Faculty of Science, Engineering and Technology

COS30045 Data Visualisation

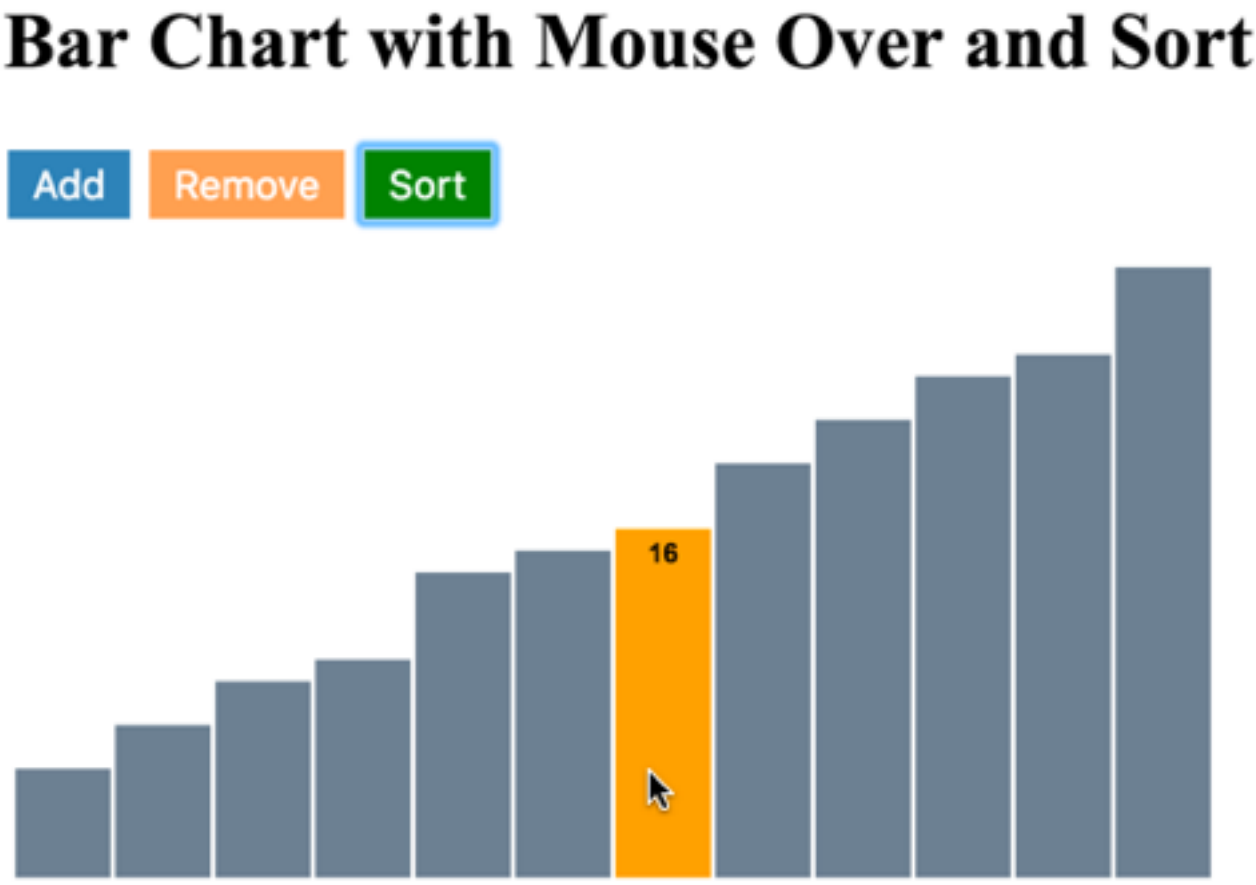
Task 6.2 D3 Interactivity - Sort

ILO	Create web-based interactive visualisations using real-world data sets.
Aim:	Bind event listeners to D3 selections
Resources:	*Textbook:* Murray Ch 10 Murray on ProQuest Murray on Safari (Make sure you use v2 of Murray as per links above)
To be marked as Complete your submission must:	Submit working code that meets the requirements specified in document below. Demonstrate appropriate use of HTML, CSS and D3. Properly formatted code Well commented code with references to code sourced from web, stack overflow etc. where appropriate. Demonstrate and explain code to tutor in class.
Submission	Submit to Doubtfire • code that demonstrates ascending and descending sort Bring code to class to demonstrate to tutor

Note: The functions handling scale have changed between D3 v3 and D3 v4. This is something to be aware of if you are doing your on research into this topic. Make sure you use Murray Ed 2. Code examples from Ed 1 will not work.

Overview

At the end of Task 6.1 we had a bar chart that we could add and remove data from and demonstrated some mouse over effects. In this task we will add a sort feature.



Step 1: Set up event listener for sort button

Start with the code from Task 6.1. Add a button for your new Sort function. Give it a unique id (e.g., `id="sort"`) so we can set up an event listener for it. Then set up the event listener to launch our the sort function we will build.

```
d3.select("#sort")
  .on("click", function() {
    sortBars();
});
```

Step 2: Write Sort Function

Our sort function will select all the rectangle elements then use D3 functions `sort()` and `d3.ascending()` to sort the data. Finally the rectangles need to be redrawn with new x values.

```
var sortBars = function() {

        svg1.selectAll("rect")
           .sort(function(a, b) {
                return d3.ascending(a, b);
            })
            .attr("x", function(d, i) {
                return xScale(i);
            });
        };
```

Save and run. You will notice that the transition happens straight away. Add a transition so the user can see the sort occur.

Step 3: Add a descending sort

Currently the sort only works one way. Allow the user to resort in the other direction by clicking the sort button again.

```
var sortOrder = false;

var sortBars = function() {

            sortOrder = !sortOrder;

              svg.selectAll("rect")
                 .sort(function(a, b) {
                     if (sortOrder) {
                         return d3.ascending(a, b);
                     } else {
                         return d3.descending(a, b);
                     }
                  })
                  // ....
```

Save your work and be ready to demonstrate in class.