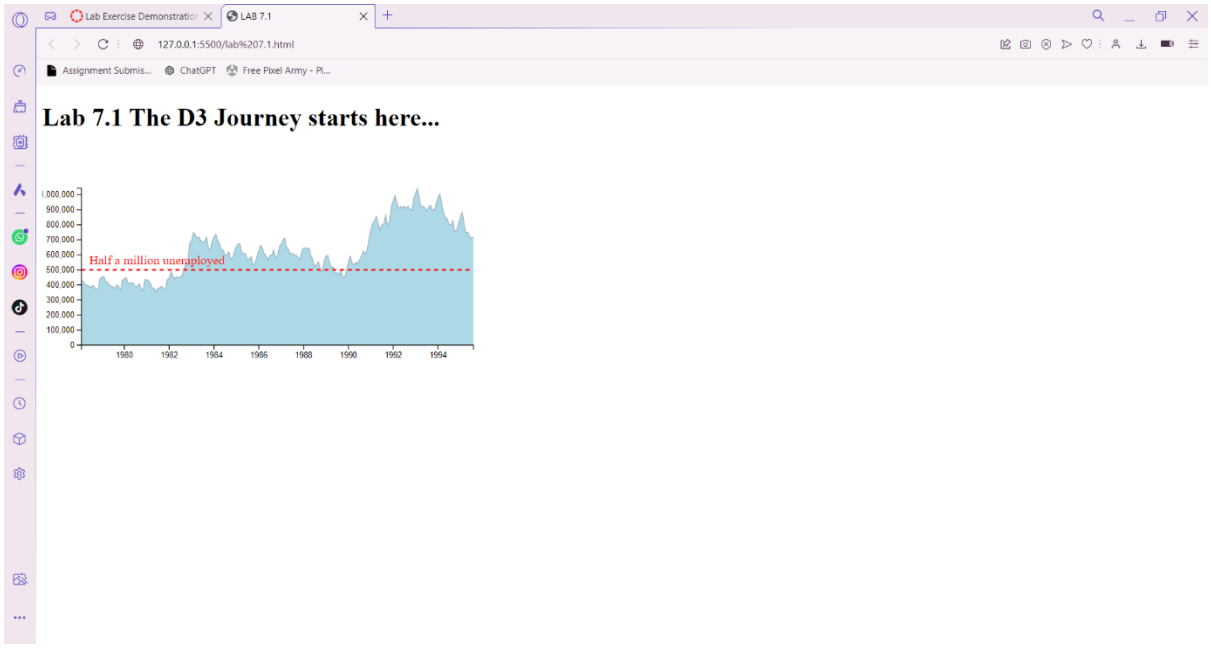
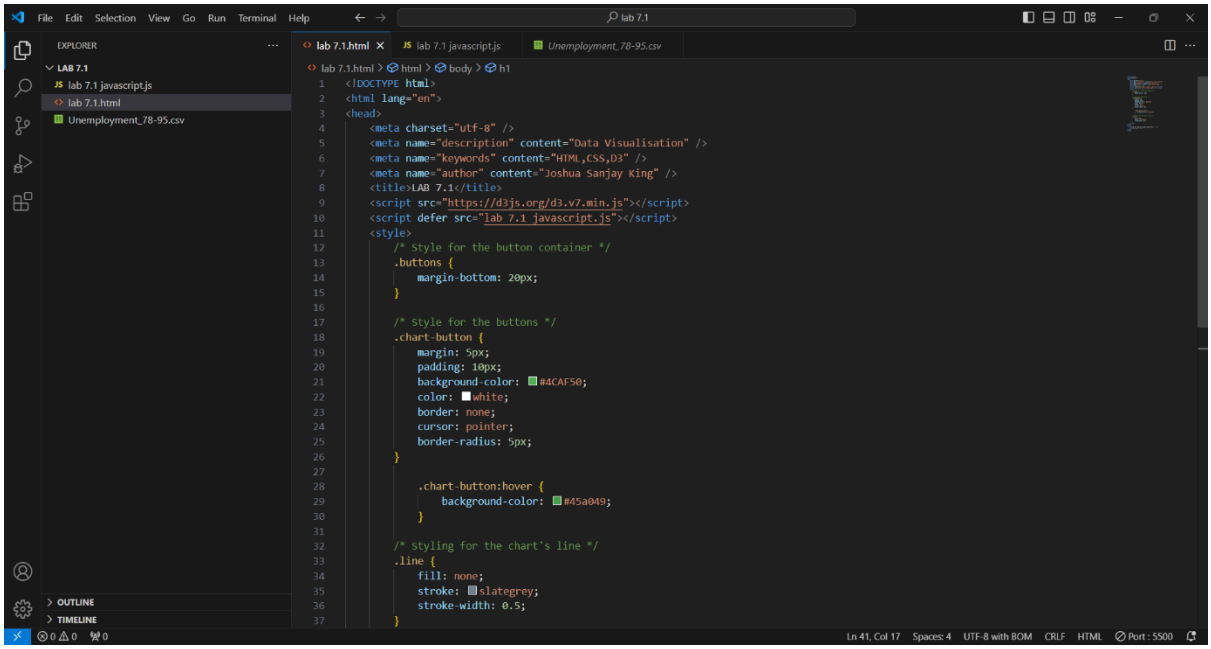
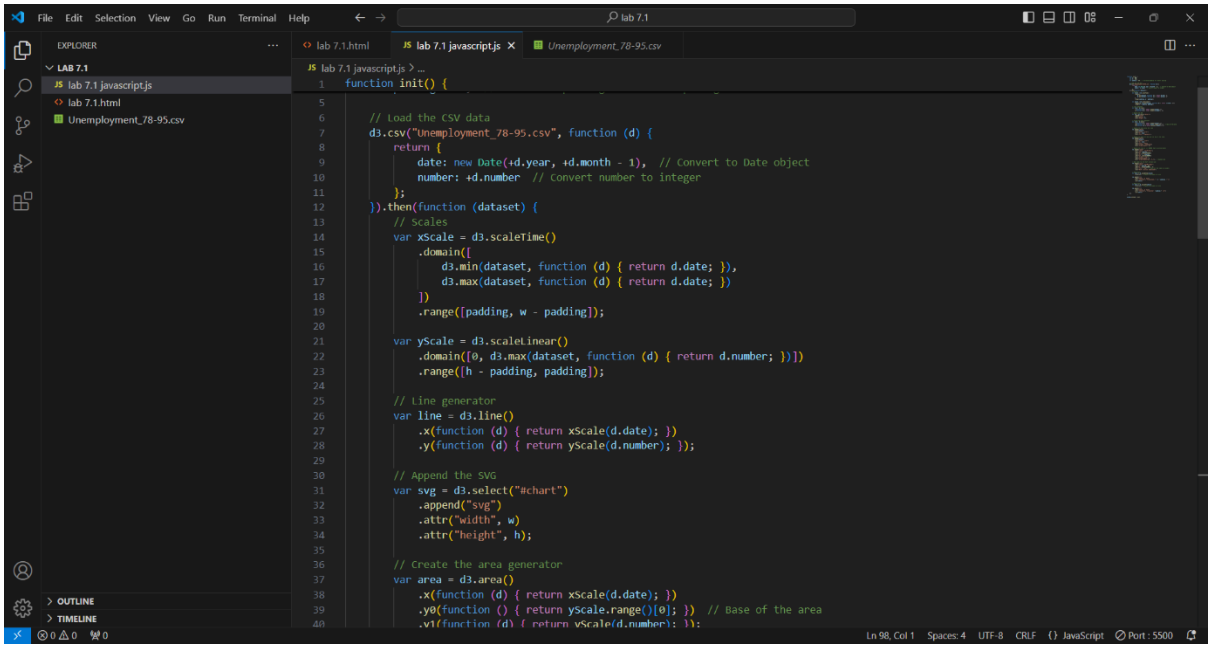
JOSHUA SANJAY KING 105282612

