WEEK 1

Aim: To develop different basic Graphical Shapes using HTML5 canvas

Program:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>week 1 practice</title>
    <script>
        function draw(){
            var canvas = document.getElementById('mycanvas')
            var ctx = canvas.getContext('2d')

            ctx.fillStyle = "blue"

            ctx.fillRect(10,10,60,60);
            ctx.fillRect(100,10,80,26);

            ctx.beginPath();
            ctx.arc(220,25,25, 0, 2*Math.PI);
            ctx.fill();

            ctx.beginPath();
            ctx.moveTo(10, 160);
            ctx.lineTo(90, 160)
            ctx.lineTo(50, 110)
            ctx.closePath();
            ctx.fill();
        }
    </script>
</head>
<body onload = 'draw()'>

    <canvas id = 'mycanvas' width = '400px' height = '400px'>

    </canvas>

</body>
</html>
```

OUTPUT:

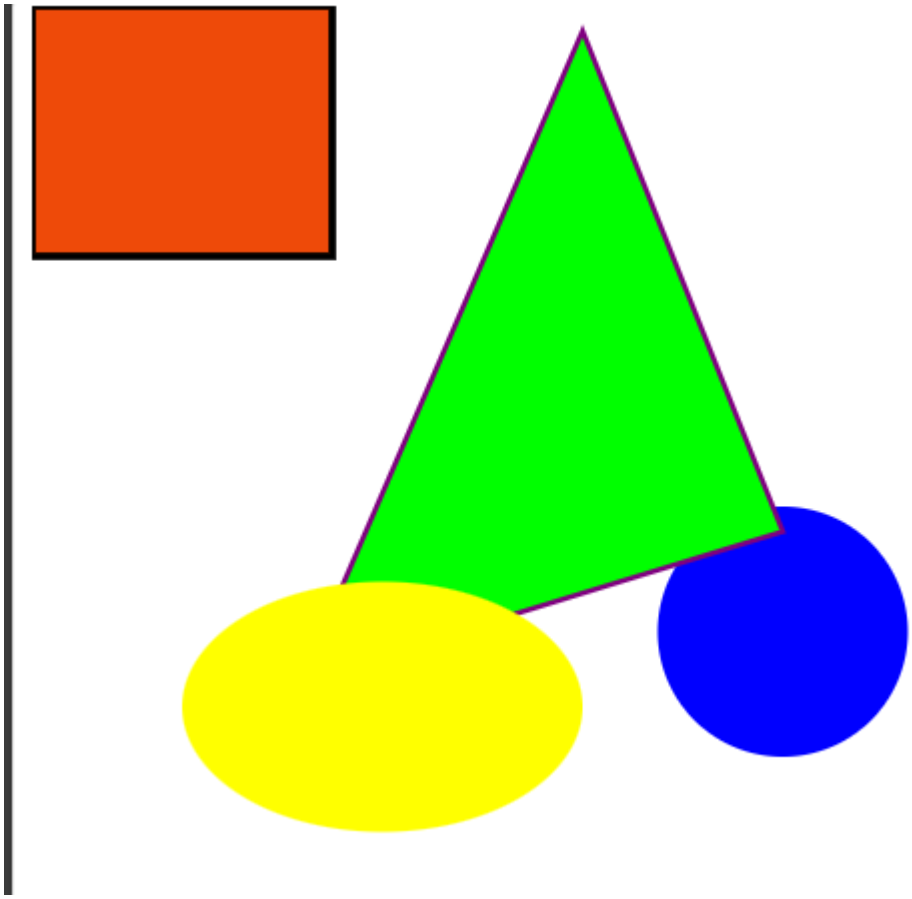
WEEK 2

Aim: To develop different basic Graphical Shapes using HTML5 SVG

Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>SVG Shape</title>
</head>

<body>
    <svg width="600px" height="400px">
        <circle cx="300" cy="250" r="50" fill="blue"></circle>
        <rect width="120" height="100" style="fill: rgb(238, 74 , 9);stroke-width:
3;stroke: rgb(0,0,0);" />

        <polygon points="220,10,300,210,170,250,123,234" style="fill: lime;stroke:
purple;stroke-width: 2;" />

        <ellipse cx="140" cy="280" rx="80" ry="50" style="fill: yellow; stroke-width: 4;"
/>
    </svg>

</body>

</html>
```

OUTPUT:



WEEK -3

Aim: To Develop a javascript code that recives input from the user and get in action based on user input using HTML5 and Javascript

Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>week 3</title>
    <style>
        body {
            background-color: paleturquoise;
            text-align: center;
        }

        h2 {
            text-transform: uppercase;
            font-size: 46px;
            color: blue;
            padding-bottom: 0px;
        }

        img {
            max-width: 100%;
            max-height: auto;
        }

        p {
            text-shadow: 1cqw;
            font-size: 25px;
            color: rgb(48, 126, 243);
        }
    </style>
</head>

<body>
    <h2>WHAT CAN JAVASCRIPT DO?</h2>
    <p>JavaScript can manipulate the html attribute</p>
    <button onclick="document.getElementById('myImage').src='img1.jpeg'">img1</button>
    <img id="myImage" src="img1.jpeg">
    <button onclick="document.getElementById('myImage').src='img2.jpeg'">img2
        ma</button>

