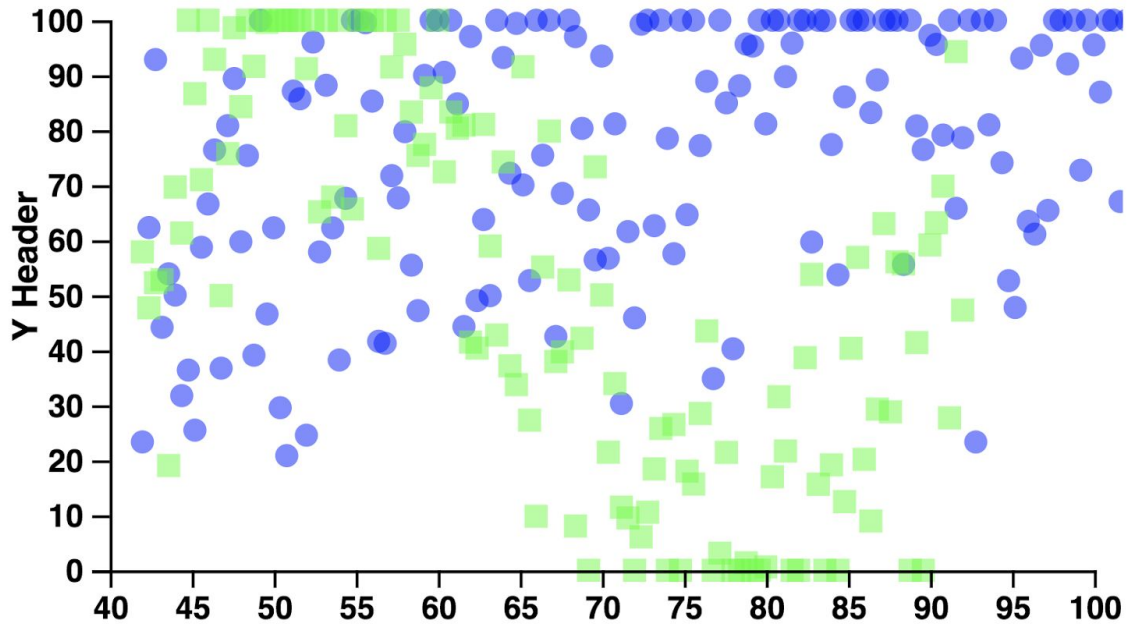


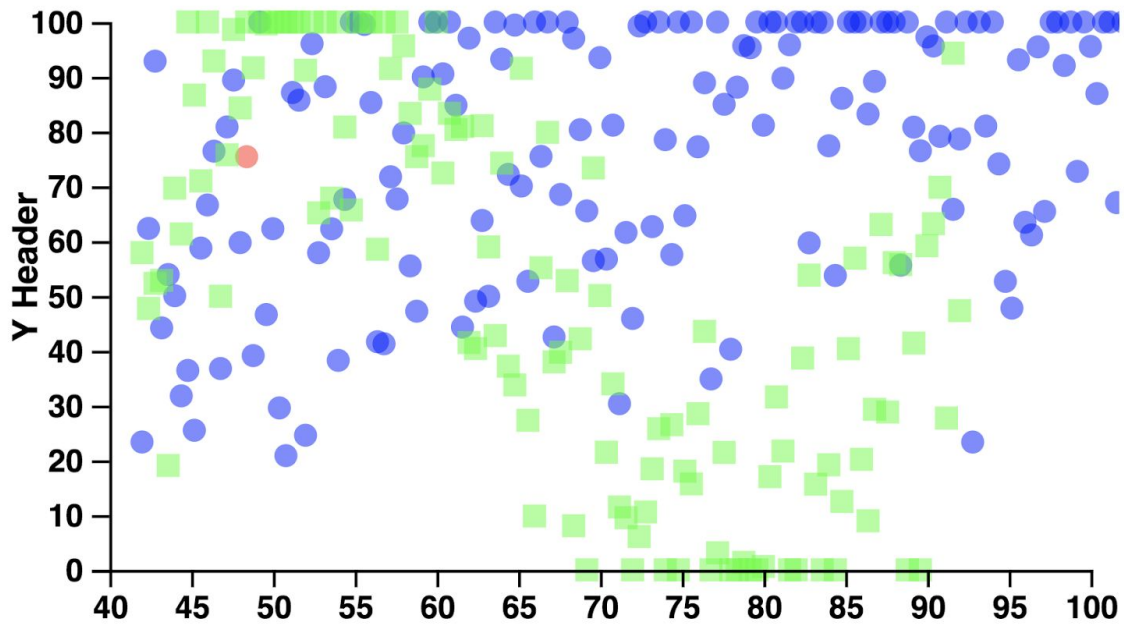
**Homework D3 #1**  
**Guanlun Zhao**  
**525001939**