https://loverboycoding.github.io/30045-Submission-website/

Lab 7.1

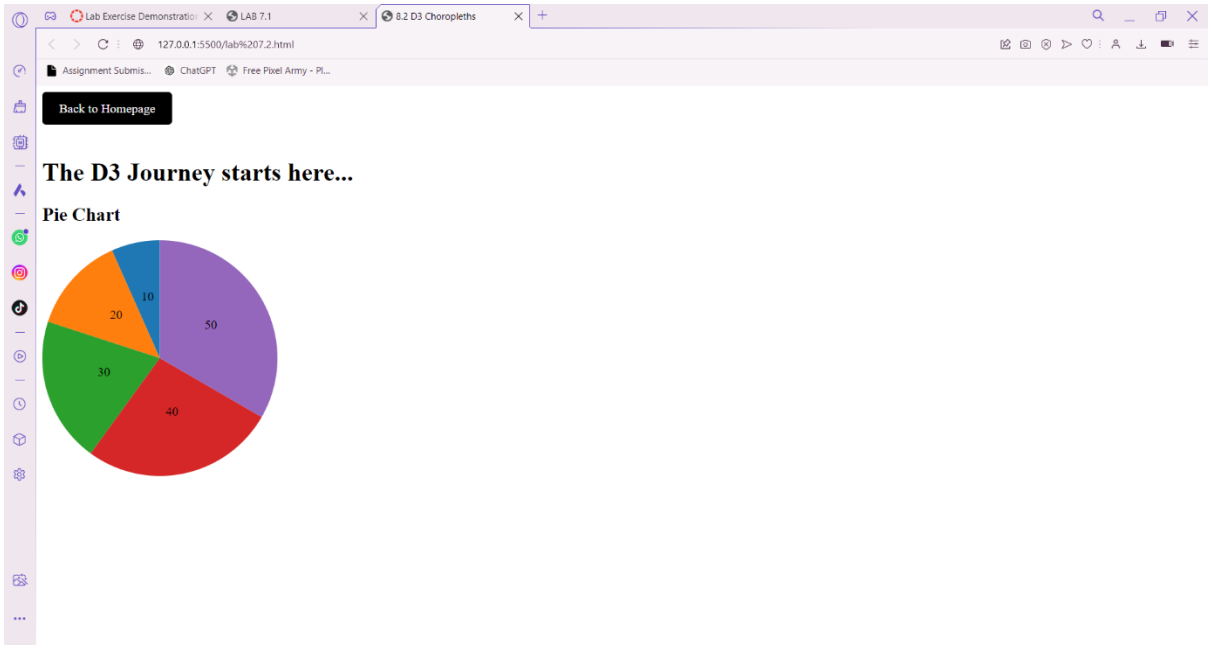


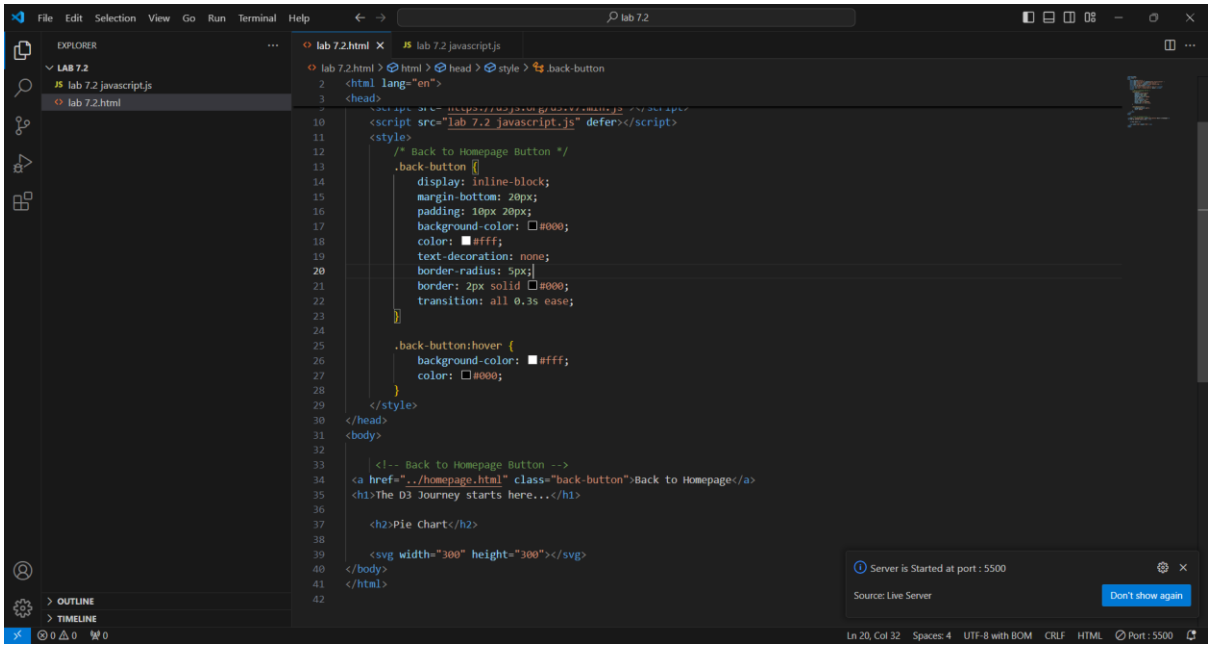


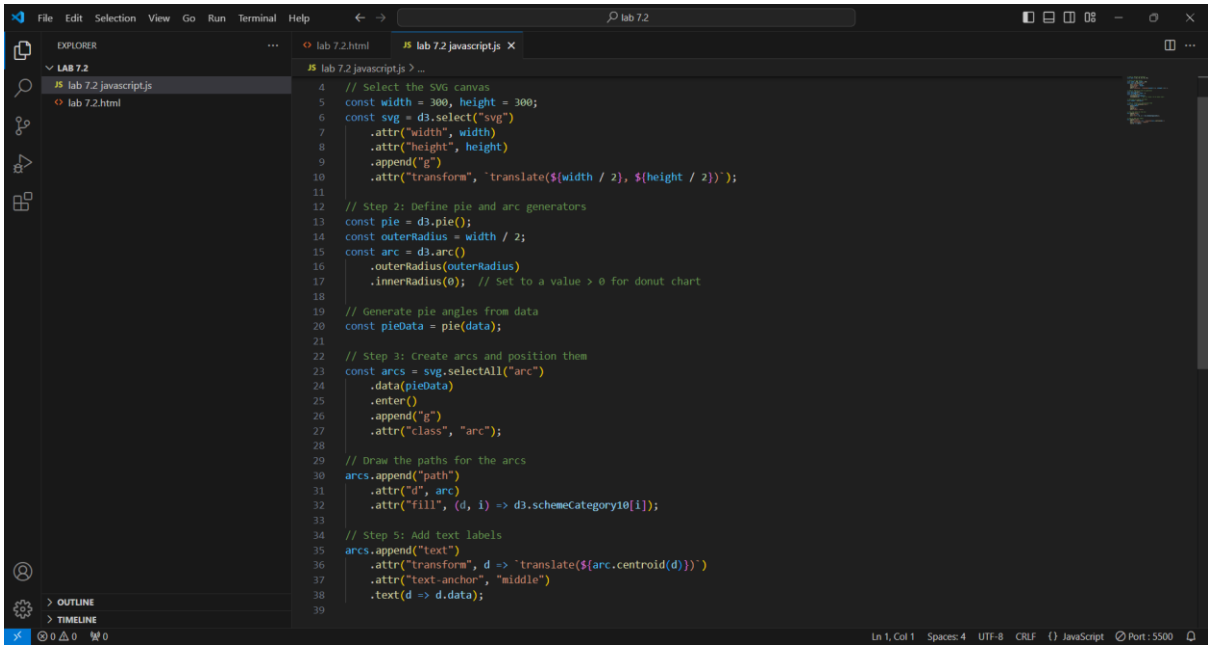



```
function init() {

    // Load the CSV data
    d3.csv("Unemployment_78-95.csv", function (d) {
        return {
            date: new Date(+d.year, +d.month - 1),  // Convert to Date object
            number: +d.number  // Convert number to integer
        };
    }).then(function (dataset) {
        // Scales
        var xScale = d3.scaleTime()
            .domain([
                d3.min(dataset, function (d) { return d.date; }),
                d3.max(dataset, function (d) { return d.date; })
            ])
            .range([padding, w - padding]);

        var yScale = d3.scaleLinear()
            .domain([0, d3.max(dataset, function (d) { return d.number; })])
            .range([h - padding, padding]);

        // Line generator
        var line = d3.line()
            .x(function (d) { return xScale(d.date); })
            .y(function (d) { return yScale(d.number); });

        // Append the SVG
        var svg = d3.select("#chart")
            .append("svg")
            .attr("width", w)
            .attr("height", h);

        // Create the area generator
        var area = d3.area()
            .x(function (d) { return xScale(d.date); })
            .y0(function () { return yScale.range()[0]; })  // Base of the area
```

