

# GNU Emacs Reference Card

(for version 24)

## Starting Emacs

To enter GNU Emacs 24, 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

<b>read</b> a file into Emacs	<code>C-x C-f</code>
<b>save</b> a file back to disk	<code>C-x C-s</code>
save <b>all</b> files	<code>C-x s</code>
<b>insert</b> 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

<b>abort</b> partially typed or executing command	<code>C-g</code>
<b>recover</b> files lost by a system crash	<code>M-x recover-session</code>
<b>undo</b> 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

<b>entity to move over</b>	<b>backward</b>	<b>forward</b>
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&gt;}</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-&lt;</code>	<code>M-&gt;</code>
scroll to next screen	<code>C-v</code>	
scroll to previous screen	<code>M-v</code>	
scroll left	<code>C-x &lt;</code>	
scroll right	<code>C-x &gt;</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

<b>entity to kill</b>	<b>backward</b>	<b>forward</b>
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>
<b>kill region</b>	<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 <b>paragraph</b>	<code>M-h</code>
mark <b>page</b>	<code>C-x C-p</code>
mark <b>sexp</b>	<code>C-M-@</code>
mark <b>function</b>	<code>C-M-h</code>
mark entire <b>buffer</b>	<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	
<b>replace</b> this one, go on to next	<code>SPC</code> or <code>y</code>
replace this one, don't move	<code>,</code>
<b>skip</b> to next without replacing	<code>DEL</code> or <code>n</code>
replace all remaining matches	<code>!</code>
<b>back up</b> to the previous match	<code>~</code>
<b>exit</b> 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 <b>line</b> (mode-dependent)	<code>TAB</code>
indent <b>region</b> (mode-dependent)	<code>C-M-\</code>
indent <b>sexp</b> (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.

# GNU Emacs Reference Card

## Buffers

select another buffer	C-x b
list all buffers	C-x C-b
kill a buffer	C-x k

## Transposing

transpose <b>characters</b>	C-t
transpose <b>words</b>	M-t
transpose <b>lines</b>	C-x C-t
transpose <b>sexps</b>	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
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
yield 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>	\/	
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	

<b>entity</b>	<b>match start</b>	<b>match end</b>
line	^	\$
word	\<	\>
symbol	\_<	\_>
buffer	\'	\'

<b>class of characters</b>	<b>match these</b>	<b>match others</b>
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>	\c <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:

<b>next</b> node	n
<b>previous</b> node	p
move <b>up</b>	u
select menu item by name	m
select <i>n</i> 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 <b>tutorial</b>	h
look up a subject in the indices	i
search nodes for regexp	s
<b>quit</b> 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

<b>start</b> defining a keyboard macro	C-x (
<b>end</b> keyboard macro definition	C-x )
<b>execute</b> 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 <b>sexp</b> before point	C-x C-e
eval current <b>defun</b>	C-M-x
eval <b>region</b>	M-x eval-region
read and eval minibuffer	M-:
load a Lisp library from <b>load-path</b>	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.

Copyright © 2015 Free Software Foundation, Inc.  
For GNU Emacs version 24  
Designed by Stephen Gildea

Permission is granted to make and distribute modified or unmodified copies of this card provided the copyright notice and this permission notice are preserved on all copies.

For copies of the GNU Emacs manual, see:

<http://www.gnu.org/software/emacs/#Manuals>