

GNU Emacs Reference Card

(for version 19)

Starting Emacs

To enter GNU Emacs 19, just type its name: `emacs`

To read in a file to edit, see Files, below.

Leaving Emacs

suspend Emacs (or iconify it under X) `C-z`
exit Emacs permanently `C-x C-c`

Files

read a file into Emacs `C-x C-f`
save a file back to disk `C-x C-s`
save all files `C-x s`
insert contents of another file into this buffer `C-x i`
replace this file with the file you really want `C-x C-v`
write buffer to a specified file `C-x C-w`

Getting Help

The Help system is simple. Type `C-h` and follow the directions.
If you are a first-time user, type `C-h t` for a **tutorial**.

remove Help window `C-x 1`
scroll Help window `ESC C-v`
apropos: show commands matching a string `C-h a`
show the function a key runs `C-h c`
describe a function `C-h f`
get mode-specific information `C-h m`

Error Recovery

abort partially typed or executing command `C-g`
recover a file lost by a system crash `M-x recover-file`
undo an unwanted change `C-x u` or `C-_`
restore a buffer to its original contents `M-x revert-buffer`
redraw garbaged screen `C-l`

Incremental Search

search forward `C-s`
search backward `C-r`
regular expression search `C-M-s`
reverse regular expression search `C-M-r`
select previous search string `M-p`
select next later search string `M-n`
exit incremental search `RET`
undo effect of last character `DEL`
abort current search `C-g`

Use `C-s` or `C-r` again to repeat the search in either direction.
If Emacs is still searching, `C-g` cancels only the part not done.

Motion

entity to move over	backward	forward
character <code>C-b</code>	<code>C-b</code>	<code>C-f</code>
word <code>M-b</code>	<code>M-b</code>	<code>M-f</code>
line <code>C-p</code>	<code>C-p</code>	<code>C-n</code>
go to line beginning (or end) <code>C-a</code>	<code>C-a</code>	<code>C-e</code>
sentence <code>M-a</code>	<code>M-a</code>	<code>M-e</code>
paragraph <code>M-{</code>	<code>M-{</code>	<code>M-}</code>
page <code>C-x [</code>	<code>C-x [</code>	<code>C-x]</code>
sexp <code>C-M-b</code>	<code>C-M-b</code>	<code>C-M-f</code>
function <code>C-M-a</code>	<code>C-M-a</code>	<code>C-M-e</code>
go to buffer beginning (or end) <code>M-<</code>	<code>M-<</code>	<code>M-></code>
scroll to next screen <code>C-v</code>	<code>C-v</code>	
scroll to previous screen <code>M-v</code>	<code>M-v</code>	
scroll left <code>C-x <</code>	<code>C-x <</code>	
scroll right <code>C-x ></code>	<code>C-x ></code>	
scroll current line to center of screen <code>C-u C-l</code>	<code>C-u C-l</code>	

Killing and Deleting

entity to kill	backward	forward
character (delete, not kill) <code>DEL</code>	<code>DEL</code>	<code>C-d</code>
word <code>M-DEL</code>	<code>M-DEL</code>	<code>M-d</code>
line (to end of) <code>M-O C-k</code>	<code>M-O C-k</code>	<code>C-k</code>
sentence <code>C-x DEL</code>	<code>C-x DEL</code>	<code>M-k</code>
sexp <code>M-- C-M-k</code>	<code>M-- C-M-k</code>	<code>C-M-k</code>
kill region <code>C-w</code>		
copy region to kill ring <code>M-w</code>		
kill through next occurrence of <i>char</i> <code>M-z char</code>		
yank back last thing killed <code>C-y</code>		
replace last yank with previous kill <code>M-y</code>		

Marking

set mark here `C-@` or `C-SPC`
exchange point and mark `C-x C-x`
set mark *arg* words away `M-@`
mark paragraph `M-h`
mark page `C-x C-p`
mark sexp `C-M-@`
mark function `C-M-h`
mark entire buffer `C-x h`

Query Replace

interactively replace a text string `M-%`
using regular expressions `M-x query-replace-regexp`

Valid responses in query-replace mode are

replace this one, go on to next `SPC`
replace this one, don't move `,`
skip to next without replacing `DEL`
replace all remaining matches `!`
back up to the previous match `~`
exit query-replace `ESC`
enter recursive edit (`C-M-c` to exit) `C-r`

Multiple Windows

delete all other windows `C-x 1`
delete this window `C-x 0`
split window in two vertically `C-x 2`
split window in two horizontally `C-x 3`
scroll other window `C-M-v`
switch cursor to another window `C-x o`
shrink window shorter `M-x shrink-window`
grow window taller `C-x ^`
shrink window narrower `C-x {`
grow window wider `C-x }`
select buffer in other window `C-x 4 b`
display buffer in other window `C-x 4 C-o`
find file in other window `C-x 4 f`
find file read-only in other window `C-x 4 r`
run Dired in other window `C-x 4 d`
find tag in other window `C-x 4 .`

Formatting

indent current **line** (mode-dependent) `TAB`
indent **region** (mode-dependent) `C-M-\`
indent **sexp** (mode-dependent) `C-M-q`
indent region rigidly *arg* columns `C-x TAB`
insert newline after point `C-o`
move rest of line vertically down `C-M-o`
delete blank lines around point `C-x C-o`
join line with previous (with *arg*, next) `M-^`
delete all white space around point `M-\`
put exactly one space at point `M-SPC`
fill paragraph `M-q`
set fill column `C-x f`
set prefix each line starts with `C-x .`

