Linux Programming:

Assignment : 02

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1. **What does the command pwd, whoami, and hostname display?**

Ans :
i.pwd → Prints the present working directory, i.e., the full path of the folder you are currently in.

ii.whoami → Shows the username of the currently logged-in user.

iii.hostname → Displays the name of the computer (host machine) in the network.

2.Write the command to create a directory named "project" inside the /home/student folder and keep three .txt files into it. Give output snapshot.

Ans : cd /home/student

mkdir project
cd project
touch file1.txt file2.txt file3.txt

3.Explain the difference between absolute path and relative path with proper examples.

Ans : Absolute Path:
An absolute path is the complete path to a file or directory starting from the root directory /.
Example: /home/student/project/file1.txt

Relative Path:
A relative path specifies the location of a file or directory with respect to the current working directory.

Example: If the current directory is /home/student/, then the relative path to access the file would be project/file1.txt.

4.What command will give you the already executed command traces in the terminal?

Ans : The command is: history
This command displays the list of commands that have been executed in the terminal, along with their respective command numbers.

5.Compare the working functionality of find and locate command. Which one is faster and why?

Ans:

i. The find command searches for files in the directory structure in real time. It checks each directory and sub-directory, making it more accurate but slower. ii.The locate command searches files using a pre-built database created by updatedb. It is very fast but may not show newly created files until the database is updated. iii.The locate command is faster because it uses a pre-indexed database instead of scanning the entire directory structure.

6.Which command is used to modify file permissions in Linux? Give an example.

Ans : The command used to modify file permissions is:chmod
Example:
chmod 755 file1.txt

Here, the owner has full permissions (read, write, execute), while group members and others have read and execute permissions.

7.A file has permissions -rw-r--r--. What does this mean?

Ans :

i. - → It is a normal file (not a directory).

ii. rw- → The owner can read and write the file.

iii. r-- → Group members can only read the file.

iv.r-- → Others (all other users) can only read the file.

Thus, the file is writable only by the owner but readable by everyone.

8.Explain the difference between chown andchgrp with an example.

Ans:

The chown command changes the owner of a file.
Example:
chown user1 file1.txt
The chgrp command changes the group of a file.
Example:
chgrp staff file1.txt
Thus, chown is for ownership, while chgrp isfor group ownership.

9.A file needs to be accessible by multiple users but only writable by the owner. Howwill you set permissions?
Ans :
We can set the file permissions using the chmod command:**chmod 644 file1.txt**
This sets the permissions as follows:
Owner: Read and Write (rw-)
Group: Read-only (r--)

Others: Read-only (r--) Hence, the file can be read by multiple users but only the owner can modify it.

10.
How do you check the manual page for any Linux commands?

Ans : We can check the manual page using the man command.
Example: man ls
This command opens the manual page of ls and displays details such as usage, options, and description.