Week 7\Lab 7_1\Lab 7_1.js

```javascript
1   function init() {
2       var w = 600;
3       var h = 300;
4       var padding = 55;
5
6       var dataset;
7
8       d3.csv("Unemployment_78-95.csv", function(d) {
9         return {
10          date: new Date(+d.year, +d.month - 1),
11          number: +d.number
12        };
13      }).then(function(data) {
14        dataset = data;
15        lineChart(dataset);
16      });
17
18
19      function lineChart(dataset) {
20        var svg = d3.select("#chart")
21                    .append("svg")
22                    .attr("width", w)
23                    .attr("height", h);
24
25        var xScale = d3.scaleTime()
26                        .domain([
27                            d3.min(dataset, function(d) { return d.date; }),
28                            d3.max(dataset, function(d) { return d.date; })
29                        ])
30                        .range([padding, w]);
31
32        var yScale = d3.scaleLinear()
33                        .domain([0, d3.max(dataset, function(d) { return d.number; })])
34                        .range([h - padding + 10, 0]);
35
36        var xAxis = d3.axisBottom().ticks(10).scale(xScale);
37        var yAxis = d3.axisLeft().ticks(10).scale(yScale);
38
39
40        area = d3.area()
41                    .x(function(d) { return xScale(d.date); })
42
43                    //base line for area shape
44                    .y0(function() { return yScale.range()[0];})
45                    .y1(function(d) { return yScale(d.number); });
46
47        svg.append("path")
48            .datum(dataset)
```

```
49             .attr("class", "area")
50             .attr("d", area);
51
52         svg.append("g") //Append the x and y axis to the SVG element as groups
53             .attr("transform", "translate(0, "+ (h - padding + 10) +")")
54             .call(xAxis);
55
56         svg.append("g")
57             .attr("transform", "translate(" + (padding) + ", 0)")
58             .call(yAxis);
59
60         svg.append("line")
61             .attr("class", "line halfMilMark")
62         //start of the line
63             .attr("x1", padding)
64             .attr("y1", yScale(500000))
65         //end of the line
66             .attr("x2", w)
67             .attr("y2", yScale(500000))
68             .style("stroke", "red")
69             .style("stroke-dasharray", "10");
70
71         svg.append("text")
72             .attr("class", "halfMilLabel")
73             .attr("x", padding + 10)
74             .attr("y", yScale(500000) - 7)
75             .text("Half a million unemployed")
76             .attr("fill", "red");
77
78     }
79
80 }
81
82 window.onload = init;
83
```