WEEK 1

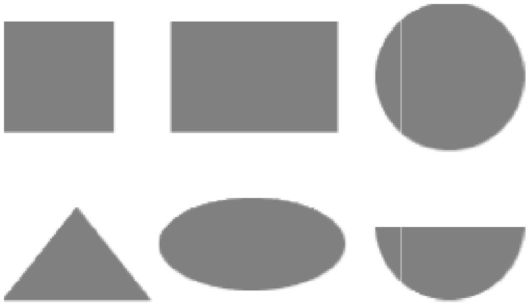
AIM: Develop the different basic Graphical shapes using HTML5 CANVAS

CODE:

```
<!DOCTYPE html>
<html>
<head>
<title>HTML5 canvas shapes</title>
<script>
   function draw() {

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

      ctx.fillStyle = 'gray';
      ctx.fillRect(10, 10, 60, 60);
      ctx.fillRect(100, 10, 90, 60);

      ctx.beginPath();
      ctx.arc(250, 40, 40, 0, 2*Math.PI);
      ctx.fill();

      ctx.beginPath();
      ctx.moveTo(10, 160);
      ctx.lineTo(90, 160);
      ctx.lineTo(50, 110);
      ctx.closePath();
      ctx.fill();

      ctx.save();
      ctx.scale(2, 1);
      ctx.beginPath();
      ctx.arc(72, 130, 25, 0, 2*Math.PI);
      ctx.fill();
      ctx.restore();

      ctx.beginPath();
```

```
        ctx.arc(250, 120, 40, 0, Math.PI);
        ctx.fill();
    }
</script>
</head>

<body onload="draw();">
<canvas id="myCanvas" width="350" height="350">
</canvas>
</body>


</html>
```

OUTPUT:



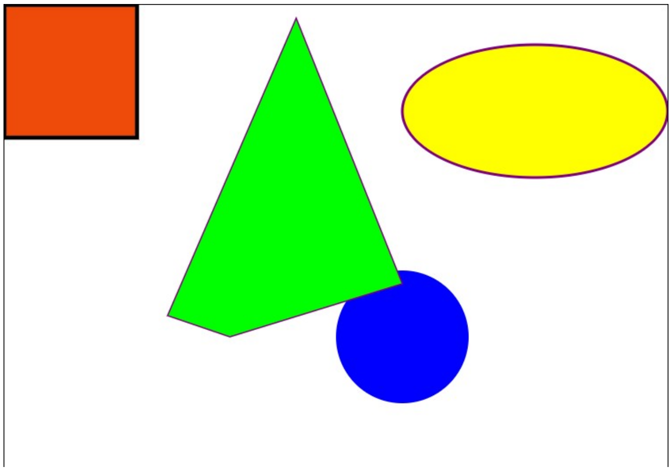
WEEK 2

AIM: Develop the different basic Graphical shapes using HTML5 SVG

CODE:

```
<!DOCTYPE html>
<html>
<body>
<svg width="500px" height="300px">
<circle cx="300" cy="250" r="50" fill="blue"></circle>
 <rect width="100" 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:1" />
<ellipse cx="400" cy="80" rx="100" ry="50" style="fill:yellow;stroke:purple;stroke-width:2" />
 </svg>
 </body>
</html>
```

OUTPUT:



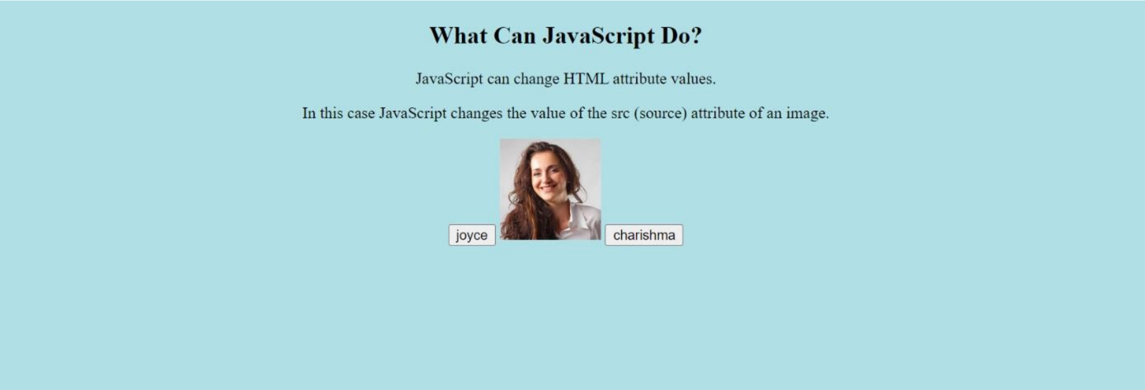
WEEK-3

AIM: Develop javaScript code that receives input from user,and gets in action based on user input HTML5 and java Script

