

Information Visualization

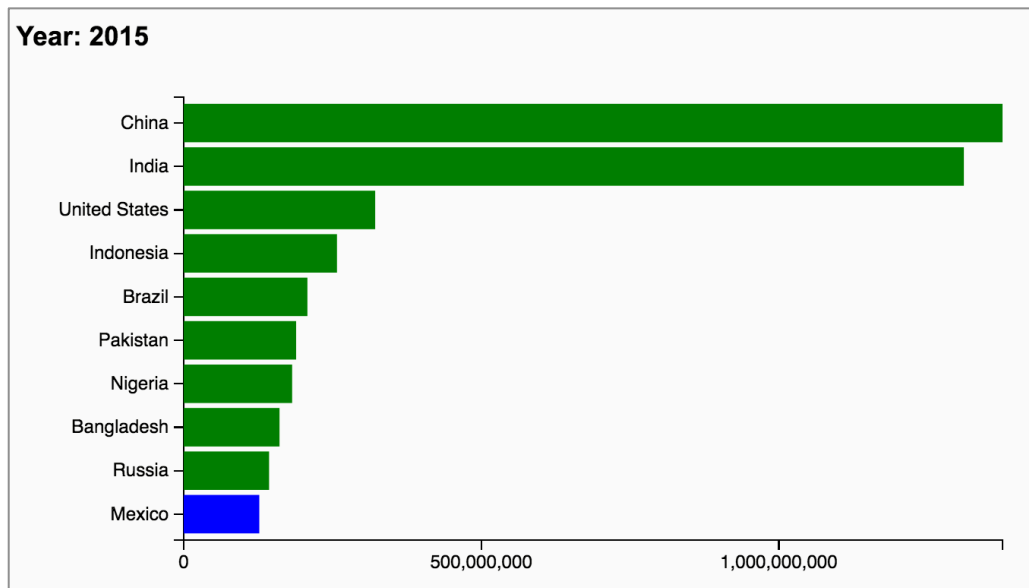
Lab 5: Updates

In this workshop we will use JavaScript and D3.js to draw charts and update them with new data.

Tasks: Part 1 – Enter, Exit, Update

In this example we will extend our population chart to display population data for multiple years. The solution to this workshop should be based on the visualisation made previously.

1. Load the data from “Top10WorldPopulations2005_2015.csv” which contains an extra Year Column and records population per year.
2. Modify the visualisation made in Workshop 6 to join the data by a key from the Country field rather than simply using an index.
3. Draw the chart using the general update pattern.
4. Set up an interval to iterate through the available years (2005 – 2015) adjusting the chart appropriately.



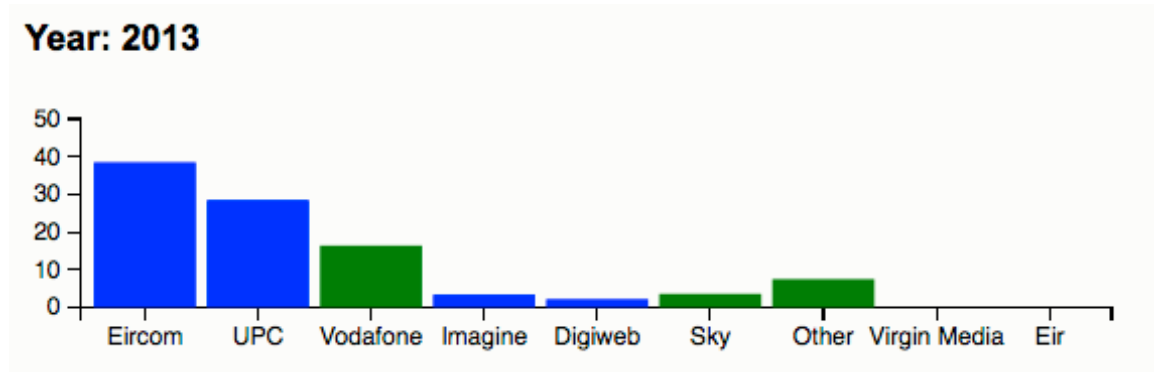
Tasks: Part 2 – Transitions

“9_1_1_Solutions.html” contains the beginning of a simple data visualisation that shows the prices of a stock over time. You need to finish it! The current code opens a file, “stock_prices_1.csv”; loads it into a dataset; and sets up scales and axes based on the values in this dataset. The code also sets up an interval callback that repeatedly adds a little noise to each point in the series.

1. Open “9_1_1_Solutions.html” and have a good look through it.
2. You’ll notice that the general update pattern is marked up in the code but not completed. You need to complete it.
 - If a new point is entered, colour it blue and add it to the canvas.
 - If a point is updated, colour it green and update its position.
 - If a point exits, remove it from the canvas
3. Add transitions to the moving points.

Tasks: Part 3 – More Transitions

In this workshop we will modify the broadband market share visualisation to include a transition that animate the bars. The original visualisation is shown below.



Tasks

1. Load the file “11_1_1_Solutions.html” and examine it carefully.
2. Add a transition so that when bars are updated they transition to their new sizes.
3. Add a transitions so that when new bars are added they animate to their new positions.
4. Your first attempt at animating the entrance of new bars is likely to be slightly strange! Modify it so that entering bars grow up from the x-axis.
5. Add a transition so that exiting bars shrink away into the y axis.
6. Experiment with different kinds of easing for these transitions.