</body>
```

```
</html>
```

OUTPUT:


WHAT CAN JAVASCRIPT DO?
JavaScript can manipulate the html attribute
img1
img2 ma


WHAT CAN JAVASCRIPT DO?
JavaScript can manipulate the html attribute
img1
img2 ma

WEEK – 4

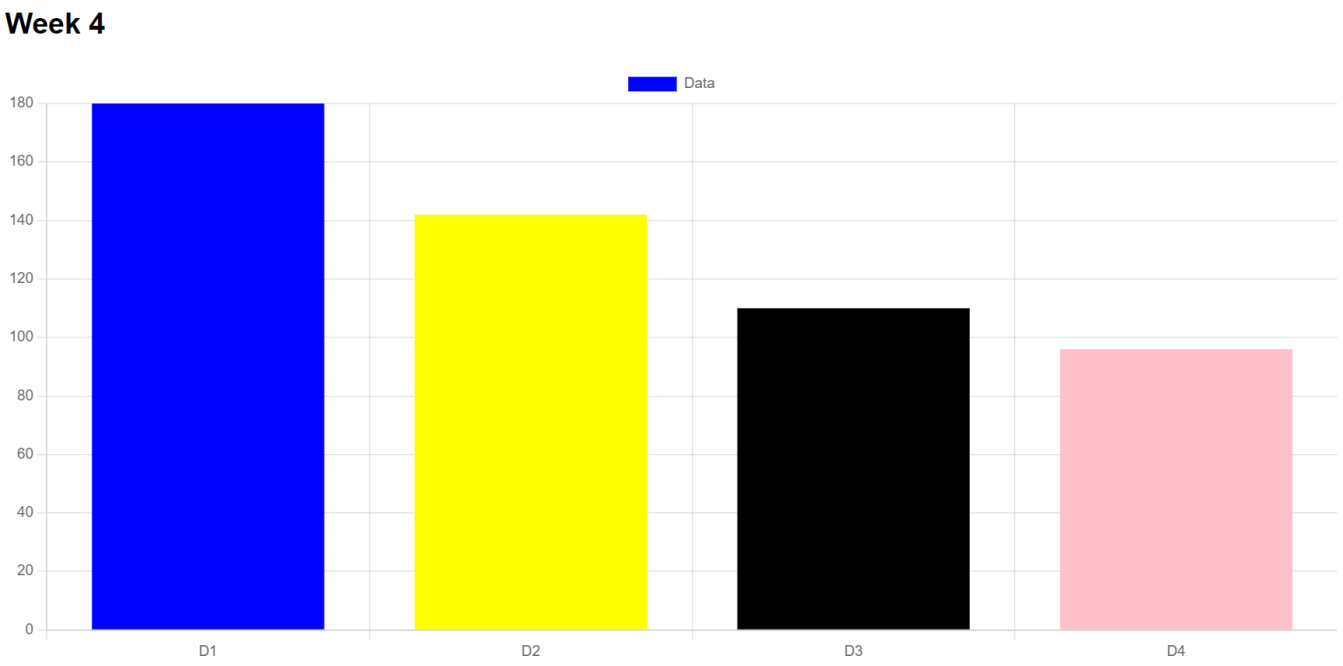
Aim: Draw a simple barchart using HTML5 CANVAS

Program:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Simple Bar Chart with Table</title>
    <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 40px;
        }
        table {
            margin-top: 20px;
            border-collapse: collapse;
            width: 100%;
        }
        th, td {
            border: 1px solid #ddd;
            padding: 8px;
            text-align: left;
        }
        th {
            background-color: #f2f2f2;
        }
    </style>
</head>
<body>

    <h2>Week 4</h2>

    <canvas id="myBarChart" width="400" height="200"></canvas>

    <!-- Data Table -->
    <table>
        <thead>
            <tr>
                <th>D1</th>
                <th>Data Value</th>
            </tr>
        </thead>
        <tbody>
            <tr>
                <td>Label 1</td>
                <td>80</td>
            </tr>
```

```
            <tr>
                <td>Label 2</td>
                <td>120</td>
            </tr>
            <tr>
                <td>Label 3</td>
                <td>60</td>
            </tr>
            <tr>
                <td>Label 4</td>
                <td>90</td>
            </tr>
        </tbody>
    </table>

    <script>
        var data = {
            labels: ["D1", "D2", "D3", "D4"],
            datasets: [{
                label: "Data",
                backgroundColor: ["blue", "yellow", "black", "pink"],
                data: [180, 142, 110, 96],
            }]
        };

        var ctx = document.getElementById('myBarChart').getContext('2d');

        var myBarChart = new Chart(ctx, {
            type: 'bar',
            data: data,
            options: {
                scales: {
                    y: {
                        beginAtZero: true
                    }
                }
            }
        });
    </script>

</body>
</html>
```

OUTPUT:



D1	Data Value
Label 1	80
Label 2	120
Label 3	60
Label 4	90

WEEK – 5

Aim: Read the data .txt file and Draw Table and draw simple bar chart

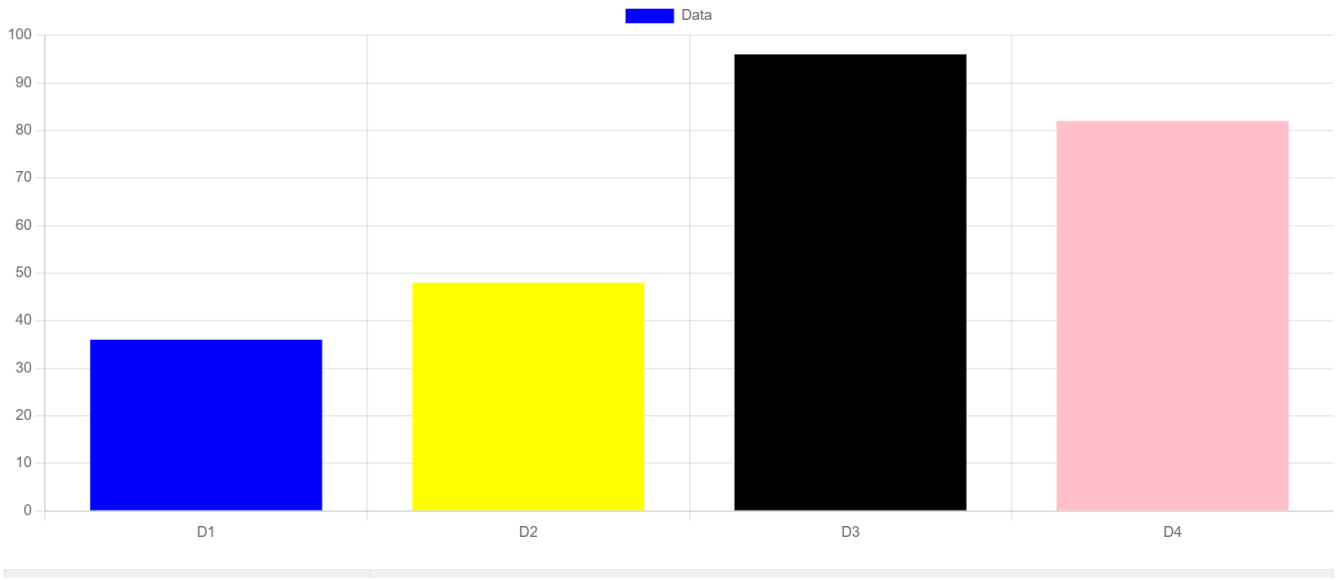
Program:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Simple Bar Chart with Table</title>
    <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 40px;
        }
        table {
            margin-top: 20px;
            border-collapse: collapse;
            width: 100%;
        }
        th, td {
            border: 1px solid #ddd;
            padding: 8px;
            text-align: left;
        }
        th {
            background-color: #f2f2f2;
        }
    </style>
</head>
<body>

