Intro to Python
Intro to Web Science
10 Points

The goal of this assignment is for you to setup your own Python programming environment and to begin learning the Python language. First setup your environment for Python programming:

1. Install **Python 3.3.0** from http://python.org/download/

   Download the installer for your operating system. When installing, use the default settings. When the install completes, you'll have a **Python (command line)** shortcut available from your Start menu.

2. Install **Eclipse** from http://www.eclipse.org/downloads/

   The **Eclipse IDE for Java Developers** should be sufficient, but choose the **Java EE** version if you are in the Internet Dev 2 course.

3. If you have not already installed a **Java SE Development Kit**, download it from here and install it: http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html

4. Install **PyDev** for Eclipse by following the directions at http://pydev.org/manual_101_install.html under the heading "Installing with the update site". Use the http://pydev.org/updates URL to get the main update. Select **PyDev** from the list of updates.

5. Follow the instructions at http://pydev.org/manual_101_interpreter.html to configure the PyDev Python command-line interpreter for Eclipse. You do not need to worry about the Jython or Iron Python interpreters. If you used the defaults when installing Python in step (1), you should find the Python interpreter at C:\Python33\python.exe.

6. Now create a new PyDev project by following the instructions under "Create a Project" at http://pydev.org/manual_101_project_conf.html. Then create a new module called **example** by following the directions at http://pydev.org/manual_101_first_module.html. You should then place an output statement in example.py and run it by following the directions at http://pydev.org/manual_101_run.html.

Now read through the Python Quick Guide at http://www.tutorialspoint.com/python/python_quick_guide.htm which will give you a quick overview of the language. The Guide is written for Python 2.x, but since you are using 3.x, there are some things which are different. The biggest thing is that print is a function in 3.x. See http://docs.python.org/3.0/whatsnew/3.0.html for more differences. Another good intro is http://docs.python.org/3.1/tutorial/introduction.html

You may want to try out some of the syntax from the Guide in an interactive command-line interpreter. Start the Python interpreter by using the **Python (command line)** shortcut option from your Start menu. Then enter commands like so:

```
>>> print("Hello, Python!")
Hello, Python!
```

Once you have read through the Guide, create a program called `prime.py` which will first ask the user to enter a number *N* and then print all the prime numbers from 2 to *N*. To determine if a single number is prime, create a boolean function called `is_prime()`. Here's how the program should run:

```
Enter a number: 11
Prime numbers:
2
3
5
7
11
```

Make sure you perform data validation (using a loop) on the input. Only *valid numbers* that are *greater than one* are acceptable (e.g., "cat" is not acceptable). Submit your working program to Easel before class on the due date.