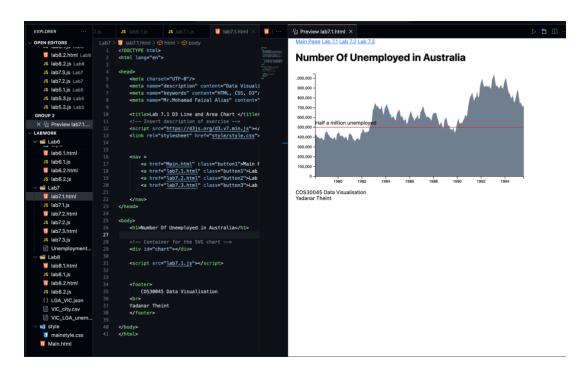
Name – Yadanar Theint
Student ID – 104992813
GitHub - https://github.com/Treasure-Mei-box/COS30045/tree/main
Hosting Website – http://yadanartheint.infinityfreeapp.com/Labwork/Lab1/Main.html

Lab 7.1

```
EXPLORER
                                  2.html JS lab6.2.js
                                                                               JS lab6.1.js
                                                                                                           JS lab7.1.js X 5 lab7.1.html
                                                                                                                                                                    lab8.1.html
                                                                                                                                                                                                                                                            JS lab8.1.js
                                                                                                                                                                                                                                                                                        5 lab8.2. ▷ ∨ □
                                                  function init() {
 × JS lab7.1.js Lab7
      lab7.1.html Lab7
                                                     var margin = {top: 10, right: 20, bottom: 30, left: 50},
w = 600 - margin.left - margin.right,
h = 300 - margin.top - margin.bottom;
      lab7.2.html Lab7
      lab7.3.html Lab7
     5 lab8.1.html Lab8
                                                       // Parse date format from the CSV
var parseDate = d3.timeParse("%Y-%m");
      JS lab8.1.js Lab8
     5 lab8.2.html Lab8
      JS lab8.2.is Lab8
     JS lab7.3.js Lab7
                                                       var x = d3.scaleTime().range([0, w]), // Time scale for the x-axis
y = d3.scaleLinear().range([h, 0]); // Linear scale for the y-axis
LABWORK
∨ 📹 Lab6
                                                       var xAxis = d3.axisBottom(x), // Bottom x-axis
yAxis = d3.axisLeft(y); //Left Y-axis
     lab6.1.html
                                                        var area = d3.area()
   .x(function(d) { return x(d.date); })// Set x position based on date
   .y0(h) // Base of the area starts at the bottom of the chart
   .y1(function(d) { return y(d.number); }); // Top of the area based on the data value
      JS lab6.1.js
     lab6.2.html
      JS lab6.2.js
     😈 lab7.1.html
                                                       // Append an SVG element to the chart container
var svg = d3.select("#chart").append("svg")
    .attr("width", w + margin.left + margin.right) // Set total width
    .attr("height", h + margin.top + margin.bottom) // Set total height
    .append("g") // Append a group element for margins
      JS lab7.1.js
      lab7.2.html
      JS lab7.2.js
     lab7.3.html
                                                               .append("g") // Append a group element for margins
.attr("transform", "translate(" + margin.left + "," + margin.top + ")"); // Translate to account for margins
     JS lab7.3.is
     Unemployment...
