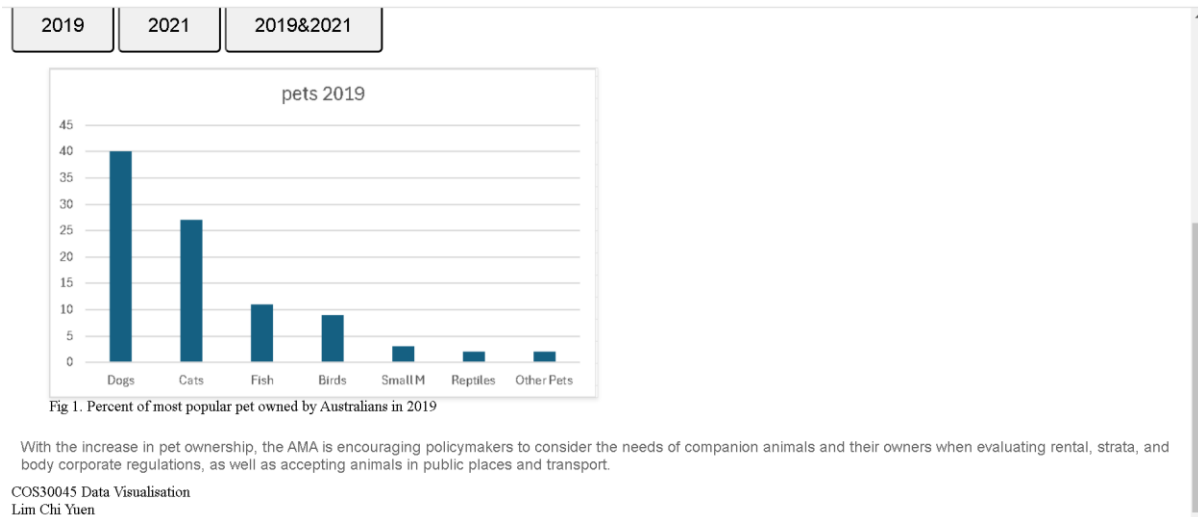


Lab1

Lab Task 1.1

<https://github.com/Cylim1507/COS30045/blob/main/COS30045/lab1/lab1-1.html>



```
15
16 <body>
17
18 <div class="button-container">
19   <form method="get" action="lab1-1.html"><button type="submit">Lab1</button></form>
20   <form method="get" action="lab1-2.html"><button type="submit">Lab2</button></form>
21   <form method="get" action="lab1-3.html"><button type="submit">Lab3</button></form>
22 </div>
23
24 <h1>Pets and the Pandemic</h1>
25 <h2>Lim Chi Yuen</h2>
26
27 <p>A report from Animal Medicines Australia (AMA) has found that many Australians took the opportunity to introduce a pet in
28
29 <ul>
30   <li>companionship</li>
31   <li>better mental health</li>
32   <li>joy and happiness.</li>
33 </ul>
34 <br>
35
36 <br>
37 Fig 1. Comparison of Pet Ownership in 2019 and 2021. <a href="https://animalmedicinesaustralia.org.au">Sources: Animal Med
38 <br>
39
40 <p>With the increase in pet ownership the AMA are encouraging policy makers to consider the needs of companion animals and t
41
42 <footer>COS30045 Data Visualisation<br>
43   Lim Chi Yuen</footer>
44
45 </body>
46 </html>
47
```

Lab Task 1.2

<https://github.com/Cylim1507/COS30045/blob/main/COS30045/lab1/lab1-2.html>

Lab1

Lab2

Lab3

Pets and the Pandemic

Lim Chi Yuen

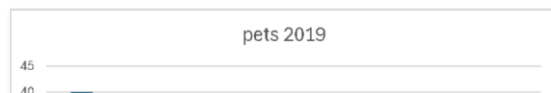
A report from Animal Medicines Australia (AMA) has found that many Australians took the opportunity to introduce a pet into their household during the pandemic. Their survey indicated that there was a significant increase in the percent of households taking in a new dog, fish, or bird. Their research also indicated that pets had a number of positive influences on their lives such as:

- companionship
- better mental health
- joy and happiness

2019

2021

2019&2021



2019

2021

2019&2021

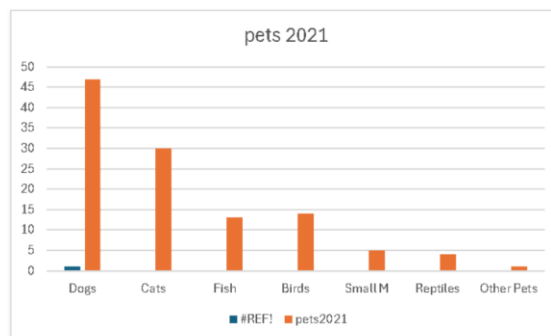


Fig 1. Percent of most popular pet owned by Australians in 2021

With the increase in pet ownership, the AMA is encouraging policymakers to consider the needs of companion animals and their owners when evaluating rental, strata, and body corporate regulations, as well as accepting animals in public places and transport.

COS30045 Data Visualisation

```

17 <body>
18
19 <p>A report from Animal Medicines Australia (AMA) has found that many Australians took the opportunity to introduce a pet ir
20
21 <ul>
22 <li>companionship</li>
23 <li>better mental health</li>
24 <li>joy and happiness</li>
25 </ul>
26 <br>
27
28 <button onclick="show('pets2019.png', 'Fig 1. Percent of most popular pet owned by Australians in 2019', 'pet2019')">2019</t
29 <button onclick="show('pets2021.png', 'Fig 1. Percent of most popular pet owned by Australians in 2021', 'pet2019')">2021</t
30 <button onclick="show('pets2019_2021.png', 'Fig 1. Percent of most popular pet owned by Australians in 2019 and 2021', 'pet2
31
32 <!-- Image container -->
33 <figure>
34 <img id="ChartImg" style="width:50%; display:none;" src="" alt="">
35 <figcaption id="ChartCap"></figcaption>
36 </figure>
37
38 <p>With the increase in pet ownership, the AMA is encouraging policymakers to consider the needs of companion animals and th
39
40 <footer>COS30045 Data Visualisation<br>
41 Lim Chi Yuen</footer>
42
43 <script>
44 function show(Image, ImgDesc, ImgAlt) {
45 document.getElementById('ChartImg').src = Image;
46 document.getElementById('ChartImg').alt = ImgAlt;
47 document.getElementById('ChartCap').textContent = ImgDesc; // Update the figcaption
48 document.getElementById('ChartImg').style.display = 'block'; // Corrected 'block'
49 }

```

Lab Task 1.3

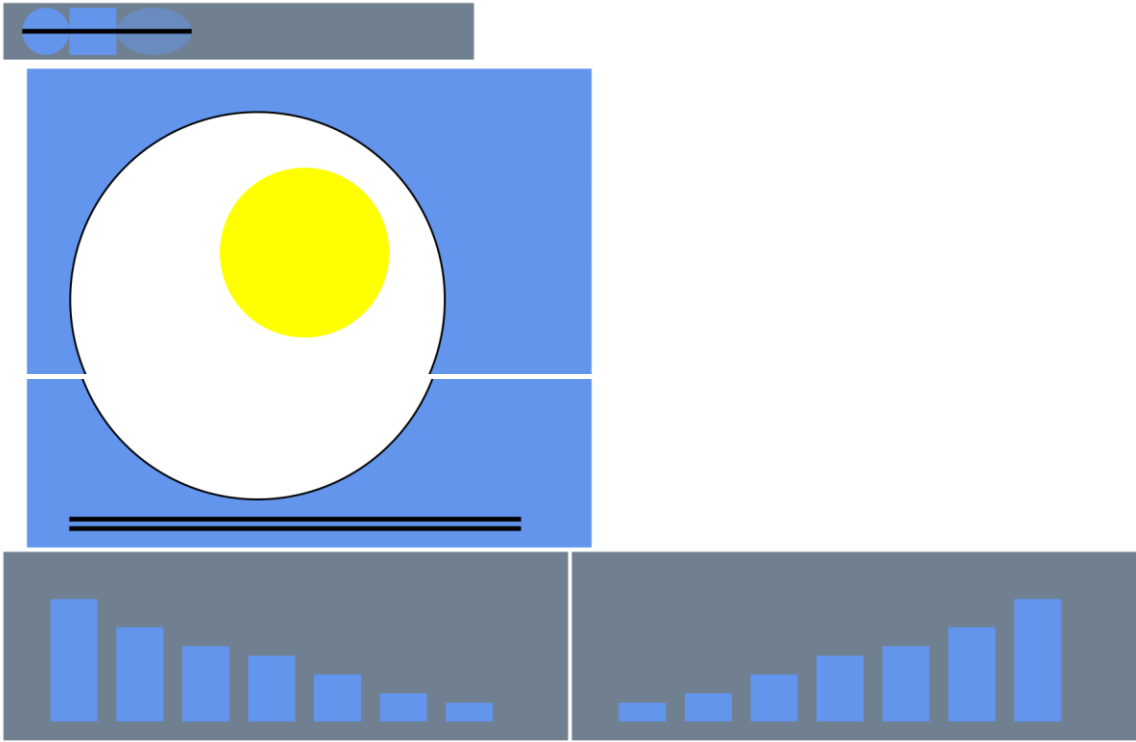
<https://github.com/Cylim1507/COS30045/blob/main/COS30045/lab1/lab1-3.html>

Lab1

Lab2

Lab3

Drawing Shape with SVG



COS30045 Data Visualisation
Lim Chi Yuen

```
20 <body>
21
22 <div class="button-container">
23   <form method="get" action="lab1-3.html"><button type="submit">Lab3</button></form>
24 </div>
25
26 <h1>Drawing Shape with SVG</h1>
27
28 <svg width="500" height = "60" style="background-color: #1f77b4;">
29
30   <g transform="translate(20,0)">
31     <circle cx="25", cy="30", r="25" fill="cornflowerblue" />
32     <rect x="50", y="5", width="50", height="50" fill="rgb(100, 149, 237)" />
33     <ellipse cx="140" cy="30" rx="40" ry="25" fill="rgba(100, 149, 237, 0.5)" />
34     <Line x1="0" y1="30" x2="180" y2="30" stroke="black" stroke-width="5" />
35   </g>
36
37 </svg>
38
39 <br>
40
41
42 <svg width="800" height = "500" ">
43
44   <g transform="translate(20,0)">
45     <rect x="5", y="5", width="600", height="500" fill="rgb(100, 149, 237)" />
46     <circle cx="250", cy="250", r="200" fill="black" />
47     <circle cx="250", cy="250", r="198" fill="white" />
48     <circle cx="300", cy="200", r="90" fill="yellow" />
49     <Line x1="50" y1="470" x2="530" y2="470" stroke="black" stroke-width="5" />
50     <Line x1="50" y1="480" x2="530" y2="480" stroke="black" stroke-width="5" />
51   </g>
52
53 </svg>
54
55 <br>
56 <svg width="600" height = "200" style="background-color: #1f77b4;">
57
```

```
53 </svg>
54
55 <br>
56 <svg width="600" height = "200" style="background-color: #slategrey;">
57
58   <g transform="translate(20,0)">
59     <rect x="30", y="50", width="50", height="130" fill="rgb(100, 149, 237)"/>
60     <rect x="100", y="80", width="50", height="100" fill="rgb(100, 149, 237)"/>
61     <rect x="170", y="100", width="50", height="80" fill="rgb(100, 149, 237)"/>
62     <rect x="240", y="110", width="50", height="70" fill="rgb(100, 149, 237)"/>
63     <rect x="310", y="130", width="50", height="50" fill="rgb(100, 149, 237)"/>
64     <rect x="380", y="150", width="50", height="30" fill="rgb(100, 149, 237)"/>
65     <rect x="450", y="160", width="50", height="20" fill="rgb(100, 149, 237)"/>
66
67   </g>
68
69 </svg>
70 <svg width="600" height = "200" style="background-color: #slategrey;">
71
72   <g transform="translate(20,0)">
73     <rect x="30", y="160", width="50", height="20" fill="rgb(100, 149, 237)"/>
74     <rect x="100", y="150", width="50", height="30" fill="rgb(100, 149, 237)"/>
75     <rect x="170", y="130", width="50", height="50" fill="rgb(100, 149, 237)"/>
76     <rect x="240", y="110", width="50", height="70" fill="rgb(100, 149, 237)"/>
77     <rect x="310", y="100", width="50", height="80" fill="rgb(100, 149, 237)"/>
78     <rect x="380", y="80", width="50", height="100" fill="rgb(100, 149, 237)"/>
79     <rect x="450", y="50", width="50", height="130" fill="rgb(100, 149, 237)"/>
80
81   </g>
82
83 </svg>
84 <br>
85 <br>
```

Lab2

Lab Task 2.1

<https://github.com/Cylim1507/COS30045/blob/main/COS30045/lab2/lab2-1.html>

Lab1

Lab2

Lab3

Lab4

The D3 journey starts here...

warning: Joe watched 14cat videos today.

