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RH12402 - The VIsual Editor

Contents

Presentation

The **VI**sual Editor (a.k.a. **VI**) is a powerful text editor that operates in three basic modes :

- *Command*
- *Ex-mode*
- *Insert*

In *Command* mode it is possible to use keys such as **i** to insert text.

In *Ex-mode* mode, all commands sent to VI must be preceded by the `:` key.

In *Insert* mode VI can be used to :

- edit text,
- add text,
- search for text,
- copy text,
- paste text,
- cut text,
- replace existing text.

LAB #1 - Creating, Opening and Closing files with VI

1.1 - Commands

Command	Description
vi *filename*	Edit *filename* starting at line 1
vi	Edit a new file starting at line 1
vi -r *filename*	Recover *filename* that was being edited when system crashed
view *filename*	Open *filename* in read-only mode
:wq	Quit vi, writing out modified file to file named in original invocation and modify the *mtime*
:x	Quit vi, writing out modified file to file named in original invocation without modifying the *mtime* if the file was not modified
:q	Quit (or exit) vi if the file was not modified or quit view
u	Undo last command
U	Undo the modifications to the current line
:q!	Quit VI even though latest changes have not been saved

1.2 - Creating a new file with VI

Copy lines 1 through 25 below:

```
This is line 1
This is line 2
This is line 3
This is line 4
This is line 5
This is line 6
This is line 7
This is line 8
This is line 9
This is line 10
This is line 11
This is line 12
This is line 13
This is line 14
This is line 15
This is line 16
```

```
This is line 17
This is line 18
This is line 19
This is line 20
This is line 21
This is line 22
This is line 23
This is line 24
This is line 25
```

Create a new file called **vitext** using vi:

```
[root@redhat9 inode]# exit
logout
[trainee@redhat9 /]$ cd ~
[trainee@redhat9 ~]$ vi vitext
```

> **To do** - Use the **i** key to change to *insert* mode. Paste lines 1 through 25. Hit the Escape key to move to *Command* mode. Now hit the : key followed by the X key to save the file and quit vi.

1.3 - Opening a file in read-only mode using view

Now open **/home/trainee/vitext** in read-only mode:

```
[trainee@redhat9 ~]$ view vitext
```

You will obtain a result similar to the following example:

```
This is line 1
This is line 2
This is line 3
This is line 4
This is line 5
This is line 6
This is line 7
This is line 8
This is line 9
This is line 10
This is line 11
This is line 12
This is line 13
This is line 14
This is line 15
This is line 16
This is line 17
This is line 18
This is line 19
This is line 20
This is line 21
This is line 22
This is line 23
This is line 24
This is line 25
~
"vitext" [readonly] 25L, 391C
```

To do - Re-size your window so that you can see just the 25 numbered lines.

Important - Note the [readonly] statement on the last line.

1.4 - Opening a file in read-write mode using VI

Quit using the **:q** command and open the file in read-write mode :

```
[trainee@redhat9 ~]$ vi vitext
```

You will obtain a result similar to the following example :

```
This is line 1
This is line 2
This is line 3
This is line 4
This is line 5
This is line 6
This is line 7
This is line 8
This is line 9
This is line 10
This is line 11
This is line 12
This is line 13
This is line 14
This is line 15
This is line 16
This is line 17
This is line 18
This is line 19
```

```
This is line 20
This is line 21
This is line 22
This is line 23
This is line 24
This is line 25
"vitext" 25L, 391C                                          25,1          All
```

> **Important** - Note that VI is launched in ***Command*** mode. Note that there are 25 lines and 391 characters.

LAB #2 - The set Command

2.1 - Commands

Command	Description
:set nu	Turns on line numbering
:set number	Turns on line numbering
:set nonu	Turns off line numbering
:set nonumber	Turns off line numbering
:set ic	Turns on independent case searching
:set noic	Turns on case dependent searching

