

Vi Editor:

To create, edit or modify file , we use vi command.

The vi editor is elaborated as **visual** editor. It is installed in every Unix system. It is user-friendly . It is a very powerful application. An improved version of vi editor is **vim**.

The vi editor has two modes:

- **Command Mode:** In command mode, actions are taken on the file. The vi editor starts in command mode. Here, the typed words will act as commands in vi editor. To pass a command, you need to be in command mode.
- **Insert Mode:** In insert mode, entered text will be inserted into the file. The **Esc** key will take you to the command mode from insert mode.

By default, the vi editor starts in command mode. To enter text, you have to be in insert mode, just type '**i**' and you'll be in insert mode. Although, after typing **i** nothing will appear on the screen but you'll be in insert mode. Now you can type anything.

To exit from insert mode press **Esc** key, you'll be directed to command mode.

If you are not sure which mode you are in, press Esc key twice and you'll be in command mode.

Using vi

The vi editor tool is an interactive tool as it displays changes made in the file on the screen while you edit the file.

In vi editor you can insert, edit or remove a word as cursor moves throughout the file.

Commands are specified for each function like to delete it's x or dd.

The vi editor is case-sensitive. For example, **p** allows you to paste after the current line while **P** allows you to paste before the current line.

vi syntax:

1. vi <fileName>

In the terminal when you'll type vi command with a file name, the terminal will get clear and content of the file will be displayed. If there is no such file, then a new file will be created and once completed file will be saved with the mentioned file name.

Linux vi example

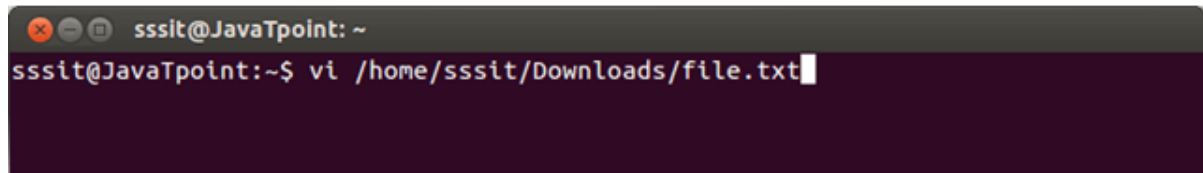
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Let's understand vi through an example:

To start vi open your terminal and type vi command followed by file name. If your file is in some other directory, you can specify the file path. And if in case, your file doesn't exist, it will create a new file with the specified name at the given location.

Example:

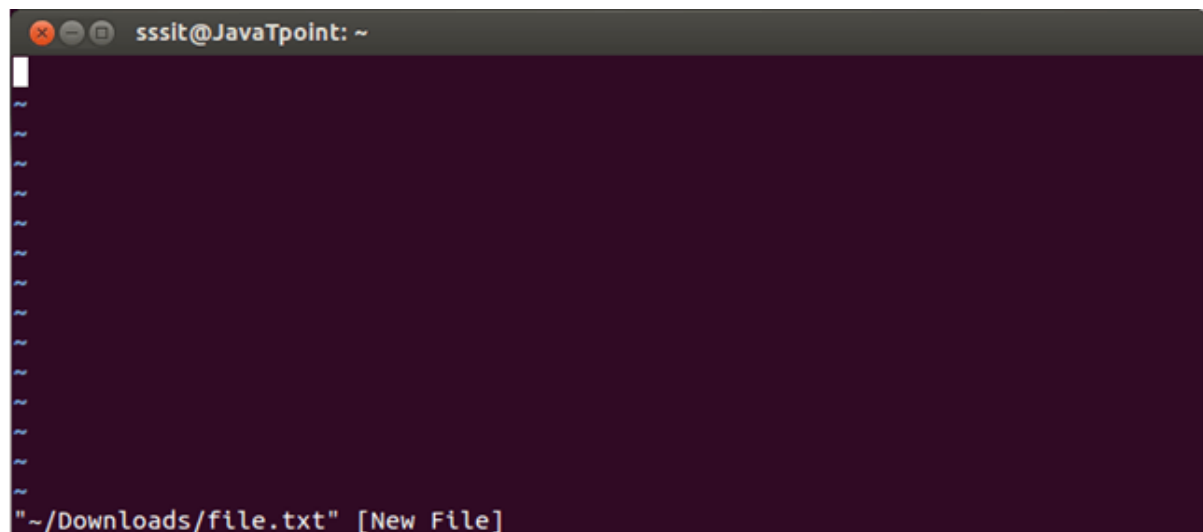
1. vi /home/sssit/Downloads/file.txt

A terminal window with a dark background. The title bar shows 'sssit@JavaTpoint: ~'. The command prompt is 'sssit@JavaTpoint:~\$' followed by the command 'vi /home/sssit/Downloads/file.txt' with a cursor at the end.

Look at the above snapshot, we are creating a new file **file.txt** (as this file doesn't exist) and have entered the full path for the directory **Downloads**.

Command mode

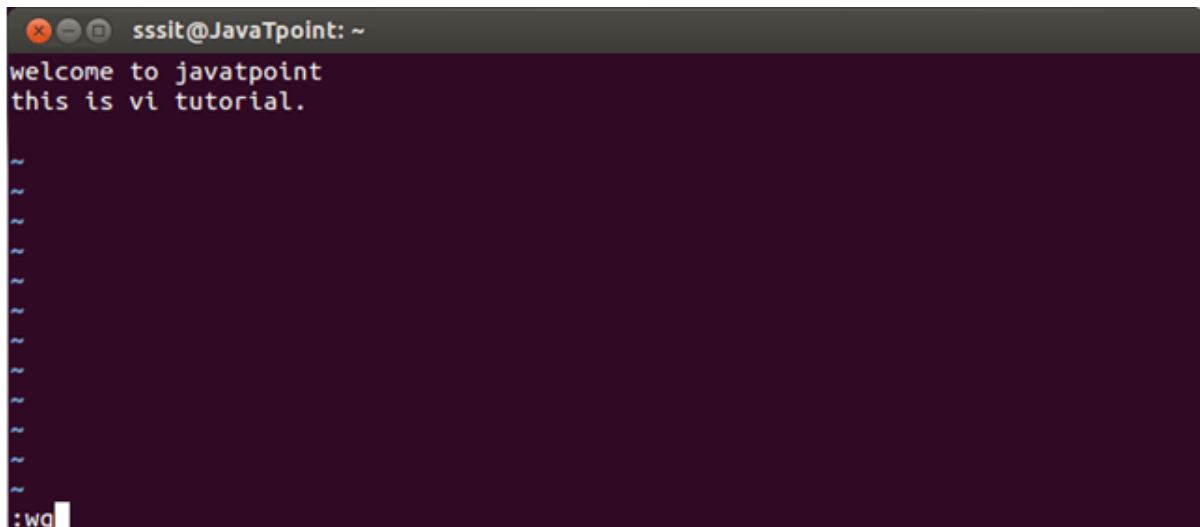
This is what you'll see when you'll press enter after the above command. If you'll start typing, nothing will appear as you are in command mode. By default vi opens in command mode.

A terminal window showing the vi editor in command mode. The title bar is 'sssit@JavaTpoint: ~'. The editor area is mostly blank with some faint blue lines on the left. At the bottom, it says '"~/Downloads/file.txt" [New File]'. The cursor is at the top left.

Look at the above snapshot, it is blank as it is a new file. To start typing, you have to move to the insert mode. At the end of the terminal window, directory name and file name are displayed.

Insert mode

To move to the insert mode press **i**. Although, there are other commands also to move to insert mode which we'll study in next page.

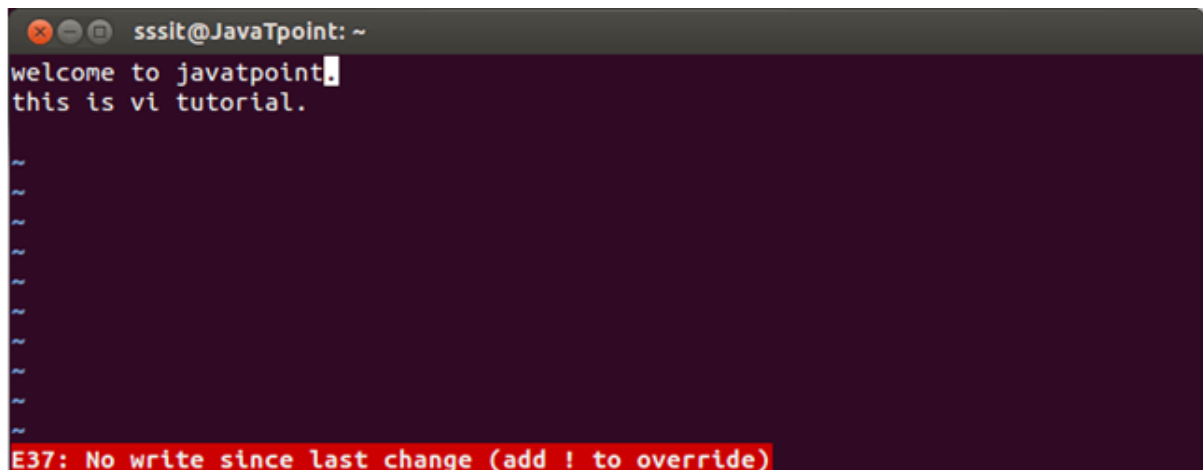
A terminal window titled 'sssit@JavaTpoint: ~' showing a file being edited in the vi editor. The file contains two lines: 'welcome to javatpoint' and 'this is vi tutorial.'. The cursor is at the end of the second line. The command ':wq' is entered in command mode, appearing at the bottom left of the screen.

```
sssit@JavaTpoint: ~
welcome to javatpoint
this is vi tutorial.

:wq
```