    <h2>Week 5: reading data from the text file</h2>

    <canvas id="myBarChart" width="400" height="165"></canvas>

    <!-- Data Table -->
    <table id="dataTable">
        <thead>
            <tr>
                <th>D1</th>
                <th>Data Value</th>
            </tr>
        </thead>
        <tbody id='tableBody'>
            <!-- Rows will be added here dynamically -->
        </tbody>
    </table>

    <script type='text/javascript'>
    // Function to load txt file
```

```
    function loadFile() {
      fetch('week5b.txt')
      .then(response => response.text())
      .then(text => {
          const rows = text.split('\n');
          const labels = [];
          const data = [];

          rows.forEach(row => {
              const [label, value] = row.split(',');
              labels.push(label);
              data.push(value);

              // Add row to table
              document.getElementById('tableBody').innerHTML +=
`<tr><td>${label}</td><td>${value}</td></tr>`;
          });

          // Draw chart
          var chartData = {
              labels: labels,
              datasets: [{
                  label: "Data",
                  backgroundColor: ["blue", "yellow", "black", "pink"],
                  data: data,
              }]
          };

          var ctx = document.getElementById('myBarChart').getContext('2d');

          new Chart(ctx, {
              type: 'bar',
              data: chartData,
              options: {
                  scales: {
                      y: { beginAtZero:true }
                  }
               }
           });
       });
    }

    loadFile();
    </script>

</body></html>
```

OUTPUT:

Week 5: reading data from the text file



D1	Data Value
D1	36
D2	48
D3	96
D4	82

week5b.txt

```
1   D1, 36
2   D2, 48
3   D3, 96
4   D4, 82
```

WEEK – 6

Aim: To read the data .csv file and draw Data Table and draw column Bar chart

Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Simple Bar Chart with Table</title>
    <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 40px;
        }

        table {
            margin-top: 20px;
            border-collapse: collapse;
            width: 100%;
        }

        th,
        td {
            border: 1px solid #ddd;
            padding: 8px;
            text-align: left;
        }

        th {
            background-color: #f2f2f2;
        }
    </style>
</head>

<body>

    <h2>Week 6: reading data from the csv file</h2>

    <canvas id="myBarChart" width="400" height="165"></canvas>

    <!-- Data Table -->
    <table id="dataTable">
        <thead>
            <tr>
                <th>D1</th>
                <th>Data Value</th>
            </tr>
```

```
    </thead>
    <tbody id='tableBody'>
        <!-- Rows will be added here dynamically -->
    </tbody>
</table>

<script type='text/javascript'>
    // Function to load txt file
    function loadFile() {
        fetch('week6b.csv')
            .then(response => response.text())
            .then(text => {
                const rows = text.split('\n');
                // Declare the labels and data arrays
                var labels = [];
                var data = [];

                // Loop through the rows of the data
                for (var i = 0; i < rows.length; i++) {
                    // Get the value of the ith row
                    var row = rows[i];
                    // Split the row by comma to get the label and value
                    var [label, value] = row.split(",");
                    // Push the label and value to the arrays
                    labels.push(label);
                    data.push(value);
                    // Create a table row element
                    var tr = document.createElement("tr");
                    // Create a table cell element for the label
                    var td1 = document.createElement("td");
                    td1.textContent = label;
                    // Create a table cell element for the value
                    var td2 = document.createElement("td");
                    td2.textContent = value;
                    // Append the cells to the row
                    tr.appendChild(td1);
                    tr.appendChild(td2);
                    // Append the row to the table body
                    document.getElementById('tableBody').appendChild(tr);
                }


                // Draw chart
                var chartData = {
                    labels: labels,
                    datasets: [{
                        label: "Data",
                        backgroundColor: ["blue", "yellow", "black", "pink"],
                        data: data,
                    }]
                };

                var ctx = document.getElementById('myBarChart').getContext('2d');
```