2.2 - Turning on line numbering using set

Turn on line numbering with the command of your choice. You will obtain a result similar to the following example:

```
  1 This is line 1
```

```
  2 This is line 2
  3 This is line 3
  4 This is line 4
  5 This is line 5
  6 This is line 6
  7 This is line 7
  8 This is line 8
  9 This is line 9
 10 This is line 10
 11 This is line 11
 12 This is line 12
 13 This is line 13
 14 This is line 14
 15 This is line 15
 16 This is line 16
 17 This is line 17
 18 This is line 18
 19 This is line 19
 20 This is line 20
 21 This is line 21
 22 This is line 22
 23 This is line 23
 24 This is line 24
 25 This is line 25
:set nu                                                  25,1          All
```

```
  1 This is line 1
  2 This is line 2
  3 This is line 3
  4 This is line 4
  5 This is line 5
  6 This is line 6
  7 This is line 7
  8 This is line 8
```

```
  9 This is line 9
 10 This is line 10
 11 This is line 11
 12 This is line 12
 13 This is line 13
 14 This is line 14
 15 This is line 15
 16 This is line 16
 17 This is line 17
 18 This is line 18
 19 This is line 19
 20 This is line 20
 21 This is line 21
 22 This is line 22
 23 This is line 23
 24 This is line 24
 25 This is line 25
:set number                                                  25,1          All
```

LAB #3 - Moving around within the file

3.1 - Commands

Command	Description
h or ← or Backspace	Move cursor left one character
j or ↓ or ↵ Enter	Move cursor down one line
k or ↑	Move cursor up one line
l or → ou Space Bar	Move cursor right one character
b	Move cursor back to beginning of preceding word
w	Move cursor to beginning of next word
e	Move cursor to the end of the current word

Command	Description
H	Move cursor to top of screen
M	Move cursor to middle of screen
L	Move cursor to bottom of screen
G or **:$**	Move cursor to the last line of the file
1G or **:0**	Move cursor to first line in file
27G	Move cursor to line 27
Ctrl+f	Move forward one screen
Ctrl+d	Move down (forward) one half screen
Ctrl+b	Move backward one screen
Ctrl+u	Move up (back) one half screen

To do - Test each of the above commands. When you have finished, position the cursor at beginning of line 13. In order to understand why the H, J, K and L keys are used as arrow keys, please see this **page**.

LAB #4 - Inserting Text

4.1 - Commands

Key(s)	Description
i	Insert text before cursor
I	Insert text at beginning of current line
a	Append text after cursor
A	Append text to end of current line
o	Open and put text in a new line below current line
O	Open and put text in a new line above current line
Escape	Returns the editor to *Command* mode

4.2 - Inserting text

Insert a line under the line 13 using the **o** command. Note that you are now in *Insert* mode. Type the following text : **Linux is super**. You will obtain a result similar to the following example :

```
  1 This is line 1
  2 This is line 2
  3 This is line 3
  4 This is line 4
  5 This is line 5
  6 This is line 6
  7 This is line 7
  8 This is line 8
  9 This is line 9
 10 This is line 10
 11 This is line 11
 12 This is line 12
 13 This is line 13
 14 Linux is super
 15 This is line 14
 16 This is line 15
 17 This is line 16
 18 This is line 17
 19 This is line 18
 20 This is line 19
 21 This is line 20
 22 This is line 21
 23 This is line 22
 24 This is line 23
 25 This is line 24
-- INSERT --                                          14,15         Top
```

Warning - Do not change the size of the window. You only need to see the first 25 lines.

Switch back to *Command* mode using the Escape key and place the cursor on the last line of the screen using the **L** command. Move the cursor to the end of the line in *Insert* mode using the **A** command and once again type **Linux is super**. You will obtain a result similar to the following example :

```
  1 This is line 1
  2 This is line 2
  3 This is line 3
  4 This is line 4
  5 This is line 5
  6 This is line 6
  7 This is line 7
  8 This is line 8
  9 This is line 9
 10 This is line 10
 11 This is line 11
 12 This is line 12
 13 This is line 13
 14 Linux is super
 15 This is line 14
 16 This is line 15
 17 This is line 16
 18 This is line 17
 19 This is line 18
 20 This is line 19
 21 This is line 20
 22 This is line 21
 23 This is line 22
 24 This is line 23
 25 This is line 24Linux is super
-- INSERT --                                              25,30         Top
```

Switch back to *Command* mode using the Escape key and move the cursor to the first line of the screen using the **H** command. Move the cursor to the

third word by pressing the **w** key 3 times. Switch to *Insert* mode using the **i** key and type **Linux is super**. You will obtain a result similar to the following example :

```
  1 This is line Linux is super1
  2 This is line 2
  3 This is line 3
  4 This is line 4
  5 This is line 5
  6 This is line 6
  7 This is line 7
  8 This is line 8
  9 This is line 9
 10 This is line 10
 11 This is line 11
 12 This is line 12
 13 This is line 13
 14 Linux is super
 15 This is line 14
 16 This is line 15
 17 This is line 16
 18 This is line 17
 19 This is line 18
 20 This is line 19
 21 This is line 20
 22 This is line 21
 23 This is line 22
 24 This is line 23
 25 This is line 24Linux is super
-- INSERT --                                                  1,28          Top
```

Switch back to *Commande* mode using the Escape key and move the cursor to the first line of the screen using the **H** command.

