1. To check the version of your name
   uname -r

2. To check OS
   uname

3. The man command in linux is used to display the manual page for any command
   The manual page contains other system utilities information also.
   The man page contains detailed information about how a command can be used and what are the various arguments that command has

   man command

   man uname
   man mkdir

4. **pwd:**
   pwd starts for the print working directory . It will print the full path of your current working directory . This command is useful for navigating through your system file structure.

   pwd

5. Check the version of pwd

   /bin/pwd - -version

6. To clear the screen

   clear

7. cal command is used to display the calendar for the given month and year . If you simply type cal , it will display the current month .

   cal

   To display calendar for specified month and year
   cal -m 2 2022

   To display calendar for current year
   cal -m 2

8. To display the calendar vertically , cal displays the calendar horizontally.

   Ncal

9. Date command displays the current date in linux

   date

10. whoami -
    This command is used to display the current user id and username of the user who is currently logged in . This will print the username of the user who is running the command.

    This command is useful when a number of users have logged in and you just want to know which user's account is currently using the system.

    whoami

11. whatis -
    whatis command is used to get one line of description of any command . This can be used for quick reference

    When you don’t know any command and don’t want to go to the manual page you use whatis.

    whatis

12. w -
    w command is used to display information about currently logged in users and their processes .

    When you type w command you will get information such as username , terminal , login session , the time they logged in and the current system load average.

    This command can be used when you have multiple users and you want to see who is currently using the system , what they are doing and how long they have been logged in.

    This command also helps you to check login history and activities of a user.

    w

13. To go to root user (i.e admin)
    To create new user , we need to login to root

    sudo -i

14. To add new user , we use this command **adduser username**

    adduser cdac

    To switch to the new user/different account we use **su username**
    su cdac

15. ps command will show all the processes that are running

    ps

16. ps aux -

    This command will display list of processes that is running on your system with additional information such as cpu and memory usage .

    ps aux

17. history -

    history command will list all the commands that you have previously used

    history

18. mkdir -

    The mkdir command allows you to create new directory in the file system

    mkdir directory_name

    When the permission is denied to create the directory , use below command

    sudo mkdir directory_name

    When we want to create multiple directories in single command ,

    sudo mkdir directory_name1 directory_name2

19. To get list of directories

    sudo ls

    sudo mkdir -p t4/t5/t6

We use curly brace {} to group directories

If we want to create directories on same level ,

mkdir -p t10/{a/{a1,a2,a3},b/{b1,b2,b3}}

If we want to create directories as parent directories ,

mkdir -p t10/{a/{a1/a2/a3},b/{b1/b2/b3}}

20. cd -

cd command is used to change the directory

If we simply type cd , it will move to home directory
cd

If we want to move to some other directory from home directory , use below command,

cd directory_name

To move back from current directory ,

cd ..

cd -
will move you to previous working directory

cd ~
will move you to home directory

cd /
will move you to system's working directory

cd ~ user
will move the user directory . This will work only when you are working in the root directory .

ls command will show a list of files/directories .

We can check the version of ls using below command ,
ls - - version

ls -l
shows files / directories , size , modified date , time, files and folder names , owner of the files and its permission.

ls -a
This command contains all the list of hidden files(hidden files starts with '.' and '..')

ls -lh
Displays all the information in human readable format

ls -lS
Displays all the information in sorted order(order by size of files and directories)

Another way to do the sorting ,
ls -S -l

ls -i
This checks for inodes (its a data structure that stores various information about files in linux such as the access modes and the owner file size , type , number of links)

ls -R
Shows the list in recursive order

ls - lt
This shows the list of files and directories by modified date in ascending order

ls -d */
This command will list you only the directories

ls ~
This contains list of directories and files that are present in home directory

ls *
This command will show you list of directories and their sub directories

ls -S
This will show you files and directories (sorting is done by date of time of file creation / directory creation) in descending order

ls -n
This command will show you user id (UId), group id(GId) of a file / directory

ls -G
This will give you the list of files and directories those who belong to same group

File Creation

How to create a file

1. touch:
   touch f.txt

2. cat
   cat > new.txt

   - Through cat command will create an empty file and you need to add contents in the text file

   - Once u have added the contents in the text file , PRESS CTRL + D to save the file

   - And to check the file whether it is created or not , write the command
     ls -l filename.txt

   - And to see the content of the file, write the command ,
     cat filename

3. echo command

   echo command will create a file in the current directory but we need to add the content / text in line of the command.

   echo “content” > filename.txt

   Similarly you can create a file using printf method

   printf “content” > filename.txt

4. nano

   nano filename.txt

5. VI Editor

   vi filename.txt

   a. To insert any text we need to enter into insert mode by pressing i

b. When you want to exit from the file , we have to PRESS ESC
c. When you want to exit from the file we have 2 modes
    1. Quit - :q
    2. Save and quit - :w
d. If we want to copy something , we PRESS CC and if you want to paste something , PRESS P
e. If you want to delete something PRESS DD
f. If you want to UNDO something PRESS u
g. To copy , paste , delete , undo we need to press the ESC button first.

6. VIM editor - It is similar to VI Editor

VI	VIM
It is the basic editor	It is advanced editor
Only available on Linux and Unix	Is available on other OS also Eg - Windows , MAC
VI editor doesn't provide multiple level of Undo	VIM editor provides multiple level of Undo

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Remove

Files:

To remove or delete files/directory we have rm command or we can use unlink command

rm filename.txt

To delete multiple files,

rm file1.txt file2.txt file3.txt

To delete all the files with txt extension ,

rm *.txt

To force delete ,

rm -f filename.txt

To prompt and delete

rm -i filename.txt

To delete directories ,

rmdir directory_name

To delete directories using rm

rm -d directory_name

To delete parent directories along with their sub directories

rm -r directory_name

To remove Directory forcefully

rm -rf directory_name

If file size is too big ,

rm *.log

Copy

Copy command is used to copy a file from source to destination.

cp sourcefile/oldfile destinationfile/newfile

cp -i filename

If you want to copy a directory from one place to another , use -r or -R

cp -r fullPathoftheDirectory (/home/abc) destination(/home/xyz)

To not overwrite an existing file

cp -n srcfile destfile

Another way of copying ,

rsync is used to synchronize/transfer the file between two locations.
This command is mostly used between two different machines

Syntax

rsync -a “filename from source location” “destination”

---

mv command :
We use this command to move a file or a directory from one place to another

mv source destination

Cat > f1.txt

File is transferred to directory ,
mv f1.txt t1

File to file transfer ,
cp f1.txt f2.txt

mv *.txt dest_directory

Multiple files can be moved
Mv “t1.txt” “t2.txt” “t3.txt” abc(dir)

Difference between cp and mv command

cp	**mv**
Used to copy file / directory	To move file / directory to a new location
	Can be used for renaming a file
Cp command will copy the file but it will not delete the original file	In mv command , it will delete the original file while moving

If you don't want to overwrite an existing file

mv -n srcfile destfile

To take a backup of file ,

mv - -backup -S 01 source/the file you want to backup destination

Another way to create backup is ,

mv -b source destination

cp - -backup -S 01 source/the file you want to backup destination

---

RENAME

Rename command is used to rename a file.

We can rename by using mv command

mv file_to_be_renamed new_file

Eg : mv f3.txt file3.txt

Rename VS Move(mv)

Rename	mv
Rename is more advanced than mv command , we can use regular expression	Mv command don't have regular exp

rename ‘s/^/cdac_/’ *.txt

cdac_new1.txt

Grep Command