CODE:

```
<!DOCTYPE html>
<html>
<head>
   <style>
      body{
      background-color:Powderblue;
      text-align:center;
      }
    img{
      width: 200px;
      height: 100px;
    }
   </style>
</head>
<body>
<h2>What Can JavaScript Do?</h2>
<p>JavaScript can change HTML attribute values.</p>
<p>In this case JavaScript changes the value of the src (source) attribute of an image.</p>
<button  onclick="document.getElementById('myImage').src='img_2.jpg'">joyce</button>
<img id="myImage" src="IMG_20210422_103737.jpg" style="width:100px">
<button
onclick="document.getElementById('myImage').src='IMG_20210422_103737.jpg'">charish
ma</button>
</body></html>
```

OUTPUT:



What Can JavaScript Do?

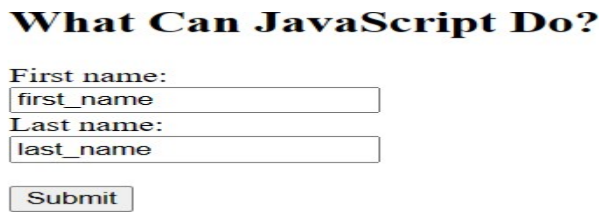
JavaScript can change HTML attribute values.

In this case JavaScript changes the value of the src (source) attribute of an image.

CODE:

```
<!DOCTYPE html>

<html>

<body>

<h2>What Can JavaScript Do?</h2>

<form action="/action_page.php">

  <label for="fname">First name:</label><br>

  <input type="text" id="fname" name="fname" value="first_name"><br>

  <label for="lname">Last name:</label><br>

  <input type="text" id="lname" name="lname" value="last_name"><br><br>

  <input type="submit" value="Submit">

</form>

</body>

</html>
```

OUTPUT:



What Can JavaScript Do?

First name:

first_name

Last name:

last_name

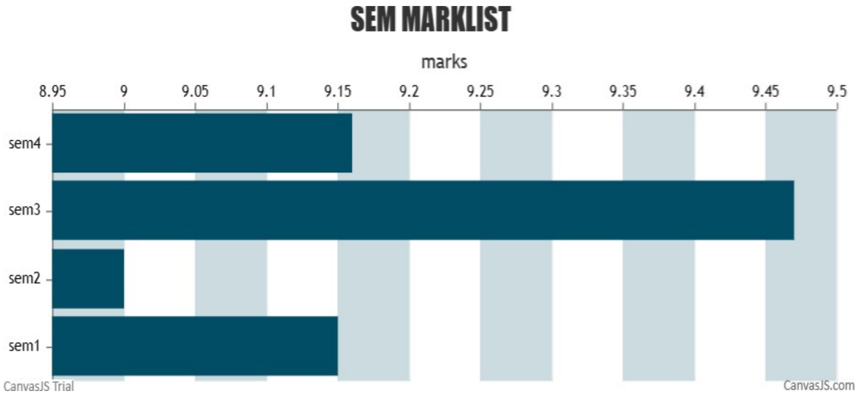
WEEK-4

AIM: Develop the simple bar chart using HTML5 CANVAS

CODE:

```
<!DOCTYPE HTML>

<html>

<head>

<script>

window.onload = function () {

        var chart = new CanvasJS.Chart("chartContainer", {

        animationEnabled: true,


        title:{

                text:"SEM MARKLIST"

        },

        axisX:{

                interval: 1

        },

        axisY2:{

                interlacedColor: "rgba(1,77,101,.2)",

                gridColor: "rgba(1,77,101,.1)",

                title: "marks"

        },

        data: [{

                type: "bar",

                name: "marks",

                axisYType: "secondary",
                color: "#014D65",
                dataPoints: [
                        { y: 9.15, label: "sem1" },
                        { y: 9, label: "sem2" },
                        { y: 9.47, label: "sem3" },
                        { y: 9.16, label: "sem4" },
                ]
        }]
});
chart.render()
}
</script>
</head>
<body>
<div id="chartContainer" style="height: 300px; width: 100%;"></div>
<script src="https://canvasjs.com/assets/script/canvasjs.min.js"></script>
</body>
</html>
```

OUTPUT:



WEEK-5

AIM: Read the data from .txt file and draw table and draw a bar chart.