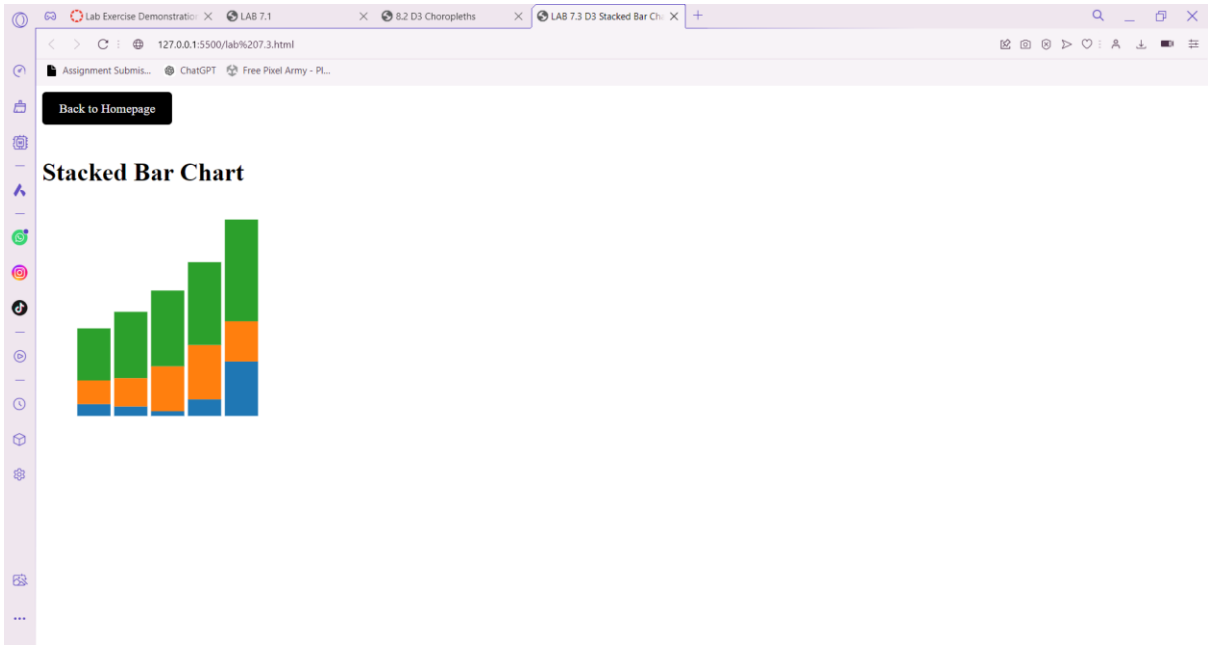
Lab 7.2

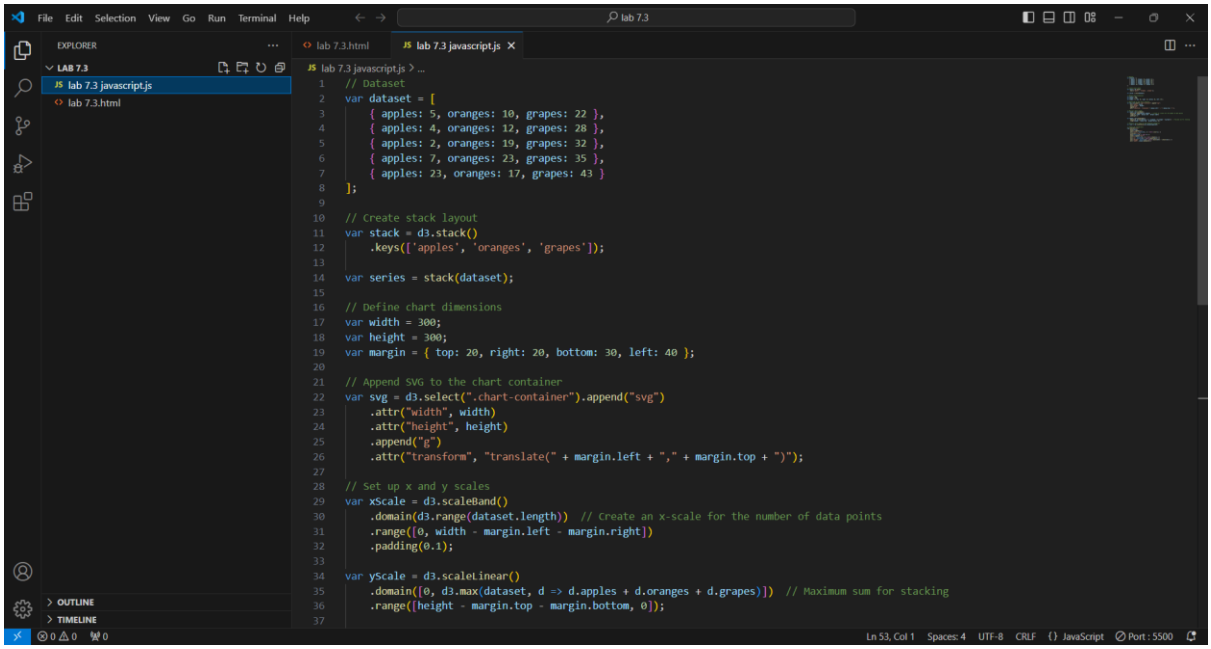



File Edit Selection View Go Run Terminal Help
lab 7.2
EXPLORER
LAB 7.2
lab 7.2 javascript.js
lab 7.2.html
lab 7.2.html
lab 7.2 javascript.js
lab 7.2.html > html > head > style > .back-button
<html lang="en">
<head>
<script src="lab 7.2 javascript.js" defer></script>
<style>
/* Back to Homepage Button */
.back-button {
display: inline-block;
margin-bottom: 20px;
padding: 10px 20px;
background-color: #000;
color: #fff;
text-decoration: none;
border-radius: 5px;
border: 2px solid #000;
transition: all 0.3s ease;
}
.back-button:hover {
background-color: #fff;
color: #000;
}
</style>
</head>
<body>
<!-- Back to Homepage Button -->
Back to Homepage
<h1>The D3 Journey starts here...</h1>
<h2>Pie Chart</h2>
<svg width="300" height="300"></svg>
</body>
</html>
Server is Started at port : 5500
Source: Live Server
Don't show again
OUTLINE
TIMELINE
Ln 20, Col 32 Spaces: 4 UTF-8 with BOM CRLF HTML Port : 5500

