Using UNIX Basic Commands:

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

   pwd

   The output is as follows.

   /home/trg1

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

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

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

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

4. Display the hidden files of your current directory.

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

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

```
[admin@hostname01 ~]$ ls ~
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
[admin@hostname01 ~]$
```

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

```
[admin@hostname01 ~]$ ls -1
Desktop
Documents
Downloads
Music
Pictures
Public
Templates
Videos
[admin@hostname01 ~]$
```

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 ~]$ ls ~
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 ~]$ mkdir ~/newdir
[admin@hostname01 ~]$ mkdir ~/newdirectory
[admin@hostname01 ~]$ ls ~
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 ~]$ ls -R ~
/home/admin:
C_prog  Desktop  Documents  Downloads  Music  newdir  newdirectory  Pictures  Public  Templates  Videos

/home/admin/C_prog:

/home/admin/Desktop:

/home/admin/Documents:

/home/admin/Downloads:
photo-1603366615917-1fa6dad5c4fa.jpg

/home/admin/Music:

/home/admin/newdir:

/home/admin/newdirectory:
```

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

```
[admin@hostname01 ~]$ rmdir ~/newdirectory
[admin@hostname01 ~]$
```

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

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

14. Create another directory directorynew under the temp directory.

```
[admin@hostname01 ~]$ mkdir ~/temp/directorynew
```

15. Change the directory to your home directory.

```
[admin@hostname01 ~]$ cd /home
[admin@hostname01 home]$
```

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

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

```
[admin@hostname01 home]$ rmdir ~/C_prog
```

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

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

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

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.

```
 GNU nano 5.6.1                                  first.unix
HI! Good Morning everybody. Welcome to the First exercise on UNIX. Hope you enjoy doing the assignment.
```

```
[admin@hostname01 ~]$ cat first.unix
HI! Good Morning everybody. Welcome to the First exercise on UNIX. Hope you enjoy doing the assignment.
```

21. Copy the file first.unix in your home dire ctory 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
Desktop  directorynew  Documents  Downloads  first.unics  first.unix  Music  Pictures  Public  temp  Templates  Videos
```

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

```
[admin@hostname01 ~]$ cat first.unix first.unics
HI! Good Morning everybody. Welcome to the First exercise on UNIX. Hope you enjoy doing the assignment.
HI! Good Morning everybody. Welcome to the First exercise on UNIX. Hope you enjoy doing the assignment.
```

23. Create a new directory under the temp directory.

```
[admin@hostname01 temp]$ mkdir new2
[admin@hostname01 temp]$ ls
directorynew  new2
[admin@hostname01 temp]$
```

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

```
[admin@hostname01 ~]$ cd /home/admin/temp/new2
[admin@hostname01 new2]$ ls
first.unics  first.unix
```

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

```
[admin@hostname01 temp]$ ls
directorynew  new2  second.unix
```

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

```
[admin@hostname01 temp]$ cd /home
[admin@hostname01 home]$ ls
admin  vinsys
[admin@hostname01 home]$ cd admin
[admin@hostname01 ~]$ ls
Desktop  directorynew  Documents  Downloads  first.unics  Music  Pictures  Public  temp  Templates  Videos
[admin@hostname01 ~]$ rm first.unics
[admin@hostname01 ~]$ ls
Desktop  directorynew  Documents  Downloads  Music  Pictures  Public  temp  Templates  Videos
[admin@hostname01 ~]$
```

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

```
[admin@hostname01 temp]$ rm *
rm: cannot remove 'directorynew': Is a directory
rm: cannot remove 'new2': Is a directory
[admin@hostname01 temp]$ ls
directorynew  new2
[admin@hostname01 temp]$
```

Removed all the files except directories

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

```
[admin@hostname01 temp]$ touch co abha mac
[admin@hostname01 temp]$ ls
abha  co  directorynew  mac  new2
[admin@hostname01 temp]$ touch vois
[admin@hostname01 temp]$ ls
abha  co  directorynew  mac  new2  vois
[admin@hostname01 temp]$ mv *[aco] ~/
[admin@hostname01 temp]$ ls
directorynew  new2  vois
[admin@hostname01 temp]$ cd /home
[admin@hostname01 home]$ cd /admin
bash: cd: /admin: No such file or directory
[admin@hostname01 home]$ cd admin
[admin@hostname01 ~]$ ls
abha  co  Desktop  directorynew  Documents  Downloads  mac  Music  Pictures  Public  temp  Templates  Videos
[admin@hostname01 ~]$
```

