EECS 428 / ECE 578
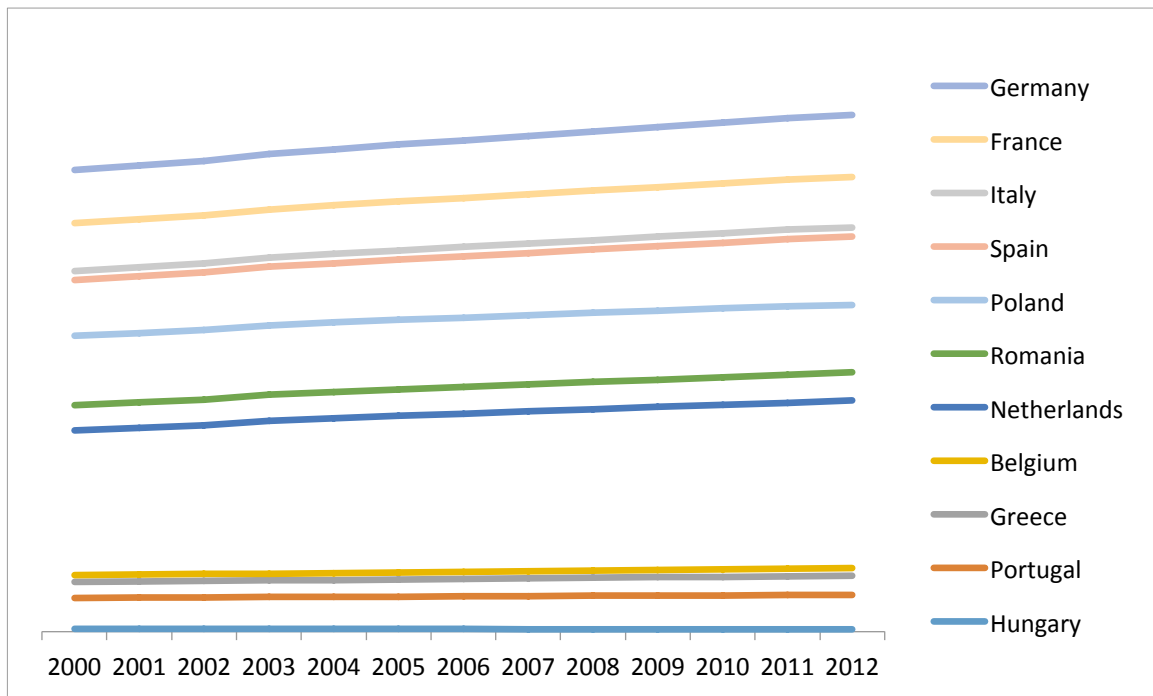# DATA VISUALIZATION
Spring 2016

ASSIGNMENT 2

Due Date: *Sunday, April 10th, 2016, 23:59*
(10 Points)

Assignment Submission: *Turn in your assignment by the due date through LMS*. *Prepare and upload* **one zip file** *that should have* **one subdirectory for each part of the assignment** *(PartA & PartB). Name the zip file as <your first name>_<your last name>_ assignment2. See individual questions for what you should return.*

You can discuss JavaScript, D3 and questions with each other. **However, implementation must be your own; you must neither copy from nor provide assistance to anybody else (including online resources). If you need guidance for any question, talk to the instructor or TA.**

