**LAB ASSIGNMENT – 02 [part – 01 ]**

**Outputs of the following commands :**

1.  **pwd** → Prints the current working directory.

2**. cd** → Changes the current directory.

3. **ls**  → Lists files and directories in the current directory.

4. **mkdir** → Creates a new directory.

5. **rm** → Deletes a file or directory.

6. **touch** → Creates an empty file or updates the timestamp.

7. **hostname** → Displays the system’s hostname.

8. **cat** → Displays the content of a file.

9. **chmod** → Changes file permissions.

10. **echo** → Prints text to the terminal.

11. **grep** → Searches for a pattern in a file.

12. **fgrep** → Searches for exact string matches in a file.

13. **mv** → Moves or renames a file.

14. **cp**  → Copies files and directories.

15. **more** → Displays file content page by page.

16. **less** → Displays file content with scrolling.

17. **wc** → Counts lines, words, and characters in a file.

18. **awk** → Extracts specific fields from a file.

19. **sed** → Replaces text in a file.

20. **tail** → Displays the last 10 lines of a file.

**LAB ASSIGNMENT – 02 [part – 02]**

**Answers to the following Questions:**

**1. How to navigate to a Specific Directory**?

Use the `cd` command followed by the directory name.

Command:

cd /path/to/directory

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

Use `ls -l` to view details like permissions, size, and modification date.

Command:

ls -l

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

Use `mkdir` with multiple directory names.

Command:

mkdir dir1 dir2 dir3

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

Use `rm` with multiple filenames.

Command:

rm file1.txt file2.txt file3.txt

**5. Can rm be used to delete directories?**

Yes, with the `-r` flag.

Command:

rm -r directory\_name

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

Use `cp` for files and `cp -r` for directories.

Commands:

cp file1.txt destination\_folder/

cp -r folder1 destination\_folder/

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

Use `mv` to rename files.

Command:

mv oldname.txt newname.txt

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

List multiple files followed by the destination folder.

Command:

mv file1.txt file2.txt file3.txt destination\_folder/

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

Use `touch` with multiple filenames.

Command:

touch file1.txt file2.txt file3.txt

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

Use `cat` with multiple filenames.

Command:

cat file1.txt file2.txt

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

Use `cat > filename` and type content. Press \*\*Ctrl + D\*\* to save.

Command:

cat > myfile.txt

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

Use `>>` to append content.

Command:

cat source.txt >> destination.txt

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

Pipe it to `less` or `more`.

Command:

cat largefile.txt | less

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

Combine multiple files into one.

Command:

cat file1.txt file2.txt > merged.txt

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

Use `>>` to add content.

Command:

cat >> existingfile.txt

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

- `chmod 777 filename` → Grants all permissions.

- `chmod 755 filename` → Owner gets full access; others can read & execute.

- `chmod +x filename` → Makes a file executable.

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

Use `grep -c` to count occurrences.

Command:

grep -c "pattern" filename.txt

**18. How to display the files that contain the given string/pattern**?

Use `grep -l` to list filenames.

Command:

grep -l "search\_term" \*.txt

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

Use `grep -n`.

Command:

grep -n "pattern" filename.txt

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

Use `^` to match the beginning.

Command:

grep "^startword" filename.txt

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

No, it sorts in ascending order by default. Use `-r` for descending order.

Command:

sort -r filename.txt

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

Use `-k` followed by the column number.

Command:

sort -k2 filename.txt