GNU Emacs Reference Card

(for version 27)

Starting Emacs

To enter GNU Emacs 27, 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 matched.

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, top, bottom	C-l
goto line	M-g g
goto char	M-g c
back to indentation	M-m

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 *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 or y
replace this one, don't move	,
skip to next without replacing	DEL or n
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	C-x 1	C-x 5 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
indent for comment	M-;
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 to *arg*	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	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 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`
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`
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	`\b`
not at word break	`\B`

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 *c*	`\s`*c*	`\S`*c*
character with category *c*	`\c`*c*	`\C`*c*

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.