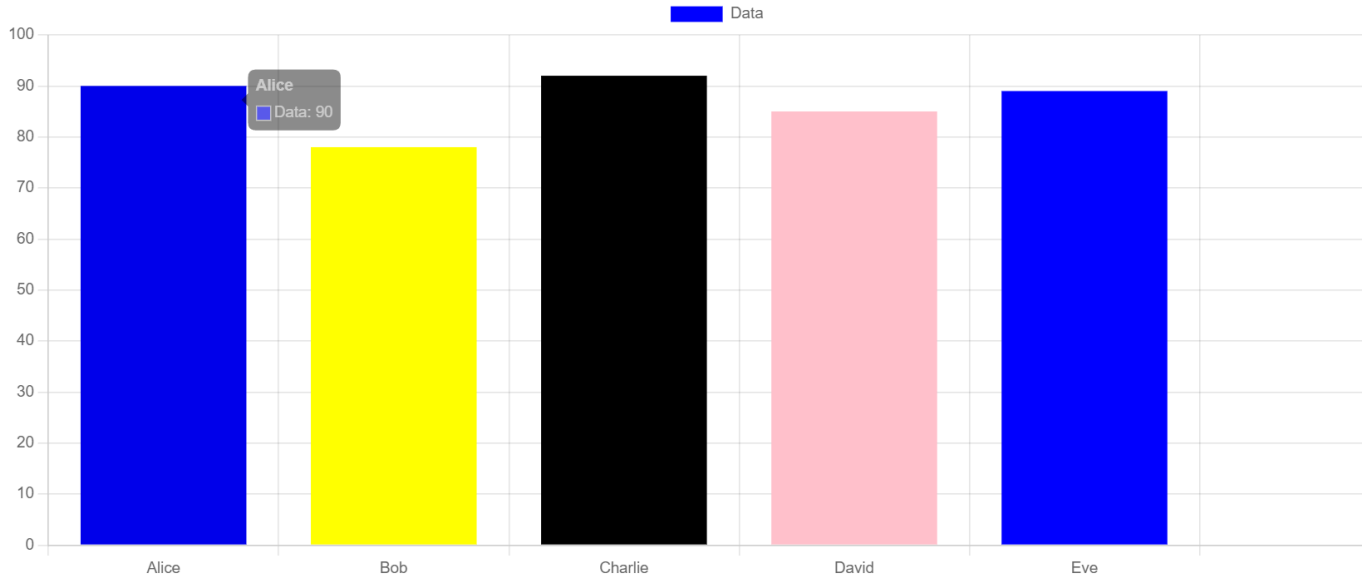
```
                    new Chart(ctx, {
                        type: 'bar',
                        data: chartData,
                        options: {
                            scales: {
                                y: { beginAtZero: true }
                            }
                        }
                    });
                });
        }

        loadFile();
    </script>

</body>

</html>
```

week6b.csv > data

```
1   Alice,90
2   Bob,78
3   Charlie,92
4   David,85
5   Eve,89
6
```

OUTPUT

Week 6: reading data from the csv file



D1	Data Value
Alice	90
Bob	78
Charlie	92
David	85
Eve	89

WEEK – 7

AIM: Read the data XML file and Draw Table and draw simple bar chart

Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Simple Bar Chart with Table</title>
    <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 40px;
        }

        table {
            margin-top: 20px;
            border-collapse: collapse;
            width: 100%;
        }

        th,
        td {
            border: 1px solid #ddd;
            padding: 8px;
            text-align: left;
        }

        th {
            background-color: #f2f2f2;
        }
    </style>
</head>

<body>

    <h2>Week 7: reading data from the xml file</h2>

    <canvas id="myBarChart" width="400" height="165"></canvas>

    <!-- Data Table -->
    <table id="dataTable">
        <thead>
            <tr>
                <th>D1</th>
                <th>Data Value</th>
            </tr>
        </thead>
        <tbody id='tableBody'>
```

```
        <!-- Rows will be added here dynamically -->
    </tbody>
</table>

<script type='text/javascript'>
    // Function to load txt file
    function loadFile() {
        fetch('week7a.xml')
            .then(response => response.text())
            .then(str => {
                // Parse the XML string
                let parser = new DOMParser();
                let xml = parser.parseFromString(str, "text/xml");

                // Declare the labels and data arrays
                var labels = [];
                var data = [];

                // Get all the 'row' elements from the XML
                let rows = xml.getElementsByTagName('row');

                // Loop through the rows of the data
                for (let i = 0; i < rows.length; i++) {
                    // Get the value of the ith row
                    let row = rows[i];
                    // Get the label and value from the row element
                    let label = row.getElementsByTagName('name')[0].textContent;
                    let value = row.getElementsByTagName('score')[0].textContent;
                    // Push the label and value to the arrays
                    labels.push(label);
                    data.push(value);
                    // Create a table row element
                    var tr = document.createElement("tr");
                    // Create a table cell element for the label
                    var td1 = document.createElement("td");
                    td1.textContent = label;
                    // Create a table cell element for the value
                    var td2 = document.createElement("td");
                    td2.textContent = value;
                    // Append the cells to the row
                    tr.appendChild(td1);
                    tr.appendChild(td2);
                    // Append the row to the table body
                    document.getElementById('tableBody').appendChild(tr);
                }


                // Draw chart
                var chartData = {
                    labels: labels,
                    datasets: [{
                        label: "Data",
                        backgroundColor: ["blue", "yellow", "black", "pink"],
                        data: data,
```

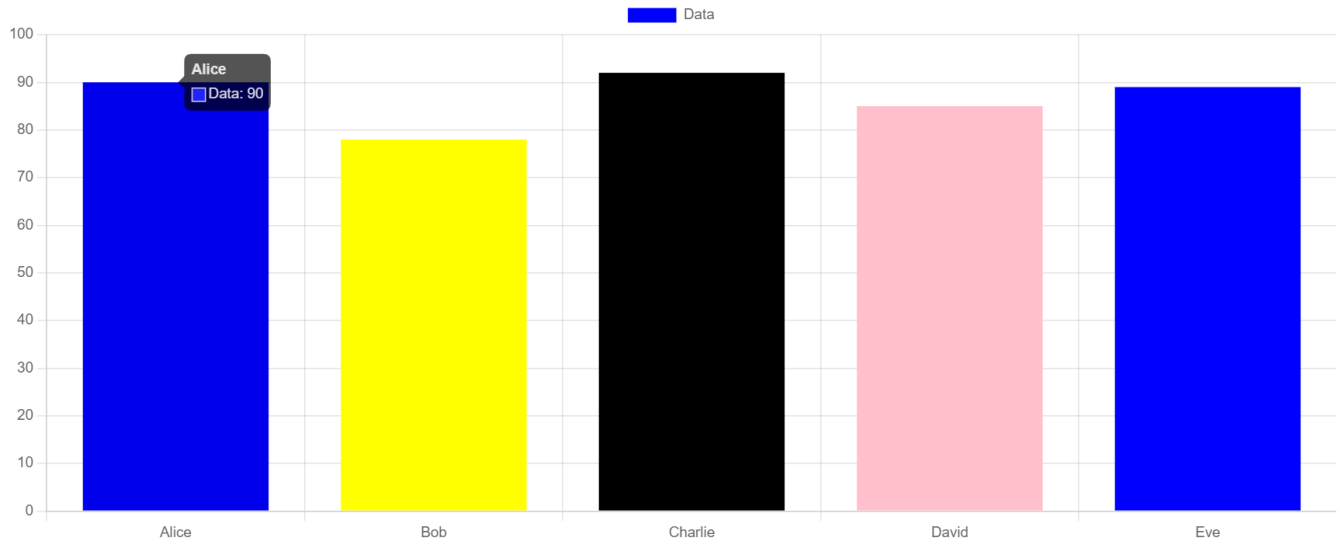
```
                    }]
                };

