Install `Auctex` package for Emacs on a Unix university machine

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Abstract

This document will guide to install the package `Auctex` for Emacs in order to assist you using LaTeX on Emacs on a Unix university machine.

1 Prerequisites

The only thing you need to use `Auctex` is a recent version of Emacs (version older than Emacs 21 are not supported). However, in order to make the installation easier, we will advise to download the latest version or at least the Emacs 24.1 version that you can find in `http://directory.fsf.org/wiki/Emacs`. In all this document, the use of `M-` denotes the use of the Alt keyboard touch and `C-` to the Ctrl keyboard touch.

2 Install the new version of Emacs in your personal directory

Giving that Emacs is already installed on university machines and that you don't have right-access to the directory where it is installed (usually usr/bin) you will need to install the latest version of Emacs on your personal directory and then set your *PATH* Unix variable to look for Emacs first in the directory.

2.1 Install Emacs

Let's assume that you extracted the Emacs file in a folder called Emacs and placed in your user directory. Hence, the way to access to the Emacs installation file is something like **/home/username/Emacs**. the installation procedure follows the usual ./configure, make, make install. Make sure to run the configure command from the **/home/username/Emacs** in a shell terminal.
Now Emacs is installed in your personal directory and the your exe should be in the path **src** created during the installation. Let's now select this version of Emacs as the default version (the one used when you run Emacs from a shell terminal).

2.2 Configure the PATH variable

You just have to open the .cshrc file in a text editor and add the following line immediately *after* the line starting "source ....":
`setenv PATH /home/username/emacs/src:$PATH`.
This line means that the we add an additional directory (/home/username/emacs/src where the Emacs exe can be found). This directory will be loaded before the other directories contained in PATH. You have to log-out log-in to make this changes effective. In order to check that everything works fine, open Emacs and run the command version (M-x+version). You will be able to check if the version running is the one you are expecting.

2.3 Install `Auctex`

The easiest way to do it is to call the `list-packages` command from Emacs (M-x list-packages). You will see a list of all the available packages. Go to the `Auctex` line and press I (to select) and x to install it. It

will be done automatically in your personal directory where Emacs is installed. The easy way to check your installation is to run a Tex file in Emacs , you should now see 3 new icons on the right side of your tolls-bar: Latex, View, Bibtex and tex. This means that `Auctex` is loaded and recognise the tex extension of your file.

3 Useful command for `Auctex`

3.1 Compile from Emacs

You will be able to compile a LaTeX project from Emacs using the compiler of your choice using these shortcuts:

- `C-c C-c`: compile the entire document.
- `C-c C-r`: compile the selected region .
- `C-c C-i`: view the produced dvi file.
- `C-c C-'`: to go to the next error (if any).

3.2 Completion

`Auctex` will also assist to find/run LaTeX commands. Here are some useful shortcuts:

- `C-c Ret + tab`: list the known LaTeX commands.
- `C-c C-e`: open an environment (for example itemize, equation, etc.) to add item you can just press `M-Ret`
- `C-c C-s`: add a level to your document (section, subsection, . . .).

3.3 activate the PDF mode

In order to create document, you just have to activate the Pdf mode by pressing `C-c C-t C-p` and recompile your document.