Linux System Administration I

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Unit 09: VI Editor in Linux

1- What is the VI editor?

2- Operation Modes

What is the VI editor?

The VI editor is the most popular and classic text editor in the Linux family. Below, are some reasons which make it a widely used editor :

 - It is available in almost all Linux Distributions

 - It works the same across different platforms and Distributions

 - It is user-friendly. Hence, millions of Linux users love it and use it for their editing needs

Operation Modes

To work on VI editor, you need to understand **its operation modes**. They can be divided into two main parts.

vi Command mode:
- The vi editor opens in this mode, and it only **understands commands**
- In this mode, you can, **move the cursor and cut, copy, paste the text**
- This mode also saves the changes you have made to the file
- **Commands are case sensitive.** You should use the right letter case.

Operation Modes

vi Editor Insert mode:

- This mode is for inserting text in the file.
- You can switch to the Insert mode from the command mode by pressing 'i' on the keyboard
- Once you are in Insert mode, any key would be taken as an input for the file on which you are currently working.
- To return to the command mode and save the changes you have made you need to press the Esc key
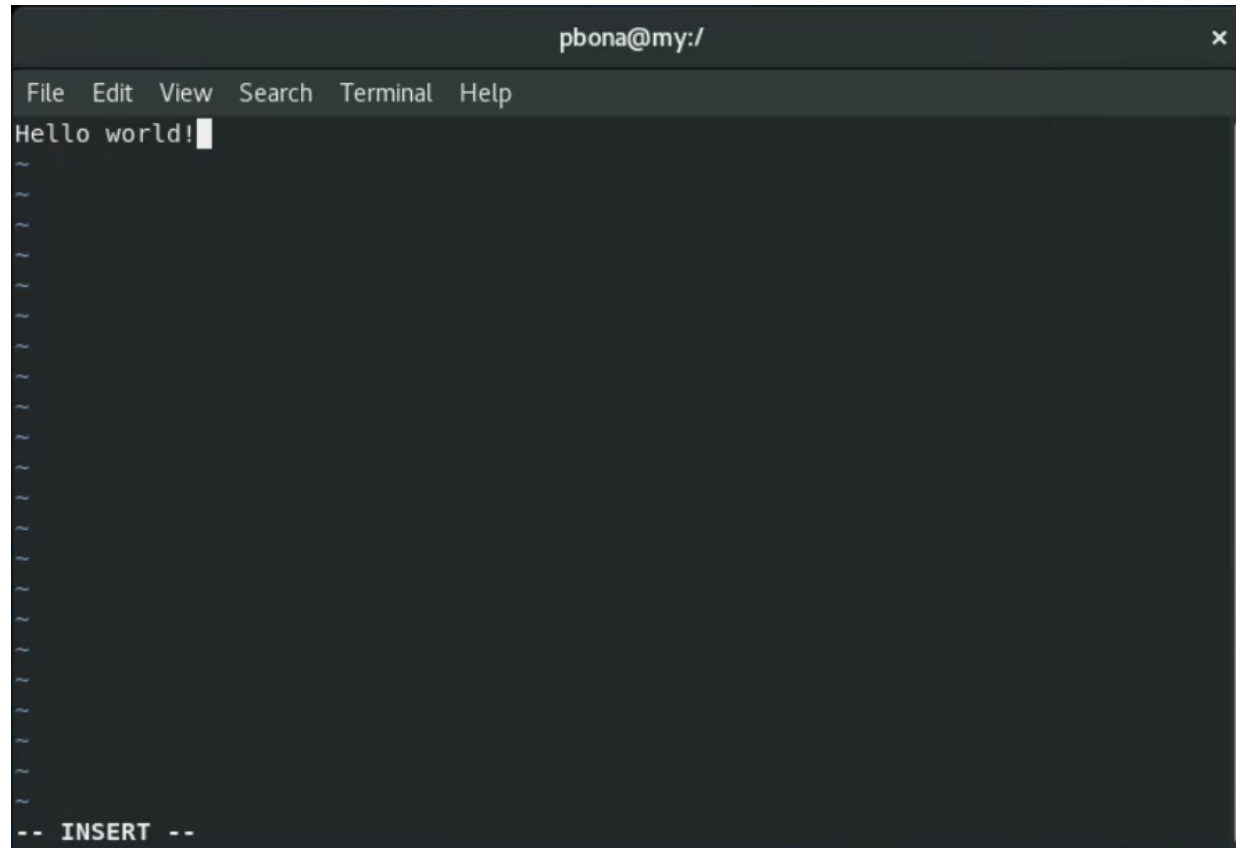
Operation Modes

How to use vi editor

To launch the VI Editor -Open the Terminal (CLI) and type

vi <filename_NEW> or <filename_EXISTING>

And if you specify an existing file, then the editor would open it for you to edit. Else, you can create a new file.