LAB #5 - Searching for Text

5.1 - Commands

Key(s)	Description
/ *string*	Search forward for occurrence of string in text
//	Search forward for next occurrence of string in text
? *string*	Search backward for occurrence of string in text
??	Search backward for next occurrence of string in text
n	Move to next occurrence of search string
N	Move to next occurrence of search string in opposite direction
:g/*string*/**s**//*string1*/**g**	Search and replace *string* by *string1*

5.2 - Searching for and replacing text

Search the text for the string *super* by using the **/super** command. Now search the next two occurrences using the **//** command twice. Your cursor should now be at the beginning of the last word on the last line.

Now search backwards for the same string using the **?super** command. Your cursor should now be on the line in the middle of the screen.

Now use the **n** command. Your cursor should be on the first line. Now use the **N** command. Your cursor should now be, once again, on the line in the middle of the screen.

Place the cursor at the beginning of the first line and *search and replace* the string **super** by the string **wonderful** using the following command :

:g/super/s//wonderful/g

You will obtain a result similar to the following example :

```
  1 This is line Linux is wonderful1
  2 This is line 2
  3 This is line 3
```

```
  4 This is line 4
  5 This is line 5
  6 This is line 6
  7 This is line 7
  8 This is line 8
  9 This is line 9
 10 This is line 10
 11 This is line 11
 12 This is line 12
 13 This is line 13
 14 Linux is wonderful
 15 This is line 14
 16 This is line 15
 17 This is line 16
 18 This is line 17
 19 This is line 18
 20 This is line 19
 21 This is line 20
 22 This is line 21
 23 This is line 22
 24 This is line 23
 25 This is line 24Linux is wonderful
3 substitutions on 3 lines                                  25,1          Top
```

LAB #6 - Deleting Text

6.1 - Commands

Key(s)	Description
x	Delete single character under cursor
X	Delete single character to the left of cursor
5x	Delete 5 characters, starting with character under cursor

Key(s)	Description
dw	Delete current word
5dw	Delete 5 words, starting with the word under cursor
dd or **:d**	Delete the current line
5dd	Delete 5 lines starting with the line under cursor
:5,7 d	Delete lines 5, 6 and 7

6.2 - Deleting lines

Place the cursor on the line containing 14 and delete it using the **dd** command. You will obtain a result similar to the following example :

```
  1 This is line Linux is wonderful1
  2 This is line 2
  3 This is line 3
  4 This is line 4
  5 This is line 5
  6 This is line 6
  7 This is line 7
  8 This is line 8
  9 This is line 9
 10 This is line 10
 11 This is line 11
 12 This is line 12
 13 This is line 13
 14 This is line 14
 15 This is line 15
 16 This is line 16
 17 This is line 17
 18 This is line 18
 19 This is line 19
 20 This is line 20
 21 This is line 21
 22 This is line 22
```

```
 23 This is line 23
 24 This is line 24Linux is wonderful
 25 This is line 25
                                                                14,1          All
```

Note the contents of lines 4 through 6. Now delete those lines using the following command:

:4,6 d

You will obtain a result similar to the following example :

```
  1 This is line Linux is wonderful1
  2 This is line 2
  3 This is line 3
  4 This is line 7
  5 This is line 8
  6 This is line 9
  7 This is line 10
  8 This is line 11
  9 This is line 12
 10 This is line 13
 11 This is line 14
 12 This is line 15
 13 This is line 16
 14 This is line 17
 15 This is line 18
 16 This is line 19
 17 This is line 20
 18 This is line 21
 19 This is line 22
 20 This is line 23
 21 This is line 24Linux is wonderful
 22 This is line 25
~
```

```
~
~
3 fewer lines                                                 4,1           All
```

LAB #7 - Copy, Cut and Paste

7.1 - Commands

Key(s)	Description
yy or **Y** or **:y**	Copy (yank) the current line into the buffer
V	Select a block of text
p	Put (paste) the line(s) in the buffer into the text after the current line
P	Put (paste) the line(s) in the buffer into the text before the current line
:2,3 co 7	Copy lines 2 to 3 to the line **after** line 7
:2,3 m 7	Move lines 2 to 3 to lines 6 and 7

