

Website\js\piechart.js

```

1  function init() {
2      const link_string = window.location.pathname;
3
4      if (link_string.includes("Smoke")) { //Tobacco web page
5          get_CSV_data("csv/MSmoke2016.csv",1);
6          get_CSV_data("csv/MSmoke2019.csv",2);
7          get_CSV_data("csv/MSmoke2022.csv",3);
8          get_CSV_data("csv/FSmoke2016.csv",4);
9          get_CSV_data("csv/FSmoke2019.csv",5);
10         get_CSV_data("csv/FSmoke2022.csv",6);
11     } else if (link_string.includes("Alcohol")) { //Alcohol web page
12         get_CSV_data("csv/MAlcohol2016.csv",1);
13         get_CSV_data("csv/MAlcohol2019.csv",2);
14         get_CSV_data("csv/MAlcohol2022.csv",3);
15         get_CSV_data("csv/FAlcohol2016.csv",4);
16         get_CSV_data("csv/FAlcohol2019.csv",5);
17         get_CSV_data("csv/FAlcohol2022.csv",6);
18     }
19 }
20
21
22 function get_CSV_data(csv_link,chart_no) {
23     d3.csv(csv_link).then(function(data) {
24         dataset = {};
25
26         loop = data.length; //for while loop
27         i = 0; //for looping array
28         while (loop > i) {
29             data.forEach(function() { //if true, get all data for the year and a state
30                 Status = data[i].Status;
31                 dataset[Status] = +data[i].Total;
32             })
33             i++; //add 1 for looping through array
34         }
35
36         piechart(dataset,chart_no);
37     })
38 }
39
40 function piechart(dataset,chart_no) {
41     var w = 700;
42     var h = 700;
43     var padding = 50;
44     var outerRadius = Math.min(w, h) / 2 - padding; //size of circle
45     var innerRadius = w/6; //size of inner circle, make circle a donut
46
47     // var dataset = [5, 10, 20, 45, 6, 25, 60];
48
49
50     var color = d3.scaleOrdinal(d3.schemeCategory10); //colours
51
52     var svg = d3.select(`#chart${chart_no}`)
53         .append("svg")
54         .attr("width", w)

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55         .attr("height", h)
56         .append("g")
57         .attr("transform", "translate(" + w/2 + "," + h/2 + ")"); //center chart
58
59     var arc = d3.arc()
60         .outerRadius(outerRadius)
61         .innerRadius(innerRadius);
62
63     var pie = d3.pie()
64         .value(function(d) {
65             return d.value;
66         })
67         .sort(function(a, b) { //same order as per csv file
68             return d3.ascending(a.key, 0);
69         })
70         .padAngle(0.015);
71
72     // map data
73     var g = svg.selectAll("path")
74         .data(pie(d3.entries(dataset)));
75
76     g.enter() //pie chart
77         .append('path')
78         .attr('d', function(d,i) {
79             return arc(d,i);
80         })
81         .attr('fill', function(d,i){
82             chartSideColor(d.data.key, color(d.data.key), i+1); //set the colors for the legend
83             return(color(d.data.key))
84         })
85         .on("mouseover", function(d,i) {
86             d3.select(this)
87                 .attr("fill", "#f88379") //change the color of the chart when hovering
88                 .attr("stroke", "white")
89                 .style("stroke-width", "0.2em");
90
91             //change the color of the legend when hovering
92             document.getElementById(`chart-side-legend${i+1}`).style.background = "#f88379";
93
94             chartSideText(d.data.key, d.data.value); //return to create hover data text, data
95         value
96         })
97         .on("mouseout", function(d,i) {
98             d3.select(this)
99                 .attr("fill", function(d){
100                     return(color(d.data.key)) //change back the color of the chart after hovering
101                 })
102                 .style("stroke-width", "0");;
103
104             //change back the color of the legend after hovering
105             document.getElementById(`chart-side-legend${i+1}`).style.background =
106             color(d.data.key);
107         })
108
109     g.enter() //pie chart data text
110         .append("text")
111         .attr("text-anchor", "middle")

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110     .text(function(d) {
111         return `${d.data.value}%`;
112     })
113     .attr("fill", "white")
114     .style("font-size", "1.2em")
115     .attr("transform", function(d) {
116         var c = arc.centroid(d);
