MAWLANA BHASHANI SCIENCE AND TECHNOLOGY UNIVERSITY

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LAB REPORT

Lab Report No : 04
Lab Report name : File operation and permission
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Lab report – 04
Lab report Name - File operation and permission

Objectives:

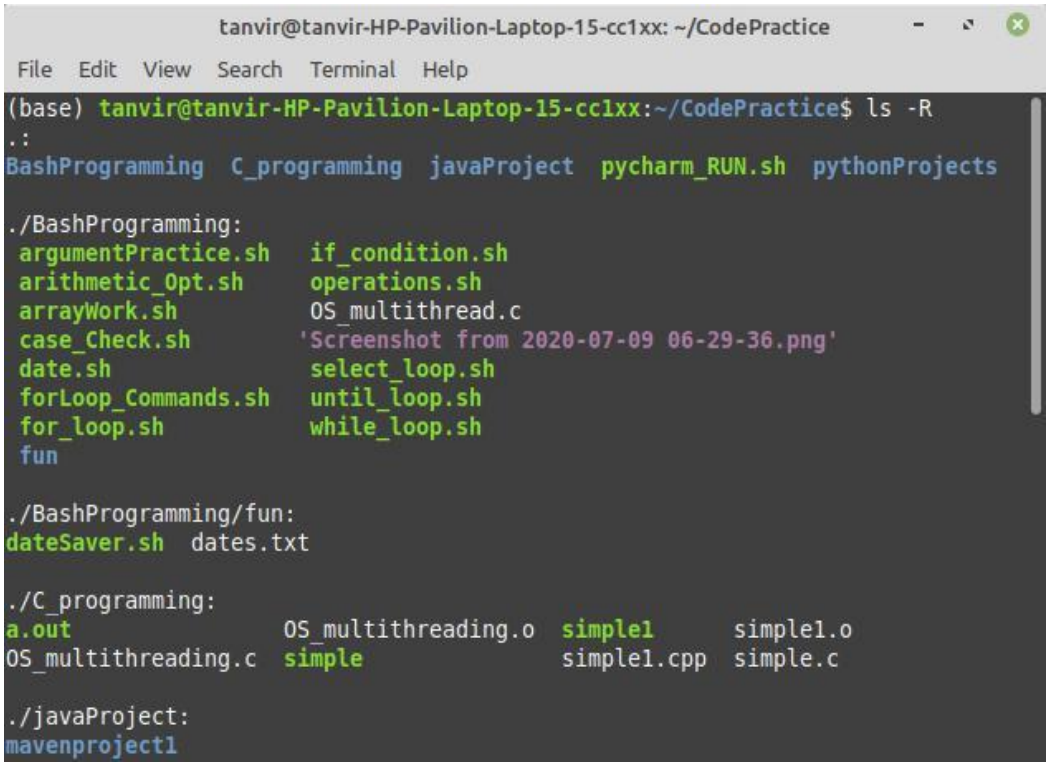
i. File operation
ii. File permission

File Operation : To use the Linux terminal like a pro, we'll need to know the basics of managing files and navigating directories.Different file operation is given below…

1. **ls** – List Files

The ls command lists the files in a directory. By default, ls lists files in the current directory.

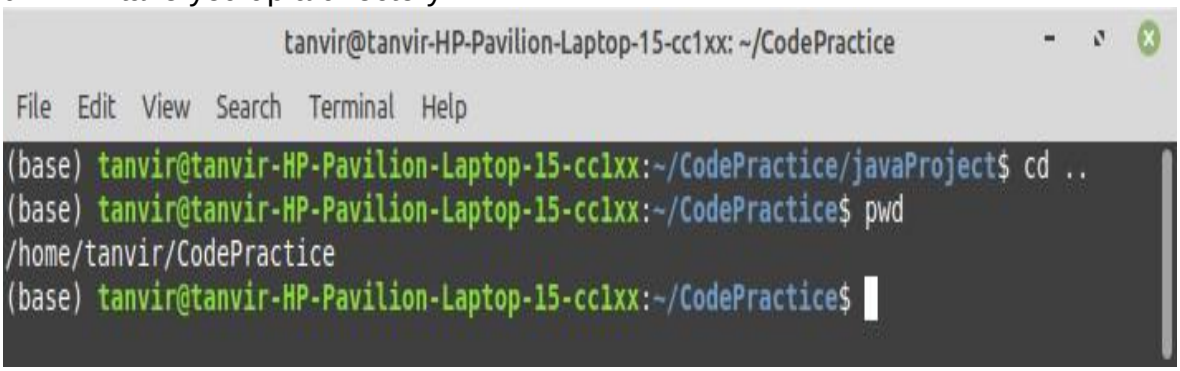
2. we can also list files recursively — that is, list all files in directories inside the current directory — with **ls -R**.



