

```

1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <meta charset="UTF-8">
5      <meta name="description" content="Data Visualisation"/>
6      <meta name="keywords" content="HTML, CSS, D3"/>
7      <meta name="author" content="Anh Khoa"/>
8
9      <title>Task 3.2 D3 Adding Axis to your Charts</title>
10
11      <script src="https://d3js.org/d3.v7.min.js"></script>
12
13    </head>
14
15    <body>
16      <h1>The D3 Journey starts here...</h1>
17
18      <script>
19        var w = 700;
20        var h = 300;
21        var padding = 40;
22
23        var dataset = [
24          [5,20,8],
25          [500,90,15],
26          [250,50,5],
27          [100,33,12],
28          [330,95,7],
29          [410,12,10],
30          [475,44,20],
31          [25,67,9],
32          [85,21,4],
33          [220,88,14],
34          [1000,150,10],
35        ];
36
37        var xScale = d3.scaleLinear()
38          .domain([d3.min(dataset, d => d[0]), d3.max(dataset, d => d[0])])
39          .range([padding, w - padding]);
40
41        var xAxis = d3.axisBottom(xScale).ticks(8);
42
43        var yScale = d3.scaleLinear()
44          .domain([d3.min(dataset, d => d[1]), d3.max(dataset, d => d[1])])
45          .range([h - padding, padding]);
46
47        var yAxis = d3.axisLeft(yScale).ticks(5);
48
49        var rScale = d3.scaleLinear()
50          .domain([0, d3.max(dataset, d => d[2])])
51          .range([3, 12]);
52
53        var svg = d3.select("body")
54          .append("svg")
55          .attr("width", w)
56          .attr("height", h)
57
58        var barWidth = w / dataset.length - padding;
59
60        svg.selectAll("circle")
61          .data(dataset)
62          .enter()
63          .append("circle")
64          .attr("cx", function(d){
65            return xScale(d[0]);})
66          .attr("cy", function(d){
67            return yScale(d[1]);})
68          .attr("r", function(d){
69            return rScale(d[2]);})
70          .attr("fill", "slategrey")
71          .on("mouseover", function() {
72            d3.select(this).attr("fill", "orange");
73          })
74          .on("mouseout", function() {
75            d3.select(this).attr("fill", "slategrey");
76          });
77
78        /* Create the labels*/
79        svg.selectAll("text")
80          .data(dataset)
81          .enter()
82          .append("text")
83          .text(function(d){
84            return "[" + d[0] + ", " + d[1] + "]";
85          })
86          .attr("x", function(d){
87            return xScale(d[0]);})
88          .attr("y", function(d){
89            return yScale(d[1]) - 10;})
90          .attr("text-anchor", "middle")
91          .attr("font-size", "12px")
92          .attr("fill", "black");
93
94        /*X axis*/
95        svg.append("g")
96          .attr("transform", "translate(0," + (h - padding) + ")")
97          .call(xAxis);
98
99        svg.append("text")
100          .attr("transform", "translate(" + (w / 2) + " , " + (h - 5) + ")")
101          .style("text-anchor", "middle")
102          .text("X Value");
103
104        /*Y axis*/
105        svg.append("g")
106          .attr("transform", "translate(" + padding + ",0)")
107          .call(yAxis);
108
109        svg.append("text")
110          .attr("transform", "rotate(-90)")
111          .attr("y", 15)
112          .attr("x", -h / 2)
113          .style("text-anchor", "middle")
114          .text("Y Value");
115
116      </script>
117
118      <br>
119      <bf>
120        <footer style="color: grey">COS30045 Data Visualisation<br>
121        Joe Bloggs</footer>
122      </body>
123    </html>

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