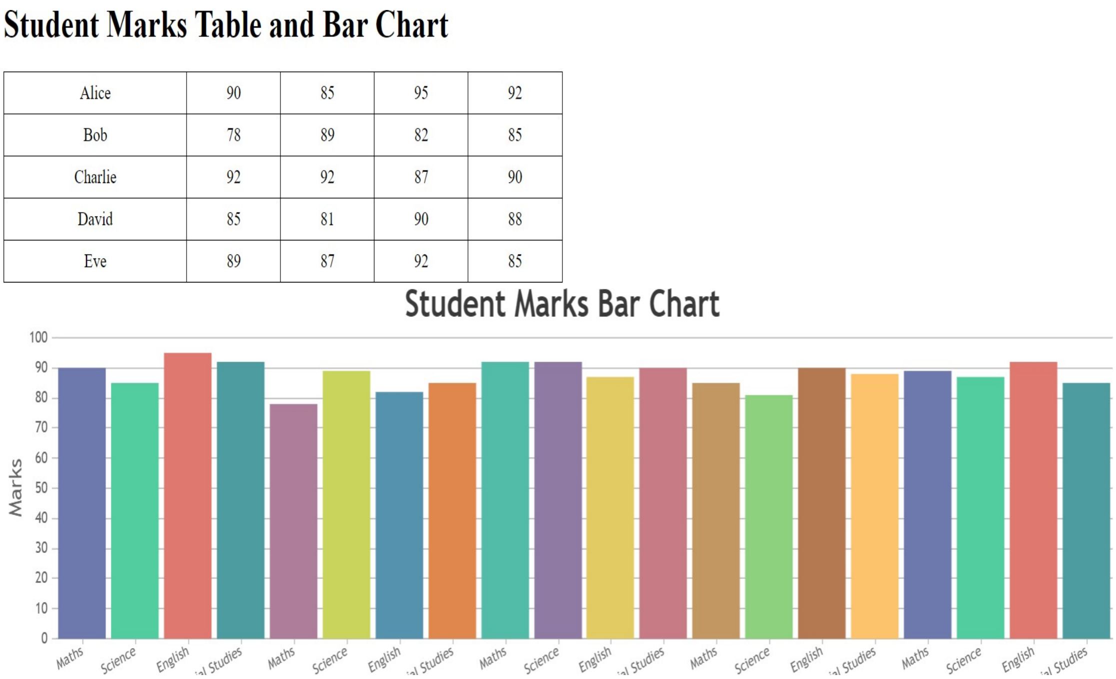
CODE:

```
<!DOCTYPE html>
<html>
 <head>
  <title>Table and Bar Chart using CanvasJS</title>
  <script src="https://canvasjs.com/assets/script/canvasjs.min.js"></script>
  <style>
   table {
                    border-collapse: collapse;
                    width: 50%;
                    text-align: center;
             }
             th, td {
                    padding: 8px;
                    border: 1px solid black;
             }
             th {
                    background-color: #ddd;
             }
  </style>
 </head>
 <body>
  <h1>Student Marks Table and Bar Chart</h1>
  <table id="table"></table>
  <div id="chartContainer" style="height: 370px; width: 100%;"></div>
  <script>
   // Define the URL of the data file
  var dataFile = "marks.txt";

  // Define the function to load the data
  function loadData(callback) {
   var xhr = new XMLHttpRequest();
   xhr.onreadystatechange = function() {
    if (xhr.readyState === 4 && xhr.status === 200) {
     callback(xhr.responseText);
    }
   };
   xhr.open("GET", dataFile, true);
   xhr.send();
  }

  // Load the data and draw the table and bar chart
  loadData(function(data) {
   var rows = data.split("\n");
   var headers = rows[0].split(",");
   var table = document.getElementById("table");
   var chartData = [];
   for (var i = 1; i < rows.length; i++) {
    var values = rows[i].split(",");
    var row = document.createElement("tr");
    for (var j = 0; j < values.length; j++) {
     var cell = document.createElement("td");
     cell.textContent = values[j];
     row.appendChild(cell);
     if (j > 0) {
      chartData.push({ label: headers[j], y: parseInt(values[j]) });
     }
    }
    table.appendChild(row);
   }
   var chart = new CanvasJS.Chart("chartContainer", {
    animationEnabled: true,
    theme: "light2",
    title: {
     text: "Student Marks Bar Chart"
    },
    axisY: {
     title: "Marks",
     includeZero: true
    },
    axisX: {
     title: "Subjects"
    },
    data: [{
     type: "column",
     dataPoints: chartData
    }]
   });
   chart.render();
  });

  </script>
 </body>
</html>
```

Marks.txt

```
Name,Maths,Science,English,Social Studies

Alice,90,85,95,92

Bob,78,89,82,85

Charlie,92,92,87,90

David,85,81,90,88

Eve,89,87,92,85
```

Output:



Student Marks Table and Bar Chart

Alice	90	85	95	92
Bob	78	89	82	85
Charlie	92	92	87	90
David	85	81	90	88
Eve	89	87	92	85

WEEK-6

AIM: Read the data from .csv file and draw table and draw a bar chart.

