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

Submitted By:	Submitted To:
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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).

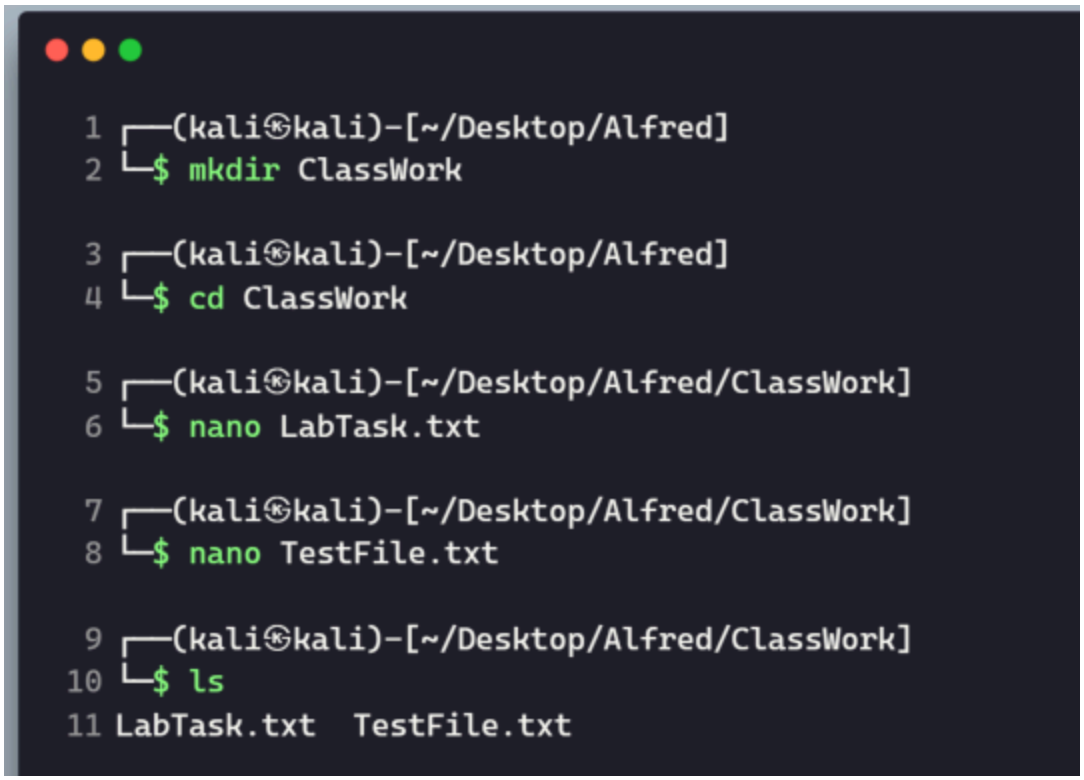
➢ **wc -w** file_name.extention
- Counts and prints the number of **words** in the file.

➢ **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***



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

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

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

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

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

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

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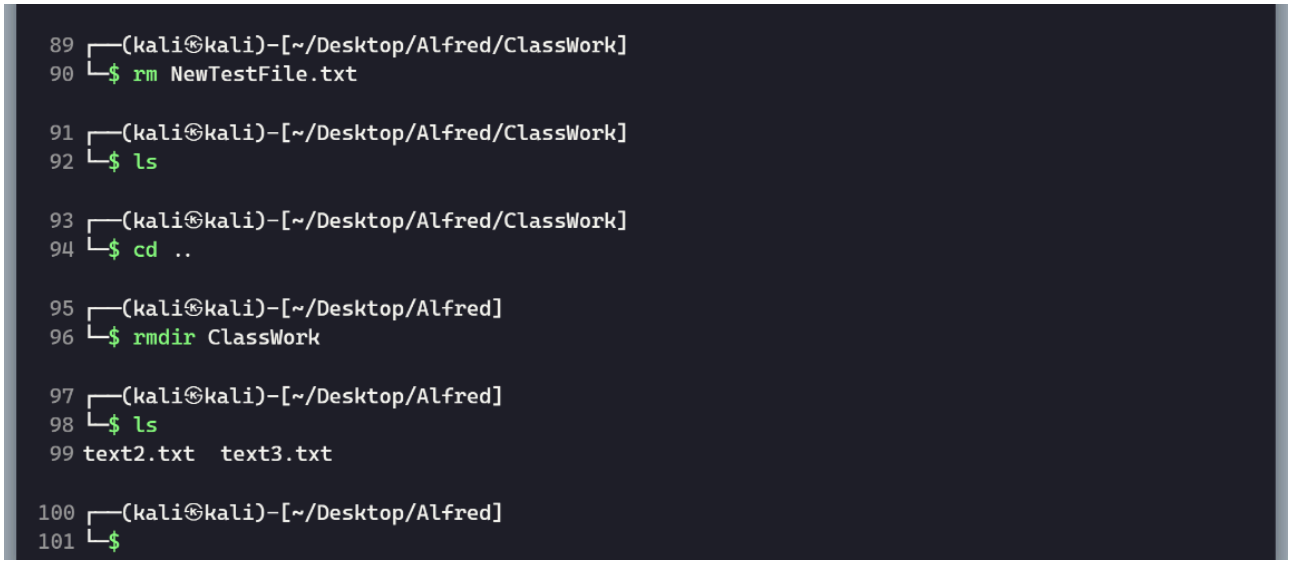

```
┌──(kali㉿kali)-[~/Desktop/Alfred/ClassWork]
└─$ echo "Trying Basic Linux Commands."
Trying Basic Linux Commands.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



*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.