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

```
[admin@hostname01 ~]$ cd /home/admin/temp/new2
[admin@hostname01 new2]$ ls
first.unics  first.unix
[admin@hostname01 new2]$ cp *unix /home/admin/temp
[admin@hostname01 new2]$ ls
first.unics  first.unix
[admin@hostname01 new2]$ cd /home/admin/temp
[admin@hostname01 temp]$ ls
directorynew  first.unix  new2  vois
[admin@hostname01 temp]$
```

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

```
[admin@hostname01 ~]$ cd /home/admin/temp
[admin@hostname01 temp]$ rm -r *
[admin@hostname01 temp]$ ls
[admin@hostname01 temp]$
```

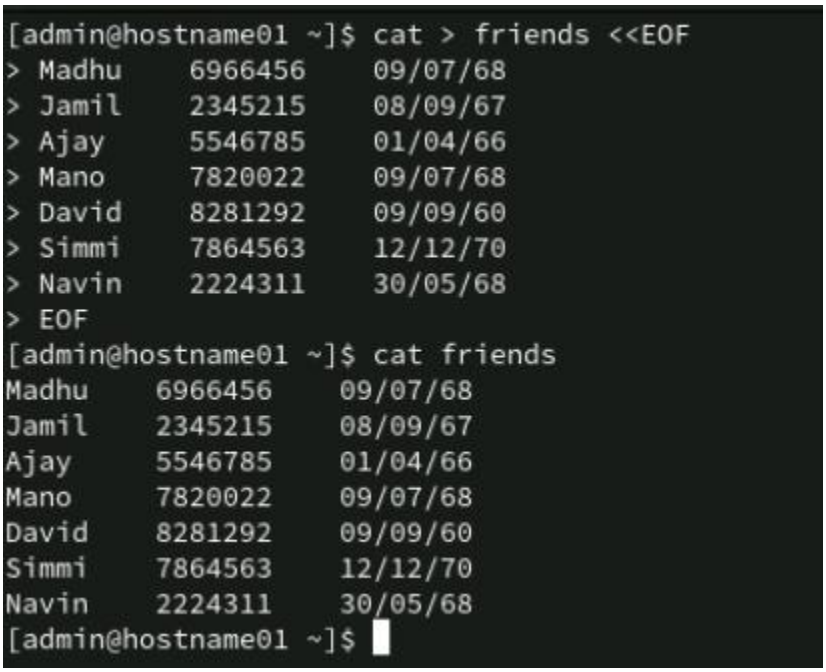
31. Try commands cp and mv with invalid number of arguments and note the results.

```
[admin@hostname01 home]$ mv file1
mv: missing destination file operand after 'file1'
Try 'mv --help' for more information.
[admin@hostname01 home]$ cp file1
cp: missing destination file operand after 'file1'
Try 'cp --help' for more information.
[admin@hostname01 home]$
```

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.



33. Display contents of the file friends.

```
[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 ~]$ 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 ~]$
```

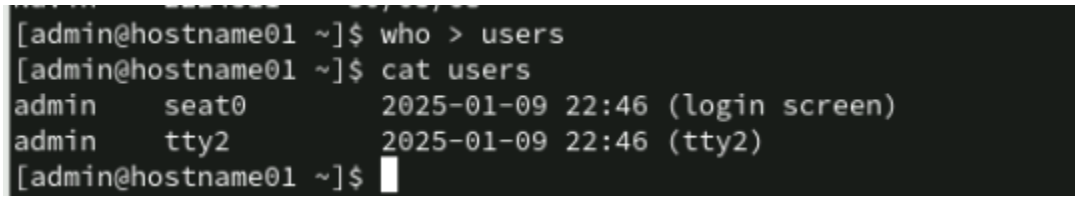
34. Copy contents of friends to newfriend without using the cp command.

```
[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
```

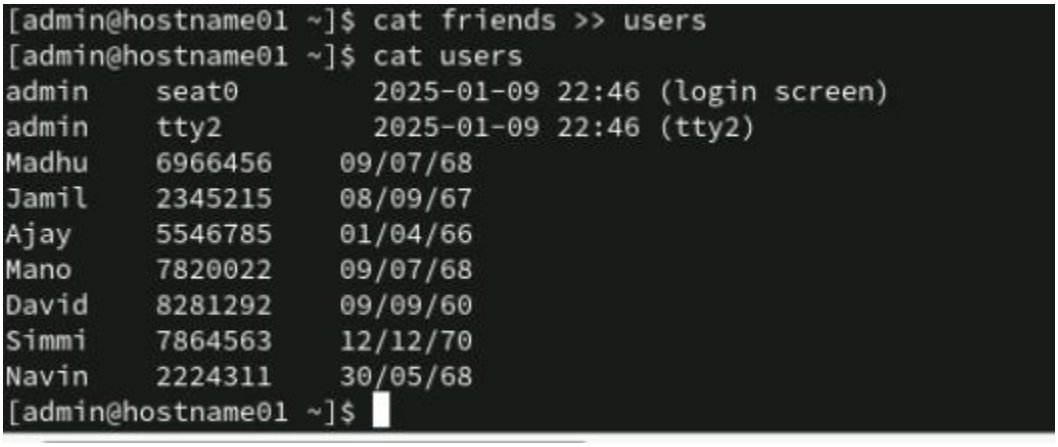
35. Display contents of the file friends and newfriends in a single command.

```
[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
```

