1. What is tar command? Why is it used?

The ‘tar’ stands for tape archive. The tar command is used to compress a group of files into an archive. The command is also used to extract, maintain, or modify tar archives. Tar archives combine multiple files and/or directories together into a single file.

Suppose we want to extract all the files from the archive named sample.tar.gz, then the command will be:

**$ tar -xvzf sample.tar.gz**

Suppose we want to create an archive of all the files stored in the path /home/linux/, then the command will be:

**$ tar -cvzf filename.tar.gz**

1. Explain Regular Expressions and Grep

Regular expression is also calledregex or regexp. It is a very powerful tool in Linux. Regular expressions are special characters or sets of characters that help us to search for data and match the complex pattern.

Regex can be used in a variety of programs like grep, sed, vi, bash, rename etc.

Like the shell’s wild-cards which match similar filenames with a single expression, grep uses an expression of a different sort to match a group of similar patterns.

* [ ] : Matches any one of a set characters
* [ ] with hyphen: Matches any one of a range characters
* ^ : The pattern following it must occur at the beginning of each line
* ^ with [ ] : The pattern must not contain any character in the set specified
* $ : The pattern preceding it must occur at the end of each line
* . (dot) : Matches any one character
* \ (backslash): Ignores the special meaning of the character following it
* \* : zero or more occurrences of the previous character
* (dot).\* : Nothing or any numbers of characters.

Example- Use [ ] with hyphen: Matches any one of a range characters

**$ grep “New[a-e]” filename**

It specifies the search pattern as

Output - Newa, Newb , Newc , Newd, Newe

1. What is the minimum number of disk partitions required to install Linux?

The minimum number of partitions required is 2.

One partition is used as the local file system where all the files are stored. This includes files of the OS, files of applications and services, and files of the user. And the other partition is used as Swap Space which acts as an extended memory for RAM.

1. How to copy a file in Linux?

Using cp command, we can copy file or group of files/folder.

Syntax - cp [Source][Destination]

Example: - This command will copy “example.txt” file to “Documents” folder

**$ cp example.txt ~/Documents**

1. How to terminate a running process in Linux?

There are two commands used to kill a process:

* kill – Kill a process by ID
* killall – Kill a process by name

1. )kill signal pid

**kills -9 3827**

1. ) killall<process>

**Killall -9 chrome**

1. How to rename a file in Linux?

There are several ways to rename a file. One way is to rename by mv command

Example: file1.txt will be renamed as file2.txt

**$ mv file1.txt file2.txt**

1. How to write the output of a command to a file?

For redirecting output to a file, we can utilize ”**>**” and ”**>>**” redirection operators. Redirection allows us to save or redirect the output of a command in another file on our system

Syntax is:

* **command > filename**
* **command >> filename**

**$ ls > test.txt**

This will send output of the ls command to file named test.txt

**$ ls >> test.txt**

This will append the output of the ls command to file named test.txt without overwriting.

1. How to see the list of mounted devices on Linux?

By running the following command, we can see the mounted devices:

**$ mount -l**

1. How to find where a file is stored in Linux?

We can use the **locate** command to find the path to the file.

Suppose we want to find the locations of a file name sample.txt, then our command would be:

**$ locate sample.txt**

1. How to find the difference between two configuration files?

We can use the **diff**command for this:

**$ diff sample1.conf sample2.conf**