

## 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`

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

`ls -l`

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

`mkdir dir1 dir2 dir3`

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

`rm file1 file2 file3`

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

Yes, use:

`rm -r directory_name`

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

For files: `cp source_file destination_file`

For directories: `cp -r source_directory destination_directory`

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

`mv old_filename new_filename`

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

`mv file1 file2 /destination/directory/`

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

`touch file1 file2 file3`

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

`cat file1 file2`

### **11. 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.

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

```
cat source_file >> destination_file
```

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

Use:

```
cat filename | less
```

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

```
cat file1 file2 > merged_file
```

**15.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.

**16.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
```

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

```
grep -c "pattern" filename
```

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

```
grep "pattern" *
```

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

```
grep -n "pattern" filename
```

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

```
grep "^string" filename
```

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

No, but you can use:

```
sort -r filename
```

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

```
sort -k column_number filename
```

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