Discovering CS: Getting Python up and Running

Step 1: Download Anaconda using the link <https://www.anaconda.com/download/>

* Select the newest version (Python 3.5.2), which should be on the left.
* On a mac, this will download a package (.pkg file). On a PC, this will download an executable (.exe). The website detects if you have a PC or a mac.
* Either way, double click this file once the download is finished, and follow the prompts. You may need to type in the password you use to log in to your computer.
* You do not need VSCode (you might be asked this question at the end of installation)

Step 2: Download Atom using the link: <https://atom.io>

* Click the yellow “Download” button on the right.
* This downloads a .zip file. Double click it. On a mac, drag the Atom icon into your Applications folder. On a PC, you should be able to create an icon on the desktop and in the start menu.

Step 3: Open Atom by double clicking the icon from Step 2.

* You may need to put in your computer’s password.
* On a mac, type Command+Shift+P
* On a PC, type Ctrl+Shift+P and
* Type "View installed packages" and click on the correct element in the drop down menu
* Look at the left part of the screen click Install
* Search for "script"
* Install script by clicking the blue “Install” button under the first search result

Step 4: Create your first program in Atom.

* File 🡪 New File
* Type in the following sample program:

print(“Hello world!”)

* File 🡪 Save
* Type in a file name, e.g. **hello.py**
* It is *essential* that you include the “.py” in the filename above.
* Notice how there are now colors for your code in Atom.

Step 5: **Run** your program

* On a Mac, pretty Command+I
* On a PC, press Ctrl+B
* In the bottom of Atom, you see the output of your code.

Step 6: Make your program say something else, by modifying the code, saving, and running.

It’s a good idea to start by saving your file as a .py file, because then Atom will automatically indent for you. Create a new file called **infinite loop.py**

Type the following code:

i = 0

while(True):

i = i + 1

print(i)

Notice how, after the colon, when you pressed the return key, Atom automatically indented the next line (i = i + 1). You’ll appreciate that automatic indentation later!

When you run this (see Step 5 above), the output will count up forever. To escape from this process, click the X on the lower right of Atom.

It’s also possible to write code that does not compile, and consequently does not run. For example, create a file with the following bad code. **Give your file a descriptive name**, and not something like “error.py”. In general, do not name your python program the same thing as an existing module. For instance, don't name it math.py, random.py. code.py, turtle.py, etc.

Now, type the following code:

print(Oops)

When you run the code (see Step 5) you will see a triangle with an exclamation mark inside. This means your code has an error. In the space where you normally get output, now you have an error message. In Lab 1, we will learn how to read these error messages and use them to fix our mistakes.