# Process Documentation

**Overview and Motivation:**

This project is intended to visualize the types of pokemon in generation 1. The main function is to provide a graph of the amount of pokemon per type. However, it goes beyond that by displaying the color of each type, and additional statistics about each type. Upon hovering over a specific bar on the chart, text describing the data, along with a count of the individual pokemon/ number of species that are that type.

**Related Work/ Questions:**

Lots of people enjoy playing with pokemon data, and I was curious to see what I could come up with in terms of a visualization. I wanted to be able to display data about the pokemon that is not typically shown in correlation, like type by individual/ species.

**Data:**

https://raw.githubusercontent.com/Biuni/PokemonGO-Pokedex/master/pokedex.json
I used data from the link above, which I originally found at https://github.com/jdorfman/awesome-json-datasets . Because this contains every feature of each pokemon, I created an array that contained only the features I wanted from each pokemon. This proved useful later in the project as I used it to store local variables I had created that I needed to reference later in the code, where they were no longer defined.

**Design Evolution:**

Originally, I attempted to make a scatter plot similar to the one from assignment 2. I had type on the x axis, number on the y, and amount as the point size. However, I honestly thought this was a really boring visualization, and I wanted to try something new for this project.
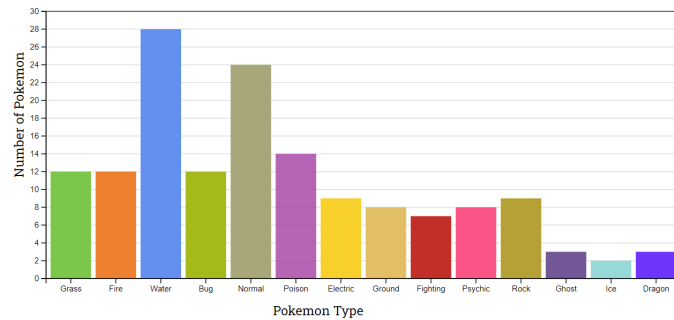
Next, I experimented with a bar chart. I spent most of my time working on implementing the mouseover interactions and the style of the chart, like making the color scale to map the types to their respective colors.

**Implementation:**
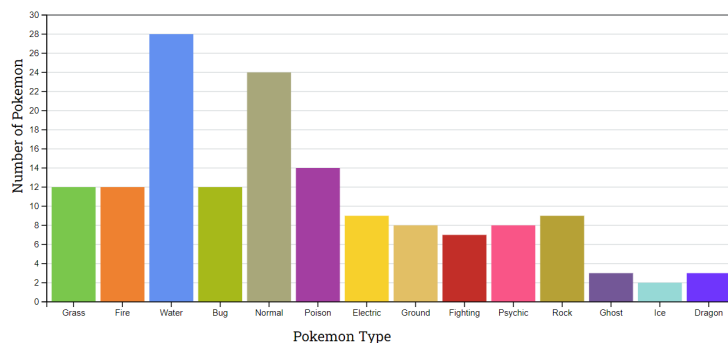


The page before mouseover

## Gen 1 Pokemon by Type



Pokemon Type: Poison | Total Amount of Pokemon: 14 | Different Species: 6

The page on mouseover of "Poison" bar

  The specific interactive elements I implemented on mouseover of bar include opacity change, and data description at the bottom, with type, total amount counted, and different species counted displayed.

  It also seems worthwhile to mention that it took me a pretty long time to get the gridlines to line up with the y-axis ticks, as that seems to be a recurring problem with d3 users.

## Evaluation:

  I think this visualization very clearly provides information on the types of each pokemon. It could be further enhanced by showing more information per pokemon, like a list of names or sizes. It also could include data about which pokemon are only that type, and which have a second type as well. In this I counted each type individually, so for example if a pokemon is water and bug type, it was counted once in bug and once in water.