

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

`select` selects the first element with a certain tagid, `select All` selects all of the elements with a certain tagid

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

`d`: `d` refers to data that is bound to a certain element.

`i`: `i` refers to the index of an certain element, which might be usefull if there are more than one of the same type of data.

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.

```
.append("div")
    .attr("class", "barChart1")
.append("svg")
    .attr("class", "barChart2")
    .attr("width", 50)
    .attr("height", 50)
```

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

The `enter` selection is used to enter and modify the values of different elements. When there is a difference in the amount of data and the amount of elements available, there are different commands that are capable of correcting it.

When there are too many data, `append` can append a new element to use the data. Whereas if there are too many elements, `exit` can remove elements without data.

`Update`, updates the values of the elements when they new data is available.

The “`selectAll + data + enter + append`” is a frequently used method, that sequentially calls one function after the other. It **selects** **all** of certain elements, gives the new **data**, **enters** the elements and **append** the new data.

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

HTML uses pixelated imaging whereas SVG is a vectorbased platform, which means that SVG can be scaled to any size or form. Also SVG supports interaction between the chart and the user.

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?

Each bar in the barchart consists of element `g`, for every barchart there are also a ‘`rect`’ and ‘`text`’ element which are individually appended for every bar.