

<http://amath/computing/vi/>

Using the VI editor

The VI editor is a screen-based text editor available on all Unix computers (and available for all other kinds of computers). Given that it takes some effort to learn, why bother with 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 the text editors (VI and emacs and pico) can be used to edit files, because they require no mouse
- mouse movements (menus, highlighting, clicking, scrolling) slow down the touch-typist

If you will be using Unix/Linux computers, especially via ssh, save yourself headaches and learn the basics of VI now! 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.

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

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:

- To switch to **insert** mode: press **i** (or **a**, or **o**)
- To switch to **command** mode: press **Esc**

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

- type **:wq Rtn** to save the edited file and quit, or
- type **:q! Rtn** to quit the editor without saving changes, or
- type **zz** to save and quit (a shortcut for **:wq Rtn**), or
- type **:w filename** to save the edited file to **new** file "filename"

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:

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

Inserting Text: From command mode, these keystrokes switch you into insert mode with new text being inserted

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

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

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 "?"

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**)

Miscellany: The commands on these two pages are just the start. Many more powerful commands exist in VI. More complete descriptions of all the possible commands are available on the web; search for "vi tutorial" or "vim tutorial". Useful commands include

- 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