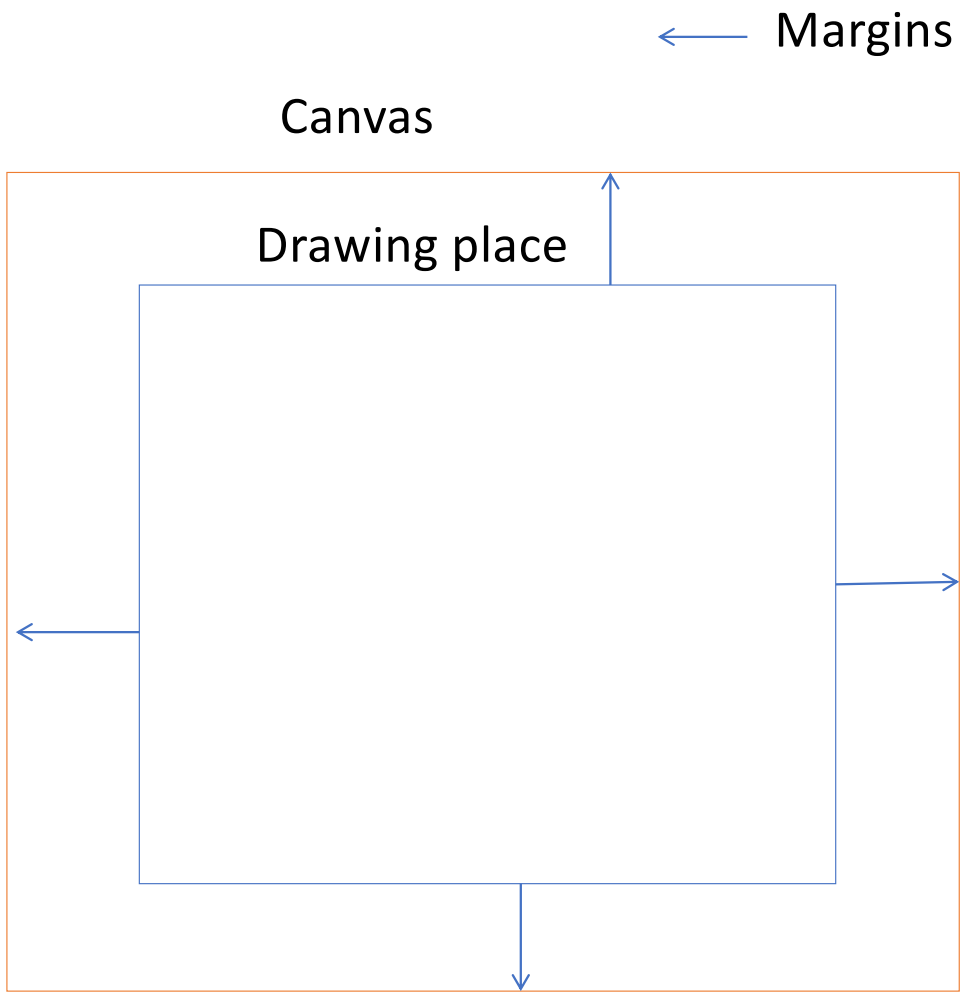
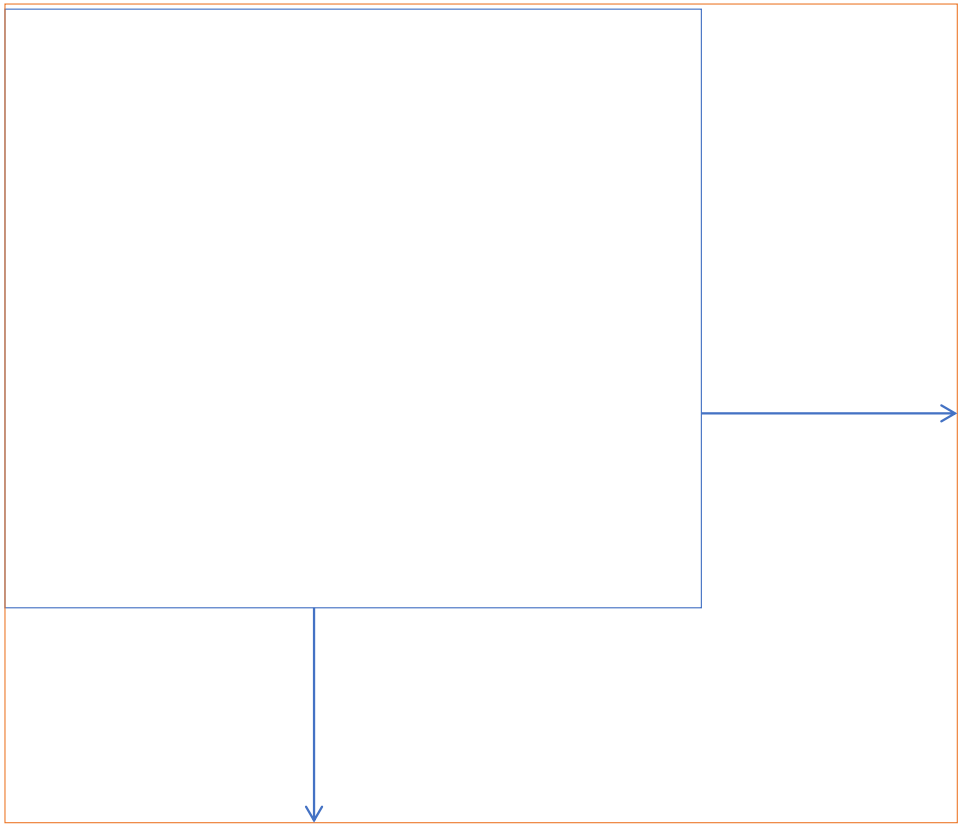

