



nano, pico, and other Linux editors, "sed" Command

Linux Text Editors

Linux text editors are useful for a variety of tasks, including editing text files, creating code, updating user manuals, and more. Multiple text editors are supported on a Linux system. In Linux, there are two different categories of text editors, as follows:

- Vi, nano, pico, and other command-line text editors.
- GUI text editors, including Kwrite, gedit (for Gnome), and others.

Using a text editor is crucial while programming. Therefore, choosing the finest text editor is crucial. Not only should a text editor be easy to use, but it should also be practical and enjoyable to use. A text editor is regarded as being good if it has IDE features.

The top 20 Linux text editors will be covered in this section. We'll also discuss the most recent text editors and contrast them with more established ones like Vi and nano. Your choice of editor will be made easier with this advice.



Editors come in a variety of forms:

1. Vi/VIM editor
2. Nano editor
3. Gedit editor
4. Sublime text editor
5. VSCode
6. GNU emacs
7. Atom editor
8. Brackets editor
9. Pico editor
10. Bluefish
11. Kate/Kwrite
12. Notepad ++
13. Eclipse
14. gVIM editor
15. Jed editor
16. Geany editor
17. Leaf Pad
18. Light Table
19. Medit text editor
20. CodeLite



Some of the important editors we will use in this lecture:

1. Vi/VIM editor

Vim editor is one of the most used and powerful command-line based editors of the Linux system. By default, it is supported by most Linux distros. It has enhanced functionalities of the old [Unix Vi editor](#). It is a user-friendly editor and provides the same environment for all the Linux distros. It is also termed as **programmer's editor** because most programmers prefer Vi editor.

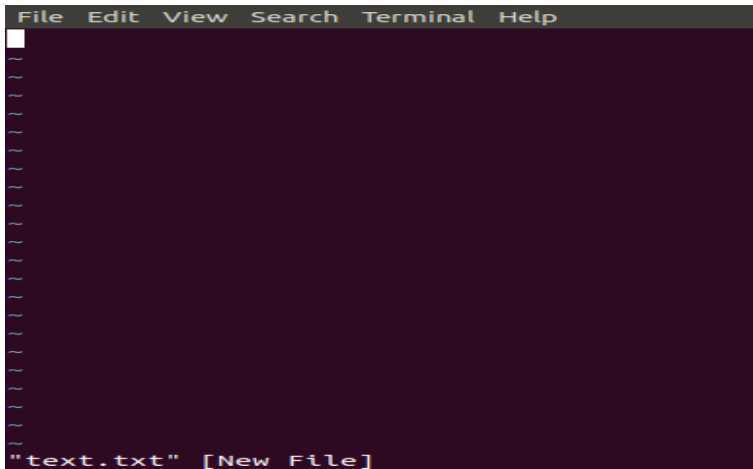
Vi editor has some special features such as Vi modes and syntax highlighting that makes it powerful than other text editors. Generally, it has two modes:

- **Command Mode:** The command mode allows us to perform actions on files. By default, it starts in command mode. In this mode, all types of words are considered as commands. We can execute commands in this mode.
- **Insert Mode:** The insert mode allows to insert text on files. To switch from command mode to insert mode, press the **Esc** key to exit from active mode and **'i'** key. To invoke the vi editor, execute the vi command with the file name as follows:

vi <file name>



It will look like below image:



2. Nano editor

Nano is a straight forward editor. It is designed for both beginners and advanced users. It has many customization features. Some advanced features of a nano text editor are as following:

- It has highly customizable key bindings
- It supports syntax highlighting
- It has undo and redo options
- It provides full line display on the standard output
- It has pager support to read from standard input

