LAB ASSIGNMENT - 2

Aim: To study and understand Ubuntu Commands.

To perform: Execute different Commands.

Part -1

Q) Output of the following commands:

1. pwd

```
varun@Varun-VirtualBox:~$ pwd
/home/varun
varun@Varun-VirtualBox:~$
```

2. cd

```
varun@Varun-VirtualBox:~$ cd /home/varun/Desktop/Operating_system/
varun@Varun-VirtualBox:~/Desktop/Operating_system$
```

3. ls

```
varun@Varun-VirtualBox:~$ ls
Desktop    Downloads  OS        Public  Templates
Documents  Music      Pictures  snap    Videos
```

4. mkdir

```
varun@Varun-VirtualBox:~$ mkdir /home/varun/assignment
varun@Varun-VirtualBox:~$ cd /home/varun/assignment
varun@Varun-VirtualBox:~/assignment$
```

5. rm

```
varun@Varun-VirtualBox:~$ rm -r /home/varun/assignment
varun@Varun-VirtualBox:~$ ls
Desktop    Downloads  OS        Public  Templates
Documents  Music      Pictures  snap    Videos
varun@Varun-VirtualBox:~$ cd /home/varun/assignment
bash: cd: /home/varun/assignment: No such file or directory
```

6. touch

```
varun@Varun-VirtualBox:~$ touch newfile1
varun@Varun-VirtualBox:~$ ls
Desktop    Downloads  newfile1  Pictures  snap       Videos
Documents  Music      OS        Public    Templates
varun@Varun-VirtualBox:~$
```

7. hostname

```
varun@Varun-VirtualBox:~$ hostname
Varun-VirtualBox
varun@Varun-VirtualBox:~$
```

8. cat

```
varun@Varun-VirtualBox:~$ cat /home/varun/Desktop/Operating_system/first.txt
hi this is a text file.
```

9. chmod

```
varun@Varun-VirtualBox:~$ chmod 777 newfile1
varun@Varun-VirtualBox:~$ ls -l
total 40
drwxr-xr-x 3 varun varun 4096 Jan 22 15:02 Desktop
drwxr-xr-x 2 varun varun 4096 Jan 17 20:16 Documents
drwxr-xr-x 2 varun varun 4096 Jan 17 20:16 Downloads
drwxr-xr-x 2 varun varun 4096 Jan 17 20:16 Music
-rwxrwxrwx 1 varun varun    0 Mar 23 10:56 newfile1
drwxrwxr-x 3 varun varun 4096 Feb  5 14:27 OS
drwxr-xr-x 3 varun varun 4096 Mar 23 10:39 Pictures
drwxr-xr-x 2 varun varun 4096 Jan 17 20:16 Public
drwx------ 5 varun varun 4096 Jan 22 15:00 snap
drwxr-xr-x 2 varun varun 4096 Jan 17 20:16 Templates
drwxr-xr-x 2 varun varun 4096 Jan 17 20:16 Videos
varun@Varun-VirtualBox:~$
```

10. echo

```
varun@Varun-VirtualBox:~$ echo "hello world"
hello world
varun@Varun-VirtualBox:~$
```

11. grep

```
varun@Varun-VirtualBox:~$ grep "hello" newfile1
hello everyone!!
varun@Varun-VirtualBox:~$
```

12. fgrep

```
varun@Varun-VirtualBox:~$ fgrep "everyone" newfile1
hello everyone!!
varun@Varun-VirtualBox:~$
```

13. mv

```
varun@Varun-VirtualBox:~$ mv newfile1 Newfile1
varun@Varun-VirtualBox:~$ ls
Desktop    Downloads  Newfile1  Pictures  snap       Videos
Documents  Music      OS        Public    Templates
varun@Varun-VirtualBox:~$
```

14. cp

```
varun@Varun-VirtualBox:~$ cp Newfile1 duplicatefile
varun@Varun-VirtualBox:~$ ls
Desktop    Downloads      Music     OS         Public  Templates
Documents  duplicatefile  Newfile1  Pictures   snap    Videos
varun@Varun-VirtualBox:~$
```