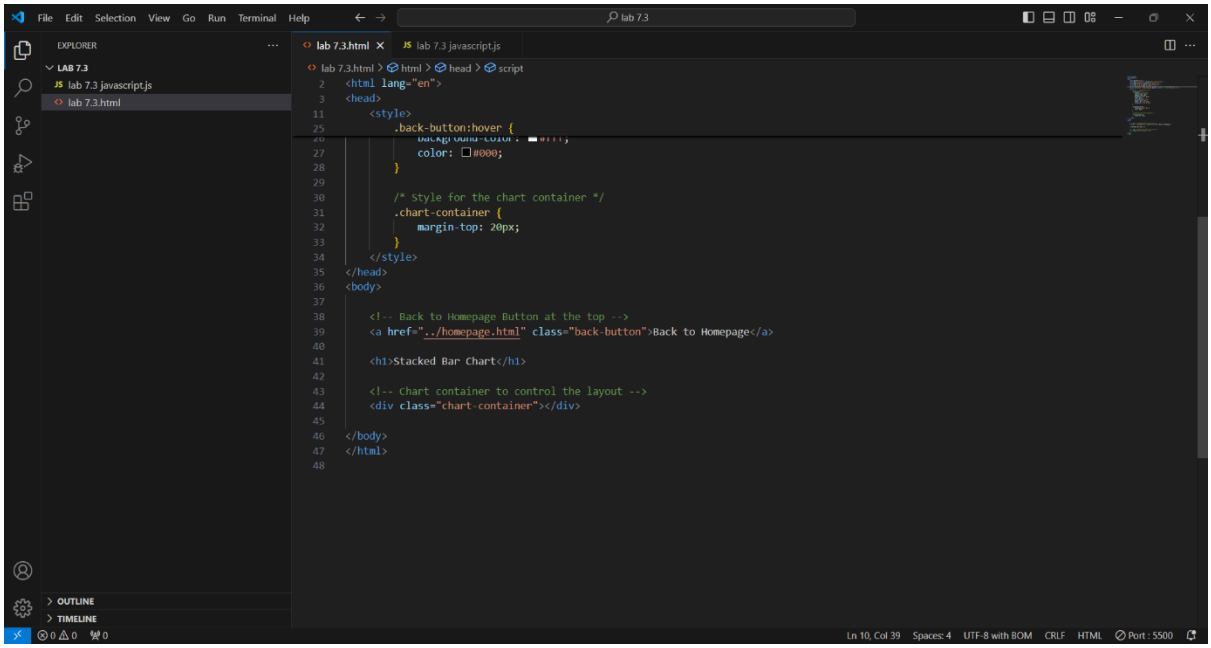

File Edit Selection View Go Run Terminal Help
lab 7.2
EXPLORER
LAB 7.2
lab 7.2 javascript.js
lab 7.2.html
lab 7.2.html
lab 7.2 javascript.js
lab 7.2 javascript.js > ...
// Select the SVG canvas
const width = 300, height = 300;
const svg = d3.select("svg")
.attr("width", width)
.attr("height", height)
.append("g")
.attr("transform", `translate(${width / 2}, ${height / 2})`);
// Step 2: Define pie and arc generators
const pie = d3.pie();
const outerRadius = width / 2;
const arc = d3.arc()
.outerRadius(outerRadius)
.innerRadius(0); // Set to a value > 0 for donut chart
// Generate pie angles from data
const pieData = pie(data);
// Step 3: Create arcs and position them
const arcs = svg.selectAll("arc")
.data(pieData)
.enter()
.append("g")
.attr("class", "arc");
// Draw the paths for the arcs
arcs.append("path")
.attr("d", arc)
.attr("fill", (d, i) => d3.schemeCategory10[i]);
// Step 5: Add text labels
arcs.append("text")
.attr("transform", d => `translate(${arc.centroid(d)})`)
.attr("text-anchor", "middle")
.text(d => d.data);
OUTLINE
TIMELINE
Ln 1, Col 1 Spaces: 4 UTF-8 CRLF {} JavaScript Port : 5500

