

# An Introduction to Emacs

Emacs is a popular and powerful editor (In fact, it is more than an editor. In this course, we will primarily use the editing function of Emacs) in Linux/Unix/Mac OS. There are several things you'd better know before you start using it.

## Several Special Keys

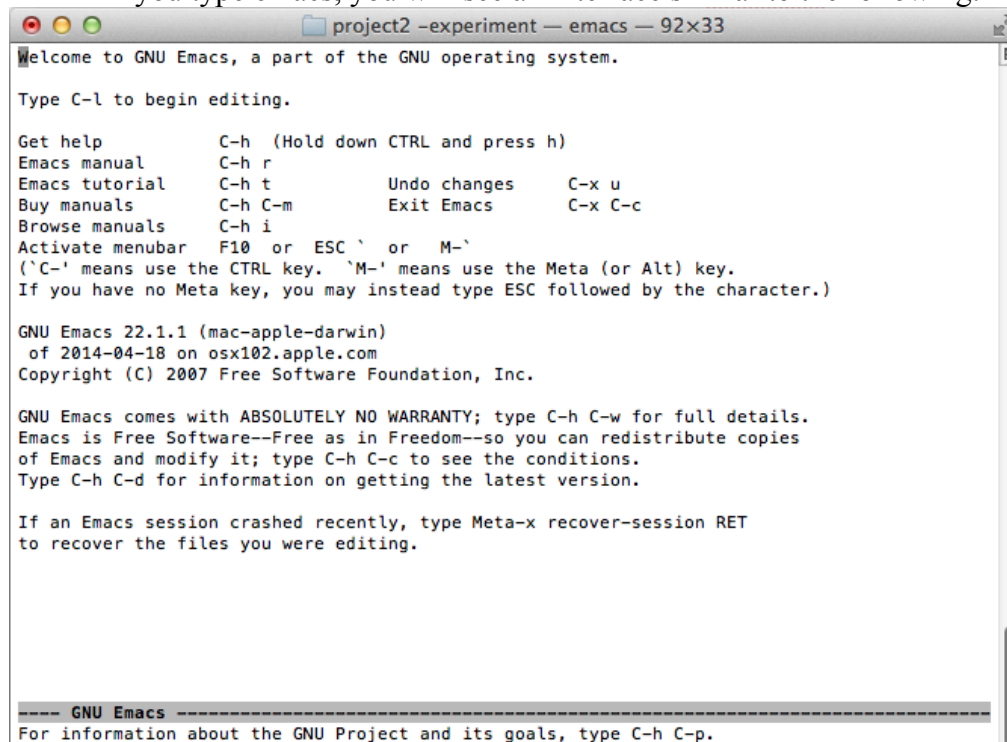
- **C-x, CTRL-x, <CTRL>-x.** These keys have the same meaning, which means “pressing **control** key and **x** key **simultaneously**”
- **M-x, Alt-x, <Alt>-x.** These keys have the same meaning, which means “pressing **alt** key and **x** key **simultaneously**”
- **ESC !.** These keys mean “type **ESC** key first, then **!** key.”

If you want to type C-x or M-x, the control key or alt key must be held down while the x key is being typed. However, ESC key can be typed by itself.

## How to run Emacs

Type either command “*emacs*” or “*emacs filename*”.

- If you type emacs, you will see an interface similar to the following:



```
Welcome to GNU Emacs, a part of the GNU operating system.

Type C-l to begin editing.

Get help          C-h  (Hold down CTRL and press h)
Emacs manual      C-h r
Emacs tutorial    C-h t          Undo changes      C-x u
Buy manuals       C-h C-m        Exit Emacs       C-x C-c
Browse manuals    C-h i
Activate menubar  F10 or ESC ` or M-`
('C-' means use the CTRL key. 'M-' means use the Meta (or Alt) key.
If you have no Meta key, you may instead type ESC followed by the character.)

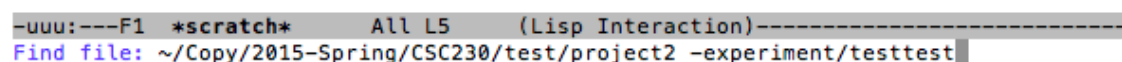
GNU Emacs 22.1.1 (mac-apple-darwin)
  of 2014-04-18 on osx102.apple.com
Copyright (C) 2007 Free Software Foundation, Inc.

GNU Emacs comes with ABSOLUTELY NO WARRANTY; type C-h C-w for full details.
Emacs is Free Software--Free as in Freedom--so you can redistribute copies
of Emacs and modify it; type C-h C-c to see the conditions.
Type C-h C-d for information on getting the latest version.

If an Emacs session crashed recently, type Meta-x recover-session RET
to recover the files you were editing.

----- GNU Emacs -----
For information about the GNU Project and its goals, type C-h C-p.
```

You can type “C-x C-f”, which means type control AND x, then control AND f. After that, you will see a line in the bottom of the window:



```
-uuu:---F1 *scratch*      All L5      (Lisp Interaction)-----
Find file: ~/Copy/2015-Spring/CSC230/test/project2 -experiment/testtest
```

In this example, I typed the filename, which is testtest. After press enter key, the window will display the contents of this file.

- If you typed “emacs filename” at command line. You will get the contents of the file inside the window directly.

