ASTR 337: Jupyter Notebook Exercises

Please install the Anaconda Python Distribution on your own computer and work through the following two exercises prior to our first in-class meeting.

If you can complete at least Exercise #1 before our first class, you will be a lot more comfortable when we dive into lab activities that evening. You will be responsible for information in both Exercises #1 and #2 by the second week of classes (completed notebooks will be due on Moodle by Fri., 9/13).
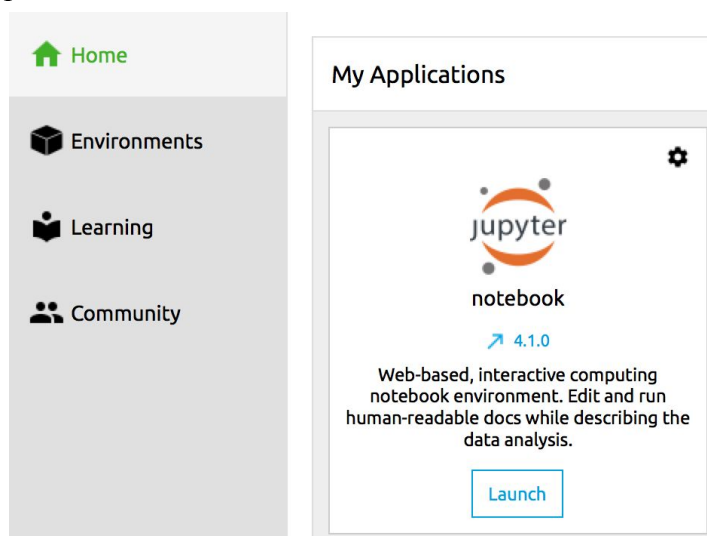
Installing the Anaconda Python Distribution

Anaconda is the world's most widely-used data science platform for the Python programming language. It is a "package manager" for Python, i.e., it has (nearly) all of the software packages we will need in ASTR 337 built into it, and it makes updating existing programs and installing new ones much simpler.

The download and installation are fairly straightforward. The package is free and available for Windows, Mac, and Linux computers. Be sure to download the Python 3.7 version:

https://www.anaconda.com/download/

Once Anaconda is installed, it will create a desktop icon named "Navigator". Open this program (it may take a few minutes to run the first time). You are now ready to use the Jupyter notebook, by clicking on the "Launch" button. The Jupyter notebook will then open as a new tab or window in your computer's default web browser.
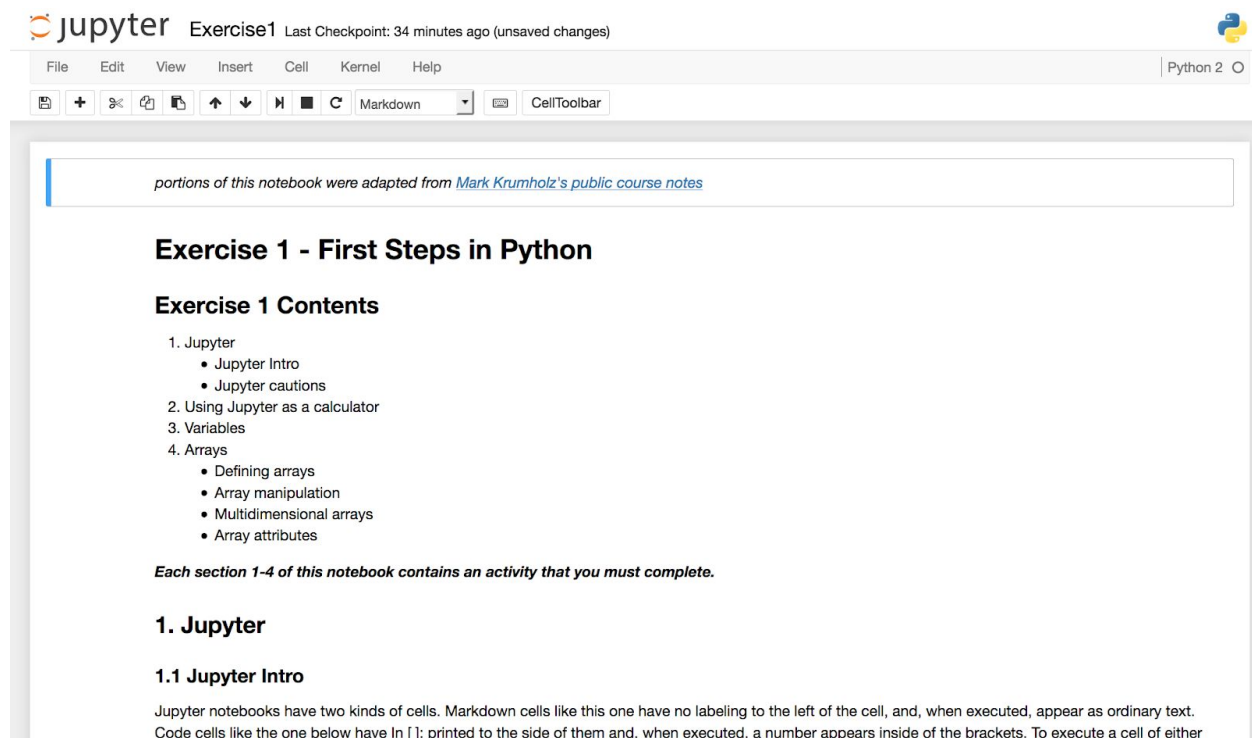
Exercise #1: First Steps in Python

To work through Exercise #1, first download the file "Exercise1.zip" from Github (see the gray "Download" button on the center right):
https://github.com/spacegal-spiff/AST337-Fall2019/blob/master/JupyterRefresher/Exercise1.zip

Once you've downloaded and unzipped this file on your computer, you can navigate to it through the Jupyter notebook interface within your browser. Once there, click on "Exercise1.ipynb" and follow the tutorial. Within your browser, it should look like this:
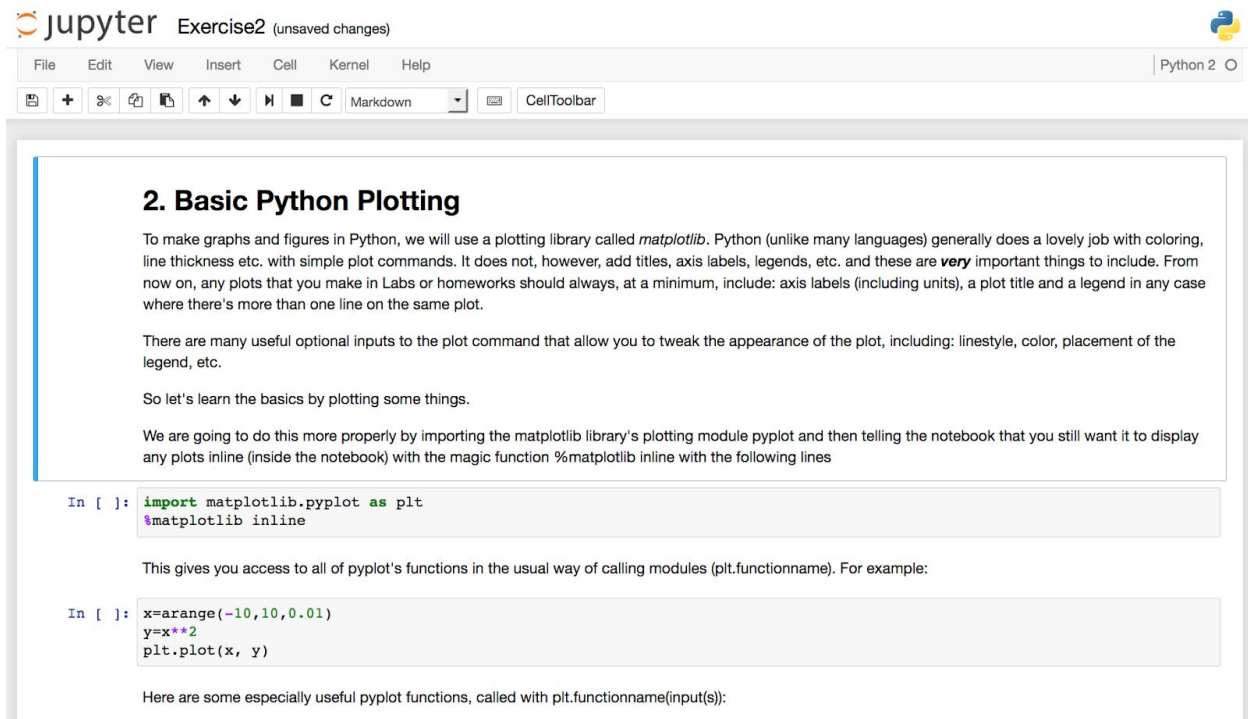
You can now walk through the tutorial and run code within the notebook.

Exercise #2: Basic Plotting in Python

As before, download the following zip file and save it to a directory on your computer, then navigate to that directory within a Jupyter notebook:

https://github.com/spacegal-spiff/AST337-Fall2019/blob/master/JupyterRefresher/Exercise2.zip

Once the file is unzipped, you should see the "Exercise2.ipynb" notebook and be able to open it within your browser: