**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