Questions + answers

1. How can D3 access and change the DOM? What do select and selectAll do?

   Before you can change or use any elements in d3 you must select them. You do this by either d3.select(this) or d3.selectAll(this). This is the specific element you want to select from the DOM. .select() only selects the first element and .selectAll() will simply select all the elements that match the criteria specified and return them as an array of elements.

2. What are the d and i in function(d){} and function(d, i){}?

   The 'd' is used for the current data element and 'i' is used for the index of the current data element.

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", x)

          .attr("height", x)

4. Describe append, update, enter, and exit at a high level. What does "selectAll + data + enter + append" refer to?

   This selects certain parts, adds the data to these elements and enter() fills the empty places with the data. Append() puts this into HTML page.

   Append: It can be used to add a valid selection, tag or element into the DOM. It can be used to add <p>, <div>, text, <svg> elements.

   Update: Gives the resulting selection of data and DOM elements together.

   Enter: It can only be used after a .data() method call. It is used to indicate that new elements will be added to the current selection.

   Exit: Show the DOM elements that do not have a corresponding data point anymore.

5. What are the main differences between drawing a bar chart with HTML and SVG?

   SVG is better scalable than HTML and SVG is better with less objects and/or higher surface and HTML is better in the opposite of that. HTML looks at pixels while SVG is more about the shape.

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 appended elements were the data values. These corresponded to new made DOM elements who you could see by the bas in the graph.