                var ctx = document.getElementById('myBarChart').getContext('2d');

                new Chart(ctx, {
                    type: 'bar',
                    data: chartData,
                    options: {
                        scales: {
                            y: { beginAtZero: true }
                        }
                    }
                });
            });
        }

        loadFile();
    </script>

</body>

</html>
```

week7a.xml

```
<rows>
    <row>
        <name>Alice</name>
        <score>90</score>
    </row>
    <row>
        <name>Bob</name>
        <score>78</score>
    </row>
    <row>
        <name>Charlie</name>
        <score>92</score>
    </row>
    <row>
        <name>David</name>
        <score>85</score>
    </row>
    <row>
        <name>Eve</name>
        <score>89</score>
    </row>
</rows>
```

OUTPUT:

Week 7: reading data from the xml file



D1	Data Value
Alice	90
Bob	78
Charlie	92
David	85
Eve	89

WEEK – 8

Read JSON Data and draw Data Table and draw Simple Chart

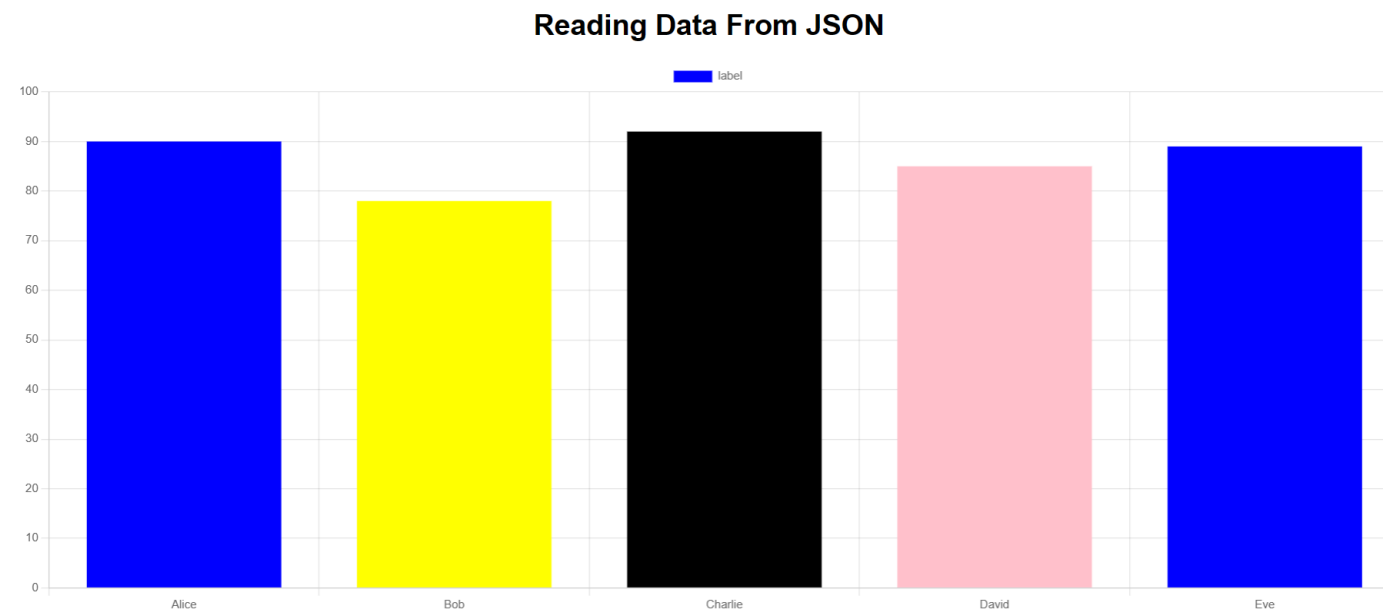
Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Week 8</title>
    <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
    <style>
        /* Your CSS here */
        body {
            color: lightblue;
            font-family: Arial, Helvetica, sans-serif;
            font-size: 25px;
            margin: 40px;
            text-align: center;
        }

        h1 {
            color: black;
            font-size: 30px;
        }

        table {
            margin: 20px;
            border-collapse: collapse;
            width: 60%;
        }

        th,
        td {
            border: 1px solid #e33e3e;
            padding: 8px;
            text-align: left;
        }

        th {
            background-color: #f2f2f2;
        }
    </style>
</head>

<body>
    <h1>Reading Data From JSON</h1>
```

```
<canvas id="mycanvas" height= 40% width= 100%></canvas>

<script type=text/javascript>
    function loadFile(){
        async function fetchJson(url){
            const response = await fetch(url);
            const jsonData = await response.json();
            return jsonData;
        };

        fetchJson('week8a.json').then(jsonData =>{
            const label = jsonData.rows.map(entry => entry.name);
            const value = jsonData.rows.map(entry => entry.score);

            // Create table
            var table = document.createElement('table');
            var thead = document.createElement('thead');
            var tbody = document.createElement('tbody');

            // Create table header
            var headerRow = document.createElement('tr');
            var headerCell1 = document.createElement('th');
            headerCell1.textContent = 'Name';
            var headerCell2 = document.createElement('th');
            headerCell2.textContent = 'Score';

            headerRow.appendChild(headerCell1);
            headerRow.appendChild(headerCell2);
            thead.appendChild(headerRow);
            table.appendChild(thead);

            // Create table rows
            for (var i = 0; i < label.length; i++) {
                var row = document.createElement('tr');
                var cell1 = document.createElement('td');
                cell1.textContent = label[i];
                var cell2 = document.createElement('td');
                cell2.textContent = value[i];

                row.appendChild(cell1);
                row.appendChild(cell2);
                tbody.appendChild(row);
            }

            table.appendChild(tbody);
            document.body.appendChild(table);

            // Your table creation code here

            var chartData = {
                labels : label,
                datasets : [{
                    label : 'label',
```

```
                    backgroundColor: ["blue", "yellow", "black", "pink"],
                    data: value,
                }]
            }
            var ctx = document.getElementById('mycanvas').getContext('2d');

            new Chart(ctx, {
                type: 'bar',
                data: chartData,
                options: {
                    scales: {
                        y: { beginAtZero:true }
                    }
                }
            });
        });
    };
    loadFile();
</script>

</body>

</html>
```

