Setting Up Perl for Mac OS X

(as of June 19, 2008)

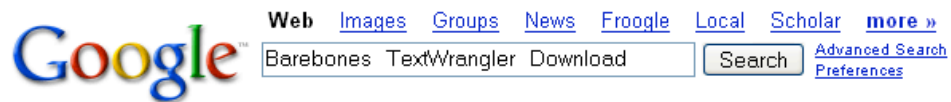### Step 1: Install a Perl Interpreter (the Perl "Engine")

Mac OS X is based on a UNIX operating system and thus comes with a PERL interpreter already installed! If your computer is running Mac OS X or above, you're done with Step 1! You can move on to Step 2.

Step 2: Install a Perl Programming Environment

NOTE: TextWrangler 2.3 requires Mac OS X **10.4** or later. They still provide TextWrangler 2.1.3 for customers who have not yet updated to Mac OS X 10.4 and are running Mac OS X 10.3.

We will guide you through installing TextWrangler™, a free environment provided by BareBones, the makers of BBEdit®. TextWrangler™ is a "lighter" version of BBEdit®, the industry standard Perl programming environment for Mac OS X.
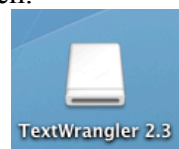
1. Open up a web browser of your choice and
    a. Google using the keywords **BareBones TextWrangler +Download**

        -OR-

    b. Go to `http://www.barebones.com/products/textwrangler/download.html`

2. Click on **Download** to download the latest version of TextWrangler™. You may be asked whether you would like to open or save Text Wrangler. Choose save, and save it to the Desktop. You also may (briefly) see a progress bar while the download is taking place.

3. Once the download is completed, if you see the Bare Bones window on your screen, proceed to Step 4.

    If you do not see the Bare Bones window, once the download is completed you should see the **TextWrangler_x.y.dmg** icon on your screen. Double-click this icon. You should then see the **TextWrangler x.y** icon on your screen.

    Double-click the **TextWrangler x.y** icon and proceed to Step 4.

4. **Drag** the TextWrangler™ icon <u>from the Bare Bones window</u> to your **Applications** folder (follow the screen shot above). (Do *not* drag either the TextWrangler_*x.y*.dmg icon or the TextWrangler *x.y* installation disc icon to your Applications folder). You can find the **Applications** folder by opening the hard drive on your Desktop (your hard drive icon will be titled **Macintosh HD**, unless you have changed the name).

5. You may (briefly) see a progress bar while the copy/install is taking place. After dragging the icon over, you will see it in your **Applications** folder:

6. Once completed, confirm the installation by finding the TextWranger Icon in your **Applications** folder (you opened this folder in step 4).

7. You should clean up your Desktop: put the TextWrangler_ *x.y*.dmg icon and the TextWrangler *x.y* installation disc icon in the Trash.

8. Assuming you have found the TextWrangler icon in your Applications folder, click, hold, and drag the icon to the docking station on your Desktop. Now all you need to do to launch TextWrangler™ is click on the TextWrangler™ icon in your docking station.
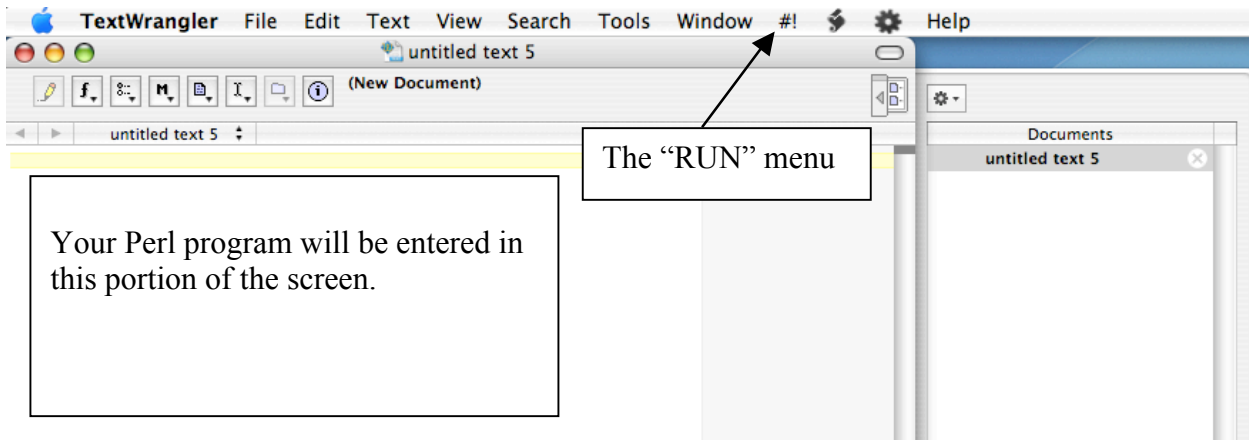
Continue to the next page for help with testing your Perl programming environment.

Step 3: Test your Perl Programming Environment

9. Click on the TextWrangler icon.

10. Once TextWrangler has started, your screen should look like the following.

The "RUN" menu

Your Perl program will be entered in this portion of the screen.

