4ITRC2 Operating System Lab

[Vaibhav soni, IT-A, 23I4075]

Lab Assignment 2

Aim: To study and understand Ubuntu Commands

To perform: Execute different Commands

To Submit: Part1 Outputs of the following commands

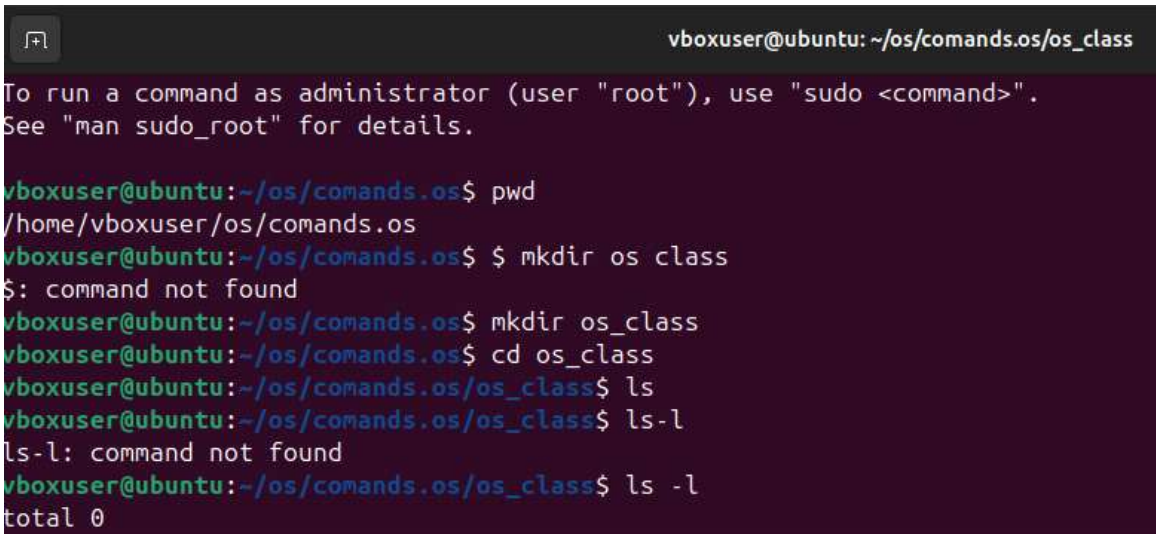
PART-1

1. pwd

2.cd

3.ls

4.mkdir



5.rm

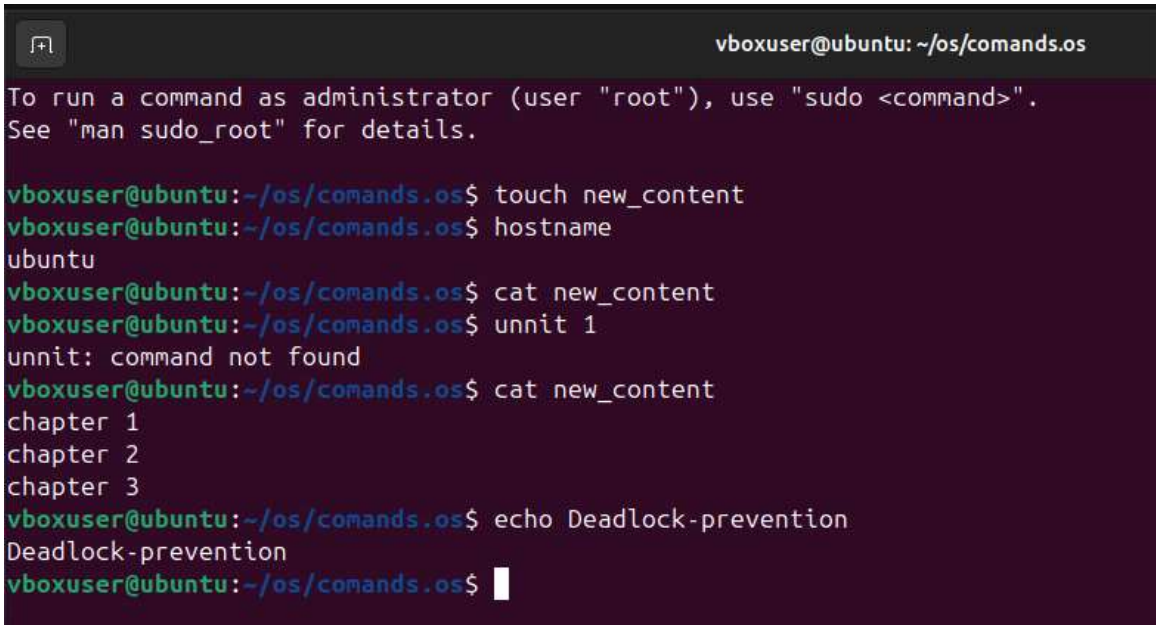
```
vboxuser@ubuntu:~/os/comands.os/os_class$ rm -r demo1
vboxuser@ubuntu:~/os/comands.os/os_class$ rm -r demo2 demo3
vboxuser@ubuntu:~/os/comands.os/os_class$ ls
vboxuser@ubuntu:~/os/comands.os/os_class$
```

