



Highcharts JS

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March 24, 2015



What is Highcharts JS ?

- **JavaScript library** offering an easy way of adding **interactive charts** to your web application.

MAKE **YOUR DATA** COME ALIVE

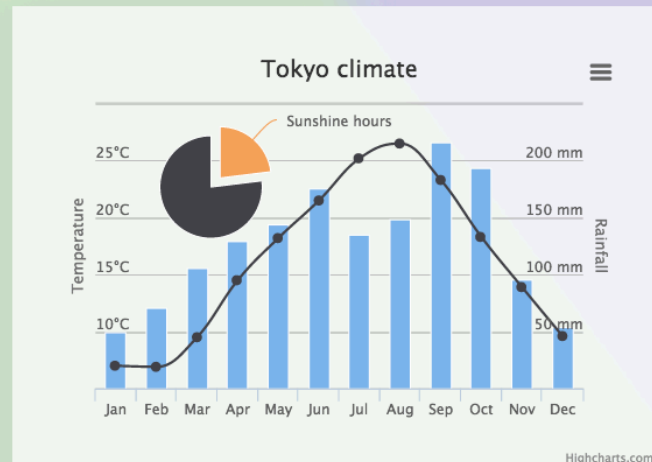
HIGHCHARTS

Create interactive charts easily for your web projects.

Used by tens of thousands of developers and 61 out of the world's 100 largest companies, Highcharts is the simplest yet most flexible charting API on the market.

[READ MORE »](#)

[DOWNLOAD »](#)



Features (1)



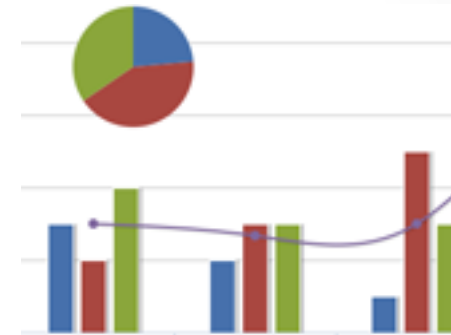
- COMPATIBLE
- FREE FOR NON-COMMERCIAL
- OPEN
- PURE JAVASCRIPT

free!

```
pe="text/javascript"  
j>  
pe="text/javascript"  
->  
pe="text/javascript"  
ebsite specific code  
1/1/2012 10:10:10 AM
```

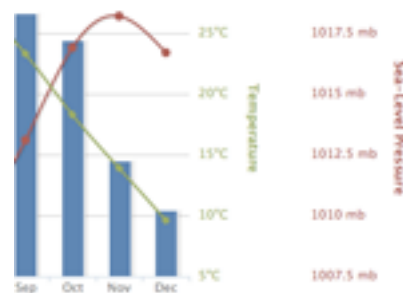


Features (2)



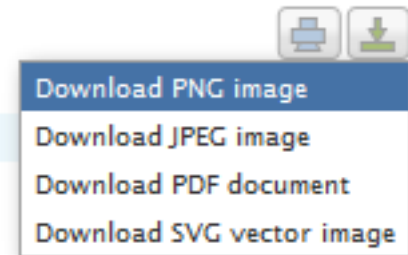
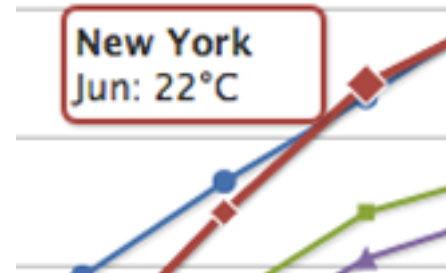
- NUMEROUS CHART TYPES
- SIMPLE CONFIGURATION SYNTAX
- DYNAMIC
- MULTIPLE AXES

```
options: {  
  chart: {  
    renderTo: 'container',  
    defaultSeriesType: 'line',  
    margin: [50, 150, 60, 80],  
  },  
  title: {  
    text: 'Monthly Average 1',  
    style: {  
      margin: '10px 100px',  
    },  
  },  
}
```



