

Programming Assignment 3
Creating a Bar Graph (5 points)
Due Date: April 16, Monday, 11:59pm

Objective: To create a colored bar graph using the dataset on canvas

Dataset: 2016 GDP for 15 countries in Trillions of US Dollars.

Expected Output: The output should look similar to the attached pdf file.

Expected Comments: **embed detailed comments** inside the *BarGraphSample.html*, *BarGraphSample.css* and *BarGraphSample.js* files on canvas. Submit these 3 files on canvas after making the changes. Suggested comments to be included are described below.

BarGraph.html

1. Add the title "2016 GDP".
2. Add your name at the bottom of the visualization.

Your assignment will not be graded without these two changes.

BarGraphSamle.css

Add .axis path and .axis line commands as described in the book with comments

BarGraphSample.js

1. Add tick marks along y-axis at interval of 5 with a \$ sign
2. Make the bars increasingly blue for higher values
3. Label the data values inside the bars
4. Orient the x-axis labels so that they are at -60 degrees and not 5.
5. Add y-axis with the caption "Trillions of US Dollars" as shown in the output

Add comments through out to demonstrate your understanding of the code

1. Add comments to explain margin conventions
2. Add comments to explain svg section
3. Add comments to explain xy scale
4. Add comments to explain reading the data
5. Add comments to explain the domain code
6. Add comments on new code that you add
7. Add comments on adding rectangular bars (demonstrate your understanding of key commands used here)

Resources/References (concepts/code needed to complete the assignment):

1. Let's Make a Bar Chart I, II, and III by Mike Bostock

Demo Requirements

This assignment **must be demonstrated in person** at the first available opportunity to a teaching assistant or a tutor on or before April 19, who may ask questions to ensure that you have good understanding of the code. *Make sure that each part of the code is well commented with good explanations.* The TA/Tutor reserves the right not to assign you any points without the added comments or good understanding of the code.

You may assist each other. *If you provide or receive assistance, you are required to provide this information on canvas submissions.* Final comments must be added individually in your own words. Two submissions with identical comments will be subject to review and investigation.