   Lab8
                                                        //Load and process CSV data
     lab8.1.html
                                                        //coad and process SSV data
data et al. csv". | function(d) {
    d.date = parseDate(d.year + '-' + d.month);
    d.number = +d.number; // Convert number to integer
      JS lab8.1.js
      lab8.2.html
                                                       return d;

)).then(function(data) {

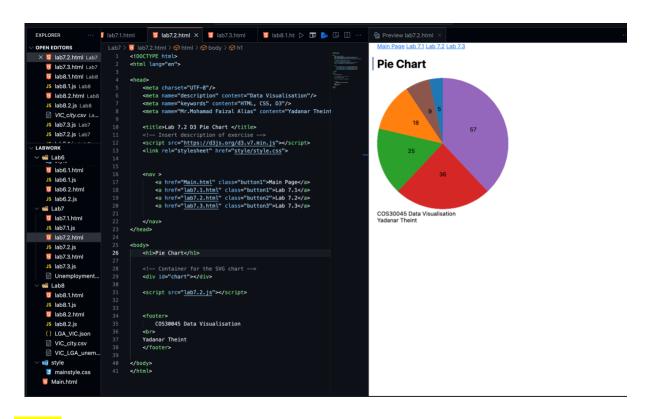
x.domain(d3.extent(data, function(d) { return d.date; })); // Date domain for x-axis
y.domain([0, d3.max(data, function(d) { return d.number; })]); // Max value for y-axis
       JS lab8.2.js
      {} LGA_VIC.json
     VIC_city.csv
     VIC_LGA_unem...
                                                              svg.append("path")
   .data([data])
   .attr("class", "area")
   .attr("d", area)
   .stvle("fill", "slateg
   鐗 style
     mainstyle.css
    Main html
```



Lab7.2

```
ab7.1.html
                                                                lab8.1.html JS lab8.1.js
                                                                                                                                                                                            ☐ lab8.2.html JS lab8.2.js
                                                                                                                                                                                                                                                                                        JS lab7.2.js ×
EXPLORER
    iab7.1.html Lab7
iab7.2.html Lab7
iab7.3.html Lab7
                                                                 const width = 300;
const height = 300;
const outerRadius = width / 2;
const innerRadius = 0;
    lab8.1.html Lab8
JS lab8.1.js Lab8
     lab8.2.html Lab8
                                                                 const svg = d3.select("#chart").append("svg")
   .attr("width", width)
   .attr("height", height)
   .append("g")
   .attr("transform", "translate(" + width / 2 + "," + height / 2 + ")");
     JS lab8.2.js Lab8
     JS lab7.3.js Lab7
 X JS lab7.2.js Lab7
LABWO... [ 5 0 0
∨ 📹 Lab6
                                                                 // Create an arc generator for the pie slices
const arc = d3.arc()
    .outerRadius(outerRadius)
    .innerRadius(innerRadius);
    lab6.1.html
    lab6.2.html
JS lab6.2.js
                                                                 // Create a pie layout to calculate the angles for each slice
const pie = d3.pie();
   Lab7
    JS lab7.1.js
                                                                 // Bind the dataset to the arcs and create a group for each arc
const arcs = swp.selectAll(".arc")
.data(pie(dataset)) // Transform the dataset into pie arc data
.enter() // Enter selection for new data
.append("g") // Append a new group element for each arc
.attr("class", "arc"); // Set class for styling
    JS lab7.2.js
      JS lab7.3.js
    Unemployment...
                                                                 // Append a path for each arc based on the arc generator
arcs.append("path")
.attr("fath", arc)// Set the 'd' attribute using the arc generator
.attr("fill", (d, i) => d3.schemeCategory10[i % 10]);
    lab8.1.html
    JS lab8.1.js
                                                                 // Append text labels to each arc
arcs.append("text")

.attr("transform", (d) >> "translate(" + arc.centroid(d) + ")") // Position the text in the center of each arc
.attr("txt-anchor", "middle")
.text((d) >> d.data);
     () LGA VIC.ison
    VIC LGA unem...
