Data Processing: Week 4

Leander de Kraker

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1. *How can D3 access and change the DOM? What do select and selectAll do?*
   The DOM can be accessed and changed via javascript. Select can store an element of the DOM as a variable and edit it. With selectAll all elements of a certain type are selected.

2. *What are the d and i in function(d){} and function(d, i){}?*
   The d is the current attribute value which can be manipulated, and the i is the index of the svg element. By editing with i you can line the data up.

3. *Write sample lines of JavaScript to add a div element with class barChart1 and to add an svg element with class barChart2 with square dimensions.*
   d3.select("body").append("div").attr("class","barChart1");
   d3.select("body").append("svg")
       .attr("class","barChart2")
       .attr("width", 100)
       .attr("height",100);

4. *Describe append, update, enter, and exit at a high level. What does selectAll + data + enter + append refer to?*
   selectAll selects all instances of a certain element.
   data links to the data you loaded in. This means elements from selectAll will be linked to data.
   enter means new instances will be introduced. (if there are less elements selected by selectAll then there are in your data)
   append creates new instances.

5. *What are the main differences between drawing a bar chart with HTML and SVG?*
   With SVG you can draw more complex shapes.

6. *In drawing the simple bar chart with D3 and SVG, what elements were appended, and what parts of the graph did these elements correspond to?*

The SVG canvas was appended, so the svg objects could be shown.
For both the axis a 'g' element was appended, and text was appended for the labels.
The bars consist of "rect"s.