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| **[vitutor](http://amath.colorado.edu/computing/unix/vi/vitutor.html)**[tutorial](http://amath.colorado.edu/computing/unix/vi/vitutor.html) [**vilearn** tutorial](http://amath.colorado.edu/computing/unix/vi/vitutor.html) [other VI manuals/tutorials](http://www.thomer.com/thomer/vi/vi.html#manuals) [frequently asked questions](http://amath.colorado.edu/computing/unix/vi/faq.html) [2-page PDF summary](http://amath.colorado.edu/computing/unix/vi/VIbasics.pdf) |

[VI Editor](http://shabbathster.blogspot.com/2010/10/vi-editor.html)

**Using the VI editor  
(the very basics)**

The VI editor is a screen-based text editor available on all Unix computers (and available for all other kinds of computers, sometimes as ``**vim**'' rather than ``**vi**''). Given that it takes some effort, why bother to learn VI? Because

* sometimes it's the only available editor
* when you log on remotely (ssh) to a Unix host from a Mac or PC, only a text editor (like VI or emacs or pico) can be used to edit files in a text-only terminal window
* mouse movements (e.g., menus, highlighting, clicking, scrolling) slow down the touch-typist. VI requires none
* as mentioned above, VI is the editor sure to be on ***every*** Unix computer in the world
* VI is a **very** powerful editor for those who learn more than just the beginner commands, and even more powerful for those who are familiar with Unix commands

If you will be using Unix/Linux computers, especially via ssh, save yourself headaches and learn the basics of VI now! This web page (and the [2-page PDF summary](http://amath.colorado.edu/computing/unix/vi/VIbasics.pdf)) are for reference; for a hands-on tutorial type the Unix command ``vitutor'' or ``vilearn'', or try the hyperlinks at the top of this page.

In the following, **^X** denotes a control character. For example, ``**^D**'' means to hold down the Control key and press the ``d'' key. Also ``*Rtn*'' means to press the Return (or Enter) key, while ``**Esc**'' means to press the Escape key, located in the far upper left corner of the keyboard.

**1. Starting:** To edit a file named (say) ``mytext'' on a Unix computer, type the command ``**vi mytext**''. Note that you must type the command with lowercase letters.

**2. Two Modes:** Pay attention, this is the crucial feature of VI! There are two **modes**, *command* and *insert*. When in ***insert mode***, everything you type appears in the document at the place where the blinking cursor is. When in ***command mode***, keystrokes perform special functions rather than actually inserting text to the document. (This makes up for the lack of mouse, menus, etc.!) You must know which keystroke will switch you from one mode to the other:

* Switch to **insert** mode: press **i** (or **a**, or **o**)
* Switch to **command** mode: press **Esc**

**3. Getting out:** When you want to get out of the editor, switch to command mode (press **Esc**) if necessary, then

* type **:wq***Rtn* to save the edited file and quit
* type **:q!***Rtn* to quit the editor without saving changes
* type **ZZ** to save and quit (a shortcut for :wq *Rtn*)
* type **:w** filename to save the edited file to **new** file ``filename''

**4. Moving Around:** When in *command mode* you can use the arrow keys to move the cursor up, down, left, right. In addition, these keystrokes will move the cursor:

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| **h** left one character **l** right one character **k** up one line **j** down one line | **b** back one word **f** forward one word **{** up one paragraph **}** down one paragraph **$** to end of the line | **^B** back one page **^F** forward one page **17G** to line #17 **G** to the last line |

**5. Inserting Text:** From command mode, these keystrokes switch youinto insert mode with new text being inserted

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| **i** just before the current cursor position **a** just after the current cursor position **o** into a new line below current cursor | **I** at the beginning of the current line **A** at the end of the current line **O** into a new line above current cursor |

**6. Cutting, Copying, Pasting:** From command mode, use these keystroke (or keystroke-combination) commands for the described cut/copy/paste function:

* **x** delete (cut) character under the cursor
* **24x** delete (cut) 24 characters
* **dd** delete (cut) current line
* **4dd** delete (cut) four lines
* **D** delete to the end of the line from the cursor
* **dw** delete to the end of the current word
* **yy** copy (without cutting) current line
* **5yy** copy (without cutting) 5 lines
* **p** paste after current cursor position/line
* **P** paste before current cursor position/line

**7. Searching for Text:** Instead of using the ``Moving Around'' commands, above, you can go directly forward or backward to specified text using ``**/**'' and ``**?**''. Examples:

* **/wavelet***Rtn* jump forward to the next occurrence of the string ``wavelet''
* **?wavelet***Rtn* jump backward to the previous occurrence of the string ``wavelet''
* **n**repeat the last search given by ``**/**'' or ``**?**''

**8. Replacing Text:** This amounts to combining two steps; deleting, then inserting text.

* **r** replace 1 character (under the cursor) with another character
* **8r** replace each of the next 8 characters with a given character
* **R** overwrite; replace text with typed input, ended with **Esc**
* **C** replace from cursor to end of line, with typed input (ended with **Esc**)
* **S** replace entire line with typed input (ended with **Esc**)
* **4S** replace 4 lines with typed input (ended with **Esc**)
* **cw** replace (remainder of) word with typed input (ended with **Esc**)

**9. Miscellany:**The commands on these two pages are just the start. Many more powerful commands exist in VI, especially those which invoke other Unix text-filtering commands (sort, fmt, uniq, cat, sed, awk, grep, etc.). More complete descriptions of all the possible commands are available on the web; see the list of VI manuals/tutorials maintained at [The Vi Lovers Home Page](http://www.thomer.com/thomer/vi/vi.html#manuals) or use a generic [web search](http://www.google.com/) to search for ``vi tutorial'' or ``vim tutorial''.

Some useful or spectacular ``miscellaneous'' commands (not in categories 1-8 above):

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| **typed command** | **what it does** |
| **u** | undo the last change to the file (and type ``**u**'' again to re-do the change) |
| **U** | undo *all* changes to the current line |
| **^G** | show the current filename and status and line number |
| **:set nu** *Rtn* | show all line numbers (``**:set nonu**'' gets rid of the numbers) |
| **^L** | clear and redraw the screen |
| **:%s/Joe/Bob/g** *Rtn* | change every ``Joe'' to ``Bob'' throughout the document |
| **J** | join this line to the next line |
| **5J** | join 5 lines |
| **xp** | exchange two characters (actually the two commands x=delete and p=paste) |
| **:w** *Rtn* | write (save) the current text, but don't quit VI |
| **:12,17w** filename *Rtn* | write lines #12-17 of the current text to a (new) text file |
| **:r** filename *Rtn* | read (and insert) contents of a text file |
| **!]]sort -u | cat -n** | sort all lines from cursor downwards, deleting duplicates, and number the lines |
| **:26,$s/\<[a-z]/\U&/g** *Rtn* | Capitalize the first letter of each word from line #26 through the end of the file |