

Using Gnu Emacs

Ernesto P. Adorio

Contents

1	Special Notation	3
2	Starting, quitting and accessing the menubar	3
3	File operations	3
4	The undo and cancel lifesavers	4
5	Navigation and cursor positioning	4
6	Emacs Help system	4
7	Searching and replacing text	5
8	Window Commands	6
9	Text region oriented Commands	6
10	Accessing the shell and running programs on a region	6
11	Spell Check	7
12	Macros	7
13	Working with tags files	7

Preface

Gnu Emacs is a powerful programmable editor and more. However, the learning curve is steep but the rewards are great. It is suggested that beginning Emacs users should have the GNU Emacs Reference Guide around and go through the interactive Emacs tutorial sometime by typing the `C-h t` command. Also as a practical matter, record in a notebook what you wanted to do in the current editing session with Emacs and the solution found. A software tool user can only be productive with that tool if he/she thoroughly knows the basic functions and make a conscious effort to study the more advanced features.

1 Special Notation

If you are very new to Emacs, you might be shocked by its 'quaint' behavior on some keystrokes. Just remember that Emacs is one of the oldest professional programmer's editors, is still actively maintained, and is a very responsive program compared with more modern GUI oriented editors. Emacs uses the Ctrl key, abbreviated 'C-', and the Alt key, abbreviated for 'M-' (for Meta key), for which the Esc key can be substituted.

C-x 2	Press Ctrl and x keys together, release then press 2 key
C-x C-s	Press Ctrl and x keys together, release both, then press Ctrl and s keys together
M-!	Press Alt and the shift and ! keys together or alternatively, press Esc momentarily then press the shift and ! key together

2 Starting, quitting and accessing the menubar

Starting and quitting Emacs are the first commands to be mastered. Accessing the menubar when working in a simple non-X window terminal without a mouse is also an important skill to know. If you want to use a small editor for this occasion where you are always in console mode, that other editor, called vi, also fits the bill.

emacs	Starts emacs
emacs filename	Starts emacs with filename loaded
emacs &	Starts emacs without losing console control
nohup emacs &	Starts emacs as a separate process, emacs will not close when console is closed
F10 or M-`	(that's an M-backtick) Access menubar
C-x C-c	Quit Emacs

3 File operations

Here are basic file operations such as opening a file, saving a file and inserting a file contents.

C-x C-f	Open file
C-x C-s	Save current file
C-x s	Save all files
C-x i	Insert file contents

4 The undo and cancel lifesavers

The undo key undoes the effect of the previous operations. The undoes can be repeated. In Emacs, the Esc key is not the key for cancel!

C-_	Undoes previous operation
C-g	Cancels current typed command
Esc Esc Esc	Aborts started command

5 Navigation and cursor positioning

You can move the navigate through the buffer by using the arrow, PgUp, PgDn keys. Emacs also provides special key codes for text navigation.

C-Home	Move to beginning of buffer
C-End	Move to end of buffer
C-f	Move forward 1 character
C-b	Move backward 1 character
M-f	Move forward 1 word
M-b	Move backward 1 word
C-a	Move to beginning of line
C-e	Move to end of line
M-a	Move to beginning of sentence
M-e	Move to end of sentence
M-{	Move to beginning of paragraph
M-}	Move to end of paragraph
M-<	Move to beginning of buffer
M->	Move to end of buffer
C-v	Scroll to next screen
M-v	Scroll to previous screen
C-x <	Scroll left
C-x >	Scroll right
C-u C-l	Scroll to center screen

6 Emacs Help system

The Emacs help system is accessed by commands starting with C-h. Typing the '?' key will give us a list of the different options where some are listed in the following table.

a	Apropos. Specify a substring and emacs will show a list of commands containing the substring.
b	Display description of all key bindings in a table.
c	Describe-key-briefly. Type a command key sequence, Emacs will print the function name that key sequence runs.
C	Describe-coding-system.
f	Describe-function. Type a function name and Emacs displays documentation for it.
C-f	Info-goto-emacs-command-node. Type a function name, displays an Info node for that function.
i	Invokes the info documentation reader in an Emacs window.
I	Describe-input-method.
C-i	Info-lookup-symbol. Display the definition of a specific symbol as found in the manual for the current language.
k	Describe-key. Type a command key sequence, Emacs displays the full documentation for it.

7 Searching and replacing text

To search for a word and replace a word by another are features to be expected in an editor. Searching allows you to move the cursor quickly to a word in a long file compared with using the navigation keys and eyeing for the existence of the word in the buffer window.

When you type C-s, Emacs will present you with a **I-search:** prompt. Type the word to be searched, noticing that Emacs concurrently searches for the partially matching letters typed so far!

C-s	Forward search for a word
C-r	Backward search for a word
M-%	Replace a word by another

When you type M-%, Emacs will present a **Query replace:** prompt. Enter the word to be replaced. Then Emacs will ask for the replacement string. Then for each highlighted found word Emacs will process the replacement request according to the key typed shown in the left column of the following table.

Spc or 'y'	Replace one match
Del or 'n'	Skip to next found word
Ret or 'q'	Exit
.	(period) Replace one word and exit
,	(comma) Replace but do not move cursor
C-r	Enter recursive edit
C-M-c	Gets out of recursive edit
C-w	Delete match and recursive edit
C-l	Clears the screen, redisplay, and offer same replacement again
!	Replace all remaining matches without prompting
~	(tilde) Move the cursor back to previous match
E	Edit the replace string

8 Window Commands

Emacs lets you split the current editing window side by side or top to bottom.

C-x 0	That's a zero. Close current window in split windows
C-x 2	Split current window into two windows
C-x 3	Split current window into two windows side by side
C-x o	That's a letter o. Switch cursor to other window.

9 Text region oriented Commands

You can highlight a text region, also called a text block, in Emacs and perform special commands on them.

C-space	Starts highlight, use Up-arrow, Dn-arrow keys
C-w	Deletes (kill) highlighted region
M-w	Saves text region
C-y	Paste (yank) saved text region
M-y	Replace last yank with previous kill

10 Accessing the shell and running programs on a region

Not only you can access the shell from Emacs, you can also execute external commands on a highlighted region. This allows you to write filter programs for use with Emacs.

M-!	Executes a shell command
M-	Run a shell command on highlighted region
C-u M-	Filter highlighted region through a shell command
M-x shell	Starts a shell session in a separate window

11 Spell Check

You can check the spelling of a word, all words in a highlighted region or all words in the current buffer.

M- <code>\$</code>	Check spelling of current word
M-x <code>ispell-region</code>	Check spelling of all words in region
M-x <code>ispell-buffer</code>	Check spelling of all words in buffer

12 Macros

A macro captures keystrokes to be played back later. This avoids repetitive keying of commands and contributes to editing efficiency.

C-x (Define a macro
C-x)	Ends a macro definition
C-u C-x (Append to latest defined macro
C-x e	Executes latest defined macro
M-x <code>name-last-kbd-macro</code>	Name last keyboard macro
M-x <code>insert-kbd-macros</code>	Playback a named macro

13 Working with tags files

In the directory where the file resides, type `M-x ! etags filename`. The filename may contain wild card characters. This will generate a TAGS index file in the said directory which is useful for locating occurrences of a word. The etags system recognizes various programming languages.

M-.	Finds a tag.
M-,	Continue finding a tag
C-u M-.	Finds next occurrence of tag

References

[FSF] , "Gnu Emacs Reference Card", designed by Stephen Gildea, Free Software Foundation, 1997

[Pedersen] Jesper Pedersen, et al., "Sams Teach Yourself Emacs in 24 Hours", Sams Publishing, 1999