

# CSCI-201/CSCI-512 – Winter 2010

## The Very Basics on the Emacs Texteditor

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**Emacs** is a very powerful texteditor that runs under UNIX/Linux. Numerous versions are in use, including ones that run under the Windows operating system. In the academic world of computer programming, the community is split into two camps, **vi** users and **Emacs** users. Usually, one is one or the other ... Users of **Emacs** are known to stress the fact that **Emacs** is much more than a texteditor; when used to its full extent, it serves as an entire working environment.

This document will introduce you to the very very basic **Emacs** commands only. Anything beyond this introduction can be learned through the multitude of web-sites (e.g., google 'Emacs tutorial'), or a good reference book (see publisher *O'Reilly and Associates*).

**How to start Emacs along with opening a file.** At the Linux prompt `$` type

```
$ emacs <file name>
```

**Emacs** will open a window in which you will edit the file that you just named.

**How to start Emacs plain.** You can also start **Emacs** without indicating a file. You will simply type

```
$ emacs
```

Depending on the setup, a window will open that is either empty or contains a page of useful information (which you may simply choose to ignore). If you want to load a file into the editor type

```
Ctrl-x-f    (hold down Control and hit x, let go, then  
             hold down Control and hit f)
```

On the bottom of the window you will be prompted to type the name of the file you wish to open. Type the name and hit 'Enter'.

**Moving around in a file.** Once you have a file open in **Emacs**, you can move left/right/up/down with the corresponding arrow keys. The more **Emacs**'y way is to use the following Control key combinations:

```
Ctrl-f    (move right on character)
Ctrl-b    (move left on character)
Ctrl-p    (move up one line)
Ctrl-n    (move down one line)
```

**Moving to beginning or end of a line.** If the curser is positioned somewhere in the middle of a line, and you want to move quickly to the beginning or end of the line, do the following:

```
Ctrl-a    (move to beginning of line)
Ctrl-e    (move to end of line)
```

**Moving to beginning or end of a file.** If the curser is positioned somewhere in the middle of your file, and you want to move quickly to the very beginning or end of the file, do the following:

```
Esc >     (move to end of file; hit Escape key, let go, then > which
           requires Shift)
Esc <     (move to beginning of file)
```

**Searching for a string in your file.** You can search for a specific string in your file by typing

```
Ctrl-s <string to find>
```

The curser will move to the first occurrence of your requested string within your file. With each repeated typing of **Ctrl-s** the cursor will move to the next occurrence of the string. If the string is not present in the file, you will see '**Search Failed**' on the bottom of the window.

**Ctrl-s** will start searching for a string starting at the current position of the cursor, going down towards the end of the file. If you want to search up-stream from the cursor position, you can do so with

```
Ctrl-r
```

**Deleting text character by character.** You delete one character at a time either with the 'Backspace' key, or by typing

`Ctrl-d` (delete character at cursor position)

**Deleting a blank line.** `Ctrl-d` will delete a blank line with the cursor at its beginning.

**Deleting one or more lines of text.** Place the cursor at the beginning of the line to be deleted and type

`Ctrl-k` (delete/kill current line)

If more than one consecutive line is to be deleted, repeat `Ctrl-k` for each line.

**Restore deleted lines.** If you change your mind after having deleted several lines with `Ctrl-k`, you can restore your lines with

`Ctrl-y` (restore/yank back recent deletes)

**Global replacement of a string.** Occasionally, you will want to replace all occurrences of a string in your file with another string (e.g., correct a consistently misspelled word). In order to do this, move to the beginning of your file, and do

`Esc-x` `replace-string`, and hit 'Enter'

enter old string and new string at prompt, and hit 'Enter'

If you want to have the option to confirm or disallow the replacements on a case by case basis, do

`Esc-x` `query-replace`, ... and proceed as above

**Cutting and Pasting.** In order to cut a block of text, you need to mark the beginning of the block first. You do so by typing

`Ctrl-Shift-@` (press all at the same time; mark beginning)

Then move the cursor to the end of the block to be cut. Once the cursor is positioned, type

`Ctrl-w`                    (end of block)

and the block will be **cut** from your file. Unless you delete any other text, the deleted block is still retained in a buffer. You can paste it back into the original place, or **paste** it into any other location in the file by positioning the cursor and typing

`Ctrl-y`                    (yank, see above)

**Undo some unintended key combination.** Should you ever hit some key combination that does not have the desired effect, you can undo the most recent command with

`Ctrl-G`    (Undo)

If you feel stuck within Emacs, `Ctrl-G` will also get you back into regular editing mode.

**Splitting the window and running shell in one half.** This is one of the best features! You may split the Emacs window into two halves. In one half, you can edit your file, in the other half you can run a regular Linux **shell**. There you can compile and run your programs, run your Lisp interpreter, or do anything else you can do via Linux commands. This comes in especially handy if you have only a single window to work with, for example, when using SSH Secure Shell to work on the lab computers remotely. This is what you do.

`Ctrl-x (let go) 2`    (splits window horizontally)

You can move the cursor back and forth from one window to the other with

`Ctrl-x (let to) o`    (move to other window)

You can start up a shell with

`Esc-x shell`

If you want to **kill a shell** (or, rather, its “buffer”), or any other of the Emacs windows (or, rather, their buffers), type

`Ctrl-x (let go) k`    and conform with 'Enter'  
                         (kill buffer)

**Saving your file.** In order to save your file, type

`Ctrl-x Ctrl-s`      (Save file)

If you are saving a document for the first time, you will be prompted for the name of your file at the bottom of the **Emacs** window.

**How to quit Emacs.** You quit with

`Ctrl-x Ctrl-c`      (Quit Emacs)

**Final Note:** This summary is incomplete and somewhat oversimplified. It should enable you to start using the **Emacs** texteditor. No more, no less. If you feel ready to move past the basics, consult one of the many on-line tutorials or books on **Emacs**. Have fun.