117         return "translate(" + c[0]*1.55 + "," + c[1]*1.55 + ")";
118     });
119 }
120
121 function showChart(chart) {
122     //set and reset data text at the side
123     document.getElementById("chart-side-title").innerHTML = `${chart}`;
124     document.getElementById("chart-side-status").innerHTML = `Status: `;
125     document.getElementById("chart-side-total").innerHTML = `Total: `;
126
127     //show or hide chart based on radio
128     switch(true) {
129         case ((chart == "Male Smoking 2016") || (chart == "Male Drinking 2016")):
130             document.getElementById("chart1").style.display = "inline";
131             document.getElementById("chart2").style.display = "none";
132             document.getElementById("chart3").style.display = "none";
133             document.getElementById("chart4").style.display = "none";
134             document.getElementById("chart5").style.display = "none";
135             document.getElementById("chart6").style.display = "none";
136             break;
137
138         case ((chart == "Male Smoking 2019") || (chart == "Male Drinking 2019")):
139             document.getElementById("chart1").style.display = "none";
140             document.getElementById("chart2").style.display = "inline";
141             document.getElementById("chart3").style.display = "none";
142             document.getElementById("chart4").style.display = "none";
143             document.getElementById("chart5").style.display = "none";
144             document.getElementById("chart6").style.display = "none";
145             break;
146
147         case ((chart == "Male Smoking 2022") || (chart == "Male Drinking 2022")):
148             document.getElementById("chart1").style.display = "none";
149             document.getElementById("chart2").style.display = "none";
150             document.getElementById("chart3").style.display = "inline";
151             document.getElementById("chart4").style.display = "none";
152             document.getElementById("chart5").style.display = "none";
153             document.getElementById("chart6").style.display = "none";
154             break;
155
156         case ((chart == "Female Smoking 2016") || (chart == "Female Drinking 2016")):
157             document.getElementById("chart1").style.display = "none";
158             document.getElementById("chart2").style.display = "none";
159             document.getElementById("chart3").style.display = "none";
160             document.getElementById("chart4").style.display = "inline";
161             document.getElementById("chart5").style.display = "none";
162             document.getElementById("chart6").style.display = "none";
163             break;
164
165         case ((chart == "Female Smoking 2019") || (chart == "Female Drinking 2019")):

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```
166     document.getElementById("chart1").style.display = "none";
167     document.getElementById("chart2").style.display = "none";
168     document.getElementById("chart3").style.display = "none";
169     document.getElementById("chart4").style.display = "none";
170     document.getElementById("chart5").style.display = "inline";
171     document.getElementById("chart6").style.display = "none";
172     break;
173
174     case ((chart == "Female Smoking 2022") || (chart == "Female Drinking 2022")):
175         document.getElementById("chart1").style.display = "none";
176         document.getElementById("chart2").style.display = "none";
177         document.getElementById("chart3").style.display = "none";
178         document.getElementById("chart4").style.display = "none";
179         document.getElementById("chart5").style.display = "none";
180         document.getElementById("chart6").style.display = "inline";
181         break;
182     }
183 }
184
185
186 function chartSideText(status,total) { //side banner 1 (hover text)
187     //triggers when chart is hovering chart
188     document.getElementById("chart-side-status").innerHTML = `Status: ${status}`;
189     document.getElementById("chart-side-total").innerHTML = `Total: ${total}%`;
190 }
191
192 function chartSideColor(text,color,num) { //side banner 2 (legend)
193     document.getElementById(`chart-side-legend${num}`).innerHTML = `${text}`;
194     document.getElementById(`chart-side-legend${num}`).style.background = color;
195 }
196
197 window.onload = init();
```