



## **Department of Computer Science & Engineering**

Course Title: Operating System Lab

Course Code: CSE 406

Report No.: 12

Report On: Shell Commands

Date of Experiment: 29 April, 2025

<u>Submitted By:</u> <b>Alfred Utsho Gomes,</b> <b>21201064, B1</b>	<u>Submitted To:</u> <b>Atia Rahman Orthi,</b> Lecturer, Department of CSE, UAP
---	---

# Problem Statement:

Do the following task using shell commands:

- Create directories and files
- Write and edit text files
- View and manage file content
- Count words
- Print files
- Delete files and directories.

## Commands:

### ➤ **ls**

- Lists all files and directories in the current directory.

### ➤ **cd** `directory_path`

- Changes the current directory to the specified path.
- “..” is the path for the *immediate previous directory*.

### ➤ **mkdir** `folder_name`

- Creates a new folder (directory) named `folder_name`

### ➤ **touch** `file_name.extention`

- Creates an empty file with the given name and extension.

### ➤ **nano** `file_name.extention`

- Open the file in the Nano text editor (a *command line app* for editing).
- **ctrl+o**, then **Enter** to save, **ctrl+x** to exit.

### ➤ **cat** `file_name.extention`

- Displays the entire content of the file in the terminal.

### ➤ **less** `file_name.extention`

- Open the file one screen at a time (useful for long files).
- **ctrl+c** to back to the terminal.

### ➤ **head** `file_name.extention`

- Shows the first 10 lines of the file.
- **tail file\_name.extention**
  - Shows the last 10 lines of the file.
- **echo "String"**
  - Prints an empty line to the terminal.
- **echo "String" > file\_name.extention**
  - Writes "String" to the file (**overwrites** content if it exists).
- **wc -w file\_name.extention**
  - Counts and prints the number of **words** in the file.
- **wc -l file\_name.extention**
  - Counts and prints the number of **lines** in the file
- **rm file\_name.extention**
  - Deletes the specified file.
- **rmdir directory\_name**
  - Deletes an **empty** directory with the given name.

## Implementation and Output:

[ScreenShorts](#)

```
1 (kali㉿kali)-[~/Desktop/Alfred]
2 $ mkdir ClassWork

3 (kali㉿kali)-[~/Desktop/Alfred]
4 $ cd ClassWork

5 (kali㉿kali)-[~/Desktop/Alfred/ClassWork]
6 $ nano LabTask.txt

7 (kali㉿kali)-[~/Desktop/Alfred/ClassWork]
8 $ nano TestFile.txt

9 (kali㉿kali)-[~/Desktop/Alfred/ClassWork]
10 $ ls
11 LabTask.txt  TestFile.txt
```

```

12 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
13 └─$ cat TestFile.txt
14 This is a Test File.

15 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
16 └─$ cat LabTask.txt
17 Hello! This is Alfred, leaning Basic Linux Commands
18 This is the LabTask of that learning.

19 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
20 └─$ nano NewTestFile.txt

21 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
22 └─$ ls
23 LabTask.txt  NewTestFile.txt  TestFile.txt

24 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
25 └─$ less NewTestFile.txt
26 zsh: suspended  less NewTestFile.txt

27 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
28 └─$ head NewTestFile.txt
29 Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae
  pellentesque sem placerat. In id cursus mi pretium tellus dui convallis. Tempus leo eu aenean
  sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis
  massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti
  sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.
30 Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae
  pellentesque sem placerat. In id cursus mi pretium tellus dui convallis. Tempus leo eu aenean
  sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis
  massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti
  sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.
31 Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae
  pellentesque sem placerat. In id cursus mi pretium tellus dui convallis. Tempus leo eu aenean
  sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis
  massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti
  sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.

32 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
33 └─$ tail NewTestFile.txt
34 Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae
  pellentesque sem placerat. In id cursus mi pretium tellus dui convallis. Tempus leo eu aenean
  sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis
  massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti
  sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.
35 Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae
  pellentesque sem placerat. In id cursus mi pretium tellus dui convallis. Tempus leo eu aenean
  sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis
  massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti
  sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.
36 Lorem ipsum dolor sit amet consectetur adipiscing elit. Quisque faucibus ex sapien vitae
  pellentesque sem placerat. In id cursus mi pretium tellus dui convallis. Tempus leo eu aenean
  sed diam urna tempor. Pulvinar vivamus fringilla lacus nec metus bibendum egestas. Iaculis
  massa nisl malesuada lacinia integer nunc posuere. Ut hendrerit semper vel class aptent taciti
  sociosqu. Ad litora torquent per conubia nostra inceptos himenaeos.

37 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
38 └─$ wc -w NewTestFile.txt
39 192 NewTestFile.txt

40 ┌─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
41 └─$ wc -l NewTestFile.txt
42 5 NewTestFile.txt

```

```
43 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
44 └─$ echo "Trying Basic Linux Commands."
45 Trying Basic Linux Commands.

46 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
47 └─$ cat LabTask.txt
48 Hello! This is Alfred, leaning Basic Linux Commands
49 This is the LabTask of that learning.

50 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
51 └─$ cat TestFile.txt
52 This is a Test File.

53 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
54 └─$ ls
55 LabTask.txt  NewTestFile.txt  TestFile.txt

56 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
57 └─$ rm TestFile.txt

58 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
59 └─$ ls
60 LabTask.txt  NewTestFile.txt

61 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
62 └─$ cd ..

63 └─(kali㉿kali)-[~/Desktop/Alfred]
64 └─$ rmdir ClassWork
65 rmdir: failed to remove 'ClassWork': Directory not empty

66 └─(kali㉿kali)-[~/Desktop/Alfred]
67 └─$ ls
68 ClassWork  text2.txt  text3.txt

69 └─(kali㉿kali)-[~/Desktop/Alfred]
70 └─$ rmdir ClassWork
71 rmdir: failed to remove 'ClassWork': Directory not empty

72 └─(kali㉿kali)-[~/Desktop/Alfred]
73 └─$ rmdir -r ClassWork
74 rmdir: invalid option -- 'r'
75 Try 'rmdir --help' for more information.

76 └─(kali㉿kali)-[~/Desktop/Alfred]
77 └─$ cd ClassWork

78 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
79 └─$ ls
80 LabTask.txt  NewTestFile.txt

81 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
82 └─$ rm TestFile.txt
83 rm: cannot remove 'TestFile.txt': No such file or directory

84 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
85 └─$ rm LabTask.txt

86 └─(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
87 └─$ ls
88 NewTestFile.txt
```

```
89 (kali㉿kali)-[~/Desktop/Alfred/ClassWork]
90 $ rm NewTestFile.txt

91 (kali㉿kali)-[~/Desktop/Alfred/ClassWork]
92 $ ls

93 (kali㉿kali)-[~/Desktop/Alfred/ClassWork]
94 $ cd ..

95 (kali㉿kali)-[~/Desktop/Alfred]
96 $ rmdir ClassWork

97 (kali㉿kali)-[~/Desktop/Alfred]
98 $ ls
99 text2.txt  text3.txt

100 (kali㉿kali)-[~/Desktop/Alfred]
101 $
```

\*implemented using Kali Linux terminal(**zsh shell**)

## Conclusion:

In this task, we successfully performed essential file and directory operations using basic Linux shell commands. We created, edited, and viewed files, counted words and lines, and managed files and directories efficiently. These commands form the foundation of terminal-based file management.