CODE:

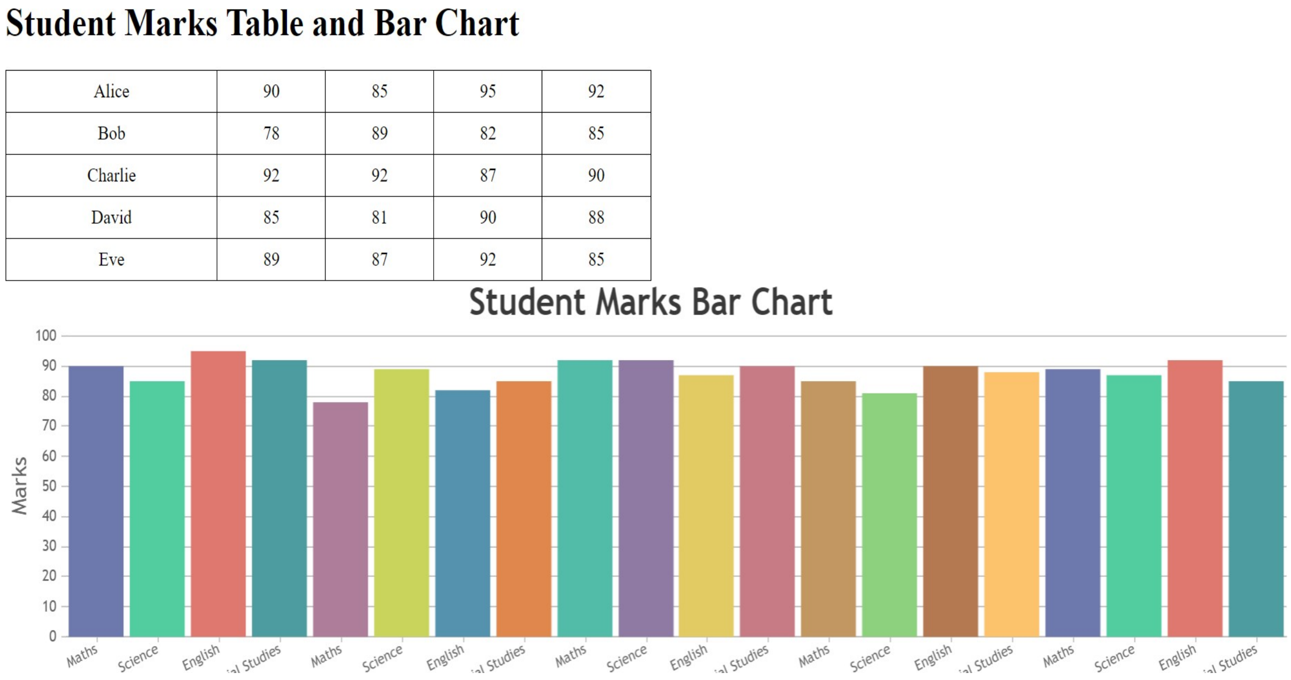
```
<!DOCTYPE html>
<html>
 <head>
  <title>Table and Bar Chart using CanvasJS</title>
  <script src="https://canvasjs.com/assets/script/canvasjs.min.js"></script>
       <style>
   table {
                    border-collapse: collapse;
                    width: 50%;
                    text-align: center;
             }
             th, td {
                    padding: 8px;
                    border: 1px solid black;
             }
             th {
                    background-color: #ddd;
             }
       </style>
 </head>
 <body>
  <h1>Student Marks Table and Bar Chart</h1>
  <table id="table"></table>
  <div id="chartContainer" style="height: 370px; width: 100%;"></div>
  <script>
             // Define the URL of the data file
             var dataFile = "data.csv";

             // Define the function to load the data
             function loadData(callback) {
             var xhr = new XMLHttpRequest();
             xhr.onreadystatechange = function() {
                    if (xhr.readyState === 4 && xhr.status === 200) {
                    callback(xhr.responseText);
                    }
             };
             xhr.open("GET", dataFile, true);
```

```
                xhr.send();
                }

                // Load the data and draw the table and bar chart
                loadData(function(data) {
                var rows = data.split("\n");
                var headers = rows[0].split(",");
                var table = document.getElementById("table");
                var chartData = [];
                for (var i = 1; i < rows.length; i++) {
                        var values = rows[i].split(",");
                        var row = document.createElement("tr");
                        for (var j = 0; j < values.length; j++) {
                        var cell = document.createElement("td");
                        cell.textContent = values[j];
                        row.appendChild(cell);
                        if (j > 0) {
                                chartData.push({ label: headers[j], y: parseInt(values[j]) });
                        }
                        }
                        table.appendChild(row);
                }
                var chart = new CanvasJS.Chart("chartContainer", {
                        animationEnabled: true,
                        theme: "light2",
                        title: {
                                text: "Student Marks Bar Chart"
                        },
                        axisY: {
                                title: "Marks",
                                includeZero: true
                        },
                        axisX: {
                                title: "Subjects"
                        },
                        data: [{
                                type: "column",
                                dataPoints: chartData
                        }]
                });
                chart.render();
                });

        </script>
 </body>
</html>
```