6.touch

7.hostname

8.cat

10.echo



11.grep

12.fgrep

```
vboxuser@ubuntu:~/os/comands.os$ grep h new_content
chapter 1
chapter 2
chapter 3
vboxuser@ubuntu:~/os/comands.os$ fgrep chapter new_content
chapter 1
chapter 2
chapter 3
vboxuser@ubuntu:~/os/comands.os$
```

14.cp

15.more

16.less

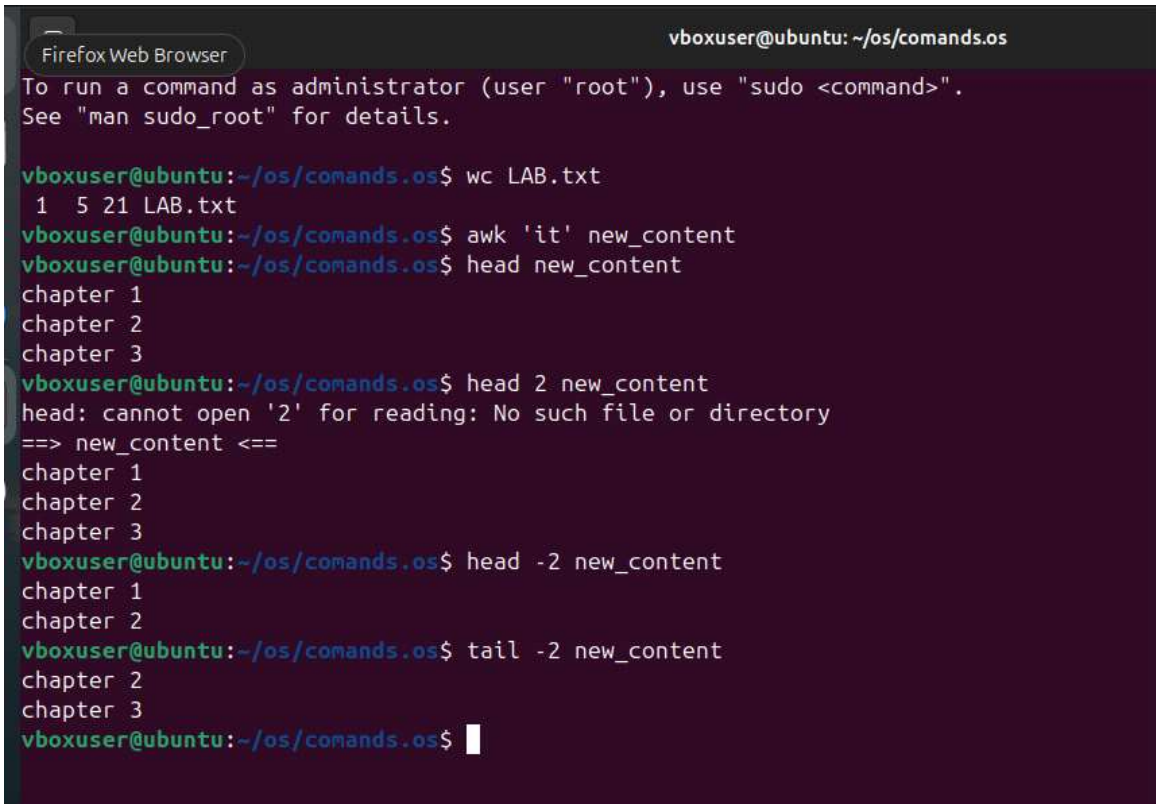
```
vboxuser@ubuntu: ~/os/comands.os
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

vboxuser@ubuntu:~/os/comands.os$ touch LAB.txt
vboxuser@ubuntu:~/os/comands.os$ echo "This is a test file." > LAB.txt
vboxuser@ubuntu:~/os/comands.os$ echo "This is another test file." > lab1.txt
vboxuser@ubuntu:~/os/comands.os$ more LAB.txt
This is a test file.
vboxuser@ubuntu:~/os/comands.os$ less lab1.txt

[1]+  Stopped                 less lab1.txt
vboxuser@ubuntu:~/os/comands.os$ cp LAB.txt copied_LAB.txt
vboxuser@ubuntu:~/os/comands.os$ more copied_LAB.txt
This is a test file.
vboxuser@ubuntu:~/os/comands.os$
```

