DLI Accelerated Data Science Teaching Kit

Lecture 9.5 - Attributes, Styles, Classes & Text

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.attr()

- The Attribute Method
- Sets attributes such as x, y, width, height, and fill

- Technical details:
  - `group.attr("x", 5)`
  - `<rect x="5"></rect>`

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.attr() and Functional Programming

Input

```
[ {size: 10}, {size: 8}, {size: 12.2} ]
```

We want 3 rectangles:

```
<rect height="10" x="5"></rect>
<rect height="8" x="10"></rect>
<rect height="12.2" x="15"></rect>
```

```
.attr("height", function(d,i){ return d.size })
```

d: the data point

```
.attr("x", function(d,i){ return (i+1)*5; })
```

i: the index of the data point

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<text> elements

- I’m going to apologize in advance here for the lousy job the W3C did with the <text> definition.
- You’re going to have to just either memorize these things or keep referring back to http://www.w3c.org/TR/SVG/text.html (first Google hit for “svg text”) like I do.

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<text> elements

- Extra Method in D3
  - `.text("Your Text Goes Here")`
  - `<tag>Your Text Goes Here</tag>`
- Attributes
  - x
  - y
- Styles
  - text-anchor: start, middle, end
  - dominant-baseline: [nothing], hanging, middle

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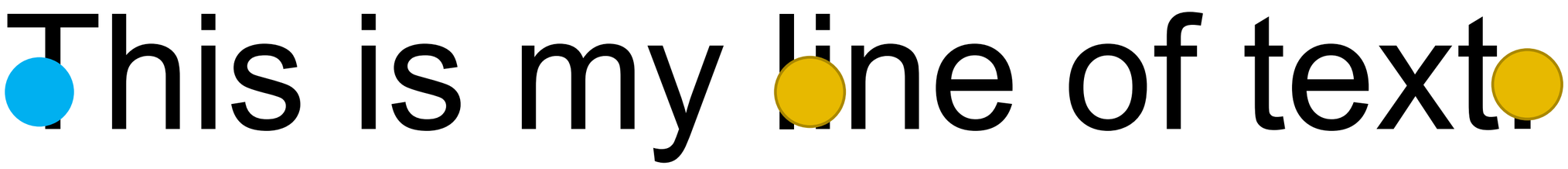
text-anchor style

Where is (0,0)?



start middle end

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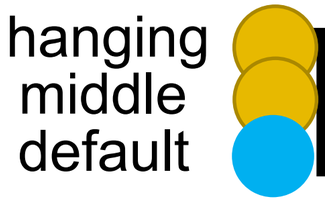
dominant-baseline style

Where is (0,0)?



This is my line of text.

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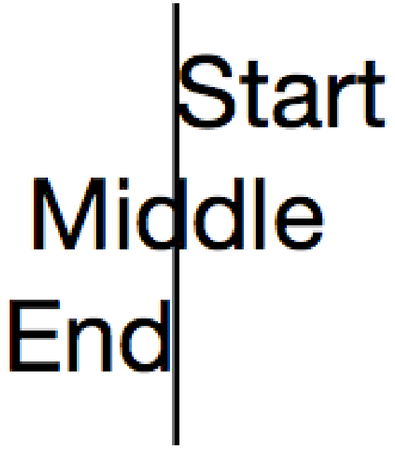
<text> example




```
<text x="50" y="20"
      style="text-anchor: start">
    Start
</text>
<text x="50" y="40"
      style="text-anchor: middle">
    Middle
</text>
<text x="50" y="60"
      style="text-anchor: end">
    End
</text>
```

http://tutorials.jenkov.com/svg/text-element.html

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The .style() Function

Like attr, but for the style attribute

- Inline CSS styling

```
.style("prop1","val1")
.style("prop2","val2")
.style("prop3", function(d,i){ })
```

```
<ele style="prop1: val1; prop2: val2;">
```


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<text> example

```
group.append("svg:text")
        .text(function(d){return d.name})
        .attr("x", function(d,i){return i*5})
        .attr("y", function(d,i){return height;})
        .style("dominant-baseline","hanging")
        .style("text-anchor", "middle")
```

Need to remember what to use .style and when to use .attr

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What if you have two different types of circles?

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Classing

- CSS Classes
  - Any number of classes per element
  - Select using “.classname”

```
blue = vis.selectAll(“circle.bluecircle”)
       .data(bluedata, function(d){return d.id;})


blue.enter( ).append(“svg:circle”)
       .classed(“bluecircle”, “true”)


vis.selectAll(“.bluecircle”).attr(“fill”,“blue”)
```


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Thank You

We thank Dr. Chad Stolper for sharing teaching materials for visualization and D3.