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

The pwd command shows where you currently are in the file system - it displays your present working directory path, like `/home/student`.

The whoami command tells you which user account you're logged in as - it simply prints your username, such as `student`.

The hostname command reveals your computer's network name - this shows what your system is called on the network, like `my-laptop`.

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

Ans:To create a directory called "project" in `/home/student` and add three text files inside it, you would run:

mkdir /home/student/project
cd /home/student/project
touch file1.txt file2.txt file3.txt
ls /home/student/project

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

ans:An absolute path gives the full address starting from the root directory `/`, like `/home/student/project/file1.txt`.

A relative path gives directions from where you currently are. For example, if you're in `/home/student`, you can use `./project/file1.txt` or `project/file1.txt`

4)What command will give you the already executed command traces in the terminal. Give output snapshot.

Ans:The history command shows all the commands you have typed in the terminal so far.

Example output:

1 pwd
2 whoami
3 mkdir /home/student/project
...

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

Ans:The find command actively searches your file system right now, so it is very accurate but can be slow, especially on large directories.

The locate command looks up a prebuilt database that is updated periodically, so it's much faster but sometimes might miss very recent files.

Thus, locate is faster because it uses a cached index, while find is slower but more up-to-date and flexible.

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

Ans:The command to change file permissions is chmod.

Example:

chmod 755 script.sh

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

Ans:The file is readable and writable by the owner, but only readable by the group and others.

8)Explain the difference between chown and chgrp with an example.

Ans:chown changes the owner (and optionally the group) of a file, e.g., `chown newuser file.txt` or `chown newuser:newgroup file.txt`.

chgrp changes only the group of a file, e.g., `chgrp newgroup file.txt`.

9)A file needs to be accessible by multiple users but only writable by the owner. How will you set permissions?

Use:

chmod 644 file.txt

10)How do you check the manual page for any Linux commands?
Ans:Use the man command followed by the command name:

man ls