

# An introduction to Emacs

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# 1 What is Emacs, and why use it

## 1.1 Why use it

- text editor that is well integrated with the operating system
- open source
- infinitely expandible
- built in support for many programmig languages

## 1.2 Why not to use it

<http://mrozekma.com/editor-learning-curve.png>

## 1.3 Windows, buffers

- main buffer
- mini buffer

# 2 Key kommands

## 2.1 Special keys

- Ctrl key, abbreviated C
- Meta key, abbreviated M, usually the alt key, windows key, mac key

## 2.2 Opening and closing files, buffers and windows

- Open file: C-x C-f
- Write file: C-x C-w
- Save file: C-x C-s
- Open window: C-x 2 (horizontally) or C-x 3 (vertically)
- Move to next widow: C-x o
- Switch to buffer: C-x b
- Kill buffer: C-x k
- Close active window: C-x 0
- Close all windows exept active window: C-x 1
- Close Emacs: C-x C-c
- Abort command: C-g

<http://www.gnu.org/software/emacs/tour/> <http://www.jesshamrick.com/2012/09/10/absolute-beginners-guide-to-emacs/>

## 3 Help-, info- & man-pages

- C-h t: built in tutorial
- C-h C-h: help pages
- M-x man return: eg. M+x man tr
- M-x info return: opens the gnu info pages in emacs

## 4 The .emacs or .emacs/init.el

For customization try C-z to your init file add: (global-unset-key (kbd "C-z"))

## 5 What is Emacs Lisp?

“Lisp stands for LISt Processing, and the programming language handles lists (and lists of lists) by putting them between parentheses. The parentheses mark the boundaries of the list. Sometimes a list is preceded by a single apostrophe or quotation mark, “Lists are the basis of Lisp. The single apostrophe or quotation mark is an abbreviation for the function quote, when it precedes a list, it tells Lisp to do nothing with the list, other than take it as it is written. But if there is no quote preceding a list, the first item of the list is special: it is a command for the computer to obey. (In Lisp, these commands are called functions.)”

## 6 Popular modes and packages

### 6.1 Shell

- M-x shell
- M-!

### 6.2 Python

<http://www.emacswiki.org/emacs-test/PythonProgrammingInEmacs> <https://github.com/proofit404/and-org-mode> <http://tkf.github.io/emacs-jedi/latest/> install all dependencies Ipython and org mode combined <https://github.com/gregsexton/ob-ipython/>

### 6.3 Latex

- built in:
  - C-c C-c pdflatex -> to produce a pdf
  - C-tab to import references
- auctex

### 6.4 Git

magit

### 6.5 Pdf

- Pdf-tools <https://github.com/politza/pdf-tools> Dependencies: libpng-dev libz-dev libpoppler-glib-dev libpoppler-private-dev

## 6.6 Org mode

- Outline processor
- timestamps C-c . 2016-01-31 sön
- Write bulletpoints
  - structural editing <http://orgmode.org/manual/Structure-editing.html>  
rearrange headers with M-S-<up>
  - visibility cycling
- TODO todos shift-arrow key (left or right)
- export to: -latex

<http://orgmode.org/manual/LaTeX-and-PDF-export.html#LaTeX-and-PDF-export> <http://orgmode.org/worg/org-tutorials/org-latex-export.html> -html -pdf and more...

### 6.6.1 babel

built in package for incorporating source code: <http://orgmode.org/worg/org-contrib/babel/intro.html#source-code-blocks-babel>

```
print("hello world")
```

```
hello world
```

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<s - tab: to open a source code block within the src, type C-c ‘ this opens up a new window with the appropriate language, to import this back into the document, type C-c ‘ again.

C-c C-c to evaluate buffer ye<http://orgmode.org/manual/The-export-dispatcher.html#The-export-dispatcher>

[http://orgmode.org/worg/org-tutorials/orgtutorial\\_dto.html](http://orgmode.org/worg/org-tutorials/orgtutorial_dto.html)  
<http://orgmode.org/worg/org-tutorials/>

- Org + babel

Embedding code:

<https://www.youtube.com/watch?v=lsYdK0C2RvQ>

Reproducible reserach with org-mode:

[https://www.youtube.com/watch?v=1-dUkyn\\_fZA](https://www.youtube.com/watch?v=1-dUkyn_fZA)

## 7 Package handling

### 7.1 TODO .emacs .emacs.d/init.el

[http://www.gnu.org/software/emacs/manual/html\\_node/emacs/Init-Examples.html#Init-Examples](http://www.gnu.org/software/emacs/manual/html_node/emacs/Init-Examples.html#Init-Examples)

Add this to your .emacs or .emacs.d/init.el file:

```
(when (>= emacs-major-version 24) (require 'package) (add-to-list 'package-archives '("melpa" . "http://melpa.org/packages/") t) (package-initialize))
```

- melpa instructions:

[http://ergoemacs.org/emacs/emacs\\_package\\_system.html](http://ergoemacs.org/emacs/emacs_package_system.html)

- An alternative way to installing packages is described here

<http://y.tsutsumi.io/emacs-from-scratch-part-2-package-management.html>

- package repositories and instructions

<http://www.emacswiki.org/emacs-test/ELPA> M-x list-packages M-x package-install restart emacs or type M-x eval-buffer

- as an example lets install snakemake package for syntax highlighting

M-x list-packages C-s snakemake <https://github.com/kyleam/snakemake-mode>

## 8 Misc

### 8.1 Lint

flycheck, flymake...

### 8.2 Autocomplete

- auto-complete for programming in emacs

### 8.3 Helm

For better complete-functions in Emacs <http://tuhdo.github.io/helm-intro.html>

## 8.4 Abbrev mode

<https://www.emacswiki.org/emacs/AbbrevMode>

## 8.5 Email client

M-x gnus <http://www.macs.hw.ac.uk/~rs46/posts/2014-01-13-mu4e-email-client.html>  
<http://pragmaticemacs.com/emacs/master-your-inbox-with-mu4e-and-org-mode/>

## 8.6 Games

M-x tetris

# 9 Additional links

<http://emacsrocks.com/> <http://www.emacswiki.org/emacs/EmacsNiftyTricks>  
<http://batsov.com/articles/2012/02/19/package-management-in-emacs-the-good-the-bad-and-the-ugly/> <http://spacemacs.org/>

## 9.1 Python and git configuration examples for emacs

<https://github.com/AndreaCrotti/minimal-emacs-configuration>, <https://www.youtube.com/watch?v=...>  
<https://github.com/jhamrick/emacs>