Joseph Raetano Class: COSC 494/557, Fall 2013

Assignment: #3

Topic: D3.js Introduction

Date Assigned: 6:20pm, Tuesday, September 24, 2013.

Date Due: 11:59pm, Tuesday, October 8, 2013.

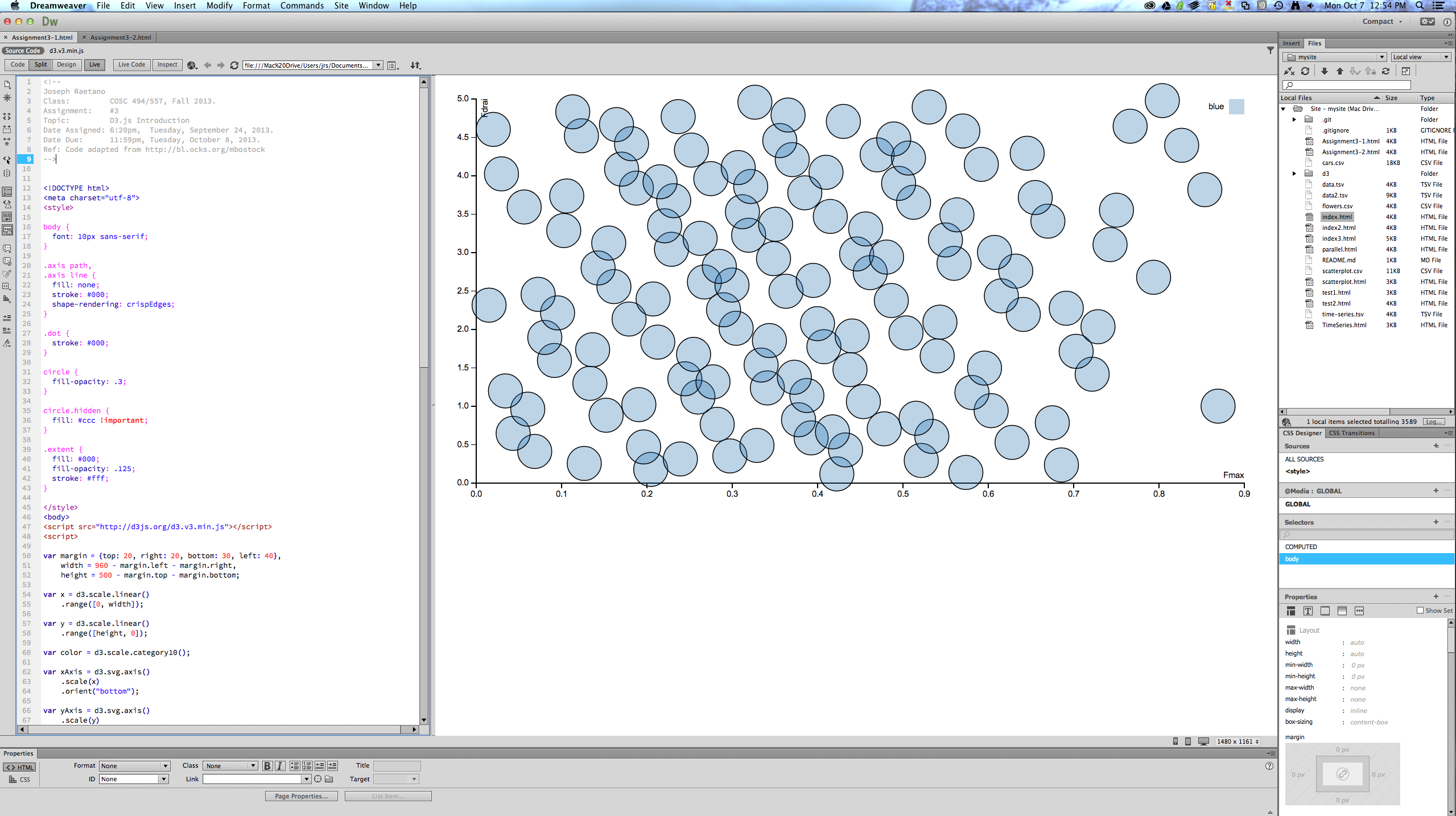
Ref: Code adapted from <http://bl.ocks.org/mbostock>

Code also adapted from "Interactive Data Visualization for the Web"