Margins
Canvas
Drawing place

To make spaces for Axis

.attr("transform", "translate("+ mleft + ", " + mright + ")");

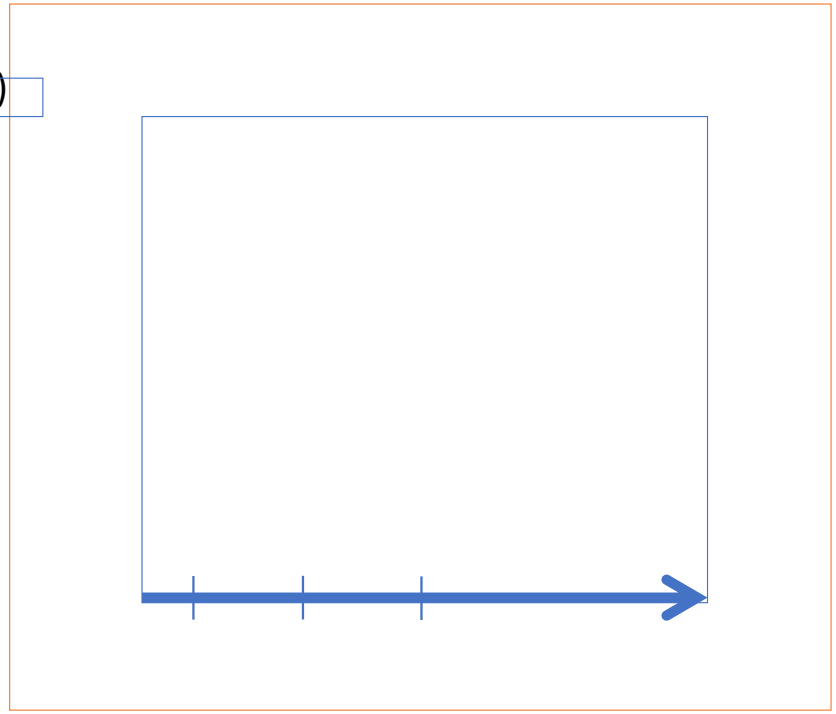


```
var xScale = d3.scaleLinear()
        .domain([0 ,100])
        .range([0,width])


var x_axis = d3.axisBottom(xScale)
```

```
canvas1.append("g")
  .attr("transform", "translate(0, "+ width+")")
  .call(x_axis)
```