OUTPUT:



Name	Score
Alice	90
Bob	78
Charlie	92
David	85
Eve	89

WEEK 11

Develop Following Program Using HTML5 and Google Charts API and Map API(Consider Market Analysis Data)

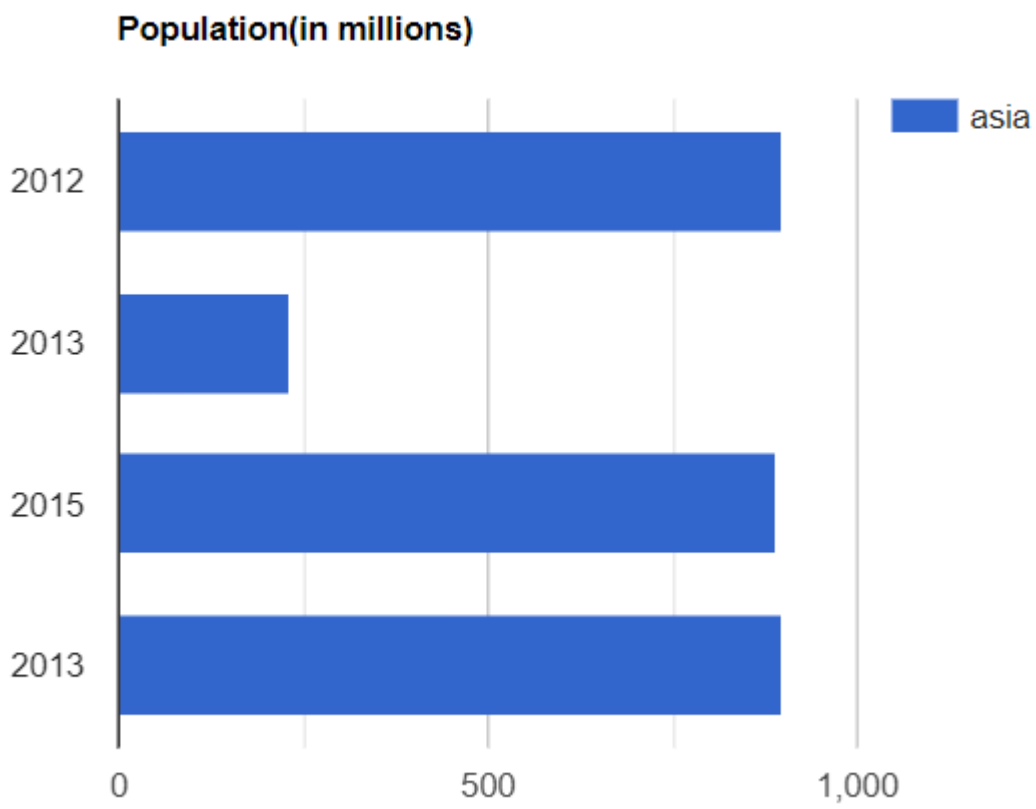
a. Using Google Charts API Basics draw charts like a Bar chart

b. Using Google Charts API Basics draw charts like a Line chart

Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <script type="text/javascript" src="https://www.gstatic.com/charts/loader.js">
    </script>

    <script type="text/javascript">
        google.charts.load('current', { 'packages': ['corechart'] });
    </script>
</head>

<body>
    <div id="c" style="width:400px; height:350px; margin: 0 auto;"></div>

    <script>
        function chart() {
            var data = google.visualization.arrayToDataTable([
                ['year', 'asia'],
                ['2012', 900],
                ['2013', 230],
                ['2015', 890],
                ['2013', 900]
            ]);

            var op = { title: 'Population(in millions)' };
            var chart = new google.visualization.BarChart(document.getElementById("c"));
            chart.draw(data, op);
        }
        google.charts.setOnLoadCallback(chart);
    </script>