Data.csv

```
Name,Maths,Science,English,Social Studies

Alice,90,85,95,92

Bob,78,89,82,85

Charlie,92,92,87,90

David,85,81,90,88

Eve,89,87,92,85
```

OUTPUT:



Student Marks Table and Bar Chart

Alice	90	85	95	92
Bob	78	89	82	85
Charlie	92	92	87	90
David	85	81	90	88
Eve	89	87	92	85

Student Marks Bar Chart

Week-7

Aim: Read the data XML file and draw Draw Data Table and draw Column Bar Chart

Program:

Html:

```
<!DOCTYPE html>

<html>

<head>

	<title>XML Data Table and Chart Example</title>

	<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

	<script src="https://cdn.jsdelivr.net/npm/chart.js@2.9.4"></script>

	<script src="week7.js"></script>

	<style>

		table, th, td {

			border: 1px solid black;

			border-collapse: collapse;

			padding: 5px;

		}

		canvas {

			max-width: 600px;

			margin-top: 20px;

		}

	</style>

</head>

<body>

	<h1>XML Data Table and Chart Example</h1>
```

```
      <input type="file" id="xmlFile">
      <div id="tableContainer"></div>
      <canvas id="chartCanvas"></canvas>
</body>
</html>
```

Js:

```
$(document).ready(function() {
  $('#xmlFile').on('change', function() {
    var file = this.files[0];
    var reader = new FileReader();
    reader.onload = function() {
      var xml = $.parseXML(reader.result);
      var data = [];
      var labels = [];
      $(xml).find('person').each(function() {
        var name = $(this).find('name').text();
        var age = parseInt($(this).find('age').text());
        data.push(age);
        labels.push(name);
      });
      $('#tableContainer').empty().append(createTable(xml));
      $('#chartCanvas').replaceWith('<canvas id="chartCanvas"></canvas>');
      createChart(labels, data);
      $('#chartCanvas').show();
    }
    reader.readAsText(file);
```

```
});


function createTable(xml) {
    var table = $('<table></table>');
    var header = $('<tr></tr>');
    header.append('<th>Name</th>');
    header.append('<th>Age</th>');
    header.append('<th>Gender</th>');
    table.append(header);
    $(xml).find('person').each(function() {
        var row = $('<tr></tr>');
        row.append('<td>' + $(this).find('name').text() + '</td>');
        row.append('<td>' + $(this).find('age').text() + '</td>');
        row.append('<td>' + $(this).find('gender').text() + '</td>');
        table.append(row);
    });
    return table;
}
function createChart(labels, data) {
    var ctx = $('#chartCanvas');
    var myChart = new Chart(ctx, {
        type: 'bar',
        data: {
            labels: labels,
            datasets: [{
                label: 'Age',
          data: data,
          backgroundColor: 'rgba(54, 162, 235, 0.2)',
          borderColor: 'rgba(54, 162, 235, 1)',
          borderWidth: 1
        }]
      },
      options: {
        scales: {
          yAxes: [{
            ticks: {
              beginAtZero: true
            }
          }]
        }
      }
    });
  }
});
```

Json:

```
<?xml version="1.0"?>
<persons>
    <person>
        <name>John</name>
        <age>25</age>
        <gender>Male</gender>
    </person>
    <person>
        <name>Jane</name>
        <age>30</age>
        <gender>Female</gender>
    </person>
    <person>
        <name>Bob</name>
        <age>40</age>
        <gender>Male</gender>
    </person>
    <person>
        <name>Susan</name>
        <age>50</age>
        <gender>Female</gender>
    </person>
</persons>
```

Week-8

Aim:Read json Data and Draw Data Table and draw simple Chart

Program:

HTML:

```
<!DOCTYPE html>

<html>

<head>

        <title>JSON Data Table and Chart Example</title>

        <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

        <script src="https://cdn.jsdelivr.net/npm/chart.js@2.9.4"></script>

        <script src="week8.js"></script>

        <style>

                table, th, td {

                        border: 1px solid black;

                        border-collapse: collapse;

                        padding: 5px;

                }

                canvas {

                        max-width: 600px;

                        margin-top: 20px;

                }

        </style>

</head>

<body>

        <h1>JSON Data Table and Chart Example</h1>

        <input type="file" id="jsonFile">
```

```
            <div id="tableContainer"></div>
            <canvas id="chartCanvas"></canvas>
</body>
</html>
```

