

COS30045

Lab Exercise Demonstration 1 (Exercises 1.1-2.4)

GAGANDEEP SINGH
104225140

```

<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8"/>
  <meta name="description"    content="Data Visualisation Exercise 1"/>
  <meta name="keywords"      content="HTML, CSS"/>
  <meta name="author"        content="Gagan"/>
  <title>Task 1.1 HTML and CSS Demo Page</title>
  <!--Insert description of exercise -->

  <style>
    .fig {
      margin-top: 100px;
      margin-bottom: 0px;
      margin-right: 150px;
      margin-left: 80px;
    }
    .figCaption {
      margin-top: 0px;
      margin-bottom: 15px;
      margin-right: 150px;
      margin-left: 80px;
      font-style: italic;
    }
    button{
      margin-top: 10px;
      margin-left: 8px;
      margin-bottom: 15px;
    }

    #barChart{
      margin-top: 50px;
      margin-bottom: 40px;
      margin-right: 150px;
      margin-left: 80px;
    }
  </style>

</head>

<body>

  <h1>
    Pets and the Pandemic
  </h1>

  <h2>
    By Gagan
  </h2>

  <p>
    A report from <b>Animal Medicines Australia (AMA)</b> 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

-

[Links to an external site.](https://animalmedicinesaustralia.org.au/wp-content/uploads/2021/08/AMAU005-PATP-Report21_v1.41_WEB.pdf)



[Stats](https://animalmedicinesaustralia.org.au/wp-content/uploads/2021/08/AMAU005-PATP-Report21_v1.41_WEB.pdf)

2019

2021

Both

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

COS30045 Data Visualisation

```
const button2019 = document.querySelector('#button2019');
const button2021 = document.querySelector("#button2021");
const buttonBoth = document.querySelector("#buttonBoth");
const barChart = document.querySelector("#barChart");
function image(location) {
    barChart.innerHTML = `</img>`;
}
button2019.onclick = function() {
    image("pets2019.png");
};

button2021.onclick = function() {
    image("pets2021.png");
};

buttonBoth.onclick = function() {
    image("both.png");
};
```

Pets and the Pandemic

By Gagan

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

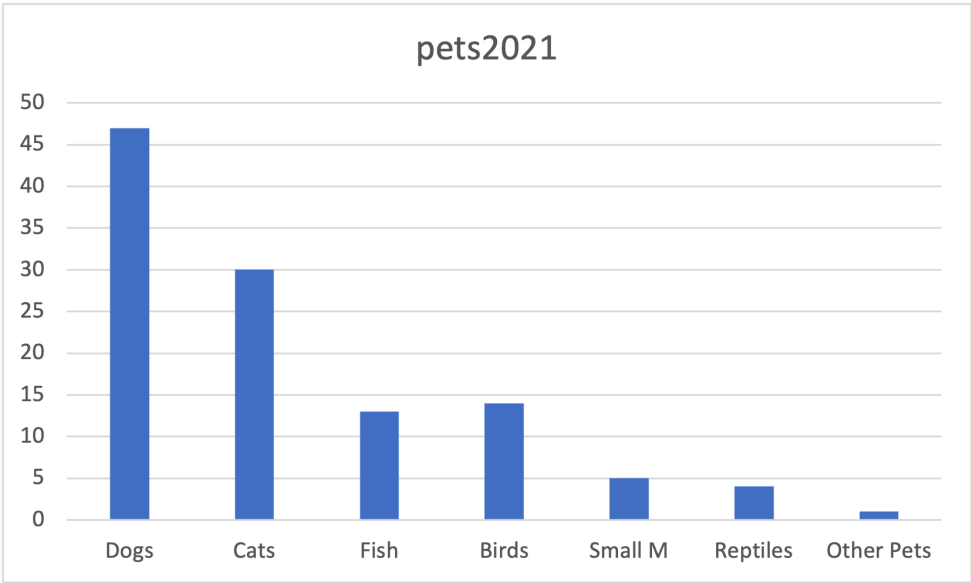
Pet ownership in Australia, 2019 vs 2021								
Pet type	Household penetration (%)		Total owner households ('000)		Animals per household (average)		Total pets ('000)	
	2019	2021	2019	2021	2019	2021	2019	2021
Dogs	40	47 ▲	3,848.2	4,644.6	1.3	1.4	5,104.7	6,344.3
Cats	27	30	2,602.4	3,030.7	1.4	1.6	3,766.6	4,903.3
Fish	11	13 ▲	1,056.8	1,314.5	10.7	8.5	11,331.7	11,186.5
Birds	9	14 ▲	867.9	1,384.0	6.4	3.9	5,569.4	5,448.4
Small mammals	3	5	257.8	498.9	2.4	3.0	614.5	1,502.0
Reptiles	2	4	194.5	426.4	1.9	1.6	364.2	663.4
Other pets	2	1	194.8	118.6	9.2	3.4	1,785.3	401.2
Pet Owners	61	69 ▲	5.9 m	6.8 m			28.5 m	30.4 m
Non-Owners	39	31 ▼	3.7 m	3.1 m				

Fig.1, About Pets - [Stats](#)

2019

2021

Both



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

COS30045 Data Visualisation

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8"/>
  <meta name="description"    content="Data Visualisation Exercise 1"/>
  <meta name="keywords"      content="HTML, CSS"/>
  <meta name="author"        content="Gagan"/>
  <title>Task 1.3 SVG</title>

</head>
<body>
  <h1>Drawing Shapes with SVG</h1>

  <svg width="500" height="60" style="background-color: cornflowerblue">
    <circle cx="50"
      " cy="200" r="25" fill="tomato"/>
    <rect x="50" y="5" width="90" height="50" fill="lightcoral"/>
    <ellipse cx="180" cy="30" rx="40" ry="25" fill="tomato"/>
    <line x1="0" y1="30" x2="220" y2="30" stroke="black" stroke-width="5">
  </svg>

  <footer style="color:gray">COS30045 Data Visualisation<br>
  Gagan</footer>

</body>
</html>
```

Drawing Shapes with SVG



COS30045 Data Visualisation
Gagan


```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8"/>
  <meta name="description"    content="Data Visualisation Exercise 2"/>
  <meta name="author"        content="Gagan"/>
  <title>2.1</title>
  <script type="text/javascript" src="https://d3js.org/d3.v7.min.js"></script>
</head>
<body>
  <h1>The D3 journey starts here....</h1>
  <script>
    var dataset = [14, 5, 26, 23, 9]
    d3.select("body")
      .selectAll("p")
      .data(dataset)
      .enter()
      .append("p")
      .text(function(d) {
        return `John has watched ${d} videos today`;
      })
      .style("color", function(d) {
        if (d > 10) {
          return "red";
        }
      });
  </script>

  <footer style="color:gray">COS30045 Data Visualisation<br>
    Gagan</footer>

</body>
</html>
```

The D3 journey starts here....

John has watched 14 videos today

John has watched 5 videos today

John has watched 26 videos today

John has watched 23 videos today

John has watched 9 videos today

COS30045 Data Visualisation

Gagan

```

<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8"/>
  <meta name="description"    content="Data Visualisation Exercise 2"/>
  <meta name="author"        content="Gagan"/>
  <title>2.2</title>
  <script type="text/javascript" src="https://d3js.org/d3.v7.min.js"></script>
</head>
<body>
  <h1>The D3 journey starts here....</h1>
  <script>
    var w = 500;
    var h = 50 ;

    var dataset = [14, 5, 26, 23, 9];

    var svg = d3.select("body")
      .append("svg")
      .attr("width", w)
      .attr("height", h);

    svg.selectAll("rect")
      .data(dataset)
      .enter()
      .append("rect")
      .attr("x", function(d, i) {
        return i * (w / dataset.length);
      })
      .attr("y", function(d){
        return h-d*4;
      })
      .attr("width", function(d){
        return (w/dataset.length) -2;
      })
      .attr("height", function(d){
        return d*4;
      })
      .attr("fill", "teal");

  </script>

  <footer style="color:gray">COS30045 Data Visualisation<br>
  Gagan</footer>

</body>

```


The D3 journey starts here....



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```

<!DOCTYPE html>
<html lang="en">

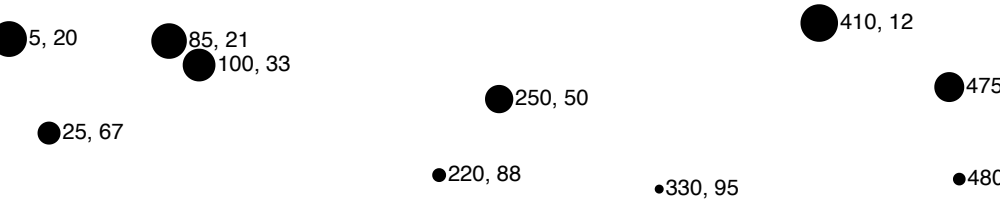
<head>
  <meta charset="UTF-8"/>
  <meta name="description"    content="Data Visualisation Exercise 2"/>
  <meta name="keywords"      content="HTML, CSS"/>
  <meta name="author"        content="Gagan"/>
  <title>Task 2.3</title>
  <script type="text/javascript" src="https://d3js.org/d3.v7.min.js"></script>
</head>
<body>
<script type="text/javascript">
  var dataset = [ [5, 20], [480, 90], [250, 50], [100, 33], [330, 95],
                  [410, 12], [475, 44], [25, 67], [85, 21], [220, 88]];
  var w = 500;
  var h = 100;

  var svg = d3.select("body")
    .append("svg")
    .attr("width", w)
    .attr("height", h);

  svg.selectAll("circle")
    .data(dataset)
    .enter()
    .append("circle")
    .attr("cx", function(d) { return d[0];
    })
    .attr("cy", function(d) {
      return d[1]; })
    .attr("r", function(d) {
      return Math.sqrt(h - d[1]);
    });

  svg.selectAll("text")
    .data(dataset)
    .enter()
    .append("text")
    .text(function(d) {
      return d[0] + ", " + d[1];
    })
    .attr("x", function(d) {
      return d[0] + Math.sqrt(h - d[1]) + 1; // Adjusted x-position for text
    })
    .attr("y", function(d) {
      return d[1] + 3; // Adjusted y-position for text
    })
    .attr("font-family", "sans-serif")
    .attr("font-size", "11px")
    .attr("fill", "black"); // Text color
</script>
</body>

```


```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8"/>
  <meta name="description"    content="Data Visualisation Exercise 2"/>
  <meta name="keywords"      content="HTML, CSS"/>
  <meta name="author"        content="Gagan"/>
  <title>Task 2.4 Charts using csv</title>
  <script type="text/javascript" src="https://d3js.org/d3.v7.min.js"></script>
  <script src = "2.4.1.js"></script>
</head>
<body>
  <h2>Charts</h2>
  <h3>2019</h3>
  <p id="chart1"></p>

  <h3>2021</h3>

  <p id="chart2"></p>

<footer style="color:gray">COS30045 Data Visualisation<br>
  Gagan</footer>
</body>
</html>
```

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8"/>
  <meta name="description"    content="Data Visualisation Exercise 2"/>
  <meta name="keywords"      content="HTML, CSS"/>
  <meta name="author"        content="Gagan"/>
  <title>Task 2.4 Charts using csv</title>
```

```

function init() {
  var sightings;
  var w = 500;
  var h = 200;

  function barChart(sightings, year, chart) {
    var svg = d3.select(`#${chart}`)
      .append("svg")
      .attr("width", w)
      .attr("height", h);

    svg.selectAll("rect")
      .data(sightings)
      .enter()
      .append("rect")
      .attr("x", function(d, i) {
        return i * (w / sightings.length);
      })
      .attr("y", function(d) {
        return (h - d[year] * 4) - 20;
      })
      .attr("width", function() {
        return (w / sightings.length) - 2;
      })
      .attr("height", function(d) {
        return d[year] * 4;
      })
      .attr("fill", "lightcoral");

    svg.selectAll("text")
      .data(sightings)
      .enter()
      .append("text")
      .text(function(d) {
        return d.animal;
      })
      .attr("x", function(d, i) {
        return i * (w / sightings.length) + ((w / sightings.length) - 2) / 2;
      })
      .attr("y", function(d) {
        return h - 3;
      })
      .attr("text-anchor", "middle")
      .attr("fill", "coral");
  }

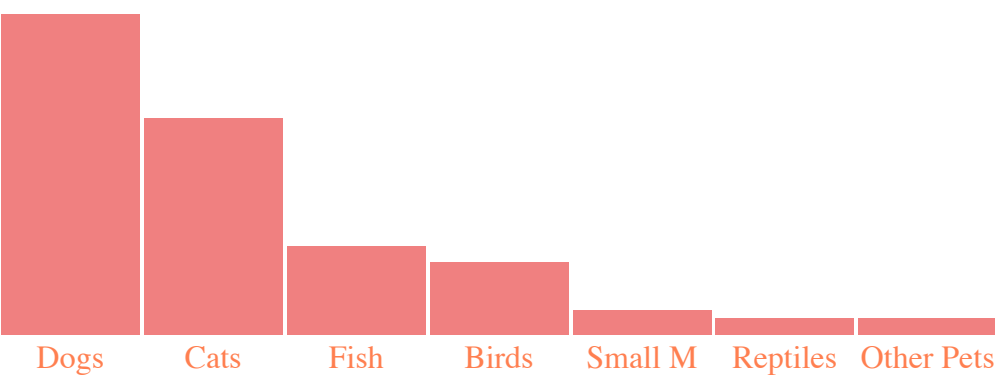
  d3.csv("pet_ownership.csv").then(function(data) {
    console.log(data);
    sightings = data;
    barChart(sightings, "pets2019", "chart1");
    barChart(sightings, "pets2021", "chart2");
  });
}

```

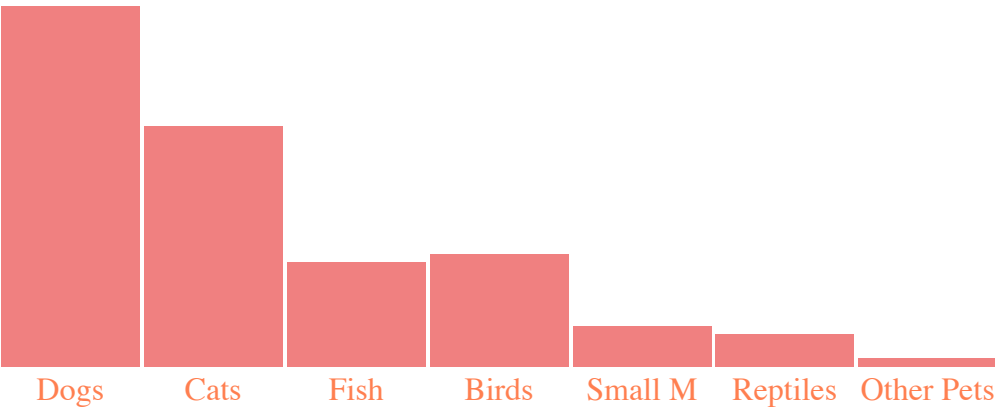
```
window.onload = init;
```

Charts

2019



2021



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