Features (3)

- TOOLTIP LABELS
- DATETIME AXIS
- EXPORT AND PRINT
- ZOOMING



What we need

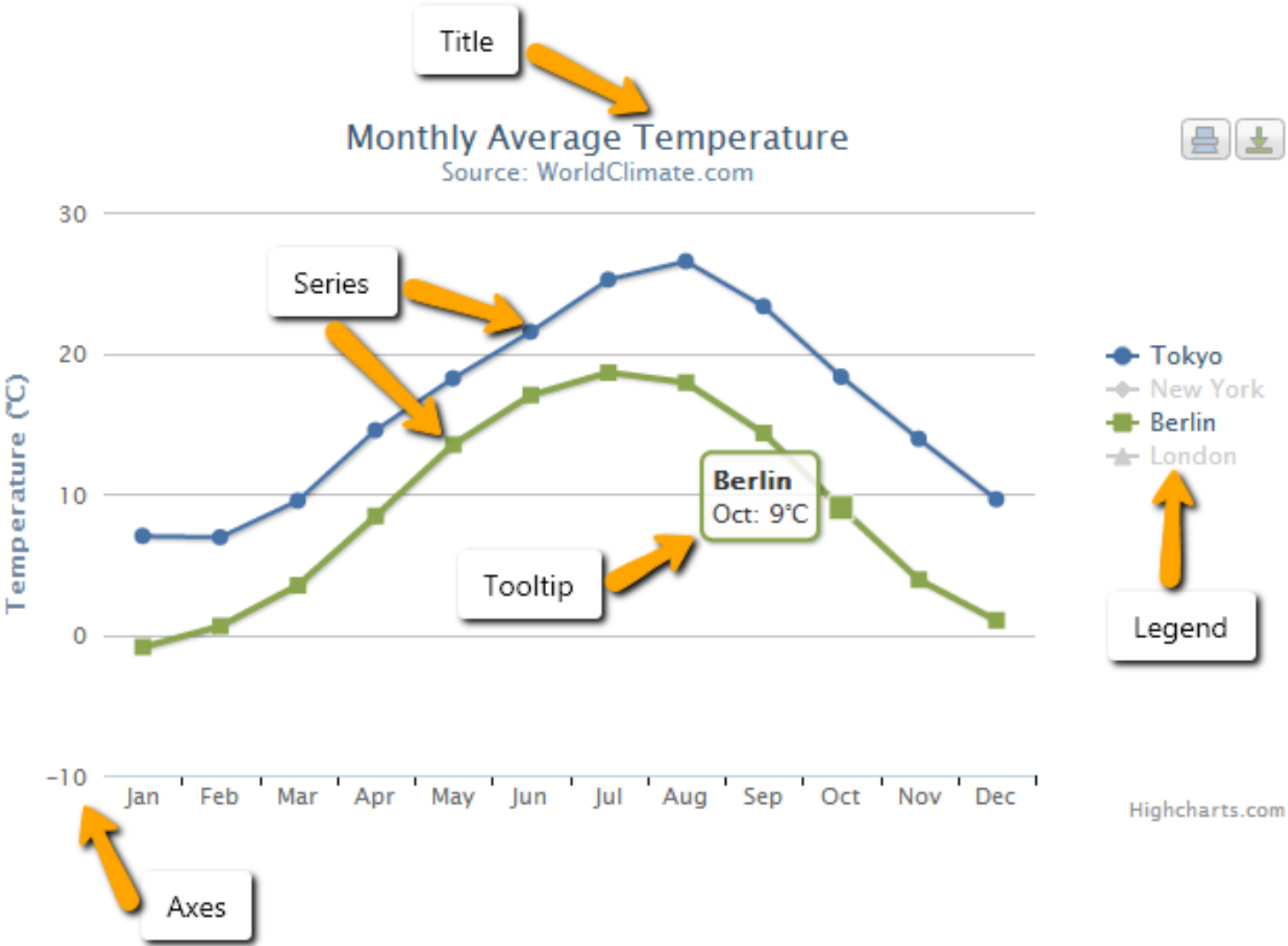
- An  document
-  library
-  JavaScript library

```
<html>
<head>
<script src="http://ajax.googleapis.com/ajax/libs/jquery/1.11.2/jquery.min.js"></script>
