**LINUX PROGRAMMING ASSIGNMENT – 2 (25-09-2025)**

**Name:Manasa K**

**Roll no: 06**

**USN:ENG24CY0032**

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

a.pwd command

The pwd command prints the full path of your current working directory.

Syntax:

pwd [options]

Options:

-L → prints shortcuts if available

-P → prints exact canonical path

**b.whoami commands**

It is used to print the name of the currently logged –in user.

Syntax: whoami

**c.hostname command**

The hostname command shows or sets the system hostname.

Syntax: hostname [options]

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.

**1.Create the directory:**

- mkdir /home/student/project

**2.Create the three text files inside the directory:**

-touch /home/student/project/file1.txt /home/student/project/file2.txt /home/student/project/file3.txt

**Output:**

$ ls -l /home/student/project

total 0

-rw-rw-r-- 1 student student 0 Sep 25 11:28 file1.txt

-rw-rw-r-- 1 student student 0 Sep 25 11:28 file2.txt

-rw-rw-r-- 1 student student 0 Sep 25 11:28 file3.txt

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

examples.

|  |  |  |
| --- | --- | --- |
|  | **Absolute path** | **Relative path** |
| **Definition** | Complete path from root directory to target. | Path from current working directory to target. |
| **Starting character** | Always starts with / | Never starts with / |
| **Dependency** | Independent of current location. | Depends on current working directory. |
| **Portability** | Works from any directory. | Only works from specific locations |
| **Example** | /home/paul/documents/file.txt | Documents/file.txt or ../shared/data.txt |

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

**A:**

History

Example:

$ history

1 .ls

2.cd Documents

3.pwd

4.mkdir test

5.cd test

6.touch file1.txt

7.nano file1.txt

8.cat file1.txt

9.history

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

**A:find command:**searches for files and directories in real time by scanning the directory tree.

**Syntax:**find /path-name filename

**locate command:**searches for files using a pre-built database

**Syntax:**locate filename

Therefore,locate is faster because it uses a pre-indexed database instead of scanning directories in real time.

find is more accurate and real-time,but comparatively slower.

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

**A:** **chmod command:** The chmod command changes file permissions. **Syntax**: chmod [options] mode file

**Example:Symbolic mode:**

chmod u+x my\_script.sh

chmod g-w my\_file.txt

chmod 0=rwx my\_dir/

**Example:Octal node:**

chmod 755 my\_program

chmod 644 my\_document

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

**A: - =** it is regular file

**rw- =** owner can have read and write permission

**r-- =** group can have only read permission

**r-- =** others can also have permission for only read

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

**A:** **chown command:** The chown command changes file ownership. Syntax: chown [options] owner:group file

**Example:**

1.Change the owner of a file

sudo chown alice file.txt

2.Change both owner and group

sudo chown bob:developers project.zip

3.Change recursively

sudo chown -R bob:bob

**chgrp command:**changes the group only

**Example:**

1.Change group of a file

sudo chgrp staff report.doc

2.Change group recursively

sudo chgrp -R developers

3.Change with Is -I to check changes

Is -l file.txt

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

**A:chmod 644 filename -rw-r--r-- (644):**

**rw-** owner can read and write

**r- -** group only read

**r- - others only read**

**Example:**

$ ls -l myfile.txt

-rw-r--r-- 1 alice users 120 Sep 25 10:30 myfile.txt

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

**A:Syntax: man [command\_name]**

To view for ls command:

**man ls**

To view a man from a specific section:

**man [section\_number] [command\_name]**