To open file with nano editor, execute the command as follows:

nano <file name>



The nano editor looks like:

```
File Edit View Search Terminal Help
GNU nano 2.9.3 text.txt

[ New File ]

^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```

In the nano editor, the useful options are given at the bottom, use the **CTRL+ option** to perform an operation. For example, to exit from the editor, use **CTRL +X** keys.

3. Gedit editor

Gedit editor is the default editor for the GNOME desktop environment. When we open a file, it will open with the Gedit editor. It provides straightforward functionalities like any basic text editor. It is a lightweight editor with a straight forward user interface. It was publicly released in the year 2000 with a GNOME desktop environment. It is



hitbullseye

developed using the C programming language and supports all font family.

Some key features of the gedit text editor are as following:

- It provides syntax highlighting.
- It supports internationalized text.
- It supports several programming languages.

To invoke the gedit editor from the terminal, execute the below command:

gedit <file name>

It looks like:

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width">
    <title>&lt;input type="color"&gt; example</title>
    <style>
      html, input {
        font-family: sans-serif;
      }

      body {
        width: 90%;
        max-width: 500px;
        margin: 0 auto;
      }

      form {
        margin-top: 20px;
      }

      div {
        margin-bottom: 20px;
      }
    </style>
  </head>
  <body>
    <form>
      <div>
        <input type="color">
      </div>
    </form>
  </body>
</html>
```

The screenshot shows the gedit text editor window titled 'index.html'. The editor contains an HTML document with syntax highlighting. The code includes a DOCTYPE declaration, a head section with meta tags for charset and viewport, a title tag, and a style section with CSS rules for the html, input, body, form, and div elements. The status bar at the bottom indicates 'HTML', 'Tab Width: 8', 'Ln 1, Col 1', and 'INS'.



4. Sublime Text

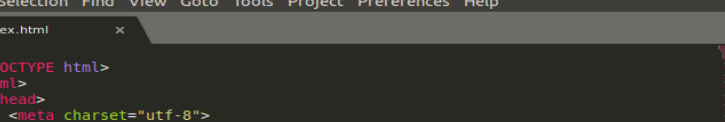
The sublime text editor is also one of the most popular IDE-based text editors. It is used as a development environment tool more than a text editor. It has several features to support many programming and mark-up languages. Further, it supports numerous plugins to make it more than a text editor.

Some key features of a sublime text editor are as following:

- It has an excellent Command Palette.
- It is a python-based plugin API.
- It supports parallel editing of code.
- It provides project-specific preferences.

Execute the following commands to install the sublime text editor:

1. `wget -qO - https://download.sublimetext.com/sublimehq-pub.gpg | sudo apt-key add -`
2. `sudo apt-add-repository "deb https://download.sublimetext.com/apt/stable/"`
3. `sudo apt install sublime-text`

**subl**

The screenshot shows a code editor window titled "index.html". The code is as follows:

```
1<!DOCTYPE html>
2<html>
3<head>
4  <meta charset="utf-8">
5  <meta name="viewport" content="width=device-width">
6  <title>&lt;input type="color"&gt; example</title>
7  <style>
8    html, input {
9      font-family: sans-serif;
10    }
11  }
12  body {
13    width: 90%;
14    max-width: 500px;
15    margin: 0 auto;
16  }
17  form {
18    margin-top: 20px;
19  }
20  div {
21    margin-bottom: 20px;
```

The editor has a dark theme and a sidebar on the right showing a file explorer. The status bar at the bottom indicates "Line 1, Column 1" and "Spaces: 2".

VSCode editor is a modern and widely used text editor. It is built by Microsoft and has support for Linux, Mac and Windows OS. It facilitates with many powerful features to support many programming languages and markup language. To install the VSCode, download the



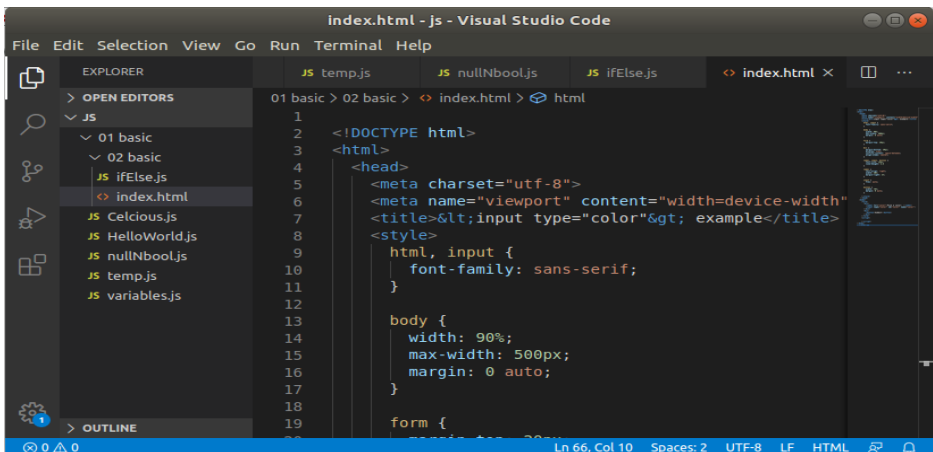
binary package from [Here](#). And, execute the below command for Debian and Ubuntu-based systems:

sudo apt install ./<file>.deb

Some key features of VSCode editor are as following:

- It has full support for debugging with an interactive console, breakpoints, call stacks and more.
- It has built-in support for Git and Git commands.
- It facilitates with IntelliSense.
- It provides many customization options.
- It has massive support for languages.
- It supports toggleable layouts.
- It provides a built-in terminal.

The VSCode editor looks like the below image:





6. GNU Emacs

GNU Emacs is the oldest and simplest text editor for the Linux system. It is a part of the GNU project. It is still a popular text editor used by thousands of users because of its simplicity. It is written in **C** and **LISP** programming languages. Some key features of GNU Emacs are as following:

- It has mail and News options.
- It provides a debugger interface extension.
- It has extensive documentation and support.

Execute the following commands to install GNU Emacs:

1. `sudo apt-get update`
2. `sudo apt-get install emacs`

To access it from the terminal, execute the below command:

emacs <file name>

It will look like below image:



7. Atom Editor

GitHub Inc. created Atom, a free and open-source code editor. In addition to supporting several programming languages, it is cross-platform. A "hackable text editor for the 21st century" is another name for it. It was created with development in mind. Using online technologies like HTML and JavaScript, it is totally editable. It makes use of Git control and Node.js-based plugins to simplify. Some key features of Atom Editor are as follows:

- It is open source.
- It has a modern, customizable layout.
- It facilitates with attractive themes.
- It provides embedded Git support.

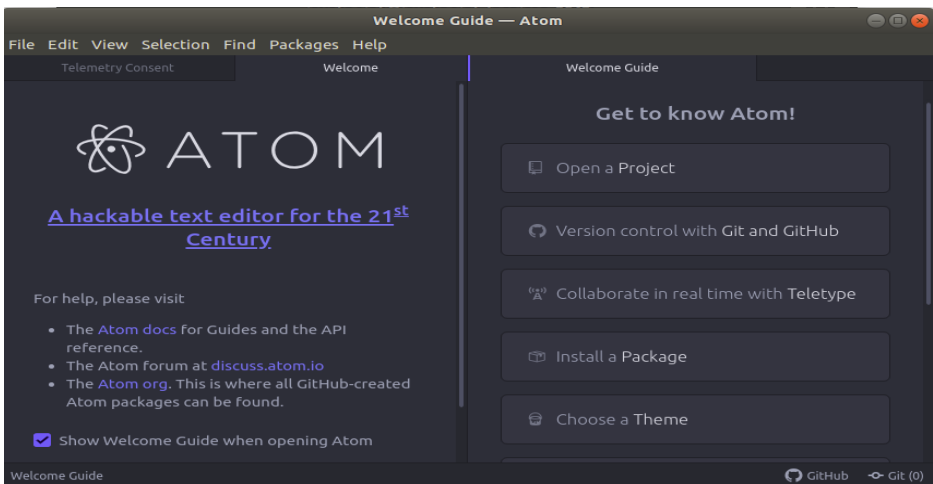


- It provides real-time collaboration with Telesync.
- It has smart auto-complete and IntelliSense.
- It has a built-in package manager.

To install Atom, download the binary package from the official site of Atom, and execute the below command:

`sudo dpkg -i Downloads/atom-amd64.deb`

It will look like below image:





8. Brackets Editor

Adobe created the free and open-source text editor known as Brackets. It is mostly concerned with web development. With a variety of free extensions, it offers a comprehensive code editing experience. HTML, CSS, and JS were used in its creation. Some key features of Brackets editor are as following:

- It provides an attractive User Interface.
- It has pre-processor support for SCSS and LESS.
- It facilitates with inline editors.
- It provides a live preview.
- It has support for multiple tabbed editing.
- It has PHP support.
- It supports Language Server Protocol.
- It supports plugin extensions.

