

Emacs reference

by Drew Roselli ripping off Dan Garcia's idea and expanding upon it

Starting out

To begin, type emacs at the % prompt.

In the command lists below, C means the “control” key. To type the command C-x u, type the control key and x at the same time, then type u. M means the “meta” key. If your terminal doesn’t have a meta key, use the escape key followed by a brief pause.

<i>command</i>	<i>explanation</i>
C-x u	<u>U</u> ndo
C-g	<u>G</u> o away, or cancel a command
C-x C-c	<u>C</u> lose session (save files, then exit emacs)
C-z	suspend emacs (or C-x C-z)
C-h	<u>H</u> elp
?	“describe mode” (tell what the keys mean in the current mode)

Files

Emacs has auto-saving. Every 300 keystrokes, it will save the file you are editing into a temporary file called #filename#. In addition, every time you edit a file, a backup is made called file~.

When finding a file, use the tab key for filename completion and the space key for a list of possible completions.

<i>command</i>	<i>explanation</i>
C-x C-f	<u>F</u> ind (load) a file
C-x s	<u>S</u> ave a file (or C-x C-s, but use C-x s)
C-x C-w	<u>W</u> rite a file
C-x C-c	<u>C</u> lose session (save files, then exit emacs)

Movement

Mouse and arrow keys will work if your terminal has them.

<i>command</i>	<i>explanation</i>
C-f	<u>F</u> orward one character
C-b	<u>B</u> ackward one character
C-n	<u>N</u> ext line
C-p	<u>P</u> revious line
C-a	beginning of line
C-e	<u>E</u> nd of line
C-v	scroll up
M-v	scroll down
M->	end of file
M-<	beginning of file
M-C-a	beginning of function
M-C-e	<u>E</u> nd of function
C-d	<u>D</u> elete dharacter
M-d	<u>D</u> elete word

Cut and paste

Everything deleted or copied goes to the “Kill Ring” which you can retrieve (“yank back”) later. To define a region, set the mark at the beginning and position the cursor at the end.

<i>command</i>	<i>explanation</i>
C-k	<u>K</u> ill line (copies to the kill ring)
C-SPC	set mark (or C-@)
C-w	<u>W</u> ipe region (kill region, copied to kill ring)
M-w	copy region (copy to kill ring)
C-y	<u>Y</u> ank back last kill
M-y	<u>Y</u> ank pop (yank back previous kill from kill ring)

Windows and buffers

<i>command</i>	<i>explanation</i>
C-x 2	split window vertically
C-x 5	split window horizontally
C-x 1	close all other windows
C-x 0	kill the window the cursor is in
C-x o	other window (put cursor in the other window)
C-x b	switch <u>B</u> uffers
C-x k	<u>K</u> ill buffer

Miscellany

I-searches are incremental searches—that is, emacs searches for the pattern as you type. When you find what you are looking for, type the escape key.

<i>command</i>	<i>explanation</i>
C-s	i-search forward
C-r	i-search backward
M-%	query replace
M-;	go to line
C-x m	mail
M-x rmail	read mail (also send and reply)
M-x shell	will start a Unix shell in emacs
M-x man	manual entry (same as man, but in <i>editor</i> mode, not <i>more</i> mode)
M-x run-lisp	run a Lisp listener in a buffer
M-x <i>command-name</i>	general way to execute a command

Useful commands for interacting with C

<i>command</i>	<i>explanation</i>
M C-\	indent region (according to C convention)
M-x compile	compiles
C-x `	(i.e. control-x backquote) next error (will find your compiler errors for you)
M-x gdb	runs the gdb debugger and follows the source code with an => in another window

How to learn more

The online help system is extensive. Typing C-h (help) will offer you several different kinds of help. Type C-h again for help with help, etc. Some of the more useful options are

- b describe all the key bindings
- i info mode. This is the entire emacs manual in hypertext (it contains its own instructions).

Customization

Emacs allows you to create a .emacs file and enter customizations such as the following. The .emacs file is executed when emacs is invoked. Customizations can be set differently for different modes. Modes are set by the file name, i.e., any file ending with .c will be assumed to be a C program file and will invoke the C mode automatically. A sample .emacs file appears on the next page.

Sample .emacs file

```
(setq inhibit-startup-message t) ; don't print emacs startup message
(setq default-major-mode text-mode)

; rebind some keys for convenience
(global-set-key "\M-h" 'help-for-help) ; reset help to M-h key.
(global-set-key "\C-h" 'delete-backward-file) ; C-h (backspace) deletes
(global-set-key "\M-r" 'rmail) ; read mail mode
(global-set-key "\M-m" 'mail)
(global-set-key "\M-s" 'save-buffer) ; save current buffer
(global-set-key "\M-g" 'goto-line)
(global-set-key "\M-c" 'compile) ; to avoid typing "make" or "compile"
(global-set-key "\M-q" 'query-replace)
(global-set-key "\M-i" 'indent-region) ; useful for indenting programs

; set default indentations for C mode
(defconst c-indent-level 4)
(defconst c-brace-offset 0)
(defconst c-arg-decl-indent 0)
(defconst c-continued-statement-offset 4)
(defconst c-auto-newline nil)
(defconst c-label-offset -2)

; set return to indent automatically while in C mode
(setq c-mode hook (function (lambda nil
  "Customize c-mode"
  (interactive)
  (setq-indent-tabs-mode t)
  (define-key "\r" 'c-newline-indent)
  (define-key "\n" 'c-newline-indent)
  (define-key c-mode-map "\n" 'c-newline-indent))))))

(defun c-newline-indent (arg)
  "user defined function to make new line and indent"
  (interactive "P")
  (newline arg)
  (c-indent-line))

(setq-default compile-command "make")
```