Js:

```
$(document).ready(function() {
    $('#jsonFile').on('change', function() {
        var file = this.files[0];
        var reader = new FileReader();
        reader.onload = function() {
            var data = JSON.parse(reader.result);
            var labels = [];
            var values = [];
            for (var i = 0; i < data.length; i++) {
                labels.push(data[i].name);
                values.push(data[i].age);
            }
            $('#tableContainer').empty().append(createTable(data));
            $('#chartCanvas').replaceWith('<canvas id="chartCanvas"></canvas>');
            createChart(labels, values);
            $('#chartCanvas').show();
        }
        reader.readAsText(file);
    });

    function createTable(data) {
```

```
    var table = $('<table></table>');
    var header = $('<tr></tr>');
    header.append('<th>Name</th>');
    header.append('<th>Age</th>');
    header.append('<th>Gender</th>');
    table.append(header);
    for (var i = 0; i < data.length; i++) {
        var row = $('<tr></tr>');
        row.append('<td>' + data[i].name + '</td>');
        row.append('<td>' + data[i].age + '</td>');
        row.append('<td>' + data[i].gender + '</td>');
        table.append(row);
    }
    return table;
}
function createChart(labels, values) {
    var ctx = $('#chartCanvas');
    var myChart = new Chart(ctx, {
        type: 'bar',
        data: {
            labels: labels,
            datasets: [{
                label: 'Age',
                data: values,
                backgroundColor: 'rgba(54, 162, 235, 0.2)',
                borderColor: 'rgba(54, 162, 235, 1)',
                    borderWidth: 1
                }]
            },
            options: {
                scales: {
                    yAxes: [{
                        ticks: {
                            beginAtZero: true
                        }
                    }]
                }
            }
        });
    }
});
```

JSON:

```
[
 {    "name": "John Doe",    "age": 32,    "gender": "Male"  },
 {    "name": "Jane Smith",    "age": 25,    "gender": "Female"  },
 {    "name": "Bob Johnson",    "age": 42,    "gender": "Male"  }
]
```

Week-11

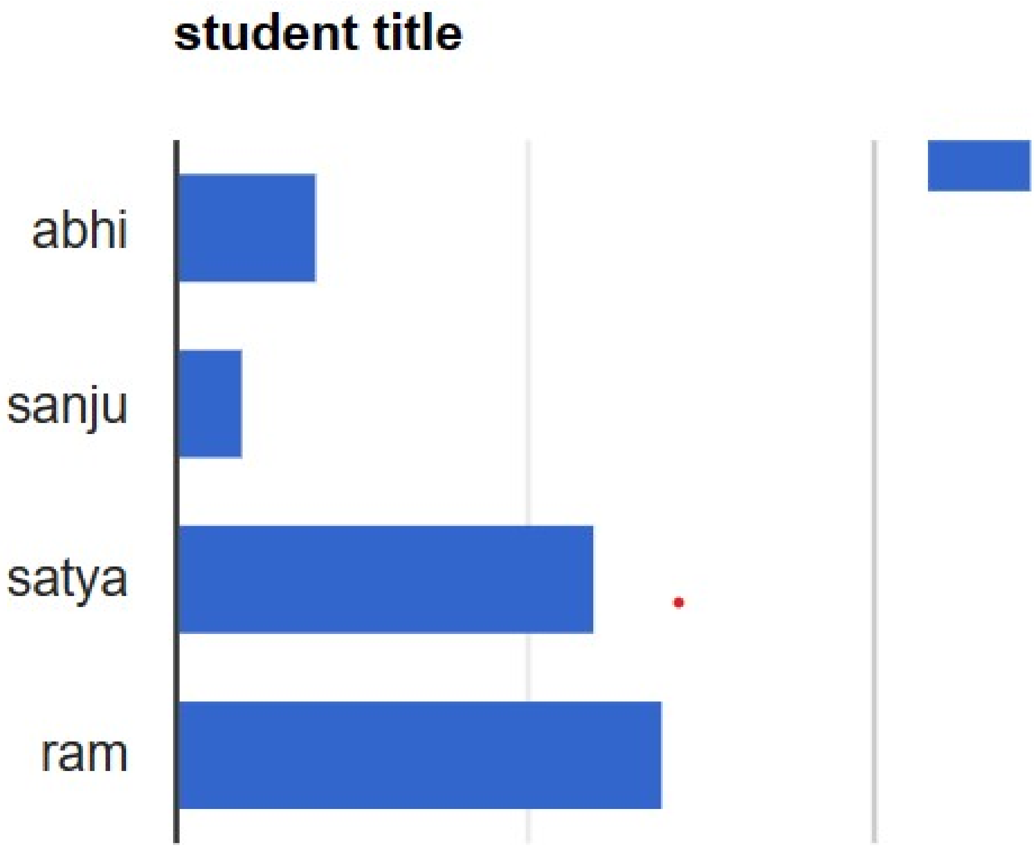
Week 11:- Develop Following Program Using HTML5 and Google Charts API and Map API(Consider Market Analysis Data)