Lab 7.3



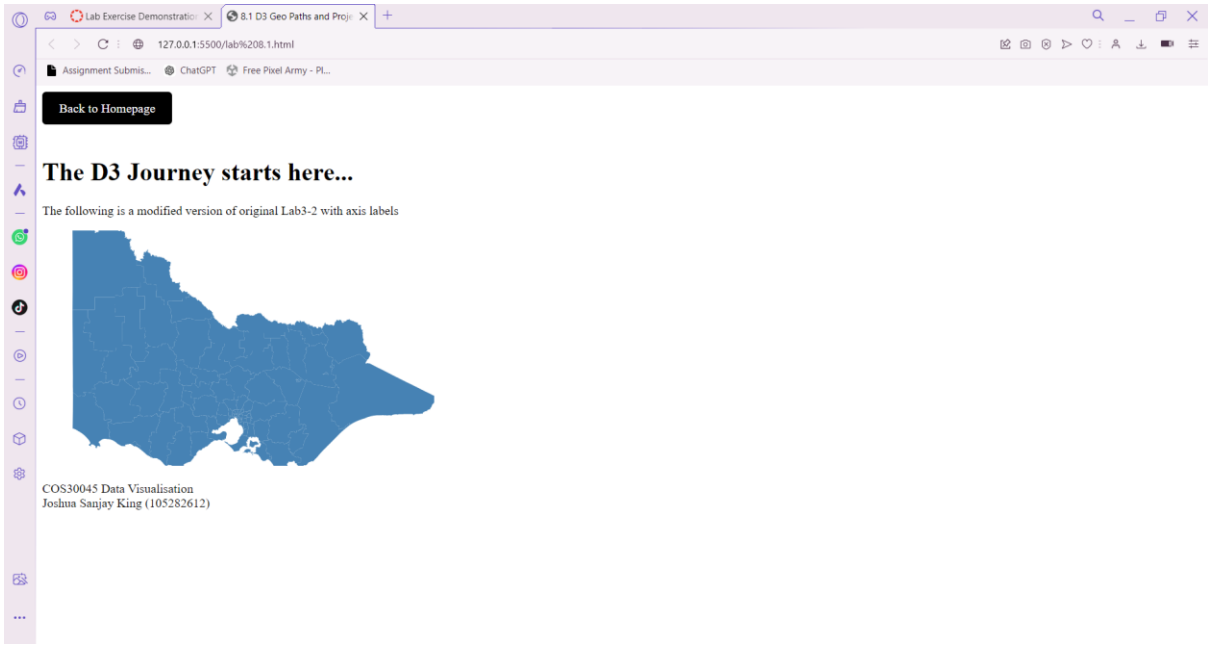


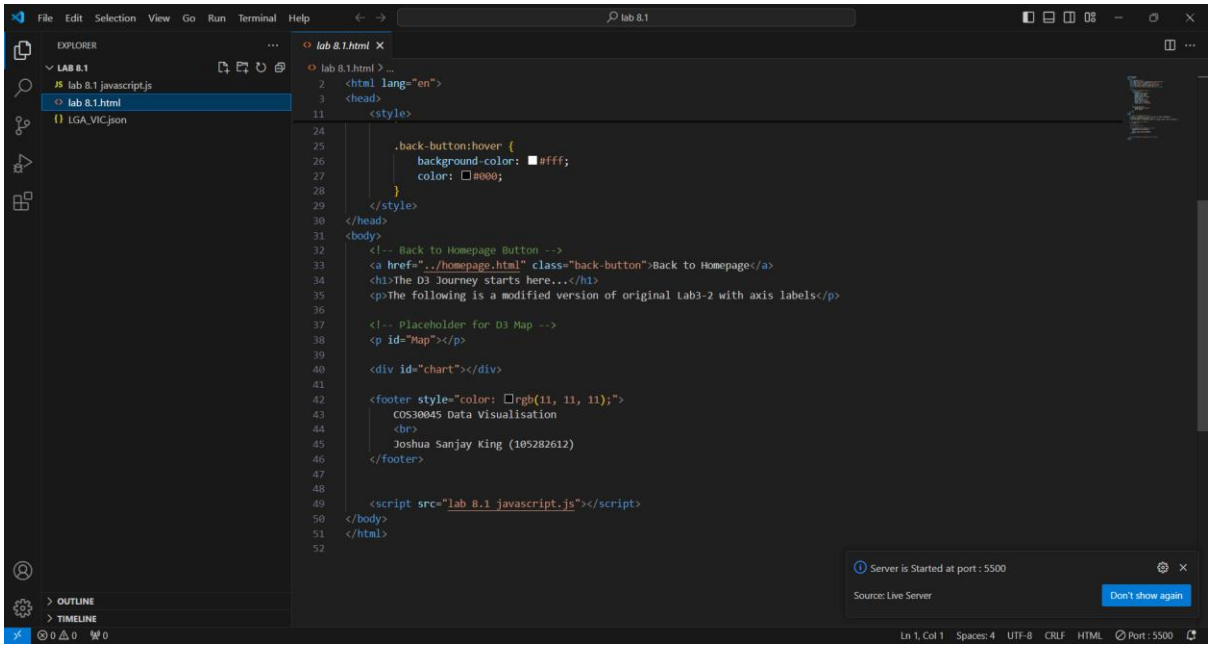

```
// Dataset
var dataset = [
    { apples: 5, oranges: 10, grapes: 22 },
    { apples: 4, oranges: 12, grapes: 28 },
    { apples: 2, oranges: 19, grapes: 32 },
    { apples: 7, oranges: 23, grapes: 35 },
    { apples: 23, oranges: 17, grapes: 43 }
];

// Create stack layout
var stack = d3.stack()
    .keys(['apples', 'oranges', 'grapes']);

var series = stack(dataset);

// Define chart dimensions
var width = 300;
var height = 300;
var margin = { top: 20, right: 20, bottom: 30, left: 40 };

// Append SVG to the chart container
var svg = d3.select(".chart-container").append("svg")
    .attr("width", width)
    .attr("height", height)
    .append("g")
    .attr("transform", "translate(" + margin.left + "," + margin.top + ")");

// Set up x and y scales
var xScale = d3.scaleBand()
    .domain(d3.range(dataset.length))  // Create an x-scale for the number of data points
    .range([0, width - margin.left - margin.right])
    .padding(0.1);

var yScale = d3.scaleLinear()
