

# D3.js

- description : D3.js
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## Chart libraries for javascript

1. [D3](#)
2. [GOOGLE CHART](#)
3. [AMCHARTS](#)
4. [JSCharting](#)
5. [HIGHCHARTS](#)

## D3.js ?

Data - Driven Documents , Javascript .  
 가 .

- [D3](#)
- [CDN](#)

```
<script src="https://d3js.org/d3.v5.min.js"></script> //d3.js v.5
```

- d3.select() : .
- d3.selectAll() : .
- .data() : 가 .
- .enter() : 가 ,
- .append() : 가 .

- ( )

# Chart.js

[Chart.js](#)

CDN

```
<script src="https://cdn.jsdelivr.net/npm/chart.js@2.8.0"></script>
```

## Chart.js

- 

Line Chart



```

<div>
  <canvas id="myChart" width="700" height="400"></canvas> // 가
</div>

<script>
  var config = new
Chart(document.getElementById("myChart").getContext('2d'),{
  type: 'line', //
  data: {
    labels: ['January', 'February', 'March', 'April', 'May',
'June', 'July'],
    datasets: [{ // datasets
      label: 'My First dataset'
      , backgroundColor: 'rgba(255, 99, 132, 0.2)'
      , borderColor: 'rgb(255, 99, 132)'
      , data: [51, 33, 60, 25, 80, 40, 77]
      , fill: true
    }
  ],
  options: {
    responsive: false, // . false
    , canvas . default = true =

    title: {
      display: true,
      text: 'Chart.js Line Chart'
    }
  }
});

```

```

    },
    scales: {
      xAxes: [{
        display: true, // x
        scaleLabel: { //
          display: true, //
          labelString: 'Month' //
        }
      }],
      yAxes: [{
        display: true,
        scaleLabel: {
          display: true,
          labelString: 'Value'
        },
        ticks: {
          beginAtZero: false, // true y 0
          // y
          // stepSize: 10
        }
      }],
    }
  });

```

## Radar Chart



```

<div style="width: 700px; height: 700px;">
  <canvas id="myChart"></canvas>
</div>

<script>
  var ctx = document.getElementById("myChart").getContext('2d');
  var radarOptions = {
    maintainAspectRatio: false // false canvas가 div
    가 . default = true.
    , title: {
      display: true,
      text: '== RADAR CHART =='
    }
    , scale: {
      angleLines: {
        display: true //
      }
    }
  }
</script>

```

```

var myChart = new Chart(ctx, {
  type: 'radar',
  data: {
    labels: ["Red", "Blue", "Yellow", "Green", "Purple",
"Orange", "Navy"],
    datasets: [{
      label: '# first'
      , data: [51, 33, 60, 25, 80, 40, 77]
      , fill: true
      , backgroundColor: 'rgba(255, 99, 132, 0.2)'
      , borderColor: 'rgb(255, 99, 132)'
      , borderWidth: 2
    }
    ,{
      label: '# second'
      , data: [21, 10, 79, 82, 55, 46, 22]
      , fill: true
      , backgroundColor: 'rgba(54, 162, 235, 0.2)'
      , borderColor: 'rgb(54, 162, 235)'
      , borderWidth: 2
    }
  ]
},
options: radarOptions
});
</script>

```

### JSON

```

<div style="width: 700px; height: 700px;">
  <canvas id="myChart"></canvas>
</div>

<script>
  // JSON
  var jsonData = [{
    "siteId": "P001"
    , "siteNm": " "
    , "stdCount": 340
  }
  , {
    "siteId": "P002"
    , "siteNm": " "
    , "stdCount": 275
  }
  , ...
  ]

  // value key 가

```

```

    var labels = jsonData.map(function(e) {
        return e.siteNm; // return " "
    });

    var config = new
Chart(document.getElementById("myChart").getContext('2d'),{
    type: 'line',
    data: {
        labels: labels, // 가
        datasets: [{
            label: 'My First dataset'
            , backgroundColor: 'rgba(255, 99, 132, 0.2)'
            , borderColor: 'rgb(255, 99, 132)'
            , data: [51, 33, 60, 25, 80, 40, 77]
            , fill: true
        }
        ]
    },
    //

```

## Doughnut Chart



```

<div>
  <canvas id="myChart" width="900px" height="500px"></canvas>
</div>

<script>
  var ctx = document.getElementById('myChart').getContext('2d');

  var jsonData = [{
    "departId": "001"
    , "departNm": " "
    , "count": 48
  }
  , {
    "departId": "002"
    , "departNm": " "
    , "count": 6
  }
  , ...
  ]

  var data = jsonData.map(function(e) {
    return e.count;
  });
  var label = jsonData.map(function(e) {
    return e.departNm;

```

```

    });

    var config = {
      type: 'doughnut',
      data: {
        datasets: [{
          data: data,
          backgroundColor: ['#ff6384', '#ff9f40', '#ffcd56',
'#4bc0c0', '#36a2eb',]
        }],
        labels: label
      },
      options: {
        rotation: 1 * Math.PI, // rotation circumference
1 * Math.PI 가
        circumference: 1 * Math.PI,
        cutoutPercentage: 60, // 가
.0
        responsive: false,
        legend: {
          position: 'top', //
'top', 'left', 'bottom', 'right'.
          labels: {
            fontSize: 16, //
            boxWidth: 50, //
padding: 15 //
          }
        },
        title: {
          display: true,
          text: ' 가 ',
          fontSize: 25 //
        },
        animation: {
          animateScale: true, // true
          animateRotate: true // true
        }
      }
    };

    var doughnut = new Chart(ctx, config);
</script>

```

### Bubble Chart



```

    <div>
      <canvas id="myChart"></canvas>
    </div>

    <script>

    var options = {
      maintainAspectRatio: false,
      type: 'bubble',
      options: {
        responsive: true,
        aspectRatio: 3, // 가 : .1
        // . canvas css 가 .
        title: {
          display: true,
          text: 'BUBBLE CHART',
          fontSize: 20
        },
      },
    },
    data: {
      datasets: [ // dataset 가
        {
          label: 'Tony',
          data: [
            {
              x: 3, // x .
              y: 5, // y .
              r: 20 // .
            }
          ],
          backgroundColor: "rgba(255, 99, 132, 0.5)",
          hoverBackgroundColor: "rgba(255, 99, 132, 2)" //
        },
        {
          label: 'Captain',
          data: [
            {
              x: 3.7,
              y: 4,
              r: 90
            }
          ],
          backgroundColor: "rgba(255, 19, 200, 0.5)",
          hoverBackgroundColor: "rgba(255, 19, 200, 2)"
        },
        {
          label: 'Thor',
          data: [
            {

```

```

        x: 2.1,
        y: 6,
        r: 18
      },
    ],
    backgroundColor: "rgba(255, 99, 132, 0.5)",
    hoverBackgroundColor: "rgba(255, 99, 132, 2)"
  }, ...
]
}
}

var ctx = document.getElementById('myChart').getContext('2d');
new Chart(ctx, options);

</script>

```

R&D

## Ref

D3.js

eleven, , D3.js, d3, chart.js,

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