**LAB ASSIGNMENT-2**

**Part 1: Outputs of the following commands-**

1. **pwd** **-** Displays the present 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 -** Removes files or directories.
6. **touch -** Creates an empty file.
7. **hostname -** Prints the hostname of the system.
8. **cat -** Displays the content of a file.
9. **chmod -** Changes file or directory permissions.
10. **echo -** Prints text to the terminal or writes to a file.
11. **grep -** Searches for patterns in files.
12. **fgrep -** Searches for fixed strings in files (deprecated; use grep -F).
13. **mv -** Moves or renames files and directories.
14. **cp -** Copies files and directories.
15. **more -** Views file content one screen at a time.
16. **less -** Views file content with navigation options.
17. **wc -** Counts lines, words, and characters in a file.
18. **awk -** Processes and analyzes text data based on patterns.
19. **sed -** Edits text in a stream or file using patterns.
20. **tail -** Displays the last few lines of a file.

**Part 2: Answers to the following Questions-**

1. **How to navigate to a specific directory?**

cd /path/to/directory

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

ls -l

1. **How to create multiple directories in Linux using the mkdir command?**

mkdir dir1 dir2 dir3

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

rm file1 file2 file3

1. **Can rm be used to delete directories?**  
   Yes, use:

rm -r directory\_name

1. **How do you copy files and directories in Linux?**

For files: cp source\_file destination\_file

For directories: cp -r source\_directory destination\_directory

1. **How to rename a file in Linux using the mv command?**

mv old\_filename new\_filename

1. **How to move multiple files in Linux using the mv command?**

mv file1 file2 /destination/directory/

1. **How to create multiple empty files by using the touch command in Linux?**

touch file1 file2 file3

1. **How to view the content of multiple files in Linux?**

cat file1 file2

1. **How to create a file and add content in Linux using the cat command?**

cat > filename

Enter your content here...

Press Ctrl+D to save.

1. **How to append the contents of one file to another using the cat command?**

cat source\_file >> destination\_file

1. **How to use the cat command if the file has too much content for one screen?**  
   Use:

cat filename | less

1. **How to merge contents of multiple files using the cat command?**

cat file1 file2 > merged\_file

1. **How to use the cat command to append content to an existing file?**

cat >> existing\_file

Enter your additional content here...

Press Ctrl+D to save.

1. **What is “chmod 777”, “chmod 755”, and “chmod +x” or “chmod a+x”?**
   * **chmod 777**: Grants read, write, and execute permissions to everyone.

chmod 777 filename

* + **chmod 755**: Grants full permissions to owner, read/execute permissions for others.

chmod 755 filename

* + **chmod +x** or **chmod a+x**: Adds execute permission for all users.

chmod +x filename

1. **How to find the number of lines that match a given string/pattern?**

grep -c "pattern" filename

1. **How to display files containing a given string/pattern?**

grep "pattern" \*

1. **How to show line numbers of matched lines in a file?**

grep -n "pattern" filename

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

grep "^string" filename

1. **Can the ‘sort’ command sort files in descending order by default?**  
   No, but you can use:

sort -r filename

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

sort -k column\_number filename