// 1. Use the filter method to create a custom filtering function

function filterPokemonGen(pokemon) {

return pokemon.generation == 1;

}

// 2. Use filter() to pass the function as its argument

var filteredPokemon = PokemonCleanData.filter(filterPokemonGen);

// Check to make sure your are filtering your pokemon.

console.log(filteredPokemon);

// 3. Use the map method with the arrow function to return all the filtered pokemon types.

var filteredPokemontype = filteredPokemon.map(pokemon => pokemon.type1);

// Check your filtered pokemon types

console.log(filteredPokemontype);

// 4. Use the map method with the arrow function to return count of the filtered pokemon types.

// var PokemonTypeCounts = filteredPokemontype.count(pokemon => pokemon.type1);

// var PokemonTypeCounts = filteredPokemontype.values()

// // Check your filtered counts.

// console.log(PokemonTypeCounts);

// var arr = [5, 5, 5, 2, 2, 2, 2, 2, 9, 4];

var arr = filteredPokemontype

var counts = {};

for (var i = 0; i < arr.length; i++) {

var num = arr[i];

counts[num] = counts[num] ? counts[num] + 1 : 1;

}

var PokemonTypeCounts = {

"Grass": counts['grass'],

"Water": counts['water'],

"Bug": counts['bug'],

"Fire": counts['fire'],

"Dyno": counts['dyno']

};

console.log(PokemonTypeCounts)

var xvalues = []

var yvalues = []

Object.entries(PokemonTypeCounts).forEach(([key, value]) => {

xvalues.push(key);

yvalues.push(value)

})

console.log(PokemonTypeCounts)

// 5. Create your trace.

var trace = {

x: xvalues,

y: yvalues,

type: "bar"

};

// # Defining colors for graphs

colors = {

"Bug": "#A6B91A",

"Dark": "#705746",

"Dragon": "#6F35FC",

"Electric": "#F7D02C",

"Fairy": "#D685AD",

"Fighting": "#C22E28",

"Fire": "#EE8130",

"Flying": "#A98FF3",

"Ghost": "#735797",

"Grass": "#7AC74C",

"Ground": "#E2BF65",

"Ice": "#96D9D6",

"Normal": "#A8A77A",

"Poison": "#A33EA1",

"Psychic": "#F95587",

"Rock": "#B6A136",

"Steel": "#B7B7CE",

"Water": "#6390F0",

}

// 6. Create the data array for our plot

var data = [trace];

// 7. Define our plot layout

var layout = {

barmode: 'stack',

title: "Pokemon Types by Generation",

xaxis: { title: "Type" },

yaxis: { title: "Number of Pokemon" }

};

// 8. Plot the chart

Plotly.newPlot("barchart", data, layout);