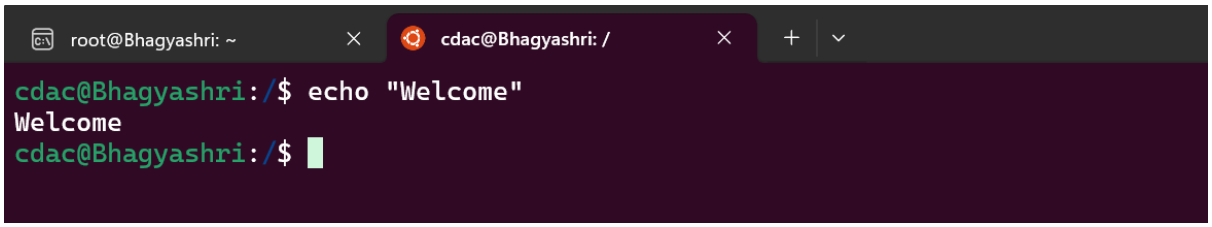
PART A

Q] What will the following commands do?

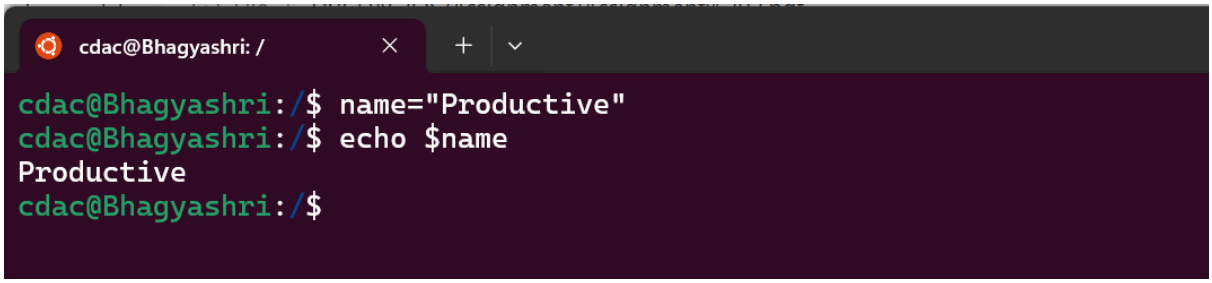
- echo "Hello, World!"

➔ echo command is use to print the String which is followed by command.



- name="Productive"

➔ This is a variable assignment command. Here String is been assigned to variable-name.

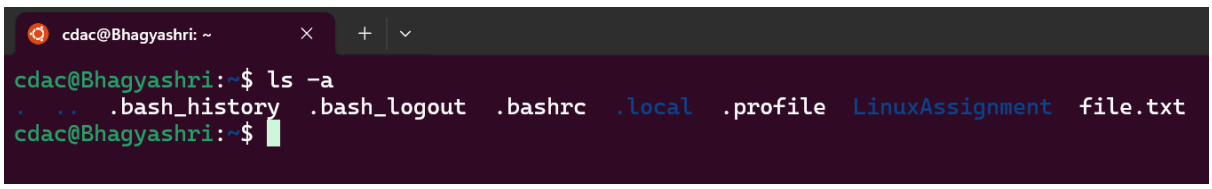


- touch file.txt

➔ The command touch file.txt is used to create a new, empty file named file.txt in the current directory.

- ls -a

➔ ls is command to list the files and directories from current directory and -a is option for it which tell 'all' i.e to include all directories and files along with hidden files also.

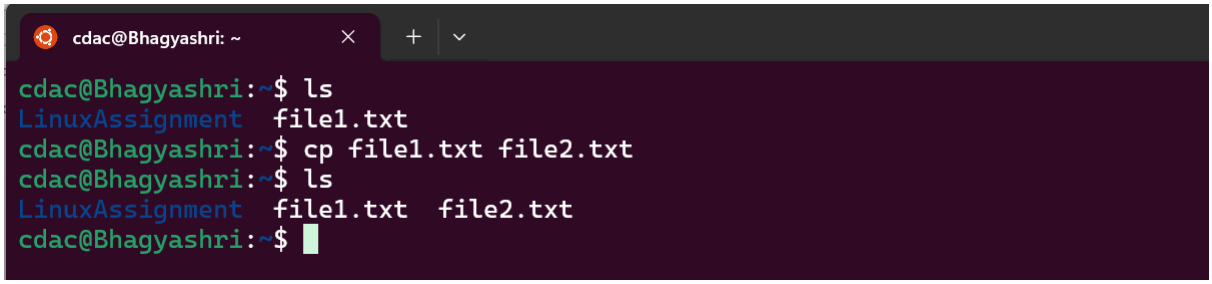


- rm file.txt

➔ rm command removes the file which mentioned after command.

