

LAB 8:

Q1:

Lockfile:

The “lockfile” command is used to create semaphore files, which can be used to indicate that a particular resource is in use or locked.

Example:

```
lockfile /tmp/mylockfile
```

Cksum:

The “cksum” command calculates a checksum for a file using a CRC (Cyclic Redundancy Check) algorithm.

Example:

```
cksum myfile.txt
```

Comm:

The “comm” command is used to compare two sorted files line by line.

Example:

```
comm file1.txt file2.txt
```

Csplit:

The “csplit” command splits a file into sections based on context lines.

Example:

```
csplit myfile.txt '/pattern/' {*}
```

Chattr:

The “chattr” command is used to change file attributes on a Linux file system, such as making a file immutable or setting it to be automatically compressed.

Example:

```
chattr +i myfile.txt
```

Touch:

The “touch” command is used to create an empty file or update an existing file's access and modification times.

Example:

```
touch newfile.txt
```

PRACTICE:

```
owais@owais-VirtualBox:~/Desktop/new$ cksum test
4294967295 0 test
owais@owais-VirtualBox:~/Desktop/new$ touch test1
owais@owais-VirtualBox:~/Desktop/new$ comm test test1
owais@owais-VirtualBox:~/Desktop/new$ comm test test1
12345
123456
owais@owais-VirtualBox:~/Desktop/new$ chatter +i test
chatter: Operation not permitted while setting flags on test
owais@owais-VirtualBox:~/Desktop/new$ sudo chatter +i test
owais@owais-VirtualBox:~/Desktop/new$ ls -la
total 20
drwxrwxr-x 3 owais owais 4096 18:25 31 سمير .
drwxr-xr-x 5 owais owais 4096 15:50 31 سمير ..
drwxrwxr-x 7 owais owais 4096 19:19 23 سمير .git
-rw-rw-r-- 1 owais owais 6 18:24 31 سمير test
-rw-rw-r-- 1 owais owais 7 18:25 31 سمير test1
owais@owais-VirtualBox:~/Desktop/new$ touch newtest.txt
owais@owais-VirtualBox:~/Desktop/new$ ls -la
total 20
drwxrwxr-x 3 owais owais 4096 18:26 31 سمير .
drwxr-xr-x 5 owais owais 4096 15:50 31 سمير ..
drwxrwxr-x 7 owais owais 4096 19:19 23 سمير .git
-rw-rw-r-- 1 owais owais 0 18:26 31 سمير newtest.txt
-rw-rw-r-- 1 owais owais 6 18:24 31 سمير test
-rw-rw-r-- 1 owais owais 7 18:25 31 سمير test1
```

Q2:

1. The **cat** command is used to concatenate and display the content of files. In this case, it displays the content of the file named "ch1".
2. This command concatenates the contents of three files (**ch1**, **ch2**, and **ch3**) and redirects the combined output to a new file named "your-practical-group."
3. This command appends the content of the file **note5** to the end of the file named **Notes**. Without overwriting the existing content.
4. This command allows you to input text interactively, and it will be written to the file named **temp1**. It's a way to create or edit a file directly from the command line. After entering this command, you can type text, and when you press **Ctrl + D**, the input will be saved to the file **temp1**.
5. This is similar to the previous command, but it uses a "here document" to input multiple lines of text, terminated by a specific delimiter ("yourname" in this case), and writes them to the file **temp2**.

Q3:

CPIO:

The **cpio** command is used for creating or extracting cpio archive files. It is often used in combination with the **find** command to archive and extract files based on certain criteria.

SORT:

The **sort** command is used to sort the lines of a text file or the output of a command. It can perform numeric or lexicographic sorting.

Fuser:

The **fuser** command is used to identify processes that are using a particular file, directory, or socket.

File:

The **file** command is used to determine the type of a file. It examines the content of a file and provides information about its type, such as whether it is a text file, binary file, or a specific type of data file.

Q4:

The “-z” option in the “**tar**” command is used to compress or decompress the archive using gzip. When creating an archive (**tar czvf**), it compresses the files, and when extracting an archive (**tar xzvf**), it decompresses the archive using gzip.

WHEN CREATING COMPRESSED ARCHIVE:

“tar czvf archive.tar.gz directory/”

- **c**: Create a new archive.
- **z**: Compress the archive using gzip.
- **v**: Verbosely list the files processed.
- **f**: Archive file name follows.

WHEN EXTRACTING COMPRESSED ARCHIVE:

“tar xzvf archive.tar.gz”

- **x**: Extract files from an archive.
- **z**: Decompress the archive using gzip.
- **v**: Verbosely list the files processed.
- **f**: Archive file name follows.

Q5:

cp Command:

The **cp** command is used to copy files or directories from one location to another.

cpio Command:

The **cpio** command is used for creating or extracting cpio archive files. It is often used in combination with other commands, such as **find**, to perform complex archiving operations.

Q7:

“**777**” gives full read, write, and execute permissions to the owner, group, and others.

“**775**” gives full read, write, and execute permissions to the owner and group, but only read and execute permissions to others.