15. more

```
varun@Varun-VirtualBox:~$ more Newfile1
hi this is my first file
hello everyone!!
varun@Varun-VirtualBox:~$
```

16. less

```
varun@Varun-VirtualBox:~$ less Newfile1
varun@Varun-VirtualBox:~$
```

```
hi this is my first file
hello everyone!!
Newfile1 (END)
```

17. wc

```
varun@Varun-VirtualBox:~$ wc Newfile1
 2  8 42 Newfile1
varun@Varun-VirtualBox:~$
```

18. awk

```
varun@Varun-VirtualBox:~$ awk '{print $1}' Newfile1
hi
hello
varun@Varun-VirtualBox:~$
```

19. sed

```
varun@Varun-VirtualBox:~$ sed 's/my/our/' Newfile1
hi this is our first file
hello everyone!!
varun@Varun-VirtualBox:~$
```

20. tail

```
varun@Varun-VirtualBox:~$ tail Newfile1
hi this is my first file
hello everyone!!
varun@Varun-VirtualBox:~$
```

Part -2

Q1. How to navigate to a Specific Directory?

Ans: By using the cd command followed by the directory.

Q2. How to see detailed information about files and directories using ls?

Ans: By using 'ls –l' and 'ls -la' commands.

Q3. How to create multiple directories in Linux using `mkdir` command?

Ans: We can use 'mkdir dir1 dir2 dir3' to create multiple directories and 'mkdir -p dir1/dir2/dir3' to make nested directories.

Q4. How to remove multiple files at once with rm?

Ans: We can remove multiple files at once in the following manner rm file1 file2 file3

Q5. Can rm be used to delete directories?

Ans: Yes, we can use rm to delete directories in the following manner rm -r directory_name

Q6. How Do You Copy Files and Directories in Linux?

Ans: By using cp command. For files: cp file1.txt /destination/path/

For directories: cp -r dir1 /destination/path/

Q7. How to Rename a file in Linux Using mv Command?

Ans: mv old_filename new_filename

Q8. How to Move Multiple files in Linux Using mv Command?

Ans: mv file1 file2 file3 / destination_path/

Q9. How to Create Multiple Empty Files by Using Touch Command in Linux?

Ans: touch file1 file2 file3

Q10. How to View the Content of Multiple Files in Linux?

Ans: cat file1 file2

Q11. How to Create a file and add content in Linux Using `cat` Command?

Ans: cat > filename

Q12. How to Append the Contents of One File to the End of Another File using cat command?

Ans: cat file1 >> file2

Q13. How to use cat command if the file has a lot of content and can't fit in the Terminal?

Ans: cat filename | less

Q14. How to Merge Contents of Multiple Files Using `cat` Command?

Ans: cat file1 file2 > file3

Q15. How to use cat Command to Append to an Existing File?

Ans: cat >> existing_file_name

Q16. What is "chmod 777 ", "chmod 755" and "chmod +x "or "chmod a+x"?

Ans: chmod 777 gives read, write, execute permissions to everyone.

chmod 755 gives owner has all permissions while others have read and execute permissions.

chmod +x makes the file executable.

chmod a+x gives execute permission to all users.

Q17. How to find the number of lines that matches the given string/pattern?

Ans: By using grep command: grep -c "string/pattern" file_name

Q18. How to display the files that contains the given string/pattern. ?

Ans: To display the files that contains the given string/pattern we can use the following command:

grep -l "string/pattern" *.txt

Q19. How to show the line number of file with the line matched?

Ans: grep -n "string/pattern" filename

Q20. How to match the lines that start with a string using grep?

Ans: grep "^string/pattern" filename

Q21. Can the 'sort' command be used to sort files in descending order by default?

Ans: No, by default sort command sorts in ascending order.

Q22. How can I sort a file based on a specific column using the 'sort' command?

Ans: sort -k <column_number> file_name