Joe watched 5 cat videos today.

warning: Joe watched 26cat videos today.

warning: Joe watched 23cat videos today.

Joe watched 9 cat videos today.

COS30045 Data Visualisation
Lim Chi Yuen

```
27  
28 <h1>The D3 journey starts here...</h1>  
29  
30 <script>  
31 //example from murray  
32  
33 var dataset = [14, 5, 26, 23, 9]  
34  
35 d3.select("body").selectAll("p")  
36 .data(dataset)  
37 .enter()  
38 .append("p")  
39 .style("color", function(d){  
40   if (d>10){  
41     return "red"  
42   }  
43 })  
44 .text(function(d){  
45   if (d > 10){  
46     return "warning: Joe watched " + d + "cat videos today. ";  
47   }  
48   else{  
49     return "Joe watched " + d + " cat videos today.";  
50   }  
51 });  
52 </script>
```

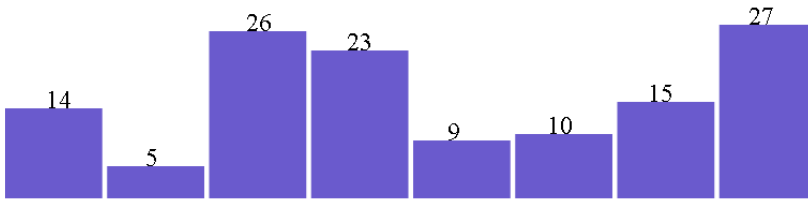
Server is Started at port: 5500
Source: Live Server
Don't show as

Lab Task 2.2

<https://github.com/Cylim1507/COS30045/blob/main/COS30045/lab2/lab2-2.html>

Lab1	Lab2	Lab3	Lab4
------	------	------	------

The D3 journey starts here...



```
24 <form method="get" action="lab2-3.html"><button type="submit">Lab3</button></form>
25 <form method="get" action="lab2-4.html"><button type="submit">Lab4</button></form>
26 </div>
27
28 <h1>The D3 journey starts here...</h1>
29
30 <script>
31   var w = 500;
32   var h = 130;
33   var barpadding = 2;
34
35   var dataset = [14, 5, 26, 23, 9, 10, 15, 27]
36
37   var svg = d3.select("body")
38     .append("svg")
39     .attr("width", w)
40     .attr("height", function(d){
41       return d;
42     })
43     .attr("fill", "rgb(106, 90, 205)");
44
45   svg.selectAll("rect")
46     .data(dataset)
47     .enter()
48     .append("rect")
49     .attr("x", function(d, i) {
50       return i * ((w/dataset.length)+1);
51     })
52     .attr("y", function(d){
53       return h - (d*4)
54     })
55     .attr("width", function(d){
56       return (w/dataset.length-barpadding);
57     })
58     .attr("height", function(d){
59       return d*4;
60     });
61
62   svg.selectAll("text")
63     .data(dataset)
64     .enter()
65     .append("text")
66     .text(function(d){
67       return d;
68     })
69     .attr("fill", "black")
70     .attr("x", function(d, i){
71       return i*(w/ dataset.length) + 25;
72     })
73     .attr("y", function(d){
74       return h - (d*4)
75     });
76 </script>
77
78 <br>
79 <bf>
80 <footer style="color: grey">COS30045 Data Visualisation<br>Lim Chi Yuen</fc
```