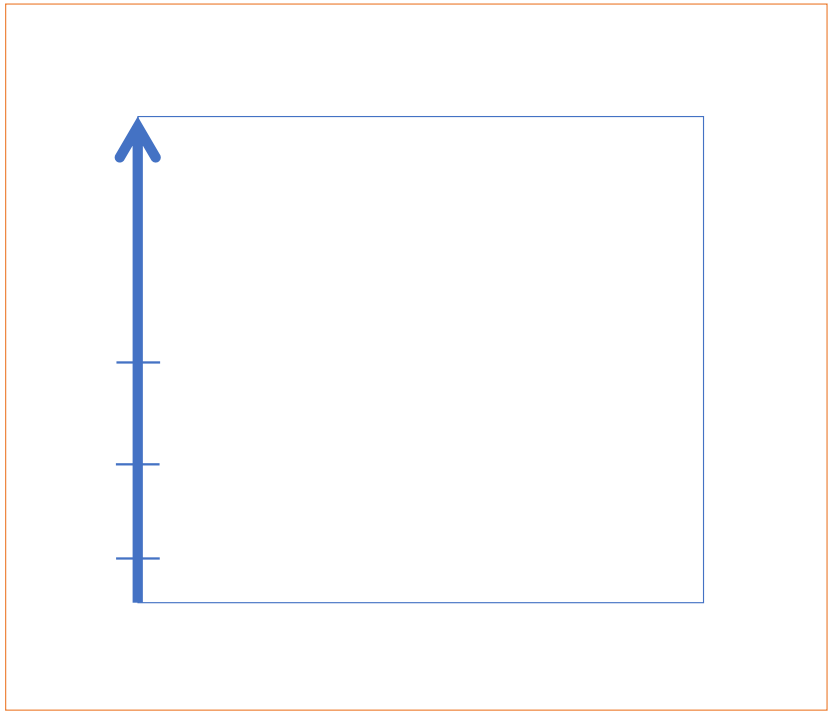
Move axis down

Append X axis



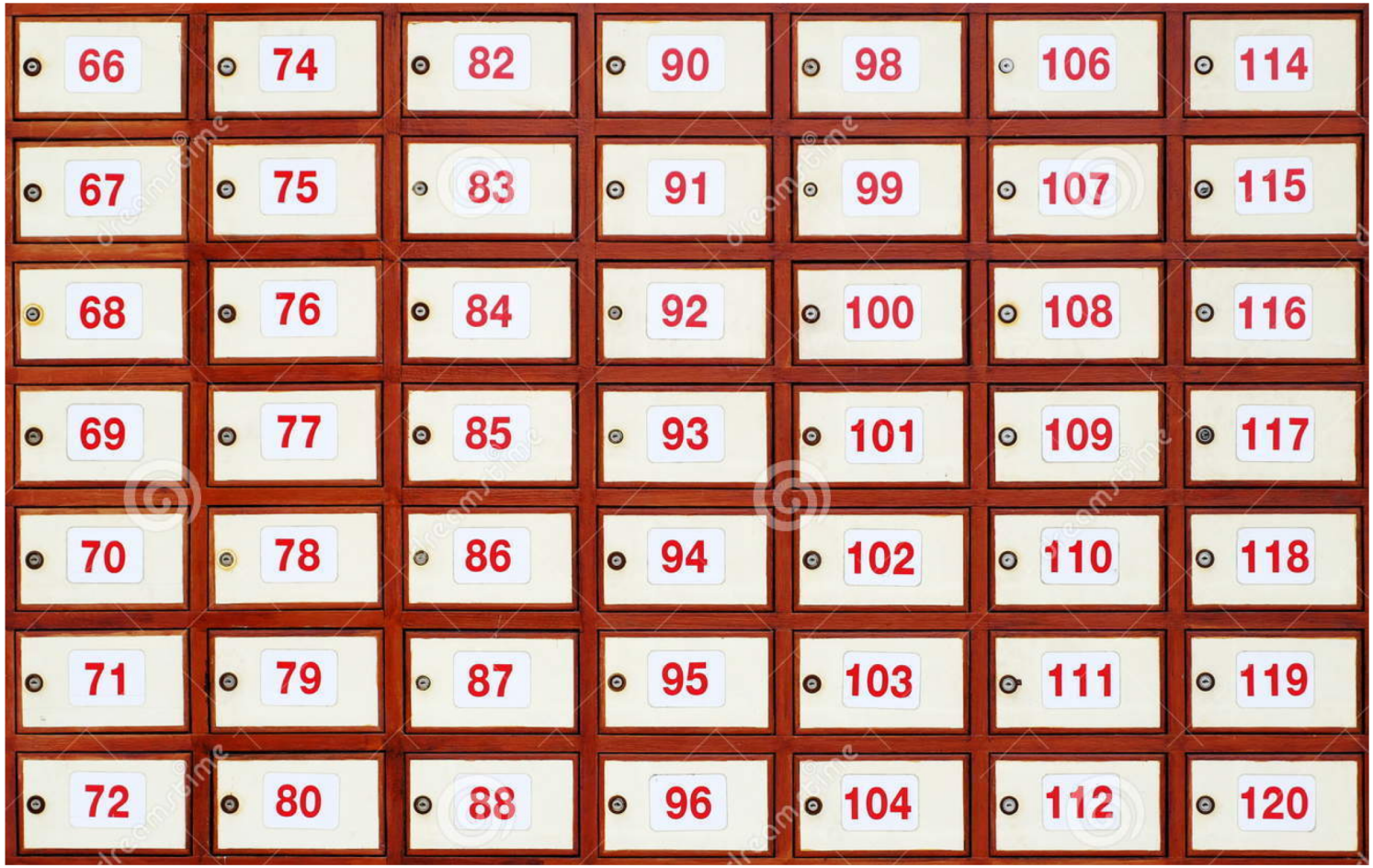
```
var yScale = d3.scaleLinear()
        .domain([0 ,10])
        .range([(height), 0])


    Var y_axis = d3.axisBottom(yScale)


canvas1.append("g")
.call(y_axis)
```