3. **cd** – Change Directory

The cd command changes to another directory. For example, cd Desktop will take you to your Desktop directory if you're starting from your home directory.

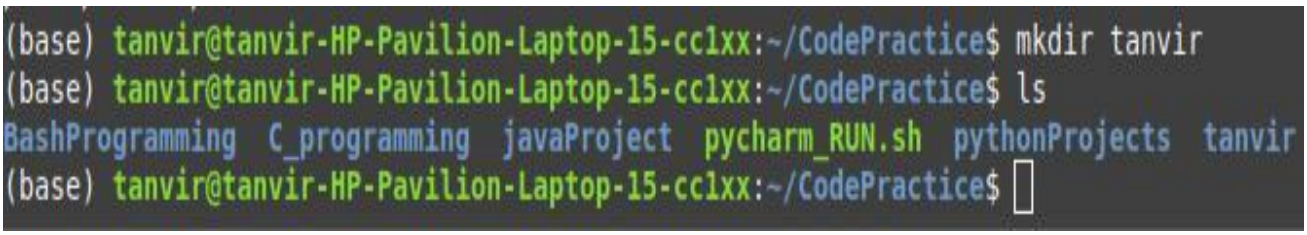
4. **cd . .** will take you up a directory.



5.**rmdir** – Remove Directories

The rmdir command removes an empty directory. rmdir directory would delete the directory named "directory" in the current directory.

6) **mkdir** – Make Directories
The mkdir command makes a new directory. mkdir example will make a directory with the name “example” in the current directory.



7) **ln** – Create Links
The ln command creates links. The most commonly used type of link is probably the symbolic link, which you can create with ln -s.

For example, the following command creates a link to our Downloads folder on our Desktop:

File Permissions:

There are 3 types of permissions:

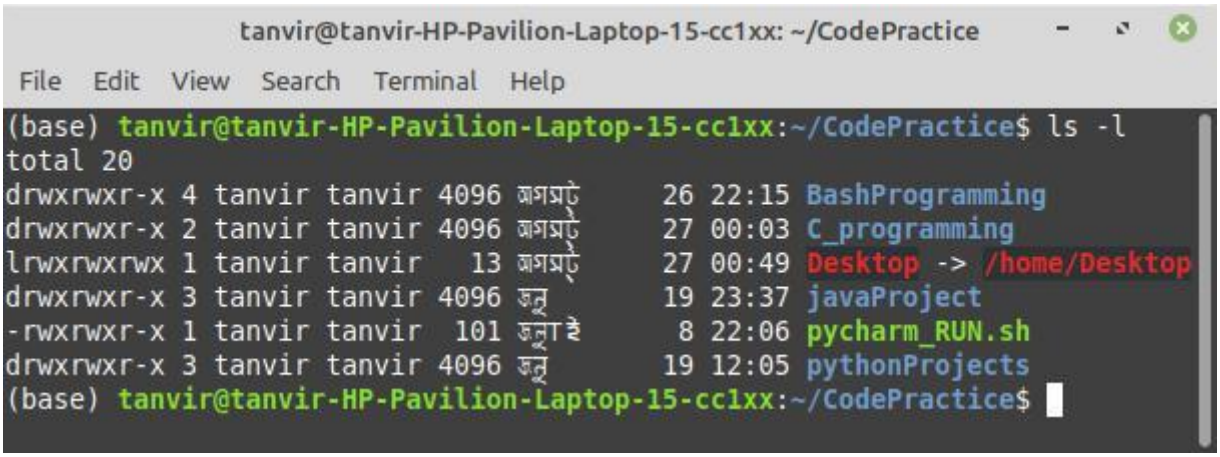
1) Read
2) Write
3) Execute permission

Read (r): this gives permission to merely open a file or folder and view its contents.