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

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

code:-

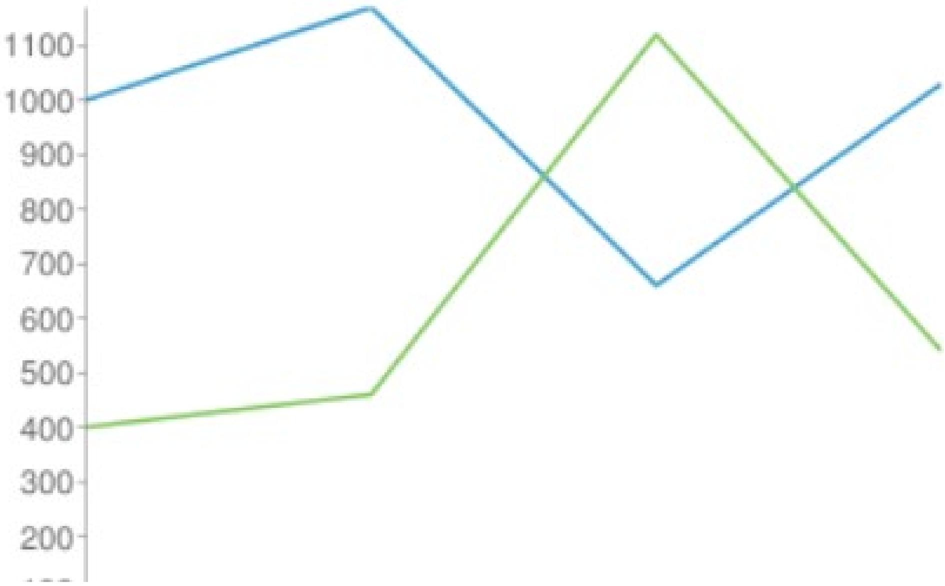
```
<!DOCTYPE html>

<html lang="en">

<head>

   <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:200px;heigth:350px;margin:0 auto"></div>

  <script language="Javascript">

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>
```



b).

code:-

```
<html>
<head>
   <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>
```



WEEK-12

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

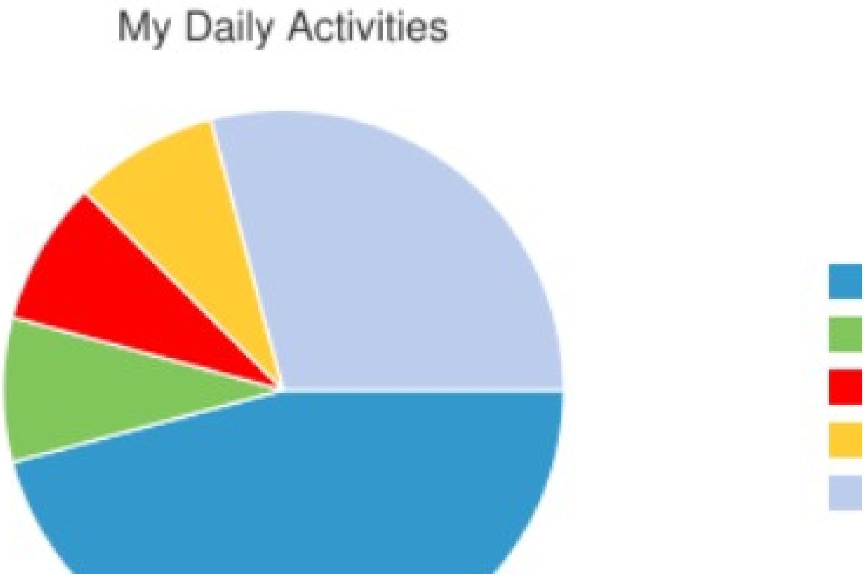
a. Draw PieChart.

b. Draw Donut Chart.

a.)Code:-

```
<html>
  <head>
    <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'));
```