Lab Task 2.3

<https://github.com/Cylim1507/COS30045/blob/main/COS30045/lab2/lab2-3.html>

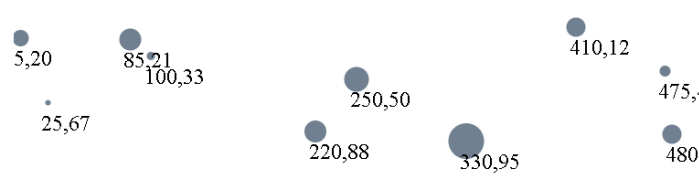
Lab1

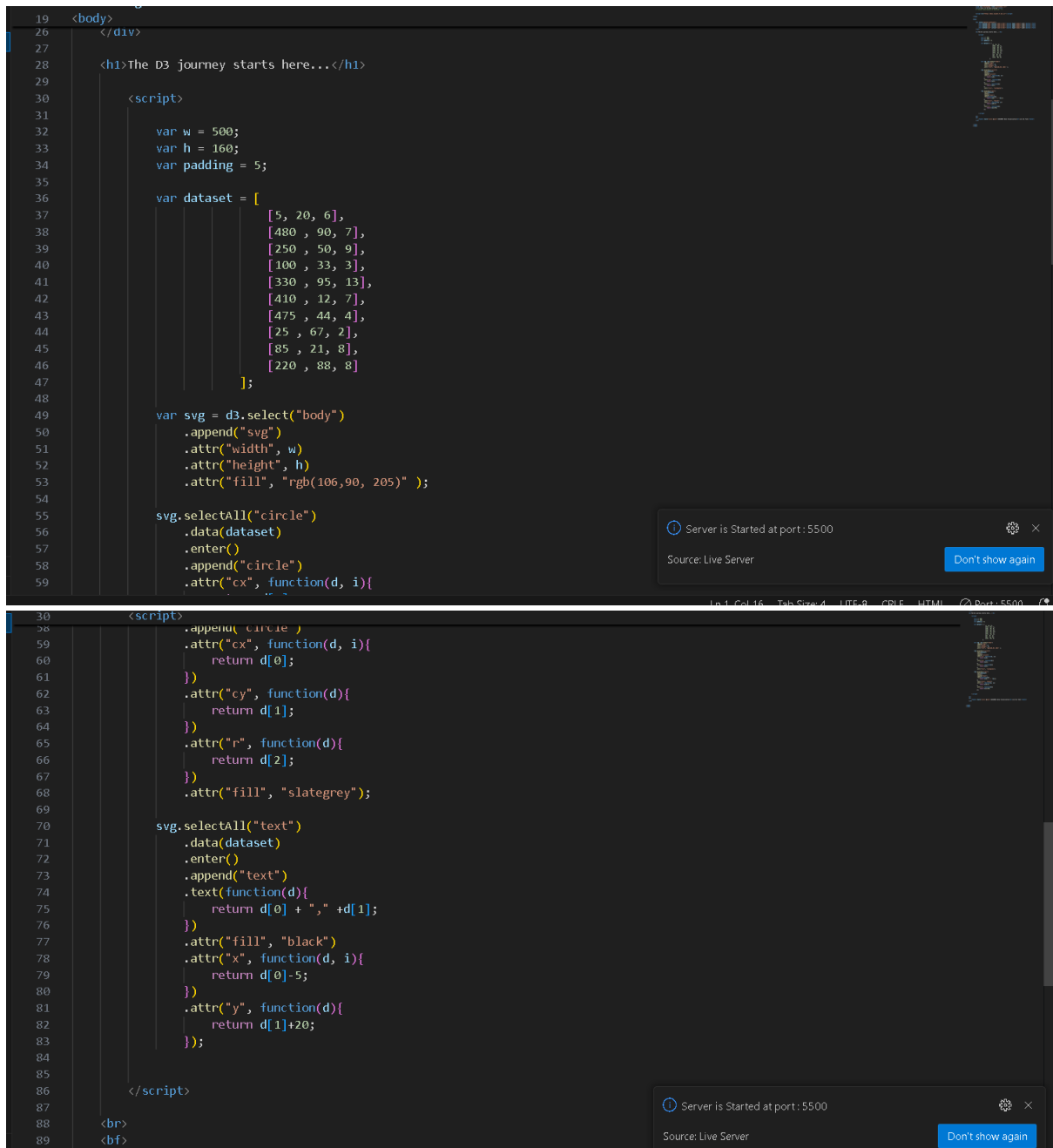
Lab2

Lab3

Lab4

The D3 journey starts here...





