

## vi Editor Basics

<http://www.physics.carleton.ca/~boyce/spole/courses/unix/vi.html>

### Background

There are a number of different UNIX file editors that you can use to create and modify files. Although not always the easiest to learn, the vi editor is one of the most versatile. This document provides you with the basic information to help you get started with the vi text editor. A text editor is simply a program used to edit files which contain plain text. Plain text is different from word processor text because it doesn't contain any formatting commands like boldface, underline, italics etc. Plain text is also called ASCII text; it can be transferred between any computer (PC, Macintosh, UNIX, Amiga, etc.) and is not software dependent. Therefore, you can import it into any word processing program you might want to use (i.e. WordPerfect, MS Word, MacWrite, etc.).

### Getting Started

While using vi, at any one time you are in one of three modes of operation. These modes are known as "command mode," "insert mode," and "last line mode."

When you start up vi, you are in "**command mode**." This mode allows you to use certain commands to edit files or to change to other modes. For example, typing "x" while in command mode deletes the character underneath the cursor. The arrow keys move the cursor around the file which you're editing. Generally, the commands used in command mode are one or two characters long.

You may actually insert or edit text within "**insert mode**." When using vi, you'll probably spend most of your time within this mode. You start insert mode by using a command such as "i" (for "insert") from command mode. While in insert mode, you are inserting text into the document from your current cursor location. To end insert mode and return to command mode, press **esc**.

"**Last line mode**" is a special mode used to give certain extended commands to vi. While typing these commands, they appear on the last line of the screen (hence the name). For example, when you type ":" from the command mode, you jump into the last line mode, and can use commands such as "wq" (to write the file and quit vi), or "q!" (to quit vi without saving changes). Last line mode is generally used for vi commands which are longer than one character. In last line mode, you enter a single-line command and press **enter** to execute it.

The best way to understand these concepts is to actually fire up vi and edit a file. In the example "screens" below, we're only going to show a few lines of text, as if the screen was only six lines high (instead of twenty-four).

To create or edit a file: **vi [filename]**

```
$ vi test
```

vi opens the file you specify in filename unless it does not exist. If the file does not exist, vi opens a new file which will be called filename. You should see something like

"test" [New file]

The column of "~" characters indicates that you are at the end of the file.

## Inserting text

You are now in command mode; in order to insert text into the file, press `i` (which will place you into insert mode), and begin typing.

Now is the time for all good men to come to the aid of the party.

While inserting text, you may type as many lines as you wish (pressing **return** after each, of course), and you may correct mistakes using the backspace key.

To end insert mode, and return to command mode, press **esc**.

While in command mode, you can use the arrow keys to move around the file. Here, because we only have one line of text, trying to use the up- or down-arrow keys will probably cause vi to beep at you.

There are several ways to insert text, other than using the "i" command. For example, the "a" command inserts text beginning after the current cursor position, instead of on the current cursor position. For example, use the left arrow key to move the cursor between the words "good" and "men".

Now is the time for all good men to come to the aid of the party.

Press **3** to start insert mode, type "wo", and then hit **esc** to return to command mode.

```
Now is the time for all good women to come to the aid of the party
```

```
^  
^  
^  
^  
^  
^
```

To begin inserting text at the line below the current one, use the "o" command. For example, press **[o]** and type another line or two:

```
Now is the time for all good women to come to the aid of the party.
```

```
Afterwards, we'll go out for pizza and beer _
```

```
^  
^  
^  
^  
^  
^
```

Just remember that at any time you're either in command mode (where commands such as "i", "a", or "o" are valid), or in insert mode (where you're inserting text, followed by **[esc]** to return to command mode), or last line mode (where you're entering extended commands, as discussed below).

### Deleting text

From command mode, the "x" command deletes the character under the cursor. If you press **[x]** five times, you'll end up with:

```
Now is the time for all good women to come to the aid of the party
```

```
Afterwards, we'll go out for pizza and _
```

```
^  
^  
^  
^  
^  
^
```

Now press **[a]**, insert some text, followed by **[esc]**:

```
Now is the time for all good women to come to the aid of the party.
```

```
Afterwards, we'll go out for pizza and Diet Coke _
```

```
^  
^  
^  
^  
^  
^
```

You can delete entire lines using the command "dd" (that is, press **[d]** twice in a row). If your cursor is on the second line, and you type "dd",

```
Now is the time for all good women to come to the aid of the party
```

```
~  
~  
~  
~  
~  
~
```

To delete the word which the cursor is on, use the "dw" command. Place the cursor on the word "good", and type "dw".

```
Now is the time for all women to come to the aid of the party
```

```
~  
~  
~  
~  
~  
~
```

### Changing text

You can replace sections of text using the "R" command. Place the cursor on the first letter in "party", and press **R**, and type the word "hungry".

```
Now is the time for all women to come to the aid of the hungry.
```

```
~  
~  
~  
~  
~  
~
```

Using "R" to edit text is much like the "i" and "a" commands, but "R" overwrites text, instead of inserting it.

The "r" command replaces the single character under the cursor. For example, move the cursor to the beginning of the word "Now", and type "r" followed by "C", you'll have:

```
Cow is the time for all women to come to the aid of the hungry.
```

```
~  
~  
~  
~  
~  
~
```

The "~" command changes the case of the letter under the cursor from upper- to lower-case, and vice versa. For example, if you place cursor on the "o" in "Cow", above, and repeatedly press **~**, you'll end up with:



```
COW IS THE TIME FOR ALL WOMEN TO COME TO THE AID OF THE HUNGRY
```

-----  
-----  
-----  
-----  
-----  
-----

## Moving Commands

You already know how to use the arrow keys to move around the document. In addition, you can use the "h", "j", "k", and "l" commands to move the cursor left, down, up, and right, respectively. This comes in handy when (for some reason) your arrow keys aren't working correctly.

The "w" command moves the cursor to the beginning of the next word; the "b" moves it to the beginning of the previous word.

The "0" (that's a zero) command moves the cursor to the beginning of the current line, and the "\$" command moves it to the end of the line.

In order to move the cursor to the end of the file, type "G". You can also move to an arbitrary line; for example, typing the command "10G" would move the cursor to line 10 in the file. To move to the beginning of the file, use "1G".

You can couple moving commands with other commands, such as deletion. For example, the command "d\$" will delete everything from the cursor to the end of the line; "dG" will delete everything from the cursor to the end of the file, and so on.

## Saving files and quitting vi

To quit vi without making changes to the file, use the command ":q!". When you type the ":" , the cursor will move to the last line on the screen; you'll be in last line mode.



```
COW IS THE TIME FOR ALL WOMEN TO COME TO THE AID OF THE HUNGRY
```

-----  
-----  
-----  
-----  
-----  
-----  
:

In last line mode, certain extended commands are available. One of them is "q!", which quits "vi" without saving. The command ":wq" saves the file and then exits "vi". The command "ZZ" (from command mode, without the ":") is equivalent to ":wq". Remember that you must press **enter** after a command entered in last line mode. To save the file without quitting vi, just use ":w".