Write (w): this gives permission to overwrite, append-to or delete a file or folder.

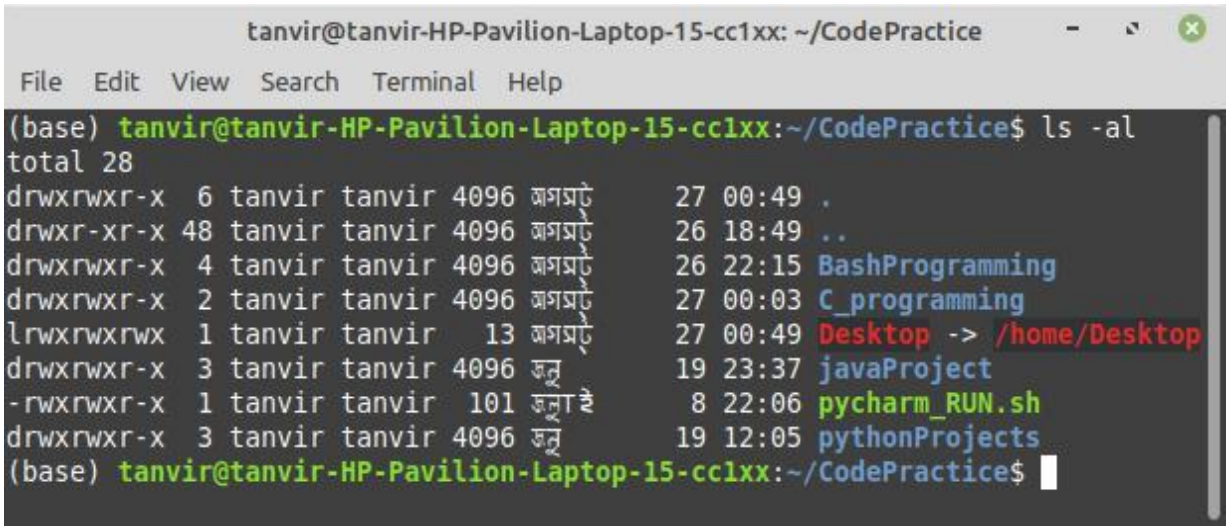
Execute (x): this gives permission to "run" a file. For example to run a script or a program.

So, how can we put this all into context? Let's have a look at the contents of a typical folder. I used the command ls -l to bring up this list:



we can also do this via the command-line. Go to a directory that has files in it and type the following command to view all files in a list:

ls -al



Next to each file and directory, we'll see a special section that outlines the permissions it has. It looks like this:

-rwx rw- r–

The r stands for "read," the w stands for "write," and the x stands for "execute." Directories will be start with a "d" instead of a "-". You'll also notice that there are 10 spaces which hold value. You can ignore the first, and then there are 3 sets of 3. The first set is for the owner, the second set is for the group, and the last set is for the world.

To change a file or directory's permissions, let's look at the basic form of the chmod command.

chmod [class][operator][permission] file

chmod [ugoa][+ or –] [rwx] file

u: This is for the owner.

g: This is for the group.
o: This is for all others.
a: This will change permissions for all of the above.

+: The plus sign will add the permissions which follow.

-: The minus sign will remove the permissions which follow.

r: Allows read access.

w: Allows write access.
x: Allows execution.

Conclusion : Files are the common storing system of any operating system. There are many kinds of files with their unique extentions like .txt , .c, .cpp, .bin, .java, .class, .py , .html , .js , .sh and many others. They are all different by nature. They all have their own purpose. But at one point they are similarly behaved .That is file permission. Without permission no file can be executed.

By this lab experiment we learnd how to list all files of any directory, create new files and delete them and many other file operations.
We have also learned how to go to any directory from command line and link them.

I think linux is more secure than windows operating system because they needs more precise permissions for each files. This made linux more stable and organized .

There are 3 types of permissions for 3 types of users . Read, write and execution are the permissions. The users are of 3 types – group , other user and all user.

In this lab experiment we have learned all the file permissions and user types of the file. Now we can simply change any file per mission by using the simple command **chmod.** This is really helpful command when working with files and securing them.