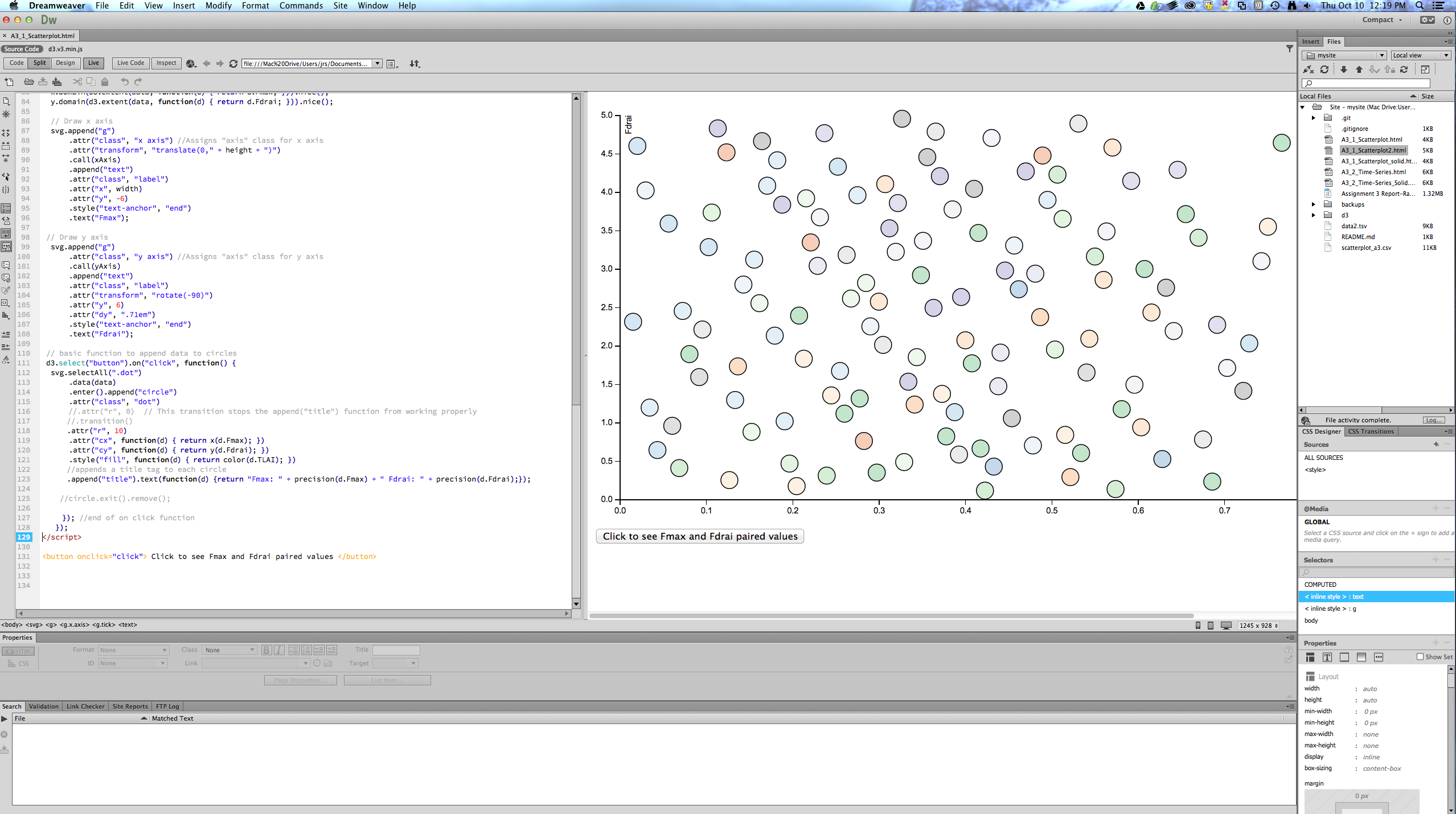
Report submitted with sections that address the following questions:

1. Tell me about the scatterplot you created. How do I run it or access it? How do I use it? What features did you add? Describe some insights you found in the data set. Include screenshots as necessary.

The scatterplot was adapted from the above reference. Dreamweaver is an ideal web development environment for designing and building web applications. I run the scatterplot using Dreamweaver’s split code window live function. See below:

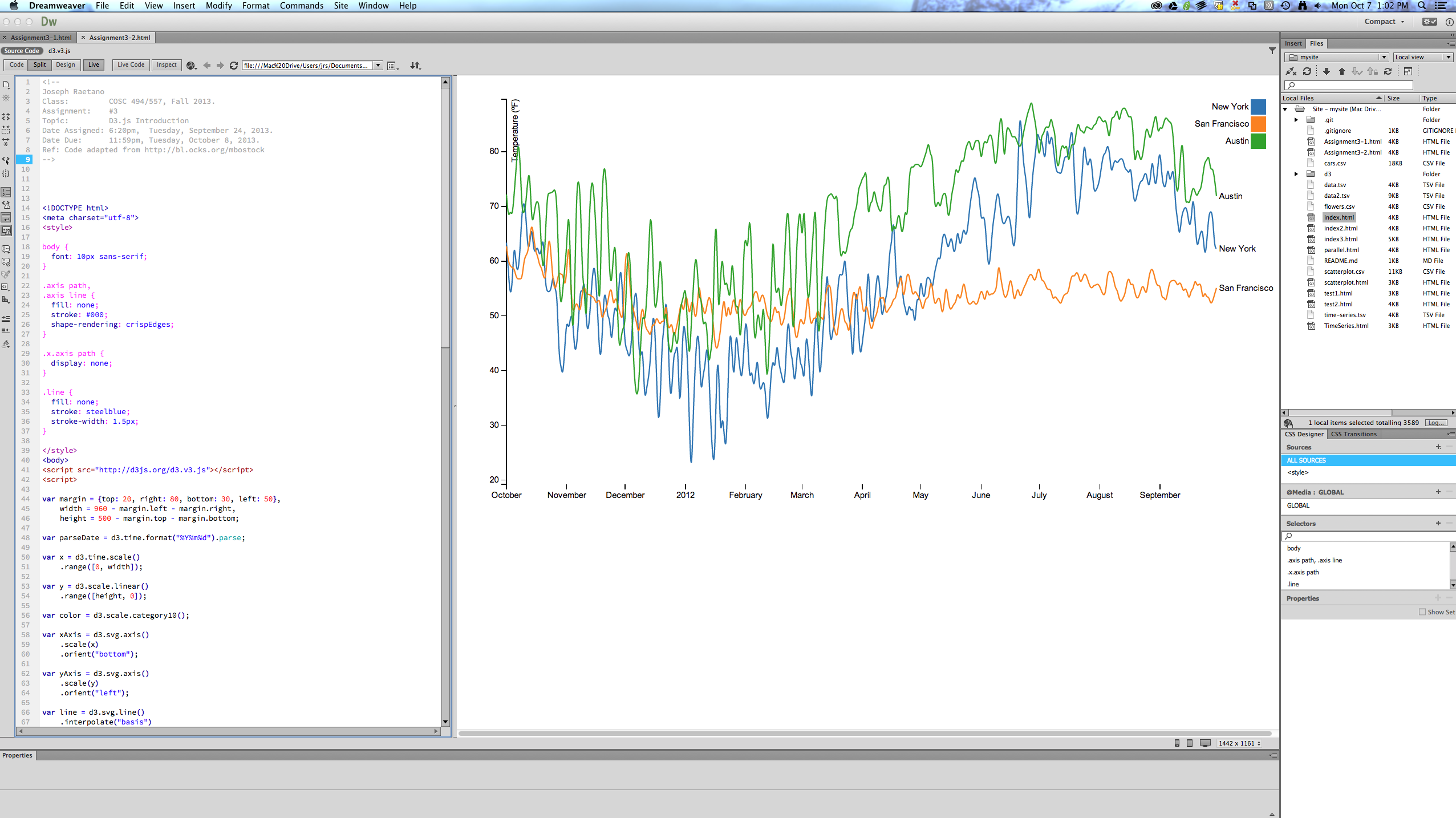


For you to access this code, unzip Raetano\_A3.zip in a local folder, change current console directory to this folder. If you do not have Dreamweaver but have Python installed, start your Python webserver (change directory to where the index.html is, such as /Downloads/mysite/A3\_2\_Time-Series\_Solid.html) to test locally "python -m SimpleHTTPServer 8888". Click File, Open File select open in your browser to the location you downloaded and unzipped it. I increased the size of the disks and adjusted the opacity. I have also tested various color schemes and added mouse over data over each disk. However the mouse over is sometimes problematic. It definitely works in Dreamweaver but browser can be finicky. I also added a button where it requires the user to interact with the visualization. I was moving toward showing the different datasets. However, I did not have that added capability working properly before due date. Tested browsers are Safari and Chrome.



1. Tell me about the multi-series line plot. How do I run it or access it? How do I use it? What features did you add? Describe some insights you found in the data set. Include screenshots as necessary.

You can run this code the same way as described above. I added a legend to describe the lines and color. I have also added mouse over data over the lines that only works in Dreamweaver and problematic in browser currently.



1. Do you think it is better to show the scatterplot points as semi-transparent discs or color-filled circles? Justify your answer.

I tested out both multi-color and single-color points. At this point it doesn’t really matter unless more data elements are added. This will increase the complexity of the graph and will require either more color variations or different shapes to help interpret the data.

1. Given your experience with the Processing assignment, how does your experience in this assignment compare? Was it easier to use d3.js? Do you think one is more advantageous than the other? What are the strengths and weaknesses of each approach?

Processing was simpler to use and set up. Getting up to speed and adding capability was much quicker in Processing. With D3, Mike Bostock provides so many rich examples, that having access to it made it much easier to transition to the D3 from Processing. Understanding D3 library and how to use it was a bit of step up if you don’t understand Javascript. If you wanted to add a dropdown or button series to be able to switch and view multiple data, you will have to understand and implement in Javascript. I did try to switch multiple datasets on the scatterplot, but could not complete it in time due, since my Javascript foo is not ninja like. Processing is definitely easier to use, but once ramped up on D3 the library and portability make it a much richer web development environment. D3 is more advantages for web development, where Processing is seems to find it’s niche in the teaching environment to enable and foster a deeper understanding of visualization techniques in a classroom setting. Students will need to additionally learn Javascript to develop enhanced D3 visualizations, where Processing is Java based and most first year students learn how to code in Java so it’s an easier transition.