

# 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>    |
| 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 |

## 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-/       |

## 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 regular expression special character <i>c</i> | \ <i>c</i> |       |
| alternative ("or")                                  |            |       |
| grouping  | \( ... \)  |       |
| same text as <i>n</i> th group                      | \ <i>n</i> |       |
| at word break                                       | \b         |       |
| not at word break                                   | \B         |       |

|                                |                    |                     |
|--------------------------------|--------------------|---------------------|
| <b>entity</b>                  | <b>match start</b> | <b>match end</b>    |
| line                           | ^                  | \$                  |
| word                           | \<                 | \>                  |
| 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>         |

## 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:

|  |          |
|--|----------|
| <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) | <i>n</i> |
| 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 from standard system directory | 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 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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Designed by Stephen Gildea

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