

D3 Tips and Tricks Cheat Sheet.

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Circle Element

```
<object>.append("circle") // append a circle
  .attr("cx", 200) // position the x-center
  .attr("cy", 100) // position the y-center
  .attr("r", 50); // radius of the circle
```

Line Element

```
<object>.append("line") // append a line
  .style("stroke", "black") // colour the line
  .attr("x1", 100) // x position, first end of the line
  .attr("y1", 50) // y position, first end of the line
  .attr("x2", 300) // x position, second end of the line
  .attr("y2", 150); // y position, second end of the line
```

Text Element

```
<object>.append("text") // append text
  .style("fill", "black") // fill the text with black
  .attr("x", 200) // set x position of left side of text
  .attr("y", 100) // set y position of bottom of text
  .attr("dx", "10px") // offset from x position anchor
  .attr("dy", ".75em") // offset from y position
  .attr("text-anchor", "middle") // y justification
  .text("Hello World"); // the text to display
```

Rectangle Element

```
<object>.append("rect") // append a rectangle
  .attr("x", 100) // position the left of the rectangle
  .attr("y", 50) // position the top of the rectangle
  .attr("height", 100) // set the height
  .attr("width", 200) // set the width
  .attr("rx", 10) // set the x corner curve radius
  .attr("ry", 10); // set the y corner curve radius
```

Time Formatting

- %a - abbreviated weekday name
- %A - full weekday name
- %b - abbreviated month name
- %B - full month name
- %c - date and time, as "%a %b %e %H:%M:%S %Y"
- %d - zero-padded day of the month as a decimal [01,31]
- %e - space-padded day of the month as a decimal [1,31]
- %H - hour (24-hour clock) as a decimal number [00,23]
- %I - hour (12-hour clock) as a decimal number [01,12]
- %j - day of the year as a decimal number [001,366]
- %m - month as a decimal number [01,12]
- %M - minute as a decimal number [00,59]
- %p - either AM or PM
- %S - second as a decimal number [00,61]
- %U - week number of the year (Sunday, first day) [00,53]
- %w - weekday as a decimal number [0(Sunday),6]
- %W - week number of the year (Monday, first day) [00,53]
- %x - date, as "%m/%d/%y"
- %X - time, as "%H:%M:%S"
- %y - year without century as a decimal number [00,99]
- %Y - year with century as a decimal number
- %z - time zone offset, such as "-0700"
- There is also a literal "%" character using double % signs

Element Styles

```
.style("fill", "red"); // element fill colour
.style("opacity", .2) // element opacity
.style("fill-opacity", .2) // fill opacity
.style("stroke-opacity", .2) // line opacity
.style("stroke", "red") // line colour
.style("stroke-width", 5) // line width
.style("stroke-dasharray", ("10,3")) // make a dashed line
```

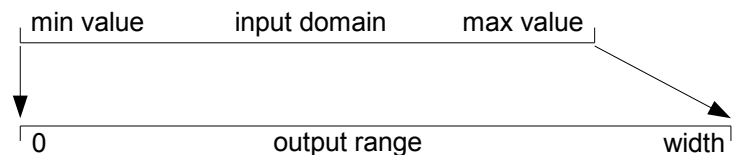
Scales: From input domain to output range;

```
var x = d3.scale.linear().range([0, width]);
```

```
x.domain([<min value>, <max value>]);
```

For example:

```
x.domain([
  d3.min(data, function(d) { return d.value; }),
  d3.max(data, function(d) { return d.value; })
]); // or
x.domain(
  d3.extent(data, function(d) { return d.value; }));
```



Filter Elements

```
.filter(function(d) {
  return d.value < 400 })
```

Select Elements using 'If'

```
.style("fill", function(d) {
  if (d.value <= 400) {return "red"}
  else { return "black" }
})
```

Transform Attribute

```
.attr("transform",
  "translate(10,5) // move relative by x,y
  scale(2) // scale by specified factor
  rotate(10)") // rotate by angle value
```

Using forEach to format data

```
data.forEach(function(d) {
  d.date = parseDate(d.date);
  d.value = +d.value;
});
```

Add an HTML link to an object

```
<object>.append("a")
  .attr("xlink:href", "http://link.org")
  .append("rect") // linked object
...
```