

Questions:

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

‘.select’ selects the first element that is specified between the brackets and ‘.selectAll’ selects all the elements as specified between the brackets. When you have selected certain elements, you can access and change them.

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

In the first function, d is the value that the function will use from the earlier selected variable (which can be an array). The i represents the order of the element in the selection starting from 0.

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").html().attr("class", "barChart1")
D3.select("body").append("svg").html()
    .attr("class", 'barChart2')
    .attr("width", x)
    .attr("height", x)
```

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

First you select part of the page that you want to create a new element in, this is important because otherwise the computer doesn’t know where to create the element.

Data links to the actual data that you want to add to your page.

Enter prepares a new element for every unmatched data item. You create some sort of placeholder for the future elements.

The append command creates as many elements as there are placeholders returned by enter.

Afterwards the html method will populate the graphs with text.

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

With HTML code you have to code the bar chart by hand which is impractical for big datasets.

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 data was appended to the div as another div so as many entries there were in the data, that many divs were appended to the page. A function then calculated the width of the divs and the text attribute was added to each div.