11. TextWrangler assumes you want to start with a new file. Of course, like most applications, you can always use the FILE menu to Open an existing file or create a New file also.
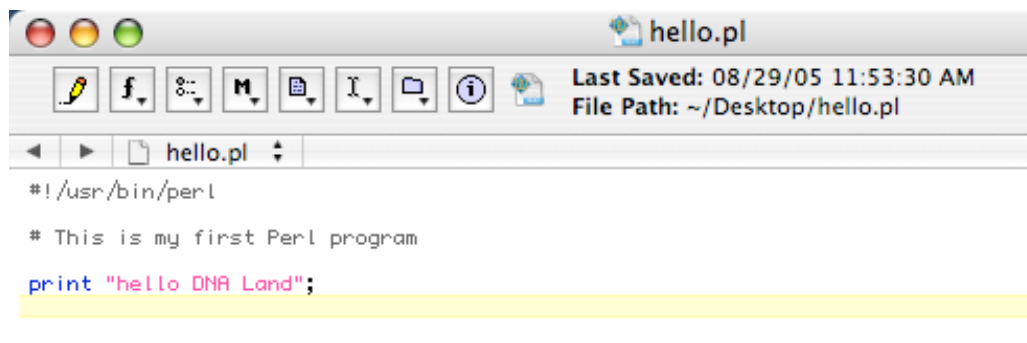
12. Enter the following Perl program exactly as shown into the left-hand side text window.

```
#!/usr/bin/perl

print "hello DNA Land";
```
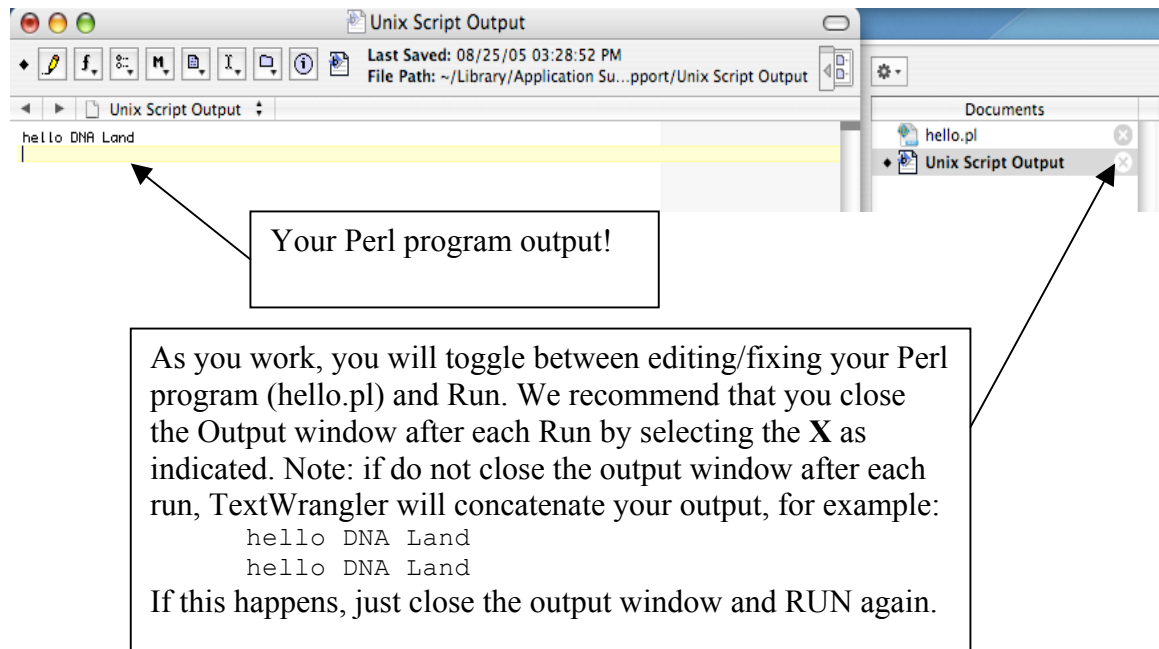
13. Using the File menu, Save your Perl program in a file called: **hello.pl** Notice the file extension .pl -- Perl programs by convention end with .pl. Once saved, notice that TextWrangler color-codes your Perl.

14. Using the **#!** menu (pronounced "hash-bang" or "she-bang"), select **Run**. This asks TextWrangler to call on the Perl interpreter to check that your Perl has correct syntax usage. If so, then the Perl interpreter will "run" (execute) your Perl program. If all goes well, you should the following output window on your screen. Congratulations, you are ready to learn Perl!

Your Perl program output!

As you work, you will toggle between editing/fixing your Perl program (hello.pl) and Run. We recommend that you close the Output window after each Run by selecting the **X** as indicated. Note: if do not close the output window after each run, TextWrangler will concatenate your output, for example:

```
hello DNA Land
hello DNA Land
```

If this happens, just close the output window and RUN again.

Note: TextWrangler does not recognize input (data) files as you might think. If you are running a Perl script such as `regex.pl` inside a folder that also contains an input file such as `big_english.txt` and your Perl script wants to open that input file, TextWrangler needs some help.

For example, in the the code for the Ch. 4 Regex Play material (from text <u>Perl for Exploring DNA</u>), this code needs two lines to be uncommented. In the `regex.pl` code, you need to uncomment the two lines for determining relative directory paths. You need these lines with TextWrangler.

```perl
my $filename    =     "big_english.txt";
# :

# TextWrangler needs these next two lines to find the input file
# so remove any leading comment symbol (#) from both lines
my @path  = File::Spec->splitdir( File::Spec->rel2abs($0) );
$filename = File::Spec->catfile( @path[0 .. $#path - 1], $filename);

# open the file of words or motif
open(my $fh, '<', $filename) or die $!;
```