To install Brackets editor, execute the following commands:

```
sudo add-apt-  
repository ppa:webupd8team/brackets
```

1. `sudo apt-get update`
2. `sudo apt-get install brackets`

It will look like:



```
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5   <meta charset="utf-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <title>GETTING STARTED WITH BRACKETS</title>
8   <meta name="description" content="An interactive getting
  started guide for Brackets.">
9   <link rel="stylesheet" href="main.css">
10 </head>
11 <body>
12
13   <h1>GETTING STARTED WITH BRACKETS</h1>
14   <h2>This is your guide!</h2>
15
16   <!--
17     MADE WITH: <3 AND JAVASCRIPT.
18   -->
19
20   <p>
21     Welcome to Brackets, a modern open-source code editor
22     that understands web design. It's a lightweight,
23     yet powerful, code editor that blends visual tools into
24     the editor so you get the right amount of help
25     when you want it.
26   </p>
27
28   <!--
```

9. Pico Editor

The Pico editor is a terminal-based Linux text editor. It has built-in support for pine news and email client. It is very straight forward to use and facilitates with some useful features such as **justification**, **cut/paste**, **spell checker**, and more. However, it is just a simple text editor, so it does not offer many features like other Linux text editors. It is not purely free text editor, so most Linux distributions do not provide pico as a text editor. It does not support working with multiple files simultaneously. Also, it cannot perform find and replace operation across multiple files. To open a file with a pico text editor, execute the command as follows:

pico <file name>

It will look like below command:



```
javatpoint@javatpoint-Inspiron-3542: ~  
File Edit View Search Terminal Help  
GNU nano 2.9.3 index.html  
  
<!DOCTYPE html>  
<html>  
  <head>  
    <meta charset="utf-8">  
    <meta name="viewport" content="width=device-width">  
    <title>&lt;input type="color"&gt; example</title>  
    <style>  
      html, input {  
        font-family: sans-serif;  
      }  
  
      body {  
        width: 90%;  
        max-width: 500px;  
        margin: 0 auto;  
      }  
  
      form {  
        Read 66 lines  
  
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos  
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line
```

10. Bluefish

Bluefish is a free and open-source text editor for the Linux system. It is an advanced text editor having plenty of tools for programming. It is good for developing dynamic websites. It supports several languages and tools such as **PHP, C, C++, JavaScript, Java, Google Go**, and many more. Some key features of Bluefish text editor are as following:

- It is lightweight and fast.
- It allows integration with external Linux programs such as make, sed, awk, lint, weblint, and many more.
- It facilitates with the spell checker.



- It allows us to work on multiple projects.
- It has remote file editing.
- It provides a find and replace feature.
- It has undo and redo option.
- It provides auto-recovery of modified files.

To install Bluefish, execute the following commands:

1. `sudo add-apt-repository ppa:klaus-vormweg/bluefish`
2. `sudo add-apt-repository ppa:klaus-vormweg/bluefish-gtk2`
3. `sudo apt-get update`
4. `sudo apt-get install bluefish`

To open file with bluefish, execute the below command:

bluefish <file name>

it will look like:

11. Leafpad

Leafpad is a straight forward GTK based text editor. It is a popular text editor among Linux users due to its simplicity and lightness. The key features of Leafpad are as following:

- It provides a codeset option.



- It provides auto codeset detection (UTF-8 and some codesets).
- It facilitates unlimited Undo/Redo operations.
- It provides Auto/Multi-line Indent.
- It displays the current line number.
- It provides drag and drop feature.
- It allows print files.

To install Leafpad, execute the following commands:

1. `sudo apt-get update -y`
2. `sudo apt-get install -y leafpad`

It will look like the below command:

```
index.html
File Edit Search Options Help
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width">
<title>&lt;input type="color"&gt; example</title>
<style>
  html, input {
    font-family: sans-serif;
  }

  body {
    width: 90%;
    max-width: 500px;
    margin: 0 auto;
  }

  form {
    margin-top: 20px;
  }

  div {
    margin-bottom: 20px;
  }
```



Sed Command in Linux/Unix with examples:

SED command in UNIX stands for stream editor and it can perform lots of functions on file like searching, find and replace, insertion or deletion. Though most common use of SED command in UNIX is for substitution or for find and replace. By using SED, you can edit files even without opening them, which is much quicker way to find and replace something in file, than first opening that file in VI Editor and then changing it.