Look at the above snapshot, command :wq will save and quit the vi editor. When you'll type it in command mode, it will automatically come at bottom left corner.

If you want to **quit without saving the file, use :q**. This command will only work when you have not made any changes in the file.


A terminal window titled 'sssit@JavaTpoint: ~' showing the same file as before. The cursor is at the end of the second line. The command ':q' is entered, which results in an error message 'E37: No write since last change (add ! to override)' displayed in red at the bottom left of the screen.

```
sssit@JavaTpoint: ~
welcome to javatpoint
this is vi tutorial.

E37: No write since last change (add ! to override)
```

Look at the above snapshot, this file is modified and hence on typing :q it displays this message at bottom left corner.

The above file can be saved with the command **:q!**. It discards the changes made in the file and save it.

A terminal window titled 'sssit@JavaTpoint: ~' showing the vi editor interface. The file content is 'welcome to javatpoint.' followed by 'this is vi tutorial.' on the next line. Below these are several empty lines, each starting with a tilde '~'. At the bottom, the command prompt ':!q' is visible, indicating the command to save and quit the editor.

Look at the above snapshot, we have typed **:!q**, it will save our file by discarding the changes made.

Vi Commands

Linux vi editor is different from other editors. You have to use different keys to use different functions. Although, it's quite easy and interesting to use vi editor.

The vi editor commands are case sensitive.

Have a look at the vi commands in the following table.

To switch from command to insert mode:

Command	Action
i	Start typing before the current character(insert mode)
I	Start typing at the start of current line
a	Start typing after the current character(append)
A	Start typing at the end of current line
o	Start typing on a new line after the current line
O	Start typing on a new line before the current line

To move around a file:

Commands	Action
j	To move down
k	To move up
h	To move left
l	To move right

To delete:

Commands	Action
x	Delete the current character
X	Delete the character before the cursor
r	Replace the current character
dd	Delete the current line
n-dd	Delete n no of lines

Command to cut, copy and paste:

Commands	Action
dd	Delete a line
yy	(yank yank) copy a line
p	Paste after the current line
P	Paste before the current line

Command to cut, copy and paste in blocks:

Commands	Action
<n>dd	Delete the specified n number of lines
<n>yy	Copy the specified n number of lines

VI Editing commands

- i - Insert at cursor (goes into insert mode)
- a - Write after cursor (goes into insert mode)
- A - Write at the end of line (goes into insert mode)
- ESC - Terminate insert mode
- u - Undo last change
- U - Undo all changes to the entire line
- o - Open a new line (goes into insert mode)
- dd - Delete line
- 3dd - Delete 3 lines.
- D - Delete contents of line after the cursor

- C - Delete contents of a line after the cursor and insert new text. Press ESC key to end insertion.
- dw - Delete word
- 4dw - Delete 4 words
- cw - Change word
- x - Delete character at the cursor
- r - Replace character
- R - Overwrite characters from cursor onward
- s - Substitute one character under cursor continue to insert
- S - Substitute entire line and begin to insert at the beginning of the line
- ~ - Change case of individual character

Note: You should be in the "**command mode**" to execute these commands. VI editor is **case-sensitive** so make sure you type the commands in the right letter-case.

Make sure you press the right command otherwise you will end up making undesirable changes to the file. You can also enter the insert mode by pressing a, A, o, as required.

Moving within a file

- k - Move cursor up
- j - Move cursor down
- h - Move cursor left
- l - Move cursor right

You need to be in the command mode to move within a file. The default keys for navigation are mentioned below else; You can **also use the arrow keys on the keyboard.**