Append Y axis

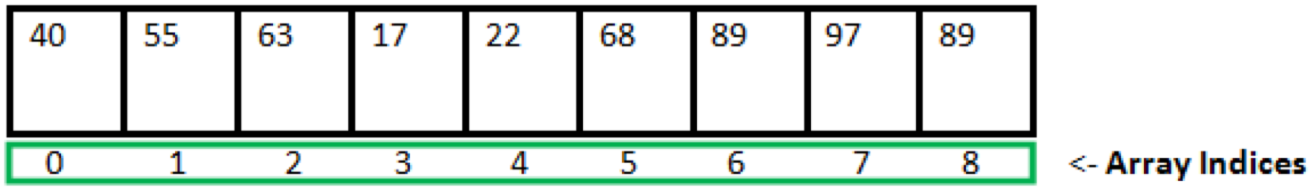


Array

Like postboxes to store items – all the same,
can store same and different items, and have unique numbers (indexes)

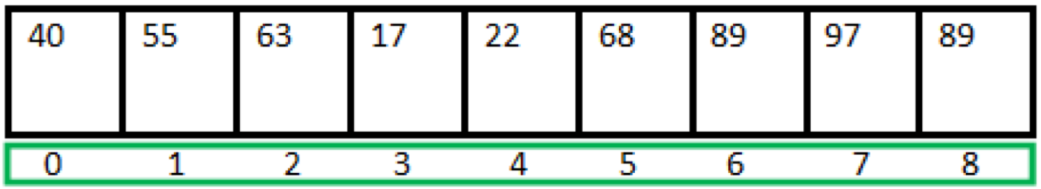


Arrays starts from 0
Can hold any value – number, decimal number, text.
Can have unlimited amount of items assigned
Are called by stating array name and index of item needed



Array Length = 9
First Index = 0
Last Index = 8

var ourArray =



ourArray[5] -> 68
ourArray[0] -> 40

var **ourArray** =[40, 55, 63, 17,22,68,89,97,89]

console.log(**ourArray**[0]) // would output 40
console.log(**ourArray**[3]) // would output 17
console.log(**ourArray**[0]+**ourArray**[3]) // would output 57

var **textArray** =[“40”, “55”, “63”,“17”,”AB”,”68”,”89”,”97”,”89”]

console.log(**textArray** [0]) // would output 40
console.log(**textArray** [3]) // would output 17
console.log(**textArray** [0]+**textArray** [3]) // would output 4017

“For” loop

var **ourArray** =[40, 55, 63, 17,22,68,89,97,89]

Repeating as many times as there are elements in array, also could

```
for (i = 0; i < 9; i++) {
    console.log("this piece is repeated 9 times")
}
```

