**GREP Command**

* The grep command in Unix/Linux is a powerful tool used for searching and manipulating text patterns within files.
* Its name is derived from the ed (editor) command g/re/p (globally search for a regular expression and print matching lines)

**grep [options] pattern [files]**

Here,

[**options**]: These are command-line flags that modify the behavior of grep.

[**pattern**]: This is the regular expression you want to search for.

[**file**]: This is the name of the file(s) you want to search within. You can specify multiple files for simultaneous searching.

Why grep is used in Unix?

grep is used in Unix for a variety of reasons, such as:

* Searching for specific patterns within files.
* Filtering output of other commands.
* Checking for the presence of certain data within databases or logs.
* Automating tasks in scripts that depend on the presence or absence of specified data.

**Options:**

|  |  |
| --- | --- |
| **-c** | This prints only a count of the lines that match a pattern |
| **-h** | Display the matched lines, but do not display the filenames. |
| **–i** | Ignores, case for matching |
| **-l** | Displays list of a filenames only. |
| **-n** | Display the matched lines and their line numbers. |
| **-v** | This prints out all the lines that do not matches the pattern |
| **-e exp** | Specifies expression with this option. Can use multiple times. |
| **-f file** | Takes patterns from file, one per line. |
| **-E** | Treats pattern as an extended regular expression (ERE) |
| **-w** | Match whole word |
| **-o** | Print only the matched parts of a matching line. |
| **^** | Pattern match starts with given pattern |
| **$** | Display line Ends with Given Pattern |

**Examples:**

## ****1. Case insensitive search****

The -i option enables to search for a string case insensitively in the given file. It matches the words like “UNIX”, “Unix”, “unix”.

grep -i "UNix" index.txt

## ****2. Displaying the Count of Number of Matches Using grep****

We can find the number of lines that matches the given string/pattern

grep -c "unix" index.txt

## ****3. Display the File Names that Matches the Pattern Using grep****

We can just display the files that contains the given string/pattern.

grep -l "unix" \*

**or**

grep -l "unix" f1.txt f2.txt f3.xt f4.txt

## ****4. Checking for the Whole Words in a File Using grep****

By default, grep matches the given string/pattern even if it is found as a substring in a file. The -w option to grep makes it match only the whole words.

grep -w "unix" index.txt

## ****5. Displaying only the matched pattern Using grep****

By default, grep displays the entire line which has the matched string. We can make the grep to display only the matched string by using the -o option.

grep -o "unix" index.txt

## ****6. Show Line Number While Displaying the Output Using grep -n****

To show the line number of file with the line matched.

grep -n "unix" index.txt

## ****7. Inverting the Pattern Match Using grep****

You can display the lines that are not matched with the specified search string pattern using the -v option.

grep -v "unix" index.txt

## ****8. Matching the Lines that Start with a String Using grep****

The ^ regular expression pattern specifies the start of a line. This can be used in grep to match the lines which start with the given string or pattern.

grep "^unix" index.txt

## ****9. Matching the Lines that End with a String Using grep****

The $ regular expression pattern specifies the end of a line. This can be used in grep to match the lines which end with the given string or pattern.

grep "os$" index.txt

## ****10.Specifies expression with -e option****

Can use multiple times :

grep –e "Agarwal" –e "Aggarwal" –e "Agrawal" index.txt

### What is the grep -R command in Unix?

*The -R option in grep stands for recursive. When this option is used, grep will search through all directories and subdirectories starting from the given directory and perform the search operation. For example:*

*grep -R "search\_term" /path/to/directory/*

*This command will search for “search\_term” in all files located within the specified directory and all its subdirectories.*