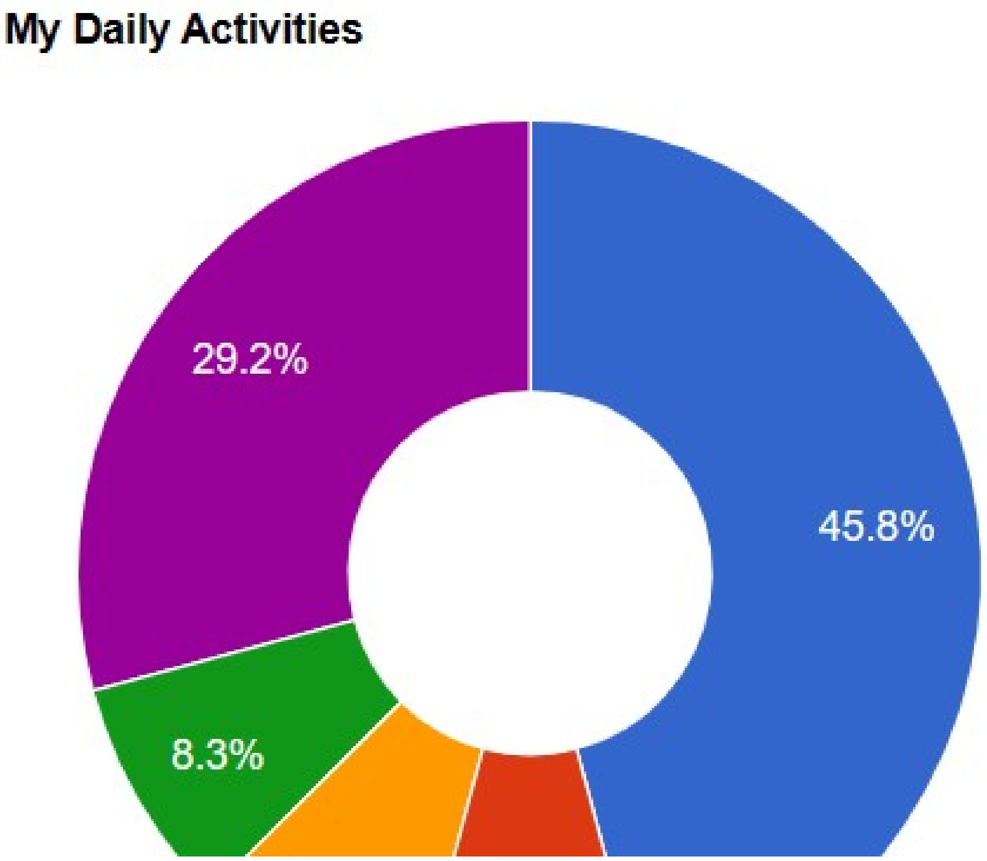
```
        chart.draw(data, {width: 430, height: 240, title: 'My Daily Activities'});
      }
    </script>
  </head>
  <body>
    <div id="chart_div" style="width: 400px; height: 240px;"></div>
  </body>
</html>
```



b)

```
<html>
 <head>
  <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>
```


My Daily Activities
29.2%
45.8%
8.3%

Week 13

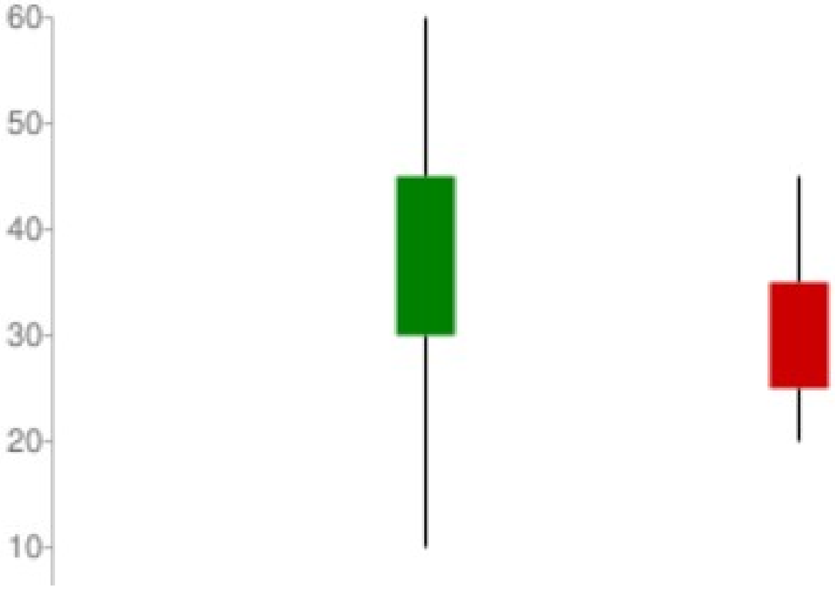
Aim:- Develop Following Program Using HTML5 and Google Chats API and Map API

a. Draw Candle Chart.

b. Draw other types of Chart

CODE:-

```
<html>
  <head>
    <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>
```


60
50
40
30
20
10

b)

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