    .domain([0, d3.max(dataset, d => d.apples + d.oranges + d.grapes)])  // Maximum sum for stacking
    .range([height - margin.top - margin.bottom, 0]);
```


File Edit Selection View Go Run Terminal Help
lab 7.3
EXPLORER
LAB 7.3
lab 7.3 javascript.js
lab 7.3.html
lab 7.3.html
lab 7.3 javascript.js
lab 7.3.html > html > head > script
<html lang="en">
<head>
<style>
.back-button:hover {
color: #000;
}
/* Style for the chart container */
.chart-container {
margin-top: 20px;
}
</style>
</head>
<body>
<!-- Back to Homepage Button at the top -->
Back to Homepage
<h1>Stacked Bar Chart</h1>
<!-- Chart container to control the layout -->

</body>
</html>
OUTLINE
TIMELINE
Ln 10, Col 39 Spaces: 4 UTF-8 with BOM CRLF HTML Port : 5500

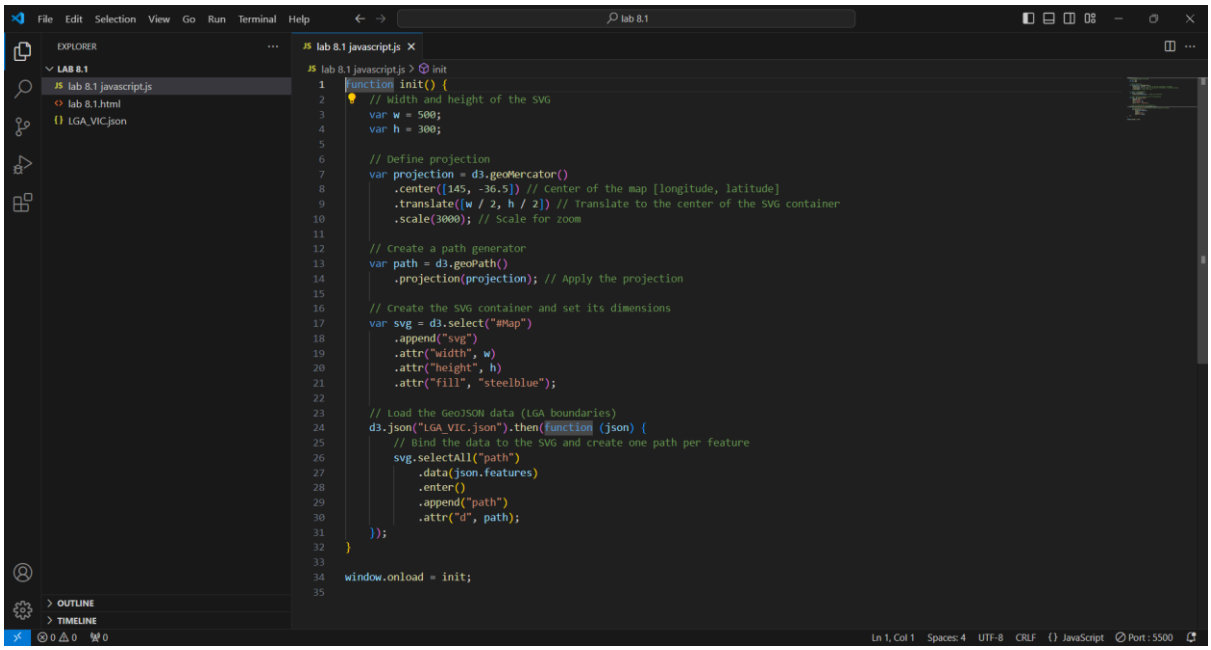
Lab 8.1


Lab Exercise Demonstration
8.1 D3 Geo Paths and Proje
127.0.0.1:5500/lab%208.1.html
Assignment Submis...
ChatGPT
Free Pixel Army - Pl...
Back to Homepage
The D3 Journey starts here...
The following is a modified version of original Lab3-2 with axis labels
COS30045 Data Visualisation
Joshua Sanjay King (105282612)