Screenshots:

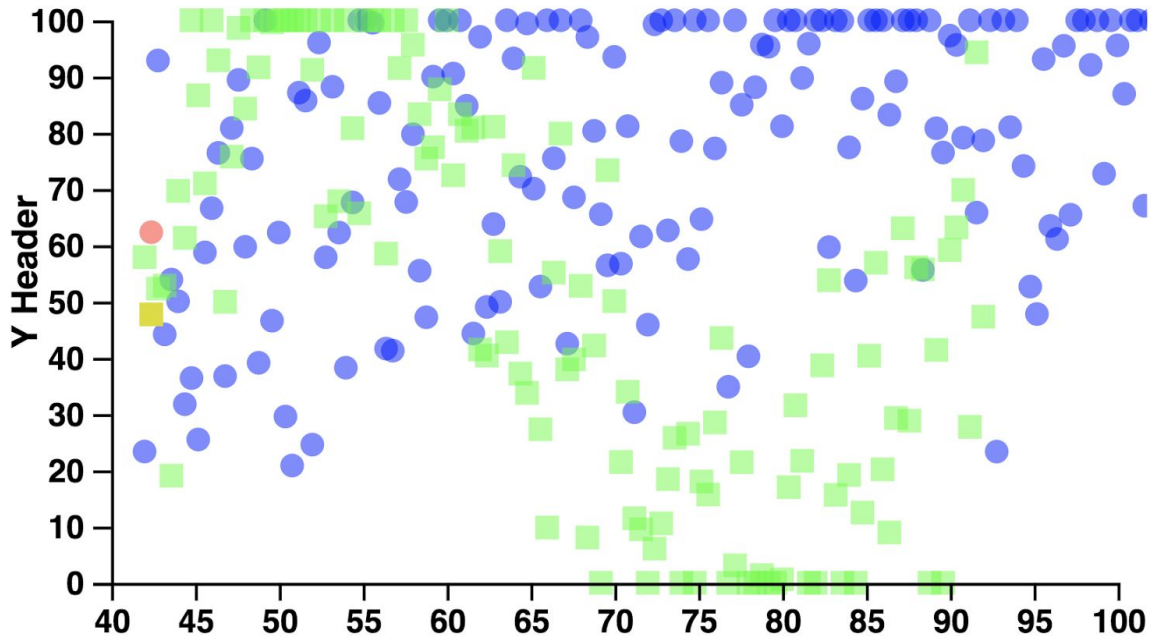
Dots changed to blue, green squares plotted:



Red dot on mouseover:



Clicking a dot marks the square with the same x value yellow



Reflection points:

- I was a little bit confused since the first dataset was much larger than the second one. Then I realized the entire graph was clipped and only shows x values ranging from 40 to 100.
- When loading two different data sources, at first I used nested callbacks (load the first json and then in its callback load the second one). This works but we can't write 10 nested callbacks if we have 10 data sources. Therefore it took me a while to find out the async helper functions, namely `queue`, `defer` and `await`, with which I could wait for different files to be loaded and then plot the data sources.
- The extra credit is a bit tricky as I had to first find the index of dot/square to be highlighted with a `findIndex` function and then use `d3.select` to select that item. Looks like D3.js did not provide a simple way to get the n-th item in the data plot object so I had to do something ugly like `squares._groups[0][matchedItemIndex]`.