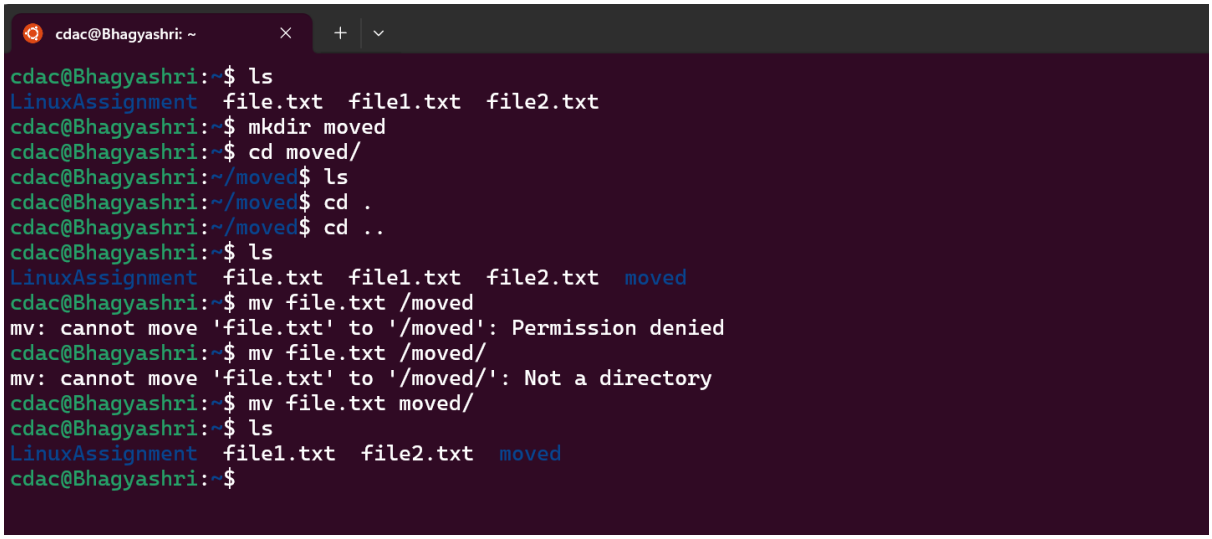
- cp file1.txt file2.txt

➔ cp commands copies the files and directories. First file is the source and Second file is the destination file.



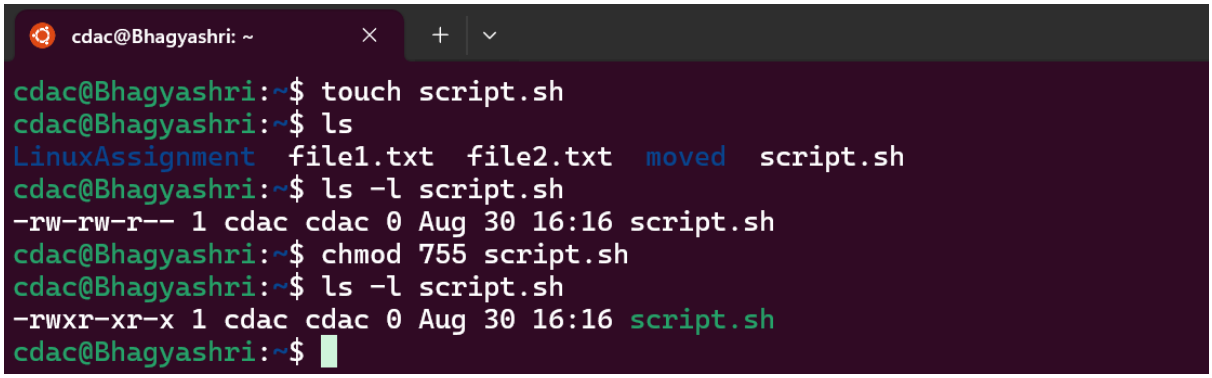
- mv file.txt /path/to/directory/

➔ mv commands move the file to destination path mentioned. Here file.txt is source file which is to be moved to destination /path/to/directory/.