<script src="http://code.highcharts.com/highcharts.js"></script>
<script src="js/main.js"></script>

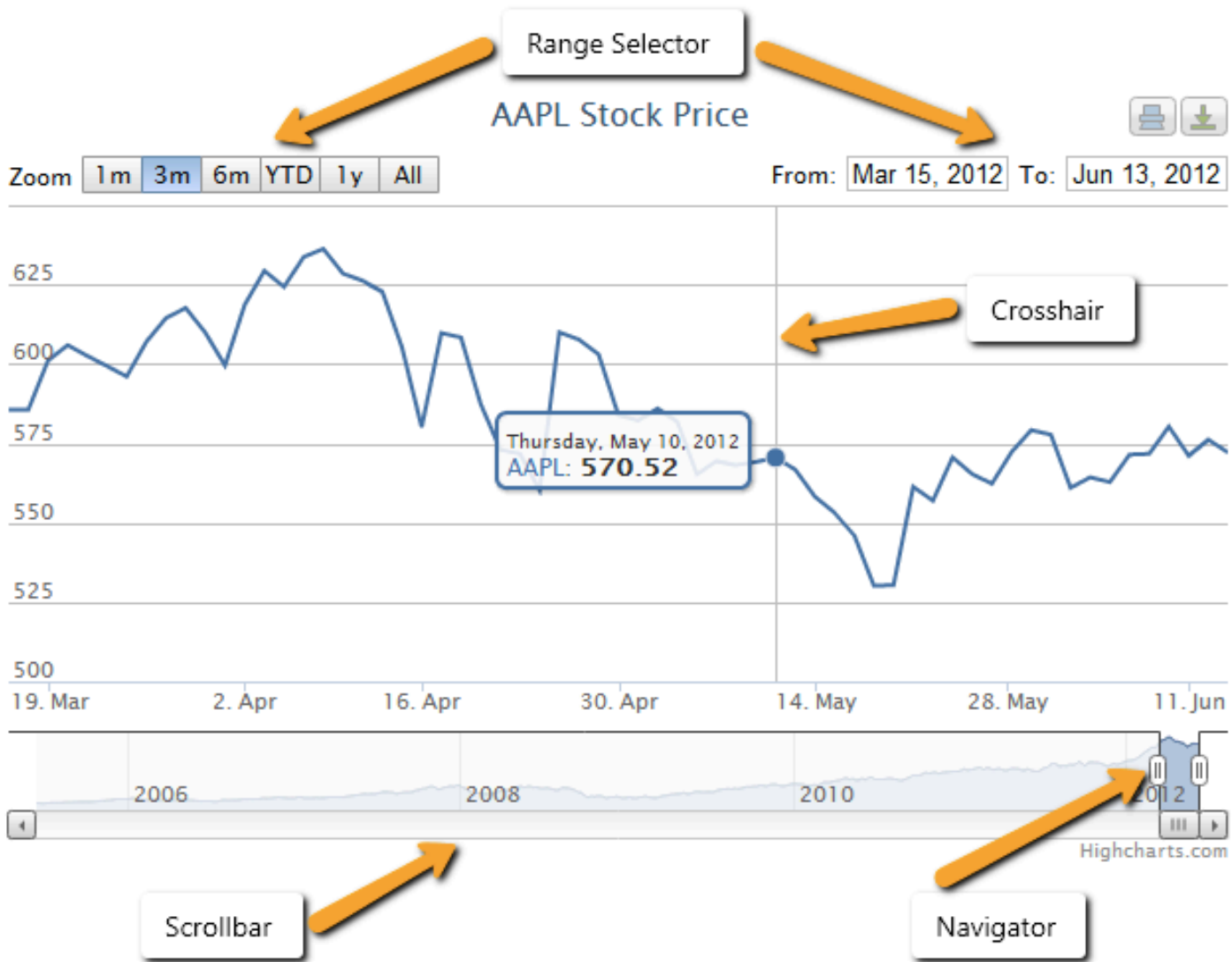
</head>
<body>
  <div id="container" style="width:100%; height:400px;"></div>
  ....
</body>
</html>
```