    style
     mainstyle.css
```



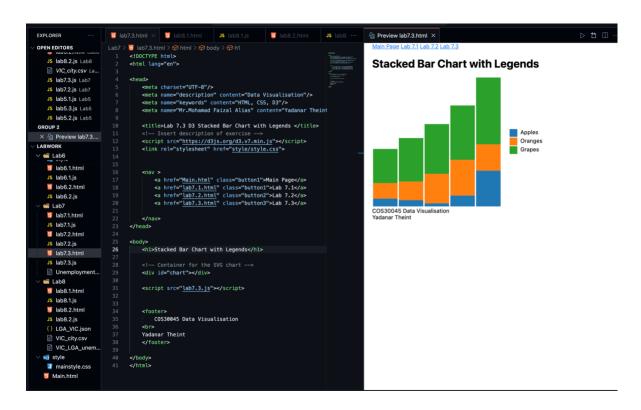
Lab7.3

```
□ lab7.1.html □ lab7.2.html □ lab7.3.html □ lab8.1.html JS lab8.1.js
                                                                                                                                                                                                                      JS lab7.3.js X JS lab7.2.js
EXPLORER
                                                                                                                                                                      lab8.2.html JS lab8.2.is
                                   Lab7 > JS lab7.3.js > [@] legend
2 var dataset = [
OPEN EDITORS
     5 lab7.2.html Lab7
      ab7.3.html Lab7
                                                    { apples: 23, oranges: 17, grapes: 43 }
     S lab8.1.html Lab8
      JS lab8.1.js Lab8
      ab8.2.html Lab8
     JS lab8.2.js Lab8
                                             // Create a stack layout for the data, specifying the keys for stacking
var stack = d3.stack()
   .keys(["apples", "oranges", "grapes"]);
 × JS lab7.3.js Lab7
     JS lab5.1.js Lab5
                                             // Apply the stack layout to the dataset
var series = stack(dataset);
LABWORK
   ■ Lab6
     lab6.1.html
                                             var w = 300;
var h = 300;
var svg = d3.select("#chart").append("svg")
.atr("width", w + 150)
.atr("height", h);
     lab6.2.html
     JS lab6.2.js
                                             // Create groups for each series in the stacked data

var groups = svg.selectAll("g")

.data(series) // Bind the stacked series data
.enter() // selection for new data
.append("g") // Append a new group element for each series
.style("fill", function(d, i) {

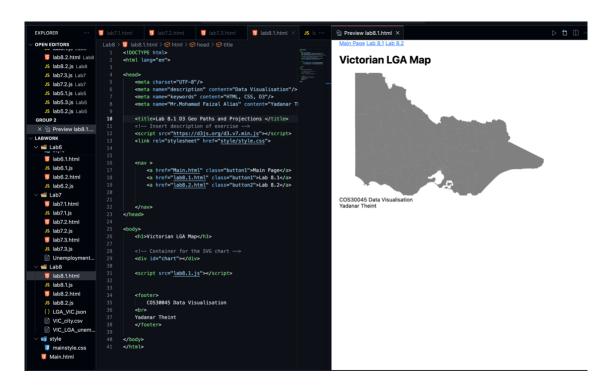
return d3.schemeCategory10[i]; // Assign a fill color from the D3 color scheme
});
     lab7.1.html
      JS lab7.1.js
     lab7.2.html
      JS lab7.2.js
     lab7.3.html
      JS lab7.3.js
    Unemployment...
   🚄 Lab8
     lab8.1.html
                                             // Create a scale for the x-axis using band scale
var xScale = d3.scaleBand()
.domain(d3.range(dataset.length)) // Set the domain to the number of data points
.rangeRound([0, wi) //range of the scale
.paddingInner(0.05); //padding between bars
      JS lab8.1.js
     Js lab8.2.js
{} LGA_VIC.json
                                              var yScale = d3.scaleLinear()
    VIC LGA unem...
