Lab Exercise #15

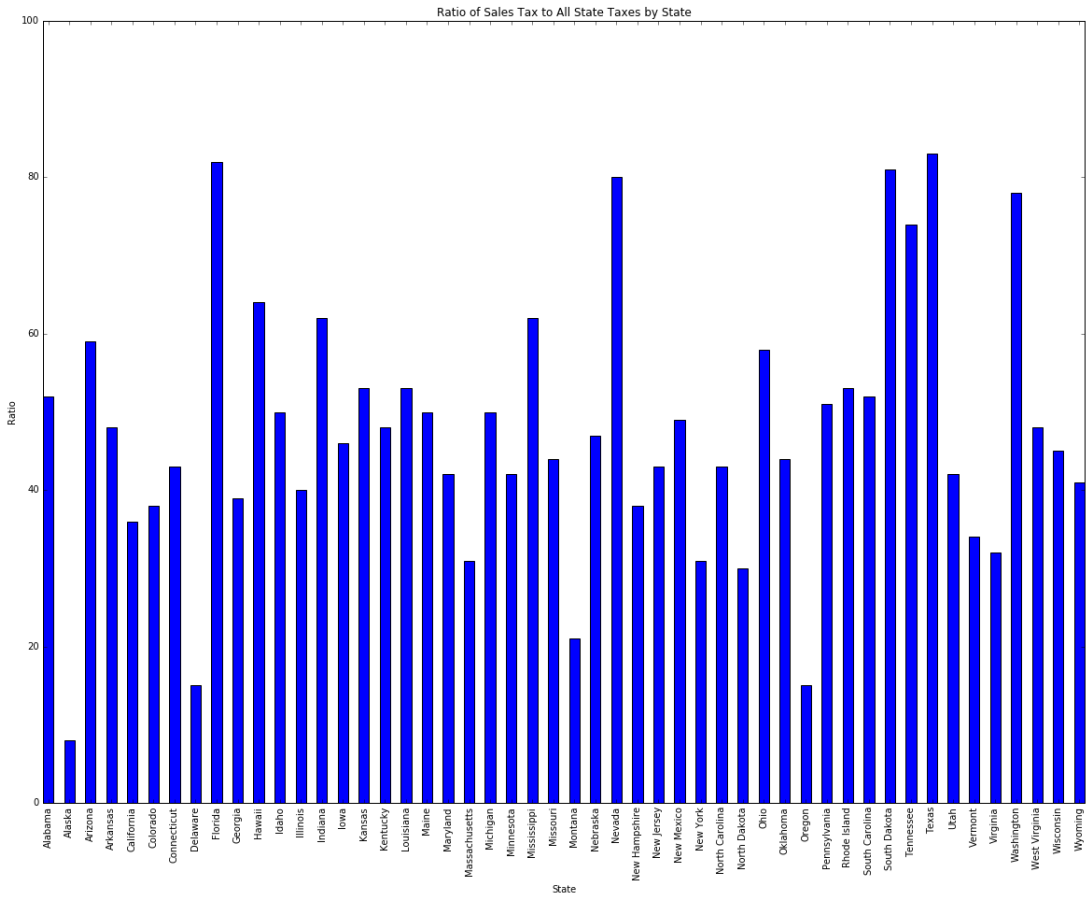
Assignment Overview

This lab exercise provides practice with plotting in Python.

Bar Graph

We provide a comma-separated-value file, `STC_2014_STC005.csv`, of tax data from the US Census Bureau: http://www.census.gov/govs/statetax/

We are interested in three columns: state name (at index 2), Total Taxes (at index 3), and Sales and Gross Receipts Taxes (at index 5). There are some header lines to ignore, but the data columns are clean (no missing or weird characters). For each state (i.e. each row) calculate the percent of Total Taxes that are Sales and Gross Receipts Taxes, i.e. values at index 5 over values at index 3. Note that the states are already in alphabetical order (hint: that should guide your choice of data structure). Write a program that reads that csv file and plots these values as a bar graph with states on the x-axis and percent on the y-axis. Your task is to make a bar graph that looks like this:



To guide you through creating the bar graph we have provided a file bar_demo.py . The demo illustrates how to make a simple bar graph. Run it. There are a number of commented out lines that you will find helpful to make a bar graph look like the one above. Experiment with those lines with the bar_demo.py program and then use what you learn to create the plot above.

★ **Demonstrate your completed program to your TA. On-line students should submit the completed files (named "lab15.py") for grading via the CSE handin system.**

For the curious: I saved the plot to a file by adding the following statement. The file extension (.png in this case) determines the type of the file. For example, naming the file bar.pdf would create a pdf file.

```
pylab.savefig('bar.png')
```