### How to Save the File?

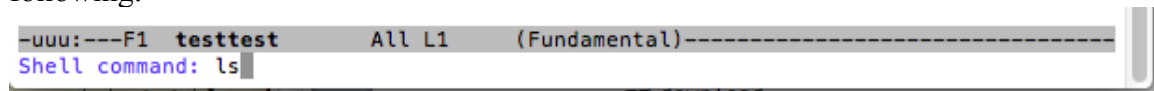
Once you have done typing, you should save it!!! Just type “C-x C-s”.

### How to Exit Emacs?

To exit Emacs, type “C-x C-c”.

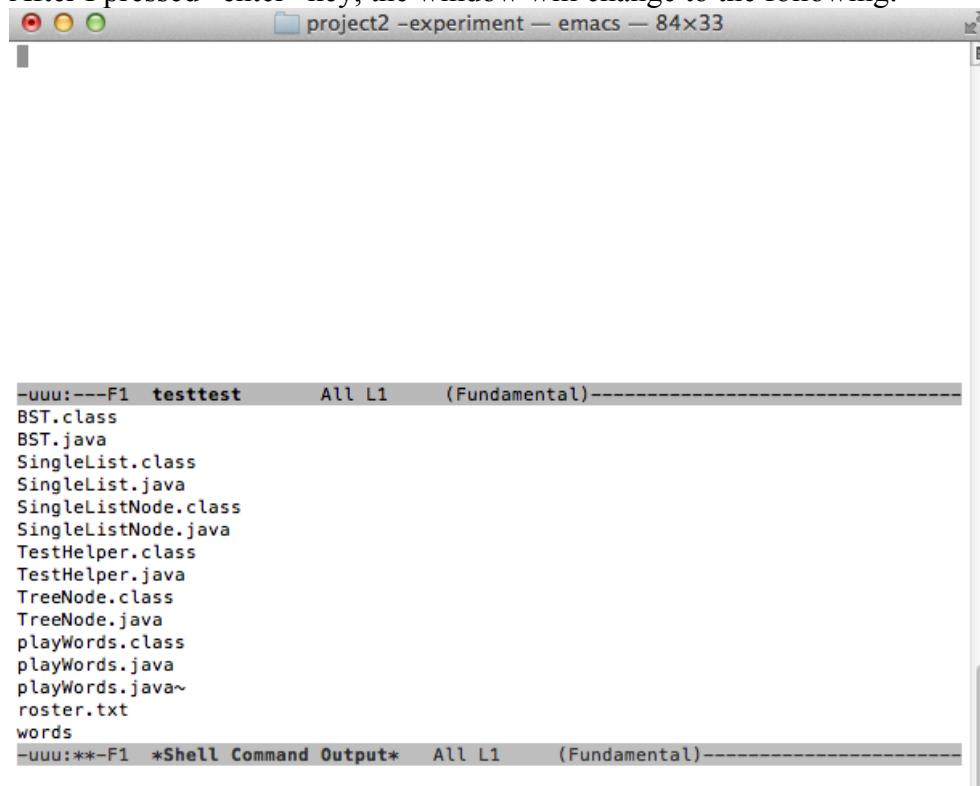
### How to Execute Shell Command Within Emacs?

To execute the shell command, the command you typed inside terminal, just type “ESC !” or “M-!”, then you can type the shell command in the bottom of the Window, just like the following:



In the above example, I typed “ls”. You can type “javac filename” or other commands.

After I pressed “enter” key, the window will change to the following:



In the above picture, there is a new window in the middle. This new window shows the result of command “ls”. To switch to this new window, you can type “C-x o”. After I switched to this new window, I can type “C-x 0” to close this window.

### Can I Open Multiple Files at the Same Time within Emacs?

Yes, you can. Just type “C-x C-f” to open each file.

### How can I Switch from One File to Another File?

First of all, each open file is corresponding to a “buffer” in Emacs. Type “C-x b” to switch buffer.

### What Else Should I Know about Emacs?

Emacs provides a lot of functions, you do NOT need to know all of them before using Emacs. The commands we introduced so far is good enough for you to start working on labs and projects. However, the following commands could be handy when you do the labs and projects.

FILES	
C-x C-f	Open a file
C-x C-s	Save active file
C-x s	Save all files (remember, you can use multiple files simultaneously!)
C-x C-c	Leave XEmacs (it will ask you if you'd like to save any unsaved files)
MOVEMENT	
Arrows, <i>PageUp</i> , <i>PageDown</i> , <i>Home</i> , and <i>End</i> - normal functions	
M-f	Move forward by one word
M-b	Move backward by one word
M-<	Move to beginning of file
M->	Move to end of file
EDITING	
[Del] [Backspace]	Delete character just left of cursor
C-d	Delete character just right of cursor
M-[Del]	Kill word just left of cursor
C-w	Kill region (highlighted by mouse or C-@)

C-y	Yank back last thing killed
C-x u	Undo previous action
M-u	Make word uppercase (like "THIS")
M-l	Make word lowercase (like "this")
M-c	Capitalize word (like "This")
<b>MISC</b>	
C-h t	Enter tutorial (highly recommended!)
C-l (lowercase L)	Redraw screen
C-g	Cancel a command (which is partially done)

For more information about Emacs, please visit <http://www.gnu.org/software/emacs/tour/>