                                                     domain(0, d3.max(dataset, function(d) {
    return d.apples + d.oranges + d.grapes; // Max value for the y-axis based on total fruits
   style
                                                   ;
))])
.range([h, 0]); // Invert the scale so that higher values are at the top
     mainstyle.css
   5 Main.html
```



Lab 8.1

```
5 lab8.1.html JS lab8.1.js X 5 lab8.2.html JS lab8.2.js
OPEN EDITORS
    lab7.3.html Lab7
                                           var w = 500;
var h = 300;
                                           // Set up the Mercator projection with specified center and scale
var projection = d3.geoMercator()
.center([145, -36.5]) // Center coordinates for the map (longitude, latitude)
.translate([w / 2, h / 2]) // center of the SVG
.scale(3000); // Scale factor for the map's size
 × JS lab8.1.js Lab8
     5 lab8.2.html Lab8
     JS lab8.2.js Lab8
     JS lab7.3.js Lab7
     JS lab7.2.is Lab7
     JS lab5.1.js Lab5
                                           // Create a path generator using the defined projection
var path = d3.geoPath() .projection(projection);
     JS lab5.3.js Lab5
                                           LABWORK
 Lab6
     lab6.1.html
     JS lab6.1.js
     lab6.2.html
    JS lab6.2.is
                                           // Load the GeoJSON data and render the map d3.json ("LGA_VIC.json").then(function (json)
   ■ Lab7
    lab7.1.html
                                                      // Bind the GeoJSON features to SVG paths and append them to the SVG
svg.selectAll("path")
    .data(json.features)// Bind the features from the GeoJSON data
    .enter() // Enter selection for new data
    .append("path") // Append a new path element for each feature
    .attr("d", path); // Set the 'd' attribute using the path generator
     JS lab7.1.js
     lab7.2.html
     JS lab7.2.is
    JS lab7.3.js

Unemployment...
    lab8.1.html
     JS lab8.1.js
     lab8.2.html
     JS lab8.2.js
     () LGA_VIC.json
     VIC_city.csv
    VIC_LGA_unem.
   📆 style
     mainstyle.css
```



Lab8.2

```
EXPLORER
                                       Lab8 > J5 lab8.2.js > ② then() callback > ② then() callback

1  // Set the dimensions of the SVG container

2  var h = 300;

3  var w = 500;
OPEN EDITORS
      lab8.1.html Lab8
       JS lab8.1.js Lab8
      lab8.2.html Lab8
                                                     // Define the projection using d3.geoMercator
var projection = d3.geoMercator{}
.center(1,45, -36.51) // Set the center of the map
.translate( u/ 2, h + 2] // Translate the map to the center of the SVG container
.scale(3000); // Set the scale of the projection
  × JS lab8.2.js Lab8
       JS lab7.3.js Lab7
      JS lab7.2.js Lab7
       JS lab5.1.js Lab5
      JS lab5.3.js Lab5
                                                       // Create a path generator using the projection
var path = d3.geoPath().projection(projection);
      JS lab5.2.js Lab5
LABWORK
                                                      // Create an SVG element and append it to the body of the HTML document
var svg = d3.select("body").append("svg")
    .attr("width", w)
    .attr("bight", h)
    .attr("fill", "grey"); // Set the fill color of the SVG container
   🚄 Lab6
      lab6.1.html
       JS lab6.1.js
      lab6.2.html
      JS lab6.2.js
                                                      // Define the color scale using d3.scaleQuantize
var color = d3.scaleQuantize() range(("#f2f8f7", "#scbc9e2", "#999ac8", "#756bb1", "#54278f"])
    .domain((0, 10000)) // Define the domain of the color scale
    .unknown('#f6eff7'); // Define the color for unknown values
var text = svg.append("text")
    .attr("fv", 6)
    .attr("dy", 15);
    Lab7
      JS lab7.1.js
        JS lab7.2.js
      lab7.3.html
       JS lab7.3.js
                                                      // Load the CSV and JSON data using promises
d3.csv("VIC_LGA_unemployment.csv").then(function (d) {
d3.json("LGA_VIC.json").then(function (json) {
// Iterate through the CSV data
for (var i = 0; i < d.length; i++) {
var dataState = 0[i].LGA; / Get the LGA from the CSV data
var dataValue = parseFloat(d[i].unemployed); // Get the unemployment rate from the CSV data
      Unemployment...
    Lab8
      lab8.1.html
      JS lab8.1.js
       JS lab8.2.js
       () LGA_VIC.json
                                                                            // Iterate through the JSON data
for (var j = 0; j < json.features.length; j++) {
    var jsonstate = json.features[j].properties.LGA_name; // Get the LGA name from the JSON data
    console.log(dataState);</pre>
     VIC_city.csv
VIC_LGA_unem...
      mainstyle.css
                                                                                    // Check if the LGA names match
if (dataState == jsonState) {
    ison.features[i].properties.
```

