Emacs tutorial

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GNU Emacs Reference Card

(for version 26)

Starting Emacs

To enter GNU Emacs 26, 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.

C+x C+s Save file

Mnemonic: “eXecute file Save”

C+x C+c Close file

Mnemonic: “eXecute file Close”

C+x C+w “SaveAs”

Mnemonic “eXecute new file Write”

C+x C+f “Open file” (will open new if file does not exist)

Mnemonic: “eXecute open File”

C+x 2 Split screen vertically

C+x 3 Split screen horizontally

C+x 1 Close all non-active screens

C+x 0 Close current active screen

C+x <<left or right arrow>> Cycle buffer screen to left or right

C+g Abort command

C+_ Undo

Mnemonic: “Underscore and ‘minus’ on same key, subtract our previous changes (undo)”

NOTE: Many of these commands are easier to execute on a Mac if you enable “Use option as meta key”
Terminal => Preferences => “Keyboard” tab

C = control, **M** = Esc (or Option on a Mac)

The Meta key enhances the magnitude of most Control commands

- *Option requires being held, while Esc waits for a command*
- *Most emacs commands work in the native Mac OSX environment!*

<<right arrow>> Jump forward one letter

<<left arrow>> Jump backward one letter

M+<<right arrow>> Jump forward one word

M+<<left arrow>> Jump backward one word

C+a Jump to beginning of line

Mnemonic: “Letter A is at the beginning of the alphabet”

C+e Jump to end of line

Mnemonic: “Jump to End of line”

M+< Jump to beginning of file

Mnemonic: “< looks like a leftward-pointing arrow, and the left is toward the top of the page (because we read from left to right, then down)”

M+> Jump to end of file

Mnemonic: “> looks like a rightward-pointing arrow, and the right is toward the end of the page (because we read from left to right, then down)”

C+d Delete a single character (in front of the cursor)

Mnemonic: “Delete”

M+d Delete a word (in front of the cursor)

M+<<backspace>> Delete a word (behind the cursor)

C+k Delete line; Mnemonic: “Kill a line” (Adds line to “kill ring”)

C+y Paste line; Mnemonic: “Yank line back (from kill ring)”

C+<<spacebar>> Set cursor mark (highlight block);

Mnemonic: “Spacebar is the key with the largest area on the keyboard, we can highlight as big of an area as we want when cursor set”

C+w Delete code block to last-set cursor mark;

Mnemonic: “Write code block to kill ring”

M+x shell; open a shell window in a buffer