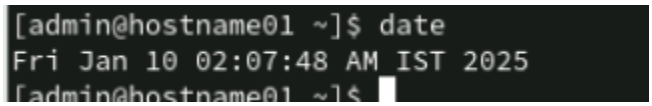
36. Find all users currently working on the system and store the output in a file named as users.



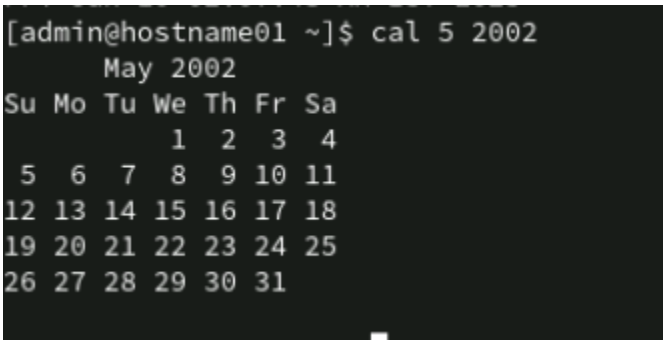
37. Append contents of friends file to the file, users.



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

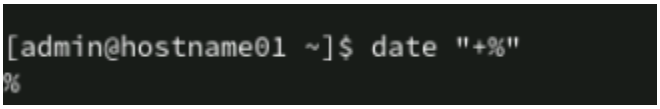


39. Display calendar for the month and year of your birth.

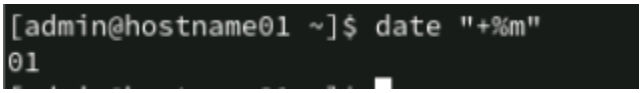


40. Try following commands and record your observations.

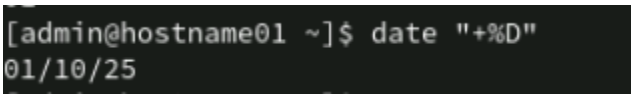
date “+ %”



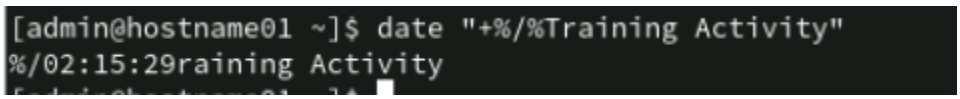
date “+%m”



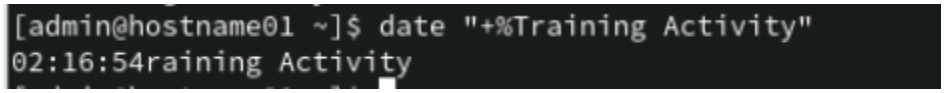
date “+%D”



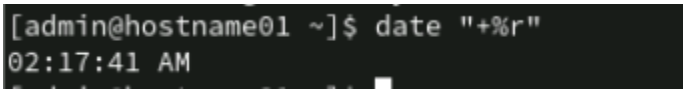
date “+%/%Training Activity”



date “+%Training Activity”



date “+%r”



Using Pipes and Filters:

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

2: Display the content of the lsdoc page wise.

```
Usage: ls [OPTION]... [FILE]...
List information about the FILEs (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.
  -a, --all                  do not ignore entries starting with .
  -A, --almost-all           do not list implied . and ..
      --author               with -l, print the author of each file
  -b, --escape               print C-style escapes for nongraphic characters
      --block-size=SIZE      with -l, scale sizes by SIZE when printing them;
                               e.g., '--block-size=M'; see SIZE format below
  -B, --ignore-backups       do not list implied entries ending with ~
  -c                         with -lt: sort by, and show, ctime (time of last
                               modification of file status information);
                               with -l: show ctime and sort by name;
                               otherwise: sort by ctime, newest first
  -C                         list entries by columns
      --color[=WHEN]         colorize the output; WHEN can be 'always' (default
:
```

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

```
[admin@hostname01 ~]$ cat > data.txt
I have started working in VOIS [admin@hostname01 ~]$
```

4: Display data.txt.

```
I have started working in VOIS
```

5: Remove the file data.txt.

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

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
[admin@hostname01 ~]$
```