

GNU Emacs Reference Card

(for version 28)

Key Binding Notation

In the Emacs key binding notation, C-x is Ctrl+X; M-x is usually Alt+X; S-x is Shift+X; and C-M-x is Ctrl+Alt+X, etc.

Leaving Emacs

iconify Emacs (or suspend it in terminal) 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
toggle read-only status of buffer C-x C-q

Getting Help

The help system is simple. Type C-h (or F1) 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 C-M-v
apropos: show commands matching a string C-h a
describe the function a key runs C-h k
describe a function C-h f
get mode-specific information C-h m

Error Recovery

abort partially typed or executing command C-g
recover files lost by a system crash M-x recover-session
undo an unwanted change C-x u, C-_ 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 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 matched.

Motion

entity to move over backward forward
character C-b C-f
word M-b M-f
line C-p C-n
go to line beginning (or end) C-a C-e
sentence M-a M-e
paragraph M-{ M-}
page C-x [C-x]
sexp C-M-b C-M-f
function C-M-a C-M-e
go to buffer beginning (or end) M-< M->
scroll to next screen C-v
scroll to previous screen M-v
scroll left C-x <
scroll right C-x >
scroll current line to center, top, bottom C-l
goto line M-g g
goto char M-g c
back to indentation M-m

Killing and Deleting

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

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 or y
replace this one, don't move ,
skip to next without replacing DEL or n
replace all remaining matches !
back up to the previous match ^
exit query-replace RET
enter recursive edit (C-M-c to exit) C-r

Multiple Windows

When two commands are shown, the second is a similar command for a frame instead of a window.

delete all other windows C-x 1 C-x 5 1
split window, above and below C-x 2 C-x 5 2
delete this window C-x 0 C-x 5 0
split window, side by side C-x 3
scroll other window C-M-v
switch cursor to another window C-x o C-x 5 o
select buffer in other window C-x 4 b C-x 5 b
display buffer in other window C-x 4 C-o C-x 5 C-o
find file in other window C-x 4 f C-x 5 f
find file read-only in other window C-x 4 r C-x 5 r
run Dired in other window C-x 4 d C-x 5 d
find tag in other window C-x 4 . C-x 5 .
grow window taller C-x ^
shrink window narrower C-x {
grow window wider C-x }

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
indent for comment M-;
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 to arg 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

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 later minibuffer input or default 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. Type F10 to activate menu bar items on text terminals.

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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
toggle on-the-fly spell checking	M-x flyspell-mode

Tags

find a tag (a definition)	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-!
execute a shell command asynchronously	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	C-x r c
prefix each line with a string	C-x r t

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-/

Miscellaneous

numeric argument	C-u <i>num</i>
negative argument	M--
quoted insert	C-q <i>char</i>

Regular Expressions

any single character except a newline	.	(dot)
zero or more repeats	*	
one or more repeats	+	
zero or one repeat	?	
quote special characters	\	
quote regular expression special character <i>c</i>	\c	
alternative ("or")		
grouping	\(... \)	
shy grouping	\(?: ... \)	
explicit numbered grouping	\(?:NUM: ... \)	
same text as <i>n</i> th group	\n	
at word break	\b	
not at word break	\B	

entity	match start	match end
line	^	\$
word	\<	\>
symbol	_ <	_ >
buffer	\'	\'
class of characters	match these	match others
explicit set	[...]	[^ ...]
word-syntax character	\w	\W
character with syntax <i>c</i>	\sc	\Sc
character with category <i>c</i>	\cc	\Cc

International Character Sets

specify principal language	C-x RET l
show all input methods	M-x list-input-methods
enable or disable input method	C-\
set coding system for next command	C-x RET c
show all coding systems	M-x list-coding-systems
choose preferred coding system	M-x prefer-coding-system

Info

enter the Info documentation reader	C-h i
find specified function or variable in Info	C-h S

Moving within a node:

scroll forward	SPC
scroll reverse	DEL
beginning of node	b

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 (1-9)	<i>n</i>
follow cross reference (return with 1)	f
return to last node you saw	l
return to directory node	d
go to top node of Info file	t
go to any node by name	g

Other:

run Info tutorial	h
look up a subject in the indices	i
search nodes for regexp	s
quit Info	q

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

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 sexp before point	C-x C-e
eval current defun	C-M-x
eval region	M-x eval-region
read and eval minibuffer	M-:
load a Lisp library from load-path	M-x load-library

Simple Customization

customize variables and faces M-x **customize**

Making global key bindings in Emacs Lisp (example):

```
(global-set-key (kbd "C-c g") 'search-forward)
(global-set-key (kbd "M-#") 'query-replace-regexp)
```

Writing Commands

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

An example:

```
(defun this-line-to-top-of-window (line)
  "Reposition current line to top of window."
  With prefix argument LINE, put point on LINE."
  (interactive "P")
  (recenter (if (null line)
                0
                (prefix-numeric-value line))))
```

The **interactive** spec says how to read arguments interactively. Type C-h f **interactive** RET for more details.

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