7.2 - Copying, Cutting and pasting text

Move the cursor to line 3 and copy it using the **yy** command. Move to line 5 and paste the line using the **p** command:

```
  1 This is line Linux is wonderful1
  2 This is line 2
  3 This is line 3
  4 This is line 7
  5 This is line 8
  6 This is line 3
  7 This is line 9
  8 This is line 10
  9 This is line 11
 10 This is line 12
 11 This is line 13
```

```
 12 This is line 14
 13 This is line 15
 14 This is line 16
 15 This is line 17
 16 This is line 18
 17 This is line 19
 18 This is line 20
 19 This is line 21
 20 This is line 22
 21 This is line 23
 22 This is line 24Linux is wonderful
 23 This is line 25
~
~
3 fewer lines                                          6,1           All
```

Move your cursor to line 4 and copy it using the **Y** command. Now move your cursor to line 6 and paste the copied line using the **P** command. You will obtain a result similar to the following example:

```
  1 This is line Linux is wonderful1
  2 This is line 2
  3 This is line 3
  4 This is line 7
  5 This is line 8
  6 This is line 7
  7 This is line 3
  8 This is line 9
  9 This is line 10
 10 This is line 11
 11 This is line 12
 12 This is line 13
 13 This is line 14
 14 This is line 15
 15 This is line 16
```

```
 16 This is line 17
 17 This is line 18
 18 This is line 19
 19 This is line 20
 20 This is line 21
 21 This is line 22
 22 This is line 23
 23 This is line 24Linux is wonderful
 24 This is line 25
~
3 fewer lines                                                6,1           All
```

Now use the following command **:4,5 co 15**. You will obtain a result similar to the following example:

```
  1 This is line Linux is wonderful1
  2 This is line 2
  3 This is line 3
  4 This is line 7
  5 This is line 8
  6 This is line 7
  7 This is line 3
  8 This is line 9
  9 This is line 10
 10 This is line 11
 11 This is line 12
 12 This is line 13
 13 This is line 14
 14 This is line 15
 15 This is line 16
 16 This is line 7
 17 This is line 8
 18 This is line 17
 19 This is line 18
 20 This is line 19
```

```
 21 This is line 20
 22 This is line 21
 23 This is line 22
 24 This is line 23
 25 This is line 24Linux is wonderful
:4,5 co 15                                                  17,1          Top
```

Note that lines 4 and 5 have been copied to after line 16:

```
...
 15 This is line 16
 16 This is line 7
 17 This is line 8
 18 This is line 17
...
```

Now use the following command: **:4,6 m 20**. You will obtain a result similar to the following example:

```
  1 This is line Linux is wonderful1
  2 This is line 2
  3 This is line 3
  4 This is line 3
  5 This is line 9
  6 This is line 10
  7 This is line 11
  8 This is line 12
  9 This is line 13
 10 This is line 14
 11 This is line 15
 12 This is line 16
 13 This is line 7
 14 This is line 8
 15 This is line 17
 16 This is line 18
```

```
 17 This is line 19
 18 This is line 7
 19 This is line 8
 20 This is line 7
 21 This is line 20
 22 This is line 21
 23 This is line 22
 24 This is line 23
 25 This is line 24Linux is wonderful
3 lines moved                                          20,1          Top
```

LAB #8 - Configuring a Personalised Interface

VI can be configured by any user to suit his/her requirements. This is achieved by creating and editing the file **~/.exrc**. The file is read by VI each time it is launched by that user and the commands contained in it are executed. The format of each command is the same as if it were typed by the user within VI *except* that the leading **:** character is omitted. For example the following .exrc file would tell VI to turn on line numbering and show hidden characters:

```
set nu
set list
```

> **To do** - Save your vitext file and quit VI, copy the above text and paste it into a new file in your home directory called **.exrc**.

Open the **/home/trainee/vitext** file using VI:

```
[trainee@redhat9 ~]$ vi vitext
```

You will see a result similar to that shown below:

```
  1 This is line Linux is wonderful1$
  2 This is line 2$
  3 This is line 3$
  4 This is line 3$
  5 This is line 9$
  6 This is line 10$
  7 This is line 11$
  8 This is line 12$
  9 This is line 13$
 10 This is line 14$
 11 This is line 15$
 12 This is line 16$
 13 This is line 7$
 14 This is line 8$
 15 This is line 17$
 16 This is line 18$
 17 This is line 19$
 18 This is line 7$
 19 This is line 8$
 20 This is line 7$
 21 This is line 20$
 22 This is line 21$
 23 This is line 22$
 24 This is line 23$
 25 This is line 24Linux is wonderful$
"vitext" 26L, 442C                                          20,1          Top
```