17.wc

18.awk

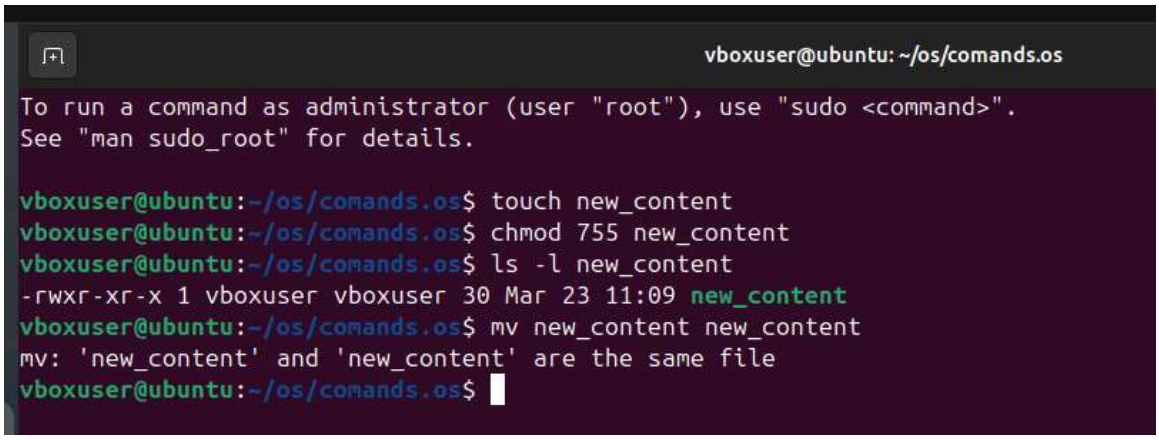
19.head

20.tail



9.chmod

13.mv



PART-2

Answers to the following Questions: (you need to supply commands)

1. How to navigate to a Specific Directory?

- Use the cd (Change Directory) command followed by the path of the directory you want to navigate to.
- Command:

  $ cd /path/to/directory

2. How to see detailed information about files and directories using ls?

- Use ls -l to display detailed information (permissions, owner, size, date modified, etc.) about files and directories.
- Command:

  $ ls -l

3. How to create multiple directories in Linux using `mkdir` command?

- Use the mkdir command with the -p flag and specify multiple directories at once.
- Command:

  $ mkdir dir1 dir2 dir3

- Or with -p flag to create parent directories

  $ mkdir -p dir1/dir2/dir3

4. How to remove multiple files at once with rm?

- You can specify multiple files with rm to delete them at once.
- Command:

  $ rm file1.txt file2.txt file3.txt

5. Can rm be used to delete directories?

- Yes, use the -r (recursive) flag with rm to delete directories and their contents.
- Command:

  $ rm -r directory_name

6. How Do You Copy Files and Directories in Linux?

- Use the cp command to copy files or directories.
- For files:

  $ cp source_file destination_file

- For directories (with the -r flag):

  $ cp -r source_directory destination_directory

7. How to Rename a file in Linux Using mv Command

- Use the mv command to rename a file by providing the current filename and the new filename.

- Command:

  $ mv oldfile.txt newfile.txt

8. How to Move Multiple files in Linux Using mv Command

- Use the mv command followed by the files you want to move and the destination directory.
- Command:

  $ mv file1.txt file2.txt /path/to/destination/

9. How to Create Multiple Empty Files by Using Touch Command in Linux

- Use the touch command and specify multiple filenames.
- Command:

  $ touch file1.txt file2.txt file3.txt

10. How to View the Content of Multiple Files in Linux

- Use the cat command followed by the filenames to display the content of multiple files.
- Command:

  $ cat file1.txt file2.txt file3.txt

11. How to Create a file and add content in Linux

Using `cat` Command

- Use cat with the > operator to create a file and add content. After typing the content, press Ctrl+D to save.
- Command:

  $ cat > newfile.txt

This is the content of the file.

Ctrl+D

12. How to Append the Contents of One File to the End of Another File using cat command

- Use cat with >> to append the content of one file to another.
- Command

  $ cat file1.txt >> file2.txt

13. How to use cat command if the file has a lot of content and can’t fit in the terminal.

- Use cat along with the more or less commands to paginate and view long content.
- Command:

  $ cat file.txt | less

14. How to Merge Contents of Multiple Files Using `cat` Command

- Use cat to concatenate and display the contents of multiple

files.

- Command:

  $ cat file1.txt file2.txt > mergedfile.txt

15. How to use cat Command to Append to an Existing File

- Use cat with the >> operator to append content to an existing file.
- Command:

  $ cat >> existingfile.txt

(Enter text, then press Ctrl+D to save)

16. What is “chmod 777 “, “chmod 755” and “chmod +x “or “chmod a+x”?

- chmod 777: Grants read, write, and execute permissions to the owner, group, and others.
- chmod 755: Grants read, write, and execute permissions to the owner and read/execute permissions to the group and others.
- chmod +x or chmod a+x: Adds execute permission to a file for all users.
- Commands:

  $ chmod 777 file.sh

  $ chmod 755 file.sh

```
$ chmod +x script.sh
```

17. How to find the number of lines that matches the given string/pattern

- Use grep with the -c flag to count the number of lines that match a pattern.
- Command:

```
$ grep -c "pattern" file.txt
```

18. How to display the files that contains the given string/pattern.

- Use grep with the -l flag to list files that contain the specified pattern.
- Command

```
$ grep -l "pattern" *.txt
```

19. How to show the line number of file with the line matched.

- Use grep with the -n flag to display line numbers along with matching lines.
- Command:

```
$ grep -n "pattern" file.txt
```

20. How to match the lines that start with a string using grep

- Use grep with the ^ symbol to match lines that start with a

given string.

- Command:

  $ grep "^start" file.txt

21. Can the ‘sort’ command be used to sort files in descending order by default?

- No, by default sort sorts in ascending order. To sort in descending order, use the -r flag.
- Command:

  $ sort -r file.txt

22. How can I sort a file based on a specific column using the ‘sort’ command?

- Use the -k flag with sort to specify the column you want to sort by.
- Command:

  $ sort -k 2 file.txt