Visualize Data with a Bar Chart

In these projects, you’ll need to fetch data and parse a dataset, then use D3 to create different data visualizations. Finish them all to earn a Data Visualization certification.

// 1: OBJECTIVE

Build an app that is functionally similar to this: <https://bar-chart.freecodecamp.rocks>.

Fulfill the below user stories and get all of the test to pass. Use whichever libraries or APIs you need. Give it your own personal style.

Once you’re done, submit the URL to your working project with all its tests passing.

// 2: TECHNOLOGY

You can use **HTML**, **JavaScript**, **CSS**, and the **D3** svg-based visualization library.

The tests require axes to be generated using the **D3** axis property, which automatically generates ticks along the axis. These ticks are required for passing the D3 tests because their positions are used to determine alignment of graphed elements.

You will find information about generating axes at <https://d3js.org/d3-axis>.

Required DOM elements are queried on the moment of each test. If you use a frontend framework (like Vue for example), the test results may be inaccurate for dynamic content. We hope to accommodate them eventually, but these framework are not currently supported for D3 projects.

// 3: USER STORIES

1. My chart should have a title with a corresponding **id=’title’**.
2. My chart should have a **g** element x-axis with a corresponding **id=’x-axis’**.
3. My chart should have a **g** element y-axis with a corresponding **id=’y-axis’**.
4. Both axes should contain multiple tick labels, each with a corresponding **class=’tick’**.
5. My chart should have a **rect** element for each data point with a corresponding **class=’bar’** displaying the data.
6. Each **.bar** should have the properties **data-date** and **data-gdp** containing **date** and **GDP** values.
7. The **.bar** elements’ **data-date** properties should match the order of the provided data.
8. The **.bar** elements’ **data-gdp** properties should match the order of the provided data.
9. Each **.bar** elements’ height should accurately represent the data’s corresponding **GDP**.
10. The **data-date** attribute and its corresponding **.bar** element should align with the corresponding value on the x-axis.
11. The **data-gdp** attribute and its corresponding **.bar** element should align with the corresponding value on the y-axis.
12. I can mouse over an area and see a tooltip with a corresponding **id=’tooltip’** which displays more information about the area.
13. My tooltip should have a **data-date** property that corresponds to the **data-date** of the active area.

// 4: DATASET

Here is the dataset you will need to complete this project: <https://raw.githubusercontent.com/freeCodeCamp/ProjectReferenceData/master/GDP-data.json>.

// 5: ENVIRONMENT

You can build your project by using this CodePen template (<https://codepen.io/pen?template=MJjpwO>) and clicking **Save** to create your own pen.

Or you can use this CDN link to run the tests in any environment you like: <https://cdn.freecodecamp.org/testable-projects-fcc/v1/bundle.js>.