty2)
Madhu     6966456 09/07/68
Jamil     2345215 08/09/67
Ajay      5546785 01/04/66
Mano      7820022 09/07/68
David     8281292 09/09/60
Simmi     7864563 12/12/70
Navin     2224311 30/05/68
[admin@hostname01 ~]$
```

> for overrride

>> for append

38. Display current system date and time and record your observations. How is the time displayed?

```
[admin@hostname01 ~]$ date
Fri Jan 10 02:08:07 AM IST 2025
```

39. Display calendar for the month and year of your birth.

```
[admin@hostname01 ~]$ cal 9 2002
   September 2002
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
```

40. Try following commands and record your observations.

date "+ %"

date "+%m"

date "+%D"

date "+%/%Training Activity"

date "+%Training Activity"

date "+%r"

```
[admin@hostname01 ~]$ date "+"

[admin@hostname01 ~]$ date"+%"
bash: date+%: command not found...
[admin@hostname01 ~]$ date "+%"
%
[admin@hostname01 ~]$ date "+%m"
01
[admin@hostname01 ~]$ date "+%D"
01/10/25
[admin@hostname01 ~]$ date "+%/%Training Activity"
%/02:18:58raining Activity
[admin@hostname01 ~]$ date "+%Training Activity"
02:19:58raining Activity
[admin@hostname01 ~]$ date "+%r"
02:20:44 AM
[admin@hostname01 ~]$
```

Using Pipes and Filters:

1: Redirect the content of the help document ls, into a file called as lsdoc.

2: Display the content of the lsdoc page wise.

3: Create a file data.txt using input redirection.

4: Display data.txt.

5: Remove the file data.txt.

6: Use error redirection to display data.txt, if any error stores it in errorlog.txt

7: Display errorlog file.