Case Change

uppercase word `M-u`
lowercase word `M-l`
capitalize word `M-c`
uppercase region `C-x C-u`
lowercase region `C-x C-l`
capitalize region `M-x capitalize-region`

The Minibuffer

The following keys are defined in the minibuffer.

complete as much as possible `TAB`
complete up to one word `SPC`
complete and execute `RET`
show possible completions `?`
fetch previous minibuffer input `M-p`
fetch next later minibuffer input `M-n`
regexp search backward through history `M-r`
regexp search forward through history `M-s`
abort command `C-g`

Type `C-x ESC ESC` to edit and repeat the last command that used the minibuffer. The following keys are then defined.

previous minibuffer command `M-p`
next minibuffer command `M-n`

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Buffers

select another buffer	C-x b
list all buffers	C-x C-b
kill a buffer	C-x k

Transposing

transpose characters	C-t
transpose words	M-t
transpose lines	C-x C-t
transpose sexps	C-M-t

Spelling Check

check spelling of current word	M-\$
check spelling of all words in region	M-x ispell-region
check spelling of entire buffer	M-x ispell-buffer

Tags

find a tag (a definition)	M-.
find next occurrence of tag	C-u M-.
specify a new tags file	M-x visit-tags-table
regexp search on all files in tags table	M-x tags-search
run query-replace on all the files	M-x tags-query-replace
continue last tags search or query-replace	M-,

Shells

execute a shell command	M-!
run a shell command on the region	M-
filter region through a shell command	C-u M-
start a shell in window *shell*	M-x shell

Rectangles

copy rectangle to register	C-x r r
kill rectangle	C-x r k
yank rectangle	C-x r y
open rectangle, shifting text right	C-x r o
blank out rectangle	M-x clear-rectangle
prefix each line with a string	M-x string-rectangle

Abbrevs

add global abbrev	C-x a g
add mode-local abbrev	C-x a l
add global expansion for this abbrev	C-x a i g
add mode-local expansion for this abbrev	C-x a i l
explicitly expand abbrev	C-x a e
expand previous word dynamically	M-/

Regular Expressions

any single character except a newline	.	(dot)
zero or more repeats	*	
one or more repeats	+	
zero or one repeat	?	
any character in the set	[...]	
any character not in the set	[^ ...]	
beginning of line	^	
end of line	\$	
quote a special character <i>c</i>	\c	
alternative ("or")		
grouping	\(... \)	
<i>n</i> th group	\n	
beginning of buffer	\‘	
end of buffer	\’	
word break	\b	
not beginning or end of word	\B	
beginning of word	\<	
end of word	\>	
any word-syntax character	\w	
any non-word-syntax character	\W	
character with syntax <i>c</i>	\sc	
character with syntax not <i>c</i>	\Sc	

Registers

save region in register	C-x r s
insert register contents into buffer	C-x r i
save value of point in register	C-x r SPC
jump to point saved in register	C-x r j

Info

enter the Info documentation reader	C-h i	
Moving within a node:		
scroll forward	SPC	
scroll reverse	DEL	
beginning of node	.	(dot)
Moving between nodes:		
next node	n	
previous node	p	
move up	u	
select menu item by name	m	
select <i>n</i> th menu item by number (1-5)	n	
follow cross reference (return with 1)	f	
return to last node you saw	l	
return to directory node	d	
go to any node by name	g	

Other:

run Info tutorial	h
list Info commands	?
quit Info	q
search nodes for regexp	s

Keyboard Macros

start defining a keyboard macro	C-x (
end keyboard macro definition	C-x)
execute last-defined keyboard macro	C-x e
append to last keyboard macro	C-u C-x (
name last keyboard macro	M-x name-last-kbd-macro
insert Lisp definition in buffer	M-x insert-kbd-macro

Commands Dealing with Emacs Lisp

eval <i>sexp</i> before point	C-x C-e
eval current defun	C-M-x
eval region	M-x eval-region
eval entire buffer	M-x eval-current-buffer
read and eval minibuffer	M-ESC
re-execute last minibuffer command	C-x ESC ESC
read and eval Emacs Lisp file	M-x load-file
load from standard system directory	M-x load-library

Simple Customization

Here are some examples of binding global keys in Emacs Lisp. Note that you cannot say "\M-#"; you must say "\e#".

```
(global-set-key "\C-cg" 'goto-line)
(global-set-key "\C-x\C-k" 'kill-region)
(global-set-key "\e#" 'query-replace-regexp)
```

An example of setting a variable in Emacs Lisp:

```
(setq backup-by-copying-when-linked t)
```

Writing Commands

```
(defun command-name (args)
  "documentation"
  (interactive "template")
  body)
```

An example:

```
(defun this-line-to-top-of-window (line)
  "Reposition line point is on to top of window.
With ARG, put point on line ARG.
Negative counts from bottom."
  (interactive "P")
  (recenter (if (null line)
                0
                (prefix-numeric-value line))))
```

The argument to `interactive` is a string specifying how to get the arguments when the function is called interactively. Type `C-h f interactive` for more information.

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