Operating System (Linux)

1. Display the current directory

   ~$ pwd

   /home/user

2. List all files and directories in the current directory

   ~$ ls

3. Create a new directory named "TestFolder"

   ~$ mkdir TestFolder

4. Change the current directory to "TestFolder"

   ~$ cd TestFolder

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

   ~/TestFolder$ touch test.txt

6. Rename the file "test.txt" to "example.txt"

   ~/TestFolder$ mv test.txt example.txt

7. Copy "example.txt" to a new file named "copy_example.txt"

   ~/TestFolder$ cp example.txt copy_example.txt

8. Delete the file "copy_example.txt"

   ~/TestFolder$ rm copy_example.txt

9. Move "example.txt" to the parent directory

   ~/TestFolder$ mv example.txt ../

10. Display the contents of "example.txt"

    ~$ cat example.txt

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

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

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

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

13. Display the date and time

```
~$ date

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

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

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

15. Delete the directory "Folder1" and its contents

```
~$ rm -r Folder1
```

16. Display the IP configuration of the system

```
~$ ifconfig
```

17. Ping the website "www.google.com" to check connectivity

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

18. Display the list of running processes

```
~$ ps -all
```

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

```
~$ cat >> numbers.txt

3

2

5

4

1
```

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

```
~$ sort numbers.txt
```

21. Find lines containing the number "4" in "numbers.txt"

```
~$ grep 4 numbers.txt
```

22. Delete the file "numbers.txt"

```
~$ rm numbers.txt
```

23. Display the current logged-in user

```
~$ whoami

user
```

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

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

25. Sort the contents of "data.txt" and save the output to "sorted_data.txt"

    ~$ sort data.txt >> sorted_data.txt

26. Find lines containing the word "banana" in "data.txt"

    ~$ grep banana data.txt

27. Display the contents of "sorted_data.txt"

    ~$ cat sorted_data.txt

    apple, banana, cherry

28. Delete both "data.txt" and "sorted_data.txt"

    ~$ rm data.txt sorted_data.txt

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

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

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

    ~$ date

    Wed Nov 20 09:01:56 UTC 2024

31. 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

32. 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

33. List all files and directories and sort the output alphabetically

    ~$ ls | sort

34. Using cat to Concatenate Files

    ~$ cat test.txt a2.txt

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

    ~$ head -10 a1.txt

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

    ~$ tail -10 a1.txt

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

    ~$ cut -c2-2 a1.txt

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

    ~$ paste file1.txt file2.txt