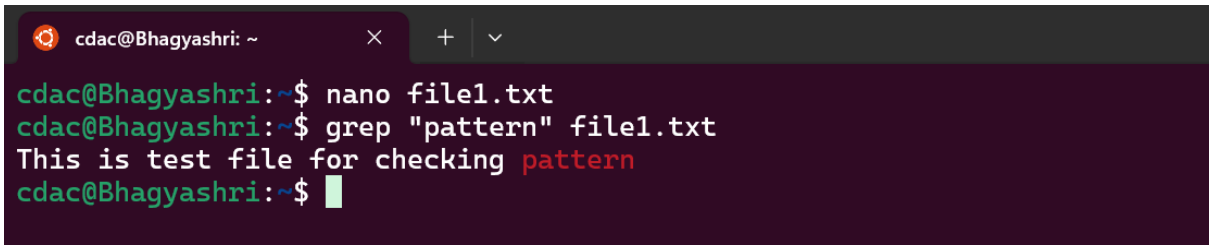
- chmod 755 script.sh

➔ chmod is command to change the permissions of how to access it.755 tells that make Owner(User) permissions: 7 (read, write, and execute).Group permissions: 5 (read and execute).Others permissions: 5 (read and execute) for the script.sh file.



- grep "pattern" file.txt

  ➔ grep is command that stands for "global regular expression print." It searches through files for lines that match a given pattern.The quoted text is to find in the file mentioned in the command.

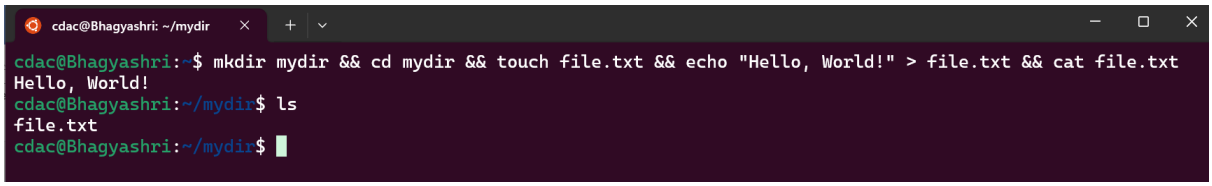


- kill PID

  ➔ The command kill PID is used to terminate or stop processes identified by its Process ID (PID).

- mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!" > file.txt && cat file.txt

  ➔ mkdir mydir-creates Directory name of mydir name.
  ➔ && is logical and operator
  ➔ cd command changes the directory
  ➔ touch command creates the file
  ➔ echo command prints the given statement to terminal
  ➔ cat command shows the content of file on terminal



- ls -l | grep ".txt"

  ➔ ls -l: Lists files and directories in the current directory , which includes detailed information.
  ➔ |: The pipe symbol takes the output of the command on its left (ls -l) and uses it as input to the command on its right (grep ".txt").
  ➔ grep ".txt": Searches for lines that contain the text .txt from the input it receives.

```
cdac@Bhagyashri: ~
cdac@Bhagyashri:~$ ls
LinuxAssignment  file1.txt  file2.txt  moved  mydir  script.sh
cdac@Bhagyashri:~$ ls -l | grep ".txt"
-rw-rw-r-- 1 cdac cdac   73 Aug 30 16:24 file1.txt
-rw-rw-r-- 1 cdac cdac   33 Aug 30 16:00 file2.txt
cdac@Bhagyashri:~$
```

- cat file1.txt file2.txt | sort | uniq

  ➔ cat file1.txt file2.txt: Concatenates the contents of file1.txt and file2.txt and outputs them.
  ➔ | (Pipe): Takes the output from the cat command and uses it as input for the sort command.
  ➔ Sort: Sorts the lines of the input text in ascending order.
  ➔ Uniq: Filters out duplicate lines.

```
cdac@Bhagyashri: ~
cdac@Bhagyashri:~$ cat file1.txt file2.txt | sort | uniq

Bye
Hello
Hie
This is assignment 1
This is assignment 2
This is test file for checking pattern
cdac@Bhagyashri:~$
```

- ls -l | grep "^d"

  ➔ This command filters the output to show only lines that start with d. In the context of ls -l, lines that start with d represent directories. The ^ symbol denotes the start of the line.

```
cdac@Bhagyashri:~$ ls -l
total 20
drwxrwxr-x 4 cdac cdac 4096 Aug 28 19:29 LinuxAssignment
-rw-rw-r-- 1 cdac cdac   73 Aug 30 16:24 file1.txt
-rw-rw-r-- 1 cdac cdac   25 Aug 30 16:47 file2.txt
drwxrwxr-x 2 cdac cdac 4096 Aug 30 16:08 moved
drwxrwxr-x 2 cdac cdac 4096 Aug 30 16:37 mydir
-rwxr-xr-x 1 cdac cdac    0 Aug 30 16:16 script.sh
cdac@Bhagyashri:~$ ls -l|grep "^d"
drwxrwxr-x 4 cdac cdac 4096 Aug 28 19:29 LinuxAssignment
drwxrwxr-x 2 cdac cdac 4096 Aug 30 16:08 moved
drwxrwxr-x 2 cdac cdac 4096 Aug 30 16:37 mydir
cdac@Bhagyashri:~$
```

- grep -r "pattern" /path/to/directory/

  ➔ The command `grep -r "pattern" /path/to/directory/` is used to search for a specific text pattern recursively within all files in a directory

- cat file1.txt file2.txt | sort | uniq –d

  ➔ The command cat file1.txt file2.txt | sort | uniq -d is used to find duplicate lines across two or more files.

- chmod 644 file.txt

  ➔ Chmod changes the permission of file, 644 is a numeric mode that sets the file permissions. The numbers represent permissions for the owner, group, and others.

```
cdac@Bhagyashri:~$ ls -l file.txt
-rw-rw-r-- 1 cdac cdac 0 Aug 30 22:01 file.txt
cdac@Bhagyashri:~$ chmod 644 file.txt
cdac@Bhagyashri:~$ ls -l file.txt
-rw-r--r-- 1 cdac cdac 0 Aug 30 22:01 file.txt
cdac@Bhagyashri:~$
```

- cp -r source_directory destination_directory

➔ -r option stands for "recursive." It tells cp to copy the directory and all of its contents, including any subdirectories and files within it.

```
cdac@Bhagyashri:~$ ls
LinuxAssignment  file.txt  file1.txt  file2.txt  moved  mydir  script.sh
cdac@Bhagyashri:~$ cp -r LinuxAssignment mydir
cdac@Bhagyashri:~$ cd LinuxAssignment/
cdac@Bhagyashri:~/LinuxAssignment$ ls
ASS2  docs  file1.txt
cdac@Bhagyashri:~/LinuxAssignment$ cd ..
cdac@Bhagyashri:~$ cd mydir/
cdac@Bhagyashri:~/mydir$ ls
LinuxAssignment  file.txt
cdac@Bhagyashri:~/mydir$
```

- find /path/to/search -name "*.txt"

➔ find: This command searches for files and directories within a specified location. /path/to/search is the directory where find will start searching. You can specify any directory path here. -name "*.txt"is option specifies the pattern to search for.

```
cdac@Bhagyashri:~$ find /home/cdac/ -name "*.txt"
/home/cdac/moved/file.txt
/home/cdac/file.txt
/home/cdac/LinuxAssignment/docs/file2.txt
/home/cdac/LinuxAssignment/file1.txt
/home/cdac/LinuxAssignment/ASS2/data.txt
/home/cdac/mydir/file.txt
/home/cdac/mydir/LinuxAssignment/docs/file2.txt
/home/cdac/mydir/LinuxAssignment/file1.txt
/home/cdac/mydir/LinuxAssignment/ASS2/data.txt
/home/cdac/file1.txt
/home/cdac/file2.txt
cdac@Bhagyashri:~$
```

- chmod u+x file.txt

➔ Chmod change the permissions,u+x allows to change permission of user and +x adds the execute permission

```
cdac@Bhagyashri:~$ ls -l
total 20
drwxrwxr-x 4 cdac cdac 4096 Aug 28 19:29 LinuxAssignment
-rw-r--r-- 1 cdac cdac    0 Aug 30 22:01 file.txt
-rw-rw-r-- 1 cdac cdac   73 Aug 30 16:24 file1.txt
-rw-rw-r-- 1 cdac cdac   37 Aug 30 21:59 file2.txt
drwxrwxr-x 2 cdac cdac 4096 Aug 30 16:08 moved
drwxrwxr-x 3 cdac cdac 4096 Aug 30 22:05 mydir
-rwxr-xr-x 1 cdac cdac    0 Aug 30 16:16 script.sh
cdac@Bhagyashri:~$ chmod u+x
chmod: missing operand after ‘u+x’
Try 'chmod --help' for more information.
cdac@Bhagyashri:~$ chmod u+x file.txt
cdac@Bhagyashri:~$ ls -l
total 20
drwxrwxr-x 4 cdac cdac 4096 Aug 28 19:29 LinuxAssignment
-rwxr--r-- 1 cdac cdac    0 Aug 30 22:01 file.txt
-rw-rw-r-- 1 cdac cdac   73 Aug 30 16:24 file1.txt
-rw-rw-r-- 1 cdac cdac   37 Aug 30 21:59 file2.txt
drwxrwxr-x 2 cdac cdac 4096 Aug 30 16:08 moved
drwxrwxr-x 3 cdac cdac 4096 Aug 30 22:05 mydir
-rwxr-xr-x 1 cdac cdac    0 Aug 30 16:16 script.sh
cdac@Bhagyashri:~$
```

- echo $PATH

➔ It helps the shell locate executable files without needing to specify their full path.

```
cdac@Bhagyashri:~$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
cdac@Bhagyashri:~$
```