A Beginners Guide to Emacs

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1. So What Is Emacs?

Emacs is a text file editor in Unix environments. This includes our lab which runs a variant of Unix called Solaris, and other, more readily available operating systems such as Linux. You can use emacs to quickly edit a simple text file, as an editor for your IDL source code, or as a nice front end to typesetting documents in LaTeX, the required typesetting utility in this class. This document will outline the basics of using emacs.

2. The Basics

2.1. Opening

Most of the programs that you will be using on these systems will be started from the command line. To begin a new document, simply navagate (via the Unix command line) to the directory where you want the file to be and type:

```
emacs something.txt &
```

Where something.txt is the new file that you wish to create. After a few moments, a new window will popup with a blank screen that you can type into. You can use the mouse to navigate the menus at the top. See table 1 for information on what the different menu options do.

Now that you have emacs open you can type something in the text area. In the next section we will save the file.

2.2. Saving

In Emacs, saving a document is as simple as π. You can click on the `Files` menu, then click on `Save Buffer...` You can also save by using the keyboard shortcut `C-x C-s`. In the interest of simplifing your life, this document will concentrate on the usage of keyboard shortcuts in using emacs.

2.3. Keyboard Shortcuts

Just about every aspect of emacs can be accessed and configured with keyboard shortcuts. This means that to work on a document, you rarely need to move your hands away from the keyboard

Buffers	Contains information about the currently open files in this instance of Emacs.
Files	Contains basic commands for opening, saving, and closing files.
Tools	Contains advanced functions for doing things like version control.
Edit	Contains cut, paste, and spell checking capabilities of emacs.
Search	Contains search and replace functions.
Mule	Advanced editing functions.
TeX	LaTeX specific functions. Only appears when the filename you are editing ends with *.tex*.
IDL or IDLWAVE	IDL specific functions. Only appears when you are editing a filename that end with *.idl* or *.pro*
Help	Emacs' extensive help and configuration area.

Table 1: Emacs Menu Items

and use the mouse. This increases productivity, and just makes things easier. All the keyboard shortcuts that I mention in this document will be summarized at the end.

All keyboard shortcuts are represented in a format like `C-x C-f`. When you see a `-`, that means you hold the key that comes before and after the `-` down at the same time. The capitol `C` however, does not correspond to the letter c, but rather the control button (abbreviated `CTRL`) on the keyboard. So, if you see `C-x C-f`, that means press and hold the `CTRL` button, then press the `x` key, then press the `f` key, then release the `CTRL` button. If you see something of the form `C-x d`, then that means to press and hold the `CTRL` button, press `x`, release `CTRL`, then press `d`. I think you get the picture.

In some of the menus, you will see keyboard shortcuts that are labelled as `M-%` . On the Sun workstations that corresponds to the ◇, and works identically to the `CTRL` key. On non-Sun workstations this key is simulated by pressing `ESC` then `CTRL`-whatever.

2.4. Cutting, Pasting, and Navigation

In Emacs cutting and pasting is simple, yet slightly different from what you may be used to. To cut, select the text with your mouse and the double right click in the selection. To paste, move the cursor to where you want to paste and click the middle mouse button. Another way of pasting is by using the shortcut `C-y`.

To move to the end of a line, use the shortcut `C-e1` .

2.5. Other Basics

To see what the other basics do, refer to the table at the end of this document.

3. LaTeXIntegration

Emacs has nice LaTeXintegration. If you start a file with the ending *.tex*, Emacs will automatically load up in a mode to highlight special characters and special modes to make life a little easier. Emacs also has a couple modes to automatically compile LaTeXfiles and display the result in xdvi (refer to the LaTeXhandout if none of this makes sense to you. Below are the basic LaTeXshortcuts.

Compile LaTeXfile	`C-c C-f`
View file in xdvi	`C-c C-v`

Table 2: LaTeX- Emacs commands

4. IDL Integration

Emacs also has a nice mode for integrating with IDL. For the purposes of this lab, we will only need to use the highlighting features of Emacs. This checks to make sure that you have matching parentheses, that you correctly close if...then...endif statements, and will color special keywords separately from other commands. It is recommended that you execute your IDL files from the IDL command prompt.

We have the following keystrock *Shortcuts*

Opening - `C-x C-f`
Saving - `C-x C-s`
Exiting Emacs - `C-x C-c`
Pasting - `C-y`
Deleting a line - `C-k`
Move to the beginning of a line - `C-a`
Move to the end of a line - `C-e`