Understanding Highcharts



Understanding Highstock

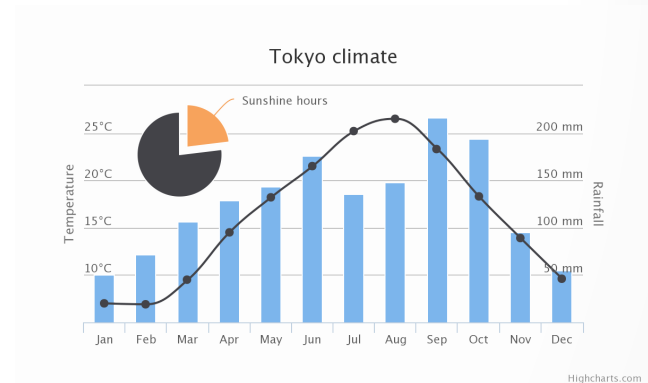


Installing Highcharts

```
<script src="http://ajax.googleapis.com/ajax/libs/jquery/1.11.2/jquery.min.js"></script>
```

```
<script src="http://code.highcharts.com/highcharts.js"></script>
```

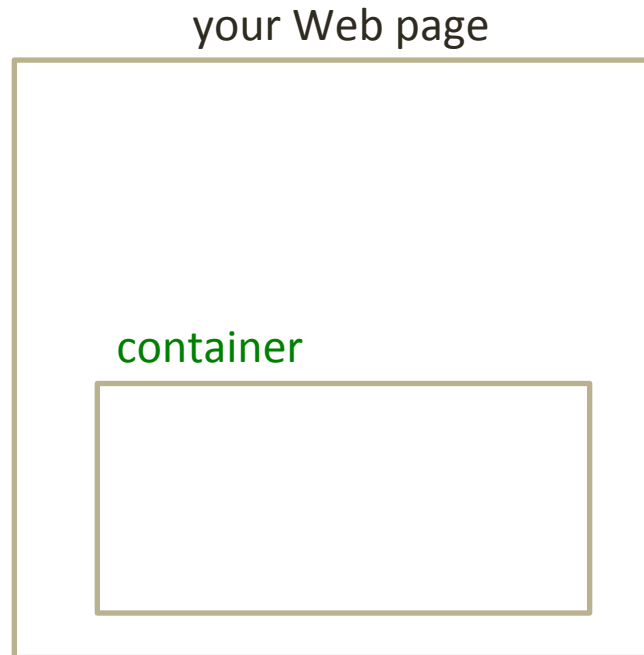
↑
or
stockchart.js



Your first chart...

Create a container for the chart in the Web page

```
<div id= "container" style="width:100%; height:400px;"></div>
```



Your first chart...