</body>

</html>
```

OUTPUT



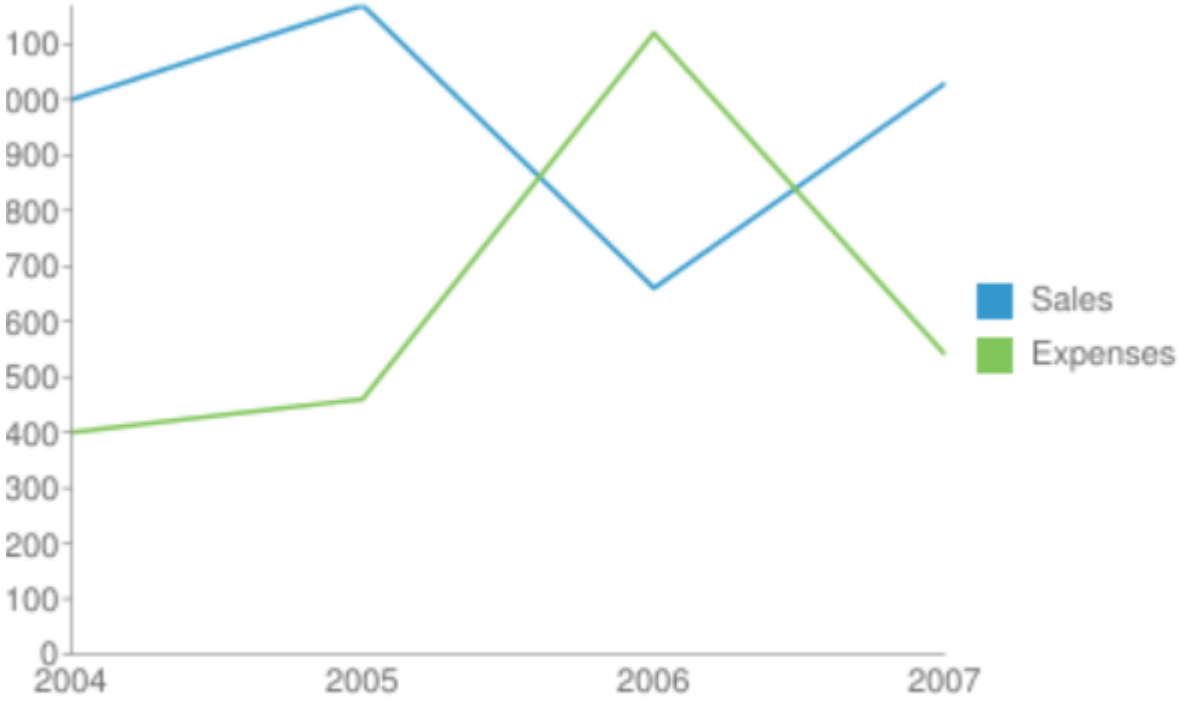
b)

Program:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Week 11b</title>
    <script type = "text/javascript" src="https://www.gstatic.com/charts/loader.js">
    </script>

    <script type = "text/javascript">
        google.charts.load("current", {packages:["imagelinechart"]});
        google.charts.setOnLoadCallback(drawChart);
        function drawChart(){
            var data = google.visualization.arrayToDataTable([
                ['Year', 'Sales', 'Expenses'],
                ['2004', 1000, 400],
                ['2005', 1170, 460],
                ['2006', 660, 1120],
                ['2007', 1030, 540]
            ]);
```

```
            var chart = new
google.visualization.ImageLineChart(document.getElementById('chart_div'));

            chart.draw(data, {width:400, height:240, min: 0});
        }
    </script>
</head>
<body>
    <div id="chart_div" style="width: 400px; height: 240px;"></div>
</body>
</html>
```

OUTPUT



WEEK 12

Develop Following Program Using HTML5 and Google Charts API and Map API(Consider student Data)

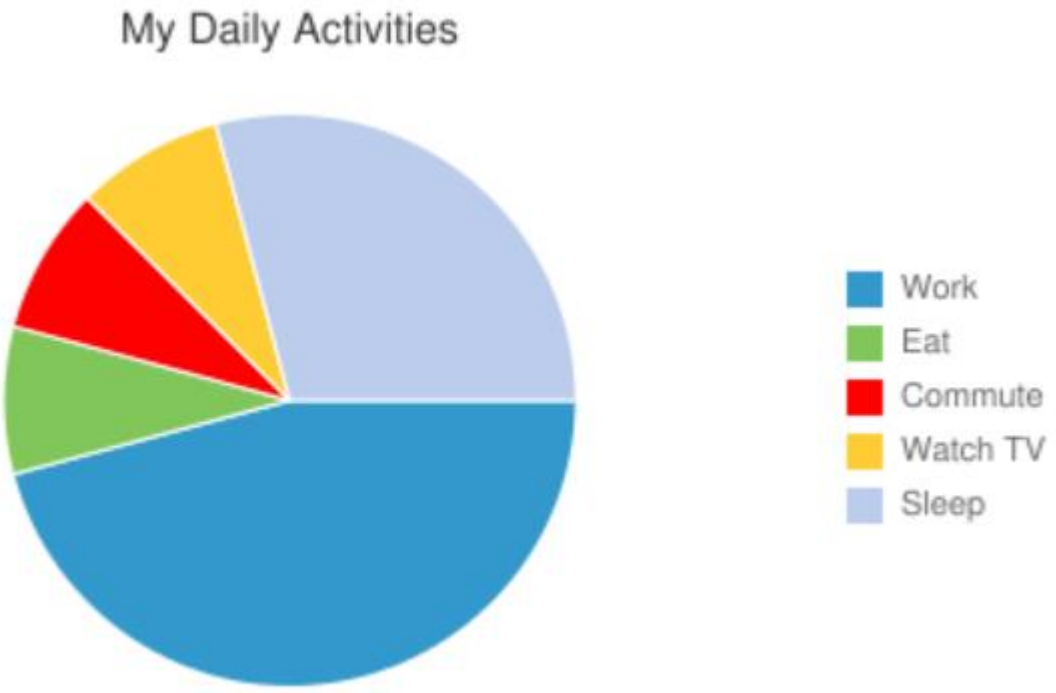
a. Draw PieChart.

b. Draw Donut Chart

Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Document</title>

   <script type="text/javascript" src="https://www.gstatic.com/charts/loader.js"></script>

   <script type="text/javascript">
      google.charts.load("current", { packages: ["imagepiechart"] });

      google.charts.setOnLoadCallback(drawChart);
      function drawChart() {
         var data = google.visualization.arrayToDataTable([
            ['Task', 'Hours per Day'],
            ['Work', 11],
            ['Eat', 2],
            ['Commute', 2],
            ['Watch TV', 2],
            ['Sleep', 7]
         ]);

         var chart = new
google.visualization.ImagePieChart(document.getElementById('Chart_div'));
         chart.draw(data, {width:430, height: 240, title: 'My Daily Activities'});

      }
   </script>
</head>

<body>
   <div id="Chart_div" style="width: 400px; height: 240px;"></div>
</body>