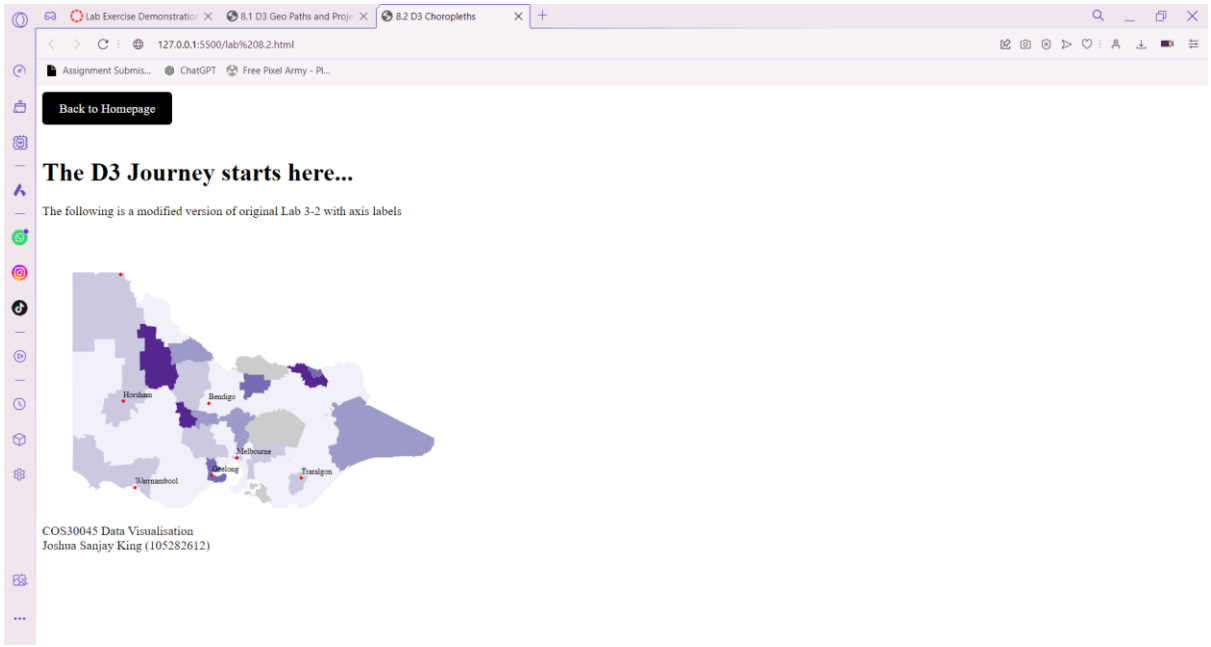

File Edit Selection View Go Run Terminal Help
lab 8.1
EXPLORER
LAB 8.1
lab 8.1 javascript.js
lab 8.1.html
LGA_VIC.json
lab 8.1.html
lab 8.1.html > ...
<html lang="en">
<head>
<style>
.back-button:hover {
background-color: #fff;
color: #000;
}
</style>
</head>
<body>
<!-- Back to Homepage Button -->
Back to Homepage
<h1>The D3 Journey starts here...</h1>
The following is a modified version of original Lab3-2 with axis labels
<!-- Placeholder for D3 Map -->

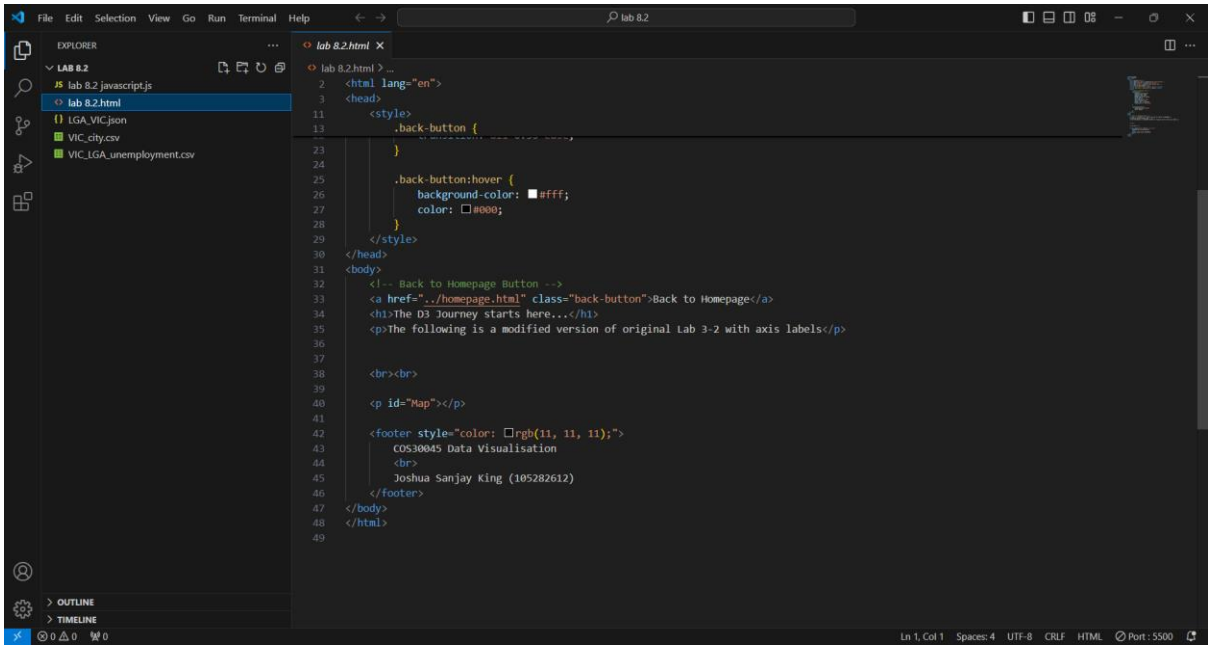
<footer style="color: rgb(11, 11, 11);">
COS30045 Data Visualisation

