

GNU Emacs Reference Card

(for version 22)

Starting Emacs

To enter GNU Emacs 22, just type its name: `emacs`

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`
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 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-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 of screen		<code>C-u C-l</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 `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 using regular expressions `M-%`
`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 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) `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-o`

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	<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 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**
 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 **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 **c** **\c**
 alternative (“or”) **\|**
 grouping **\(... \)**
 same text as *n*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 **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 **.** (dot)

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 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**
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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