**Example1:** [**http://setosa.io/ev/**](http://setosa.io/ev/)

**Example2:** [**http://christopheviau.com/d3list/gallery.html**](http://christopheviau.com/d3list/gallery.html)

1. **Selections:**

Create a **lab2.html**,use d3 selector to change background color from white to grey

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| <html>  <head>  <script src="http://d3js.org/d3.v3.min.js"></script>  </head>  <body>  <h2>CSE 578 Data Visualization</h2>  </body>  </html> |
| Open lab2.html in browser, you should see “CSE 578 Data Visualization” |
| d3.select('body').style("background-color","#D8D8D8"); |
| * 1. Use d3 selector to change header text to blue   d3.select("h2").style("color","blue") |
| * 1. change title to a random color   d3.select("h2").style("color",function(){  return "hsl("+Math.random()\*120+",100%,70%)";  }); |
| * 1. change text   d3.select("h2").text("changed text") |
| * 1. enter bounded data   d3.select("body").selectAll("p")  .data([4,8,15,16,23,24])  .enter().append("p")  .text(function(d){  return d;  }); |
| * 1. create alternate shades of blue for even and odd <p>   d3.select("body").selectAll("p").style("color", function(d,i){  return i%2 ? "blue" : "purple"  }); |

\*color reference <http://www.w3schools.com/cssref/css_colors_legal.asp>

\*explore useful methods: selection.filter, selection.sort

1. **Transitions:**

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| var svgCircle = d3.select("#viz").append("svg")  .attr("width", 600) .attr("height", 800);  var circle = svgCircle.append("circle").style("stroke", "gray").style("fill", "white")  .attr("r", 40)  .attr("cx", 50)  .attr("cy", 50); |
| * 1. move the circle to the right   function move(){  var circlex = d3.select("circle").attr("cx");  circle.transition()  .attr("cx",circlex\*1.5)  } |
| * 1. change some behaviors: duration, delay   circle1.transition()  .delay(2000)  .attr("cx",250)  .duration(2000) |
| * 1. add another transition after transition (i.e. move to right and then move it down)   circle1.transition()  .duration(1000)  .attr("cx",250)  .transition()  .attr("cy",50) |
| * 1. add an event at the end of movement   circle1.transition()  .attr("cx",250)  .duration(2000)  .each("end",function(){  d3.select(this).style("fill","#FF8000")  .transition()  .duration(4000);  }); |
| * 1. combine events and transitions   circle.transition()  .attr("cx",350)  .duration(2000)  .each(function(){d3.select(  this).transition()  .duration(1000)  .style("fill","#FF8000")  }) |

3.

*tennis.tsv*

winners errors player victory

71 64 Roger Federer 0

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| 3.1 Create a d3 scatter plot, by reading in tennis.tsv (3 players, 3 colors)  ref: <http://bl.ocks.org/mbostock/3887118> |
| 3.2 Create an interaction, to change color scheme to color dots by victory  ***(3 points extra credit in assignment 2, submit it together with assignment 2)*** |
| <!DOCTYPE html>  <meta charset="utf-8">  <style>  body {  font: 10px sans-serif;  }  .axis path,  .axis line {  fill: none;  stroke: #000;  shape-rendering: crispEdges;  }  .dot {  stroke: #000;  }  </style>  <body>  <script src="http://d3js.org/d3.v3.min.js"></script>  <script>  var margin = {top: 20, right: 20, bottom: 30, left: 40},  width = 960 - margin.left - margin.right,  height = 500 - margin.top - margin.bottom;  var x = d3.scale.linear()  .range([0, width]);  var y = d3.scale.linear()  .range([height, 0]);  //https://github.com/mbostock/d3/wiki/Ordinal-Scales  var color = d3.scale.category10();  var xAxis = d3.svg.axis()  .scale(x)  .orient("bottom");  var yAxis = d3.svg.axis()  .scale(y)  .orient("left");  var svg = d3.select("body").append("svg")  .attr("width", width + margin.left + margin.right)  .attr("height", height + margin.top + margin.bottom)  .append("g")  .attr("transform", "translate(" + margin.left + "," + margin.top + ")");  d3.tsv("tennis.tsv", function(error, data) {  data.forEach(function(d) {  d.winners = +d.winners;  d.errors = +d.errors;  d.victory = +d.victory;  });  x.domain(d3.extent(data, function(d) { return d.errors; })).nice();  y.domain(d3.extent(data, function(d) { return d.winners; })).nice();  svg.append("g")  .attr("class", "x axis")  .attr("transform", "translate(0," + height + ")")  .call(xAxis)  .append("text")  .attr("class", "label")  .attr("x", width)  .attr("y", -6)  .style("text-anchor", "end")  .text("Winners");  svg.append("g")  .attr("class", "y axis")  .call(yAxis)  .append("text")  .attr("class", "label")  .attr("transform", "rotate(-90)")  .attr("y", 6)  .attr("dy", ".71em")  .style("text-anchor", "end")  .text("Errors")  svg.selectAll(".dot")  .data(data)  .enter().append("circle")  .attr("class", "dot")  .attr("r", 5)  .attr("cx", function(d) { return x(d.errors); })  .attr("cy", function(d) { return y(d.winners); })  .style("fill", function(d) { return color(d.players); });  var legend = svg.selectAll(".legend")  .data(color.domain())  .enter().append("g")  .attr("class", "legend")  .attr("transform", function(d, i) { return "translate(0," + i \* 20 + ")"; });  legend.append("rect")  .attr("x", width - 18)  .attr("width", 18)  .attr("height", 18)  .style("fill", color);  legend.append("text")  .attr("x", width - 24)  .attr("y", 9)  .attr("dy", ".35em")  .style("text-anchor", "end")  .text(function(d) { return d; });  });  </script> |

**After class:**

Understanding D3 selections <http://prcweb.co.uk/lab/selection/>

More other d3 tutorial: <https://github.com/mbostock/d3/wiki/Tutorials>

Practice More & Just Do It!

***To be continued…***