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

   With selecting them. Select selects the first element it applies to. selectAll selects all elements it applies to.

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

   D is the first element in the array and i is the first element in the node (used to index)

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");
   var svgContainer = d3.select("body").append("svg").attr("width", 200).attr("height", 200)

   var rectangle = svgContainer.append("rect").attr("x", 10).attr("y", 10).attr("width", 50).attr("height", 100)

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

   Append: Appends a new element with the specified *name* as the last child of each element in the current selection, returning a new selection containing the appended elements.

   Update: bound data element to specific node

   Enter: Returns the enter selection: placeholder nodes for each data element for which no corresponding existing DOM element was found in the current selection.

   Exit:Returns the exit selection: existing DOM elements in the current selection for which no new data element was found.

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

   A html canvas converts the shapes to pixels and do not "remember" what these pixels represent. In SVG the original description of the shape is preserved. So shapes can be resized or moved.

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