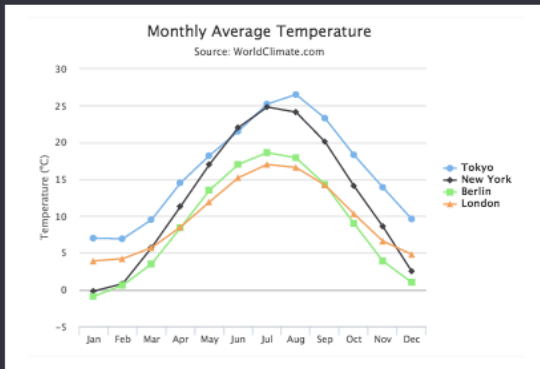
Create a new instance of the highchart.class

```
$(function () {
  $('#container').highcharts({
    chart: {
      type: 'bar'
    },
    title: {
      text: 'Fruit Consumption'
    },
    xAxis: {
      categories: ['Apples', 'Bananas',
'Oranges']
    },
    yAxis: {
      title: {
        text: 'Fruit eaten'
      }
    }
  });
  ...
  series: [{
    name: 'Jane',
    data: [1, 0, 4]
  }, {
    name: 'John',
    data: [5, 7, 3]
  }
  ]});
  ...
});
```

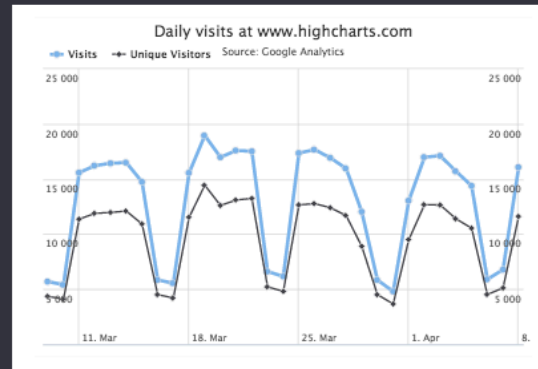


Chart types – line charts

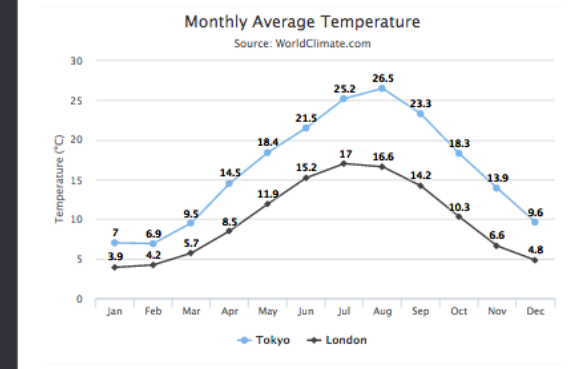
LINE CHARTS



