

GNU Emacs Reference Card

(for version 21)

Starting Emacs

To enter GNU Emacs 21, 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**
version control checkin/checkout **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**
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	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-0 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 <i>char</i>		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 **RET**
enter recursive edit (**C-M-c** to exit) **C-r**

Multiple Windows

When two commands are shown, the second is for "other frame."
delete all other windows **C-x 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**
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 .**
set face **M-g**

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 the menu bar using the minibuffer.

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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
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-!
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-/

Regular Expressions

any single character except a newline	.	(dot)
zero or more repeats	*	
one or more repeats	+	
zero or one repeat	?	
quote regular expression special character <i>c</i>	\c	
alternative (“or”)		
grouping	\(... \)	
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	\<	\>
buffer	\‘	\’
class of characters	match these	match others
explicit set	[...]	[^ ...]
word-syntax character	\w	\W
character with syntax <i>c</i>	\sc	\Sc

International Character Sets

specify principal language	M-x set-language-environment
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 C-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 (1-9)	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
quit Info	q
search nodes for regexp	M-s

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 from standard system directory	M-x load-library

Simple Customization

customize variables and faces M-x customize

Making global key bindings in Emacs Lisp (examples):

```
(global-set-key "\C-cg" 'goto-line)
(global-set-key "\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 line point is on to top of window.
With ARG, put point on line ARG."
  (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** for more details.

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