Repeating as many times as there are elements in array, also could

```
for (i = 0; i < ourArray.length; i++) {
    console.log(ourArray[i])
}
```

```
Sum = 0
for (i = 0; i < 9; i++) {
        sum = sum + ourArray[i];
}
console.log("sum of Array " + Sum);
```

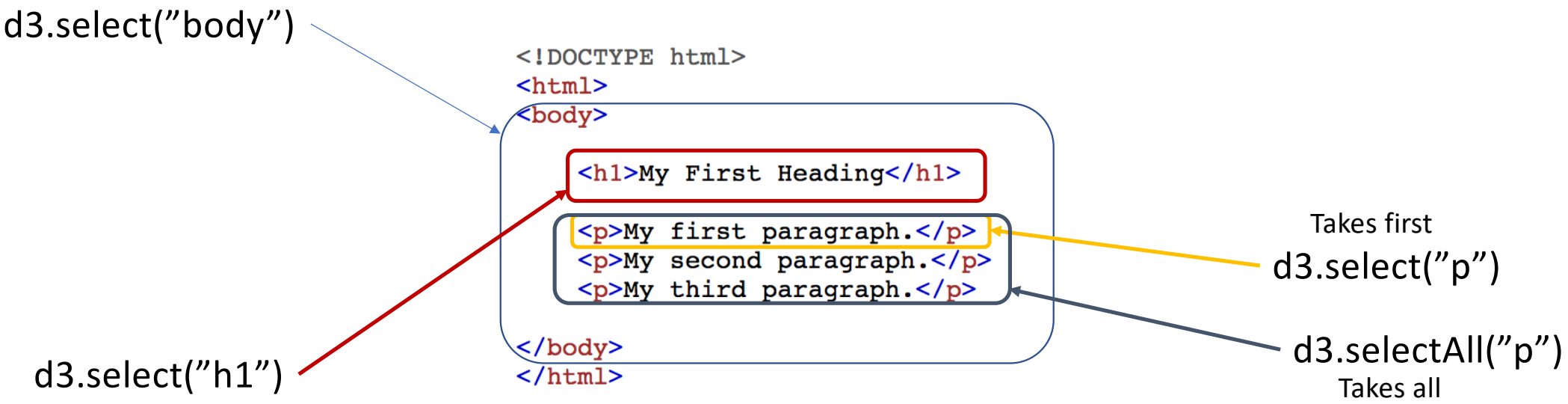
End point

Beginning point Step how fast loop goes

```
for (i = 4; i < 9; i++) {
    console.log("this piece is repeated
        5 times")
}
```

```
for (i = 0; i < 3; i++) {

    canvas.append("circle")
            .attr("r", 30)
            .attr("cx", 10*i)
            .attr("cy", 20)

}
```

Select


d3.select(”body”)
<!DOCTYPE html>
<html>
<body>
<h1>My First Heading</h1>
My first paragraph.
My second paragraph.
My third paragraph.
</body>
</html>
Takes first
d3.select(”p”)
d3.selectAll(”p”)
Takes all
d3.select(”h1”)

d3.select (”p”) `.style(color', 'darkOrange')`

Change selected elements

d3.selectAll(”p”) `.text('darkOrange')`

Style selected element

d3.selectAll(”circles”) `.text('darkOrange')`

Style selected element

SelectAll – Enter()

var dataPoints2 = [30, 50, 100,35];

Select all drawns circles if any already drawn

```
canvas.selectAll("circle") // enter
.data(dataPoints2)
.enter().append
```

Take the array length and repeat that many times

draw missing amount of elements if there are such

SelectAll – Exit()

```
var dataPoints2 = [30, 50, 100,35];
```

Select all drawns circles if any already drawn

```
canvas.selectAll("circle") // enter
```

```
.data(dataPoints2)
```

Take the array length and repeat that many times

remove unneeded elements if there are such

```
.exit().remove
```

SelectAll – Update()

Update size of all the selected elements

```
var dataPoints2 = [30, 50, 100,35];

canvas.selectAll("circle")
.data(dataPoints2)
        .attr(”r”, function(d,i){
                return d
        })
```

Homework 3: to read and practice

- Arrays https://www.w3schools.com/js/js_arrays.asp
- Variables https://www.w3schools.com/js/js_variables.asp
- For Loop https://www.w3schools.com/js/js_loop_for.asp