The image shows two screenshots of a code editor with a dark theme. The top screenshot displays the initial setup of a D3.js visualization, including the dataset definition and the creation of an SVG container. The bottom screenshot continues the code, adding attributes for circles and text labels to the dataset.

```
19 <body>
20 </div>
21
22 <h1>The D3 journey starts here...</h1>
23
24 <script>
25
26   var w = 500;
27   var h = 160;
28   var padding = 5;
29
30   var dataset = [
31     [5, 20, 6],
32     [480, 90, 7],
33     [250, 50, 9],
34     [100, 33, 3],
35     [330, 95, 13],
36     [410, 12, 7],
37     [475, 44, 4],
38     [25, 67, 2],
39     [85, 21, 8],
40     [220, 88, 8]
41   ];
42
43   var svg = d3.select("body")
44     .append("svg")
45     .attr("width", w)
46     .attr("height", h)
47     .attr("fill", "rgb(106,90, 205)");
48
49   svg.selectAll("circle")
50     .data(dataset)
51     .enter()
52     .append("circle")
53     .attr("cx", function(d, i){
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
```

The code continues with the following lines in the bottom screenshot:

```
    .append("circle")
    .attr("cx", function(d, i){
      return d[0];
    })
    .attr("cy", function(d){
      return d[1];
    })
    .attr("r", function(d){
      return d[2];
    })
    .attr("fill", "slategrey");

  svg.selectAll("text")
    .data(dataset)
    .enter()
    .append("text")
    .text(function(d){
      return d[0] + "," + d[1];
    })
    .attr("fill", "black")
    .attr("x", function(d, i){
      return d[0]-5;
    })
    .attr("y", function(d){
      return d[1]+20;
    });
  </script>
  <br>
  <bf>
```

Lab Task 2.4

<https://github.com/Cylim1507/COS30045/blob/main/COS30045/lab2/lab2-4.html>

https://github.com/Cylim1507/COS30045/blob/main/COS30045/lab2/Task_2.4.js

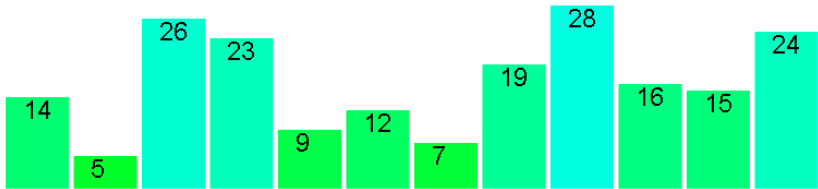
Lab1

Lab2

Lab3

Lab4

The D3 journey starts here...



```
JS Task_2.4.js > init > barChart > attr("fill") callback
1 function init(){
2     //reading the data from csv file
3     d3.csv("Task_2.4_data.csv").then(function(data){
4         console.log(data);
5         wombatsSightings = data;
6
7         barChart(wombatsSightings);
8     })
9
10    var w = 500;
11    var h = 150;
12    var barPadding = 3;
13
14    //D3 block
15    var svg = d3.select("#chart")
16        .append("svg")
17        .attr("width",w)
18        .attr("height",h);
19
20    function barChart(wombatsSightings)
21    {
22        svg.selectAll("rect")
23            .data(wombatsSightings)
24            .enter()
25            .append("rect")
26            //x coordinate and y coordinate
27            .attr("x",function(d,i){
28                return i * (w/wombatsSightings.length);
29            })
30            .attr("y",function(d){
31                return h - (d.wombats*4)
32            })
33            //width and height of the bar chart
34            .attr("width",function(d){
35                return (w/wombatsSightings.length-barPadding);
36            })
37
38            .attr("height",function(d){
39                return d.wombats*4;
40            })
41            //colour of the bar changes depending on the value of the data
42            .attr("fill", function(d) {
43                return "rgb(0,255, " + (d.wombats * 8) + ")";
44            });
45
46        svg.selectAll("text")
47            .data(wombatsSightings)
48            .enter()
49            .append("text")
50            .text(function(d) {
51                return d.wombats;
52            })
53            .attr("fill","black")
54            .attr("x", function(d, i) {
55                return i * (w / wombatsSightings.length) +10.5;
56            })
57            .attr("y",function(d){
58                return h - (d.wombats *4) + 13
59            })
60    }
61    window.onload = init;
62
```