- SED is a powerful text stream editor. Can do insertion, deletion, search and replace (substitution).
- SED command in unix supports regular expression which allows it perform complex pattern matching.

Syntax:

➤ **sed OPTIONS... [SCRIPT] [INPUTFILE...]**

Example:

Consider the below text file as an input.

\$cat > geekfile.txt

unix is great os. unix is opensource. unix is free os.

Sample Commands



1. **Replacing or substituting string:** Sed command is mostly used to replace the text in a file. The below simple sed command replaces the word “unix” with “linux” in the file.

\$sed 's/unix/linux/' geekfile.txt

Output:

- linux is great os. unix is opensource. unix is free os.
- learn operating system.
- linux linux which one you choose.
- linux is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.

Here the “s” specifies the substitution operation. The “/” are delimiters. The “unix” is the search pattern and the “linux” is the replacement string.

By default, the sed command replaces the first occurrence of the pattern in each line and it won't replace the second, third...occurrence in the line.

2. **Replacing the nth occurrence of a pattern in a line:** Use the /1, /2 etc flags to replace the first, second occurrence of a pattern in a line. The below command replaces the second occurrence of the word “unix” with “linux” in a line.

\$sed 's/unix/linux/2' geekfile.txt



Output:

- unix is great os. linux is opensource. unix is free os.
- learn operating system.
- unix linux which one you choose.
- unix is easy to learn. linux is a multiuser os. Learn unix .unix is a powerful.

- 3. Replacing all the occurrence of the pattern in a line:** The substitute flag /g (global replacement) specifies the sed command to replace all the occurrences of the string in the line.

\$sed 's/unix/linux/g' geekfile.txt

Output:

- linux is great os. linux is opensource. linux is free os.
- learn operating system.
- linux linux which one you choose.
- linux is easy to learn. linux is a multiuser os. Learn linux .linux is a powerful.

- 4. Replacing from nth occurrence to all occurrences in a line :** Use the combination of /1, /2 etc and /g to replace all the patterns from the nth occurrence of a pattern in a line. The following sed command replaces the third, fourth, fifth... “unix” word with “linux” word in a line.



\$sed 's/unix/linux/3g' geekfile.txt

Output:

- unix is great os. unix is opensource. linux is free os.
- learn operating system.
- unix linux which one you choose.
- unix is easy to learn.unix is a multiuser os.Learn linux .linux is a powerful.

5. Parenthesize first character of each word: This sed example prints the first character of every word in parenthesis.

\$ echo "Welcome To The Geek Stuff" | sed 's/\(\\b[A-Z]\\)/\\(\\1\\)/g'

Output:

- (W)elcome (T)o (T)he (G)eek (S)tuff

6. Replacing string on a specific line number: You can restrict the sed command to replace the string on a specific line number. An example is

\$sed '3 s/unix/linux/' geekfile.txt

Output:

- unix is great os. unix is opensource. unix is free os.
- learn operating system.



- linux linux which one you choose.
- unix is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.
- The above sed command replaces the string only on the third line.

7. Duplicating the replaced line with /p flag: The /p print flag prints the replaced line twice on the terminal. If a line does not have the search pattern and is not replaced, then the /p prints that line only once.

\$sed 's/unix/linux/p' geekfile.txt

Output:

- linux is great os. unix is opensource. unix is free os.
- linux is great os. unix is opensource. unix is free os.
- learn operating system.
- linux linux which one you choose.
- linux linux which one you choose.
- linux is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.
- linux is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.

8. Printing only the replaced lines: Use the -n option along with the /p print flag to display only the



replaced lines. Here the -n option suppresses the duplicate rows generated by the /p flag and prints the replaced lines only one time.

\$sed -n 's/unix/linux/p' geekfile.txt

Output:

- linux is great os. unix is opensource. unix is free os.
- linux linux which one you choose.
- linux is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.
- If you use -n alone without /p, then the sed does not print anything.