

Below was implemented:

### C-Level Functionality

- Get the query string from the page URL, decode (Links to an external site.) the text, and convert it to lowercase. - Done
- Loop through the text and store the count for all letters ([A-z]) in a JavaScript object (Links to an external site.) (similar to a dictionary in Python). Use the letter as the key and the count as the value. Do not store spaces, punctuation, or special characters. - Done
- Log the decoded input text and counts to the console. - Done
- Display a basic non-interactive bar chart of the counts using D3 in an SVG. You can use the final code (source (Links to an external site.)) from the bar chart tutorial (link (Links to an external site.)) as a starting point. - Done
- Modify the tick label formatting (e.g. change number of decimal points visible, size, spacing and/or frequency). - Done
- Modify the underlying grid and axis lines (e.g. adding/removing grid lines, changing color or line thickness of axis lines). - Done
- Modify the bar colors (e.g. color vowels differently from consonants). - Done
- Modify the sort order (e.g. sort alphabetically vs sort by value). - Implemented sort alphabetically

### B-Level Functionality

- Show a grid line at the mouse y-position (behind the bars) when mouse is hovered over plot area, and show exact value for that line. - Not Done
- Add a button that allows you to change between sorting alphabetically and sorting by value (example (Links to an external site.)). - Done
- Add a tooltip that shows the exact value of a bar when hovering over it. - Done
- Figure out how to add a search box on the page, and show the word count for the text in that box instead of from the URL query string. -- Added search box on page but could not implement count

### A-Level Functionality

Customize the transitions used in your visualization. For example, you could choose one or more of the following:

- At the start of your visualization, show one bar at a time and smoothly grow each bar from the bottom up to its value. - Not Done

- Allow the user to continue adding new text via a search box and button combo, and use transitions to smoothly update the values. (You will likely need to update your y-axis scale as well if you have a new max value.) - Done
- Smoothly fade in the axis line, tick labels, and grid lines for the y-axis only when your plot area is hovered over by the mouse, and smoothly fade out that information when the plot area is no longer hovered over by the mouse.