Joshua Sanjay King (105282612)
</footer>
<script src="lab 8.1 javascript.js"></script>
</body>
</html>
Server is Started at port : 5500
Source: Live Server
Don't show again
OUTLINE
TIMELINE
Ln 1, Col 1 Spaces: 4 UTF-8 CRLF HTML Port : 5500

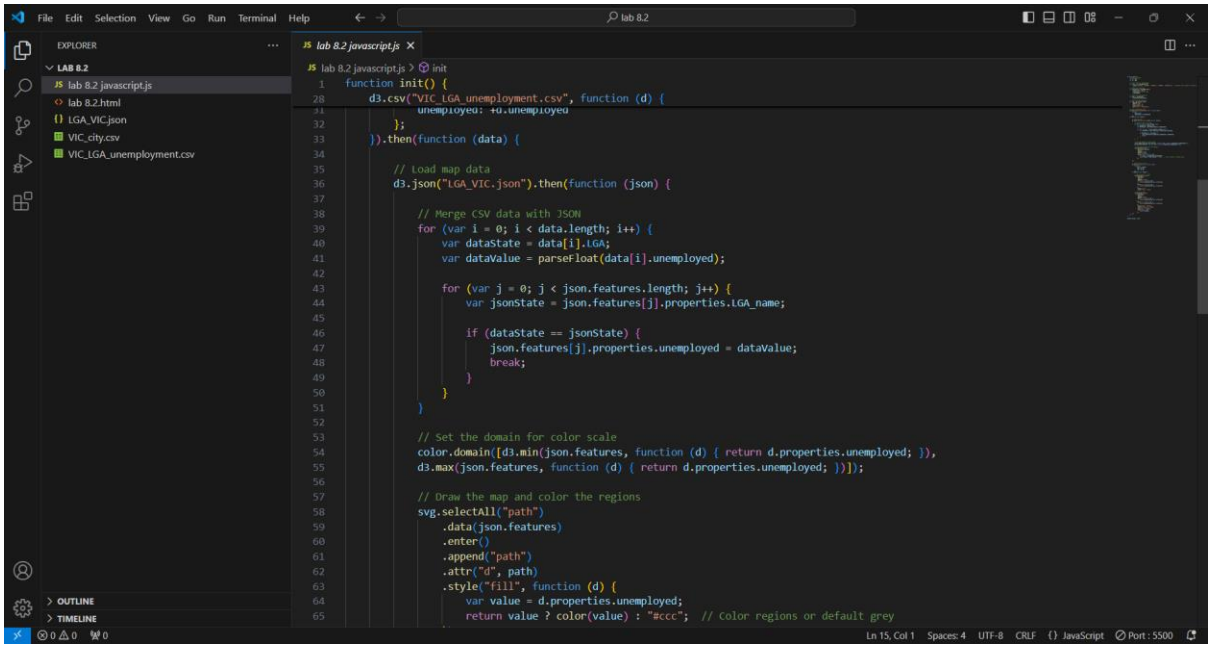

File Edit Selection View Go Run Terminal Help
lab 8.1
EXPLORER
LAB 8.1
lab 8.1 javascript.js
lab 8.1.html
LGA_VIC.json
lab 8.1 javascript.js
lab 8.1 javascript.js > init
function init() {
// Width and height of the SVG
var w = 500;
var h = 300;
// Define projection
var projection = d3.geoMercator()
.center([145, -36.5]) // Center of the map [longitude, latitude]
.translate([w / 2, h / 2]) // Translate to the center of the SVG container
.scale(3000); // Scale for zoom
// Create a path generator
var path = d3.geoPath()
.projection(projection); // Apply the projection
// Create the SVG container and set its dimensions
var svg = d3.select("#Map")
.append("svg")
.attr("width", w)
.attr("height", h)
.attr("fill", "steelblue");
// Load the GeoJSON data (LGA boundaries)
d3.json("LGA_VIC.json").then(function (json) {
// Bind the data to the SVG and create one path per feature
svg.selectAll("path")
.data(json.features)
.enter()
.append("path")
.attr("d", path);
});
}
window.onload = init;
OUTLINE
TIMELINE
Ln 1, Col 1 Spaces: 4 UTF-8 CRLF {} JavaScript Port : 5500

Lab 8.2






```
<html lang="en">
<head>
    <style>
        .back-button {
        }

        .back-button:hover {
            background-color: #fff;
            color: #000;
        }
    </style>
</head>
<body>
    <!-- Back to Homepage Button -->
    <a href="../homepage.html" class="back-button">Back to Homepage</a>
    <h1>The D3 Journey starts here...</h1>
    <p>The following is a modified version of original Lab 3-2 with axis labels</p>


    <br><br>

    <p id="Map"></p>

    <footer style="color: rgb(11, 11, 11);">
        COS30045 Data Visualisation
        <br>
        Joshua Sanjay King (105282612)
    </footer>
</body>
</html>
```


File Edit Selection View Go Run Terminal Help
lab 8.2
EXPLORER
LAB 8.2
lab 8.2 javascript.js
lab 8.2.html
LGA_VIC.json
VIC_city.csv
VIC_LGA_unemployment.csv
OUTLINE
TIMELINE
lab 8.2 javascript.js
lab 8.2 javascript.js > init
function init() {
d3.csv("VIC_LGA_unemployment.csv", function (d) {
unemployed: +d.unemployed
};
}).then(function (data) {
// Load map data
d3.json("LGA_VIC.json").then(function (json) {
// Merge CSV data with JSON
for (var i = 0; i < data.length; i++) {
var dataState = data[i].LGA;
var dataValue = parseFloat(data[i].unemployed);
for (var j = 0; j < json.features.length; j++) {
var jsonState = json.features[j].properties.LGA_name;
if (dataState == jsonState) {
json.features[j].properties.unemployed = dataValue;
break;
}
}
}
// Set the domain for color scale
color.domain([d3.min(json.features, function (d) { return d.properties.unemployed; }),
d3.max(json.features, function (d) { return d.properties.unemployed; })]);
// Draw the map and color the regions
svg.selectAll("path")
.data(json.features)
.enter()
.append("path")
.attr("d", path)
.style("fill", function (d) {
var value = d.properties.unemployed;
return value ? color(value) : "#ccc"; // Color regions or default grey
Ln 15, Col 1
Spaces: 4
UTF-8
CRLF
{} JavaScript
Port : 5500