**Operating System (Linux)**

1. **Display the current directory**

**~$ pwd**

**/home/user**

1. **List all files and directories in the current directory**

**~$ ls**

1. **Create a new directory named "TestFolder"**

**~$ mkdir TestFolder**

1. **Change the current directory to "TestFolder"**

**~$ cd TestFolder**

1. **Create an empty file named "test.txt" in the current directory**

**~/TestFolder$ touch test.txt**

1. **Rename the file "test.txt" to "example.txt"**

**~/TestFolder$ mv test.txt example.txt**

1. **Copy "example.txt" to a new file named "copy\_example.txt"**

**~/TestFolder$ cp example.txt copy\_example.txt**

1. **Delete the file "copy\_example.txt"**

**~/TestFolder$ rm copy\_example.txt**

1. **Move "example.txt" to the parent directory**

**~/TestFolder$ mv example.txt ../**

1. **Display the contents of "example.txt"**

**~$ cat example.txt**

1. **Create a new file named "data.txt" and write "Hello, World!" into it**

**~$ touch "Hello, World!" > data.txt**

1. **Append the text "This is a test." to "data.txt"**

**~$ echo "This is a test" >> data.txt**

1. **Display the date and time**

**~$ date**

**Wed Nov 20 08:26:17 UTC 2024**

1. **Create a directory named "Folder1" and a subdirectory inside it named "Subfolder"**

**~$ mkdir -p Folder1/Subfolder**

1. **Delete the directory "Folder1" and its contents**

**~$ rm -r Folder1**

1. **Display the IP configuration of the system**

**~$ ifconfig**

1. **Ping the website "www.google.com" to check connectivity**

**~$ ping https://www.google.com/**

1. **Display the list of running processes**

**~$ ps -all**

1. **Create a file named "numbers.txt" with the numbers 1 to 5 in random order**

**~$ cat >> numbers.txt**

**3**

**2**

**5**

**4**

**1**

1. **Sort the contents of "numbers.txt" and display the sorted output**

**~$ sort numbers.txt**

1. **Find lines containing the number "4" in "numbers.txt"**

**~$ grep 4 numbers.txt**

1. **Delete the file "numbers.txt"**

**~$ rm numbers.txt**

1. **Display the current logged-in user**

**~$ whoami**

**user**

1. **Create a file named "data.txt" with the content "apple, banana, cherry"**

**~$ echo "apple, banana, cherry" > data.txt**

1. **Sort the contents of "data.txt" and save the output to "sorted\_data.txt"**

**~$ sort data.txt >> sorted\_data.txt**

1. **Find lines containing the word "banana" in "data.txt"**

**~$ grep banana data.txt**

1. **Display the contents of "sorted\_data.txt"**

**~$ cat sorted\_data.txt**

**apple, banana, cherry**

1. **Delete both "data.txt" and "sorted\_data.txt"**

**~$ rm data.txt sorted\_data.txt**

1. **Create a directory named "Project", navigate into it, and create an empty file named "README.txt"**

**~$ mkdir -p Project && touch Project/README.txt**

1. **Display the current date and time, and then list all files in the current directory**

**~$ date**

**Wed Nov 20 09:01:56 UTC 2024**

1. **Create a directory "TestDir", navigate into it, create a file "test.txt" with content "Hello", then display the file content**

**~$ mkdir TestDir && touch TestDir/test.txt && echo Hello >> test.txt && cat test.txt**

1. **List all files in the current directory, find and display only those containing "test" in their name**

**~$ ls | grep "test"**

**This is a test**

**test.txt**

1. **List all files and directories and sort the output alphabetically**

**~$ ls | sort**

1. **Using cat to Concatenate Files**

**~$ cat test.txt a2.txt**

1. **Using head to Display the First 10 Lines**

**~$ head -10 a1.txt**

1. **Using tail to Display the Last 10 Lines**

**~$ tail -10 a1.txt**

1. **Using cut to Extract Multiple Columns**

**~$ cut -c2-2 a1.txt**

1. **Using paste to Combine Files Horizontally (Combine filel.txt and file2.txt side by side.)**

**~$ paste file1.txt file2.txt**