</html>
```

OUTPUT

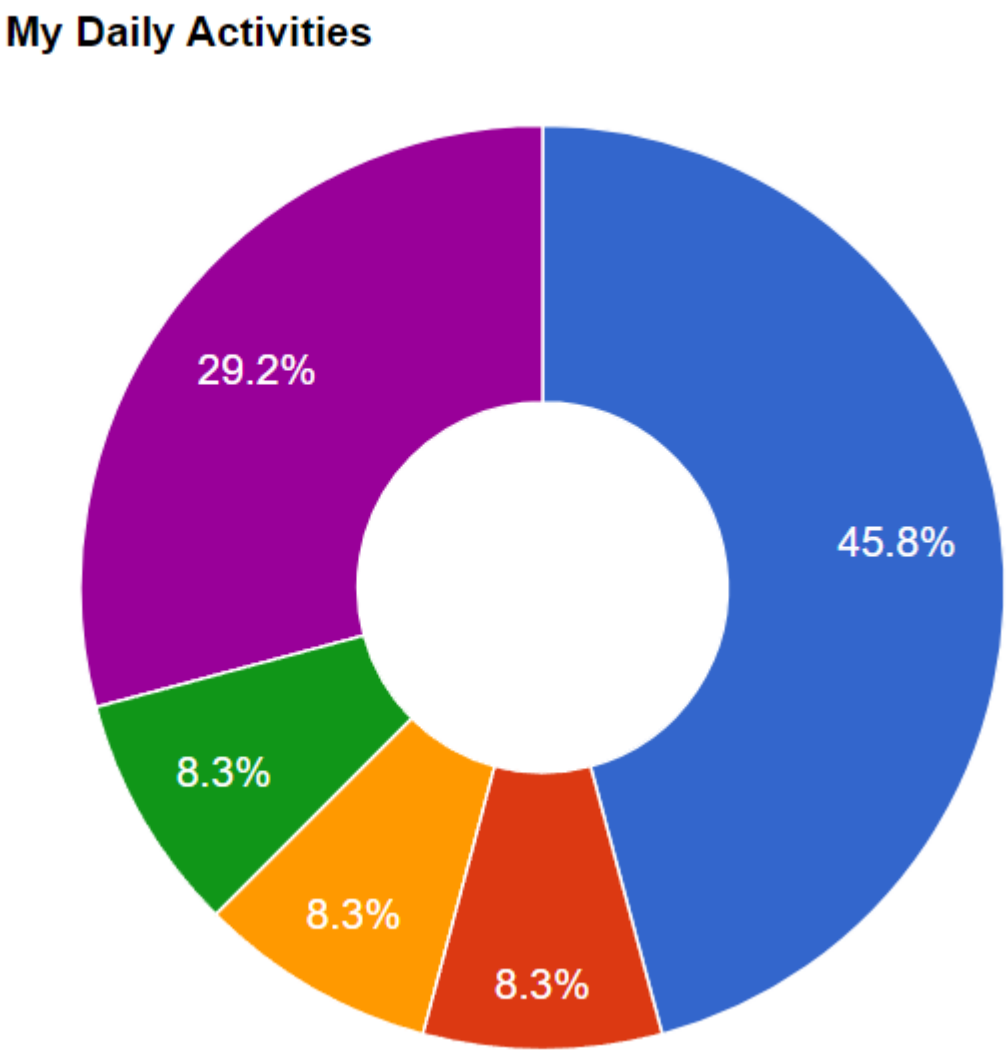


b)
Program:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <script type = "text/javascript"
    src = "https://www.gstatic.com/charts/loader.js"
    ></script>

    <script type="text/javascript">
        google.charts.load("current", {packages:["corechart"]});
        google.charts.setOnLoadCallback(drawchart);

        function drawchart(){
            var data = google.visualization.arrayToDataTable([
                ['Task', 'Hours per Day'],
                ['work', 11],
                ['Eat', 2],
                ['Commute', 2],
                ['Watch TV', 2],
                ['sleep', 7]

            ]);
            var options = {
                title: 'My Daily Activities',
                pieHole: 0.4,
            };
```

```
            var chart = new
google.visualization.PieChart(document.getElementById('donutchart'));
            chart.draw(data, options);
        }

    </script>

</head>
<body>
    <div id = "donutchart" style = "width: 900px; height: 500px">   </div>

</body>
</html>
```

OUTPUT:



WEEK 13

Develop Following Program Using HTML5 and Google Chats API and Map API

a. Draw Candle Chart.

Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>

    <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>

    <script type="text/javascript">
        google.charts.load("current", { packages: ["imagechart"] });
        google.charts.setOnLoadCallback(drawChart);
        function drawChart() {
            var options = {};
            dataTable = google.visualization.arrayToDataTable([
                ['Gainers', 10, 30, 45, 60],
                ['Losers', 20, 35, 25, 45],
            ], true);

            var chart = new
google.visualization.ImageCandlestickChart(document.getElementById('chart_div'));
            chart.draw(dataTable, options);
        }
    </script>
</head>

<body>
    <div id="chart_div" style="width: 400px; height: 240px;"></div>
</body>

</html>
```

OUTPUT:

b. Draw other types of Chart

Program:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>

    <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>

    <script type="text/javascript">
        google.charts.load('current', {
            'packages': ['geochart'],
        });
        google.charts.setOnLoadCallback(drawRegionMap);

        function drawRegionMap() {
            var data = google.visualization.arrayToDataTable([
                ['Country', 'Popularity'],
                ['Germany', 10000],
                ['australia', 900],
                ['United States', 300],
                ['Brazil', 400],
                ['Canada', 500],
                ['France', 600],
                ['RU', 700],
                ['india', 50000]
```

```
            ]);

            var options = {};

            var chart = new
google.visualization.GeoChart(document.getElementById('regions_div'));

            chart.draw(data, options);
        }
    </script>
</head>

<body>
    <div id="regions_div" style="width: 900px; height: 500px;"></div>
</body>

</html>
```

OUTPUT: