1. Creating and Renaming Files/Directories

Create a directory named test\_dir using mkdir.

Inside test\_dir, create an empty file called example.txt.

Rename example.txt to renamed\_example.txt using mv

**mkdir test\_dir # Create a directory named test\_dir**

**cd test\_dir # Navigate into test\_dir**

**touch example.txt # Create an empty file called example.txt**

**mv example.txt renamed\_example.txt # Rename it to renamed\_example.txt**

**Explanation**:

mkdir creates a new directory.

touch creates an empty file.

mv is used to rename the file.

2. Viewing File Contents

Use cat to display the contents of /etc/passwd.

Display only the first 5 lines of /etc/passwd using head.

Display only the last 5 lines of /etc/passwd using tail.

**cat /etc/passwd # Display the full contents of the file**

**head -n 5 /etc/passwd # Show the first 5 lines**

**tail -n 5 /etc/passwd # Show the last 5 lines**

**Explanation:**

cat prints the whole file.

head and tail show top/bottom lines respectively.

3.Searching for Patterns

Use grep to find all lines containing the word "root" in /etc/passwd.

**grep "root" /etc/passwd**

**Explanation**:

grep searches for lines containing the pattern "root" in the file /etc/passwd.

4. Zipping and Unzipping

Compress the test\_dir directory into a file named test\_dir.zip using zip.

Unzip test\_dir.zip into a new directory named unzipped\_dir.

**cd .. # Go back to parent directory**

**zip -r test\_dir.zip test\_dir # Compress test\_dir into test\_dir.zip**

**mkdir unzipped\_dir # Create target directory for unzip**

**unzip test\_dir.zip -d unzipped\_dir # Extract contents into unzipped\_dir**

**Explanation**:

zip -r recursively compresses a directory.

unzip -d extracts to a specific directory.

5. Downloading Files

Use wget to download a file from a URL (e.g., <https://example.com/sample.txt>).

**wget https://example.com/sample.txt**

**Explanation:**

wget downloads the file from the given URL.

6. Changing Permissions

Create a file named secure.txt and change its permissions to read-only for everyone using chmod.

**touch secure.txt # Create the file**

**chmod 444 secure.txt # Set permissions to read-only for user/group/others**

**ls -l secure.txt # Verify the permissions**

**Explanation:**

chmod 444 makes the file read-only for everyone.

7. Working with Environment Variables

Use export to set a new environment variable called MY\_VAR with the value "Hello, Linux!".

**export MY\_VAR="Hello, Linux!"**

**echo $MY\_VAR**

**Explanation:**

export sets the environment variable.

echo confirms it’s set.

**Submission Guidelines -:** Attach Screenshots or command along with explanation and submit in doc(google doc or microsoft doc) format also attach github repo link