

LAB ASSIGNMENT 2

PART 1

Outputs of Linux Commands

1. pwd

Prints the current working directory.

Example:

/home/user/Documents

2. cd

Changes the current directory.

Example:

cd /home/user/Desktop

3. ls

Lists files and directories in the current directory.

Example:

file1.txt file2.txt Documents Downloads

4. mkdir

Creates a new directory.

Example:

mkdir new_folder

5. rm

Removes a file or directory.

Example:

rm file1.txt

6. touch

Creates an empty file or updates the timestamp of an existing file.

Example:

touch newfile.txt

7. hostname

Displays the system's hostname.

Example:

my-computer

8. cat

Displays the contents of a file.

Example:

cat file.txt

Hello, World!

9. chmod

Changes file permissions.

Example:

```
chmod 755 script.sh
```

10. echo

Prints text to the terminal.

Example:

```
echo "Hello, Linux"
```

```
Hello, Linux
```

11. grep

Searches for a pattern in a file.

Example:

```
grep "error" logfile.txt
```

12. fgrep

Searches for a string without interpreting special characters.

Example:

```
fgrep "error?" logfile.txt
```

13. mv

Moves or renames a file.

Example:

```
mv old.txt new.txt
```

14. cp

Copies files or directories.

Example:

```
cp file1.txt backup/
```

15. more

Displays file content one page at a time.

Example:

```
more largefile.txt
```

16. less

Similar to 'more', but allows scrolling up and down.

Example:

```
less largefile.txt
```

17. wc

Counts words, lines, and characters in a file.

Example:

```
wc file.txt
```

```
10 50 200 file.txt
```

18. awk

A text-processing tool.

Example:

```
awk '{print $1}' file.txt
```

19. sed

Edits text in a stream.

Example:

```
sed 's/old/new/g' file.txt
```

20. tail

Displays the last few lines of a file.

Example:

```
tail -n 5 file.txt
```

PART 2

1. How to navigate to a Specific Directory?

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

Example:

```
cd /home/user/Documents
```

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

Use ``ls -l`` to display detailed information including permissions, owner, size, and date.

Example:

```
ls -l
```

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

Use ``mkdir`` with multiple directory names.

Example:

```
mkdir dir1 dir2 dir3
```

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

List multiple files separated by spaces.

Example:

```
rm file1.txt file2.txt file3.txt
```

5. Can rm be used to delete directories?

Yes, use ``rm -r`` to delete directories and their contents.

Example:

```
rm -r my_directory
```

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

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

Example:

```
cp file1.txt backup/  
cp -r folder1 backup/
```

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

Use `mv` with the old and new filename.

Example:

```
mv oldfile.txt newfile.txt
```

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

List multiple files followed by the destination.

Example:

```
mv file1.txt file2.txt /destination/folder/
```

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

Use `touch` with multiple filenames.

Example:

```
touch file1.txt file2.txt file3.txt
```

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

Use `cat` followed by multiple filenames.

Example:

```
cat file1.txt file2.txt
```

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

Use `cat > filename` and type the content.

Example:

```
cat > file.txt
```

Hello, World!

Ctrl+D (to save)

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

Use `cat file1 >> file2`.

Example:

```
cat file1.txt >> file2.txt
```

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

Use `cat filename | less`.

Example:

```
cat largefile.txt | less
```

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

Use `cat file1 file2 > merged.txt`.

Example:

```
cat file1.txt file2.txt > merged.txt
```

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

Use ``cat >> filename`` and type content.

Example:

`cat >> file.txt`

New content

Ctrl+D (to save)

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

``chmod 777`` – Full permissions for all users.

``chmod 755`` – Owner has full, others have read/execute.

``chmod +x`` – Makes a file executable.

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

Use ``grep -c``.

Example:

`grep -c 'error' logfile.txt`

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

Use ``grep -l``.

Example:

`grep -l 'error' *.txt`

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

Use ``grep -n``.

Example:

`grep -n 'error' logfile.txt`

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

Use ``grep '^pattern' filename``.

Example:

`grep '^Hello' file.txt`

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

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

Example:

`sort -r file.txt`

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

Use ``sort -k`` followed by the column number.

Example:

`sort -k2 file.txt`