

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 l`
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.

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`

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 of screen `C-u C-l`

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`
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`

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Buffers

select another buffer
list all buffers
kill a buffer

C-x b
C-x C-b
C-x k

Transposing

transpose characters
transpose words
transpose lines
transpose sexps

C-t
M-t
C-x C-t
C-M-t

Spelling Check

check spelling of current word
check spelling of all words in region
check spelling of entire buffer

M-\$
M-x ispell-region
M-x ispell-buffer

Tags

find a tag (a definition)
find next occurrence of tag
specify a new tags file

M-
C-u M-

regexp search on all files in tags table M-x tags-table
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
run a shell command on the region
filter region through a shell command
start a shell in window *shell*

M-!
M-|
C-u M-|
M-x shell

Rectangles

copy rectangle to register
kill rectangle
yank rectangle
open rectangle, shifting text right
blank out rectangle
prefix each line with a string

C-x r r
C-x r k
C-x r y
C-x r o
M-x clear-rectangle
M-x string-rectangle

Abbrevs

add global abbrev
add mode-local abbrev
add global expansion for this abbrev
add mode-local expansion for this abbrev
explicitly expand abbrev
expand previous word dynamically

C-x a g
C-x a l
C-x a i g
C-x a i l
C-x a e
M-/

Regular Expressions

any single character except a newline
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 *c*
alternative ("or")
grouping
*n*th group
beginning of buffer
end of buffer
word break
not beginning or end of word
beginning of word
end of word
any word-syntax character
any non-word-syntax character
character with syntax *c*
character with syntax not *c*

. (dot)
*
+
?
[. . .]
[^ . . .]
\$
\c
\|
\(. . . \)
\n
\c
\>
\b
\B
\<
\>
\w
\W
\s
\S

Registers

save region in register
insert register contents into buffer
save value of point in register
jump to point saved in register

C-x r s
C-x r i
C-x r SPC
C-x r j

Info

enter the Info documentation reader
Moving within a node:
scroll forward
scroll reverse
beginning of node
Moving between nodes:
next node
previous node
move up
select menu item by name
select *n*th menu item by number (1-5)
follow cross reference (return with 1)
return to last node you saw
return to directory node
go to any node by name

C-h i
SPC
DEL
.
n
p
u
m
n
f
l
d
g

Other:
run Info tutorial
list Info commands
quit Info
search nodes for regexp

Keyboard Macros

start defining a keyboard macro
end keyboard macro definition
execute last-defined keyboard macro
append to last keyboard macro
name last keyboard macro
insert Lisp definition in buffer

C-x (C-x)
C-x e
C-x C-x (C-x insert-kbd-macro
M-x insert-kbd-macro

Commands Dealing with Emacs Lisp

eval sexp before point
eval current defun
eval region
eval entire buffer
read and eval minibuffer
re-execute last minibuffer command
read and eval Emacs Lisp file
load from standard system directory

C-x C-e
C-M-x
M-x eval-region
M-x eval-current-buffer
M-ESC
C-x ESC ESC
M-x load-file
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)
  "Position 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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designed by Stephen Gladea, May 1993 v2.0
for GNU Emacs version 19 on Unix systems

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