

GNU Emacs Reference Card

(for version 25)

Starting Emacs

To enter GNU Emacs 25, just type its name: `emacs`

Leaving Emacs

suspend Emacs (or iconify it under X)	<code>C-z</code>
exit Emacs permanently	<code>C-x C-c</code>

Files

read a file into Emacs	<code>C-x C-f</code>
save a file back to disk	<code>C-x C-s</code>
save all files	<code>C-x s</code>
insert contents of another file into this buffer	<code>C-x i</code>
replace this file with the file you really want	<code>C-x C-v</code>
write buffer to a specified file	<code>C-x C-w</code>
toggle read-only status of buffer	<code>C-x C-q</code>

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	<code>C-x 1</code>
scroll help window	<code>C-M-v</code>
apropos: show commands matching a string	<code>C-h a</code>
describe the function a key runs	<code>C-h k</code>
describe a function	<code>C-h f</code>
get mode-specific information	<code>C-h m</code>

Error Recovery

abort partially typed or executing command	<code>C-g</code>
recover files lost by a system crash	<code>M-x recover-session</code>
undo an unwanted change	<code>C-x u</code> , <code>C-_</code> or <code>C-/</code>
restore a buffer to its original contents	<code>M-x revert-buffer</code>
redraw garbaged screen	<code>C-l</code>

Incremental Search

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

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

Killing and Deleting

entity to kill	backward	forward
character (delete, not kill)	<code>DEL</code>	<code>C-d</code>
word	<code>M-DEL</code>	<code>M-d</code>
line (to end of)	<code>M-O C-k</code>	<code>C-k</code>
sentence	<code>C-x DEL</code>	<code>M-k</code>
sexp	<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	<code>C-@</code> or <code>C-SPC</code>
exchange point and mark	<code>C-x C-x</code>
set mark <i>arg</i> words away	<code>M-@</code>
mark paragraph	<code>M-h</code>
mark page	<code>C-x C-p</code>
mark sexp	<code>C-M-@</code>
mark function	<code>C-M-h</code>
mark entire buffer	<code>C-x h</code>

Query Replace

interactively replace a text string	<code>M-%</code>
using regular expressions	<code>M-x query-replace-regexp</code>

Valid responses in query-replace mode are

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

Multiple Windows

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

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

Formatting

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

Case Change

uppercase word	<code>M-u</code>
lowercase word	<code>M-l</code>
capitalize word	<code>M-c</code>
uppercase region	<code>C-x C-u</code>
lowercase region	<code>C-x C-l</code>

The Minibuffer

The following keys are defined in the minibuffer.

complete as much as possible	<code>TAB</code>
complete up to one word	<code>SPC</code>
complete and execute	<code>RET</code>
show possible completions	<code>?</code>
fetch previous minibuffer input	<code>M-p</code>
fetch later minibuffer input or default	<code>M-n</code>
regex search backward through history	<code>M-r</code>
regex search forward through history	<code>M-s</code>
abort command	<code>C-g</code>

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-.
 find next occurrence of tag C-u M-.
 specify a new tags file M-x visit-tags-table
 regex 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 *num*
 negative argument M--
 quoted insert C-q *char*

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 *c* *c*
 alternative ("or") \|
 grouping \ (... \
 shy grouping \ (:? ... \
 explicit numbered grouping \ (:NUM ... \
 same text as *n*th group *n*
 at word break \ **not at word break **

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>	\s <i>c</i>	\S <i>c</i>
character with category <i>c</i>	\s <i>c</i>	\C <i>c</i>

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 *n*th menu item by number (1-9) *n*
 follow cross reference (return with l) 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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