

## Worksheet 1: Unix/xmacs

### Open Xemacs

Open the Xwindows program. This looks like a white box with an X in your dock. It should open a window with a prompt at the top which looks something like:

```
tcl-216 :~ 01skw$
```

I will represent the prompt by just the \$.

### Some Basic Unix Commands

- Create a directory (folder) for this lab, called `perl`, then change directories into that directory:

```
$ mkdir perl  
$ cd perl
```

- Then, copy a data file (the whole genome sequence from the chloroplast genome of *Nicotiana Tabacum*) from my home directory into yours with the following command:

```
$ cp ~stacia/fasta/nicotiana.fa .
```

- The tilde is the shortcut for a username, so the command says to copy the file in user `stacia`'s `fasta` directory called `nicotiana.fa` to the current directory and give it the same name in your directory.
- Next, familiarize yourself with your home directory and your Unix account by typing the following commands and examining the output (\$ represents the prompt below):

```
$ ls           $ date         $ wc *         $ cat nicotiana.fa  
$ ls -l       $ clear        $ which perl   $ head nicotiana.fa  
$ ls -lt      $ file *       $ ls | grep cot $ tail nicotiana.fa  
$ pwd         $ man ls       $ grep ACT nic* $ more nicotiana.fa  
$ env | more  $ ls ..        $ grep ">" n*   $ alias
```

### Using a Text Editor (*not* a word processor)

If you are already comfortable with a text editor, go to number 4 below substituting your favorite editor for `xemacs`. If you would like to learn `vi` there is a link to a tutorial on the course homepage (I use `vi`) and there is an `emacs` tutorial if you type `emacs <filename>` at the prompt, then type `ctrl-H,t` (hold down `ctrl`, follow by `H`, release, type `t`).

**Xemacs** In `xemacs`, commands are displayed at the top of the screen. To move around in a file in `xemacs`, use the arrow keys, *not* the mouse.

1. Let's start by creating your first file. At the Unix prompt, type:

```
$ xemacs s1.pl &
```

Xemacs will then open up an editor window for you. Assuming no file named `s1.pl` (for script 1, `.pl` is the perl extension) exists, `xemacs` will create that file. If it already exists, you will be editing the existing file.

2. Now try typing and deleting text and moving around in the text in the file then save it and do an `ls` in the Xwindow. You should see the file there.
3. Delete any existing text, and type in the following text *exactly* starting on the first line of the file:

```
#!/usr/bin/perl

print "Hello, world!\n";
```

4. Then try executing the script at the prompt in the Xwindow:

```
$ ./s1.pl
```

If it didn't work, you may have to change the permissions on the file so that it is executable (c.f. `chmod`), or you may have a typo.