PART A

In the first part of this assignment, you will use the data of 192 countries in *countries.json* file (can be found in LMS). The file contains information about the population, GDP, life expectancy, and many other aspects for the different countries from 1995 to 2012. You are asked to plot the **population** trend of countries in ***Europe*** using a Line Chart. You are only required to depict the changes from 2000 to 2012. Line chart will show the population of each country in Europe during the given year range. Your final result should look similar to the figure below. Your graph should have proper axes and tick marks. ***Although it has not been shown in the sample figure below, you should have y-axis (vertical axis) as well to show the population numbers.***
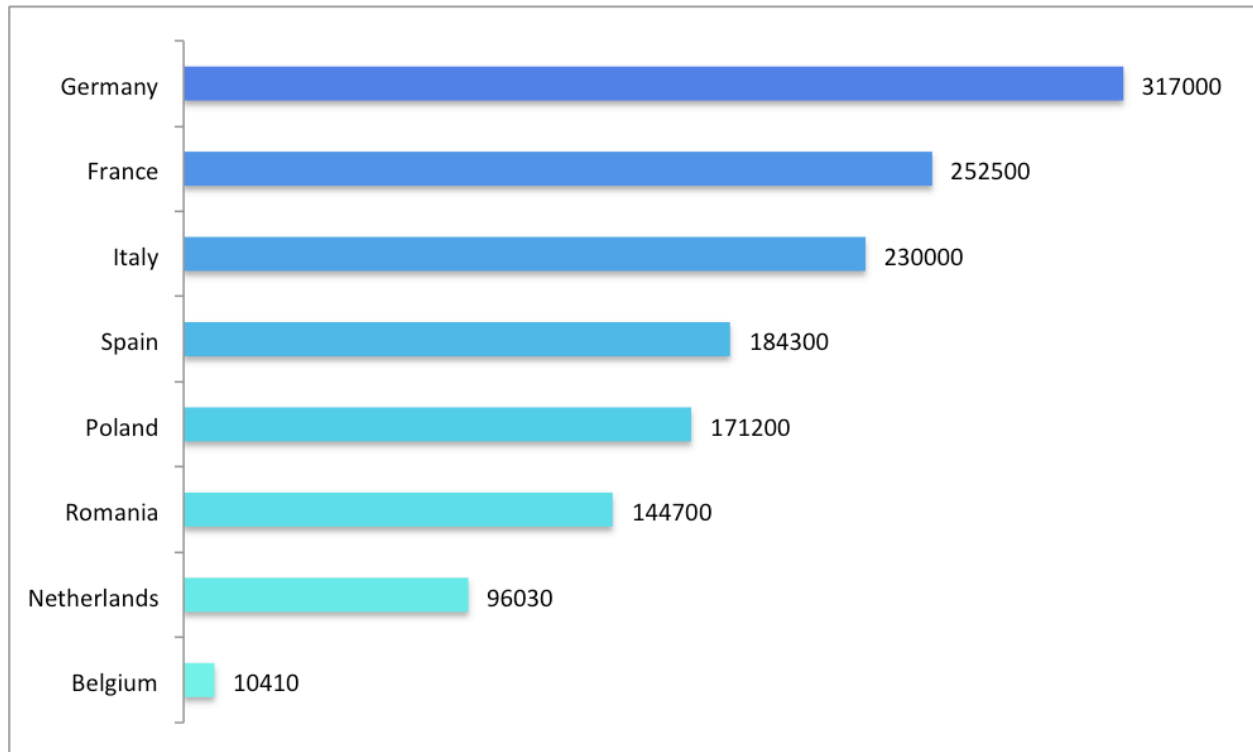
Please return in PartA directory:

- All your HTML, JavaScript and CSS files (you can have sub-directories under PartA if you prefer). Your main HTML file should be named as **index.html**. When we open *index.html* in our web browser (*Chrome* will be used for grading), the visuals should show up in the main page.

PART B

In the second part of this assignment, you will use the same *countries.json* file as your data. You are asked to depict the three (3) aspects for **all countries**, namely, **population**, **GDP**, and **life expectancy at** year **2012**. Radio buttons to select one of these 3 options should be provided. The selected aspect should be displayed using a Bar Chart in the orientation shown in the figure below. In the bar chart, the countries should be sorted based on the value of the selected aspect. The country name is shown on the left side and the value is shown on the right side of the corresponding bar. Use a color spectrum for the bars that changes from darker to lighter colors, as the value gets smaller. As a new aspect is selected through radio buttons, the bar chart should be updated to reflect the selected aspect. Your final result should look similar to the figure below.

Population ○ GDP ○ Life Expectancy

Country	Value
Germany	317000
France	252500
Italy	230000
Spain	184300
Poland	171200
Romania	144700
Netherlands	96030
Belgium	10410

Please return in PartB directory:

- All your HTML, JavaScript and CSS files (you can have sub-directories under PartB if you prefer). Your main HTML file should be named as ***index.html***. When we open *index.html* in our web browser (*Chrome* will be used for grading), the visuals should show up in the main page.