Operation Modes

Operation Modes

Saving/Loading a file

- First check that you are in command mode by pressing [ESC]

- To save file and quit the vi:
  - **ZZ**
  - **:wq**

- To safe file without quitting vi:
  - **:w <filename>**   (write to specified file)
  - **:w**   (write again)
  - **:w! <filename>** (to override existing file)

- To load existing file:

 :r <filename>

- To edit new file:
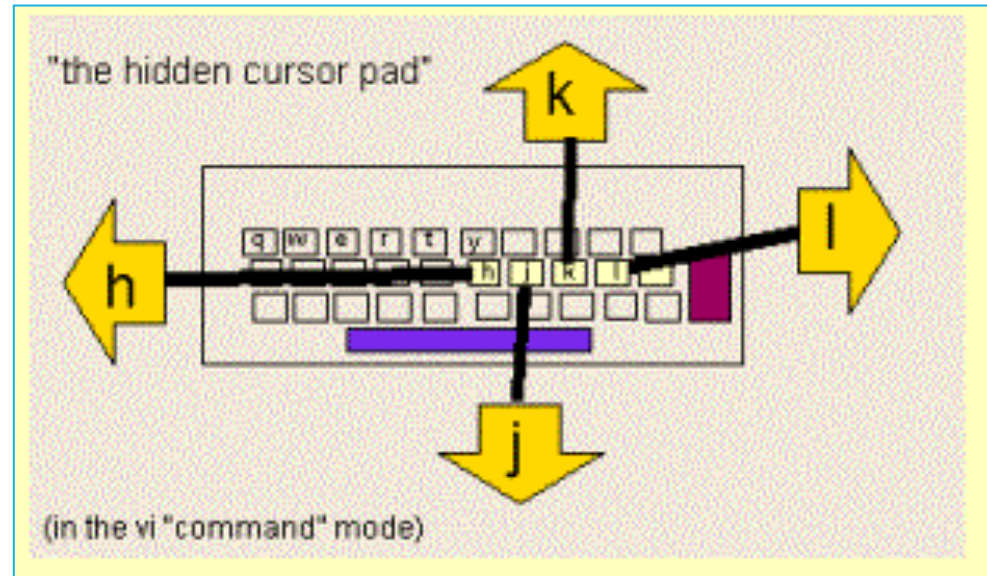
 :e <filename>

Operation Modes

Quitting VI

- To return to the last saved version of the file:

- :e! [Enter]

- :q! [Enter]   (with quitting from vi)

- vi normally won't let you throw away your edits. The exclamation point added to the :e or :q command causes vi to override this prohibition.

- To quit vi if no changes were made
  :q

Operation Modes

Moving within a file

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

"the hidden cursor pad"

(in the vi "command" mode)

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.

Operation Modes

Moving the Cursor by Bocks

- To the next word
  - w (symbols and punctuation as equivalent to words)
  - W

- To the previous word
  - b (symbols and punctuation as equivalent to words)
  - B

- Movement commands take numeric arguments
  - 4w, or 5B

- To the line number nn
  - :nn

- To the last line
  - :$

Operation Modes

Inserting Text

- **i** inserts text before cursor.

- **a** appends text after cursor.

- **A** appends text to the end of current line.

- **I** inserts text at the beginning of line.

- **o** opens blank line below cursor for text.

- **O** opens blank line above cursor for text.

- All of these commands leave you in insert mode. After inserting text, press [ESC] to escape back to command mode.

- **J** joins two consecutive lines.

- Using a numeric argument with J joins that number of consecutive lines: **3J**

Operation Modes

Changing Text

The following commands allow you to modify text.

- **r**   replace single character under cursor (no <Esc> needed)

- **R**   replace characters, starting with current cursor position, until <Esc> hit

- **cw**   change the current word with new text, starting with the character under cursor, until <Esc> hit

- **cNw**   change N words beginning with character under cursor, until <Esc> hit; e.g., c5w changes 5 words

- **C**   change (replace) the characters in the current line, until <Esc> hit

- **cc**   change (replace) the entire current line, stopping when <Esc> is hit

- **Ncc or cNc**   change (replace) the next N lines, starting with the current line, stopping when <Esc> is hit

Operation Modes

Deleting Text

The following commands allow you to delete text.

- **x**   delete single character under cursor

- **Nx**   delete N characters, starting with character under cursor

- **dw**   delete the single word beginning with character under cursor

- **dNw**   delete N words beginning with character under cursor; e.g., d5w deletes 5 words

- **D**   delete the remainder of the line, starting with current cursor position

- **dd**   delete entire current line

- **Ndd or dNd**   delete N lines, beginning with the current line; e.g., 5dd deletes 5 lines

Operation Modes

Copying and Pasting Text

The following commands allow you to copy and paste text.

- **yy**   copy (yank, cut) the current line into the buffer

- **Nyy or yNy**   copy (yank, cut) the next N lines, including the current line, into the buffer

- **p**   put (paste) the line(s) in the buffer into the text after the current line

Operation Modes

Searching Text

A common occurrence in text editing is to replace one word or phase by another. To locate instances of particular sets of characters (or strings), use the following commands.

- **/string**   search forward for occurrence of string in text

- **?string**   search backward for occurrence of string in text

- **n**   move to next occurrence of search string

- **N**   move to next occurrence of search string in opposite direction

Operation Modes

Summary

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.

Operation Modes

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.