

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

```
bash: whoami: command not found...
[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  Videos
.. .bash_logout  .bashrc        .config  Documents  .lessshsQ  .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
[admin@hostname01 ~]$

```

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 mclog 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 dnf inputrc modprobe.d rc.local sysctl.d
at.deny dnsmasq.conf iproute2 modules-load.d redhat-release systemd
audit dnsmasq.conf iscsi motd request-key.conf system-release
[admin@hostname01 etc]$
```

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.

```
cd 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
[admin@hostname01 temp]$
```

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 override

>> 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"

Using Pipes and Filters:

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

```
[admin@hostname01 ~]$ ls --help > lsdoc
```

2: Display the content of the lsdoc page wise.

```
[admin@hostname01 ~]$ less lsdoc
```

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

```
[admin@hostname01 ~]$ cat > data.txt  
Hi this is shivam's file  
[admin@hostname01 ~]$
```

4: Display data.txt.

```
[admin@hostname01 ~]$ cat data.txt  
Hi this is shivam's file  
[admin@hostname01 ~]$
```

5: Remove the file data.txt.

```
[admin@hostname01 ~]$ rm data.txt  
[admin@hostname01 ~]$
```

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

```
[admin@hostname01 ~]$ cat data.txt 2> errorlog.txt
```

7: Display errorlog file.

```
[admin@hostname01 ~]$ cat errorlog.txt  
cat: data.txt: No such file or directory
```