Basic line



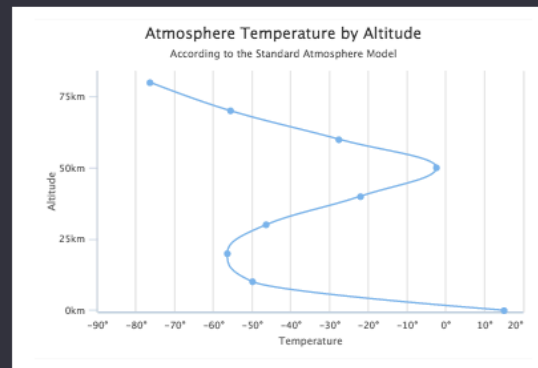
Ajax loaded data, clickable points



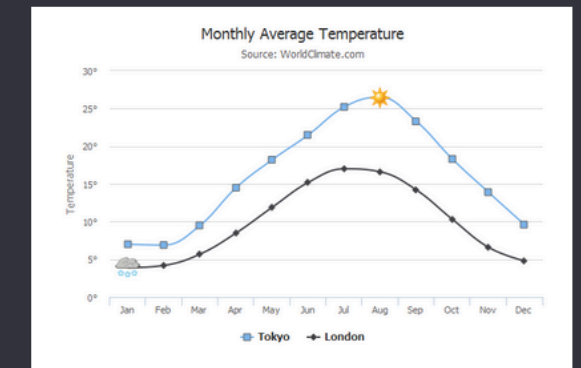
With data labels



Time series, zoomable



Spline with inverted axes

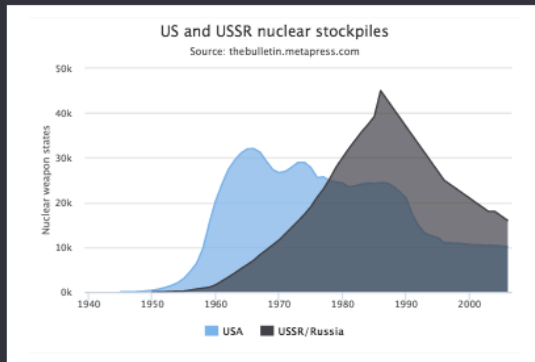


Spline with symbols

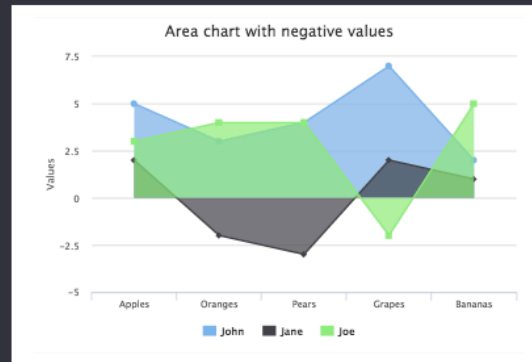


Chart types – area charts

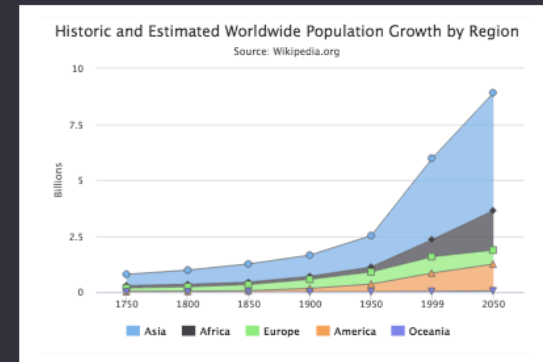
AREA CHARTS



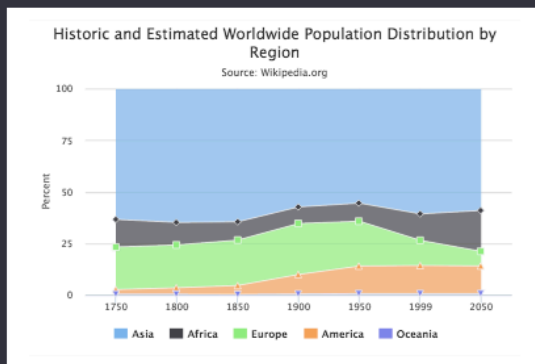
Basic area



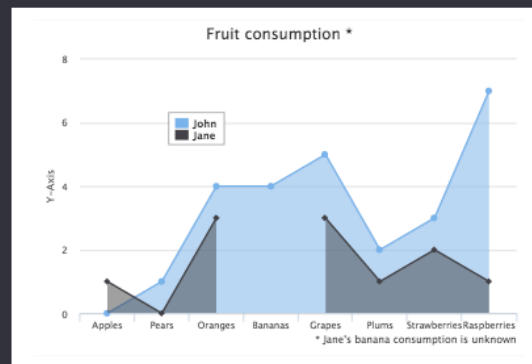
Area with negative values



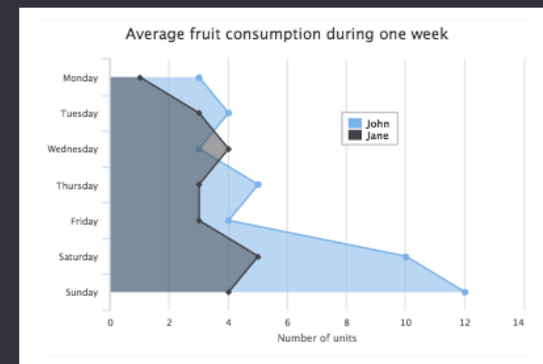
Stacked area



Percentage area



Area with missing points

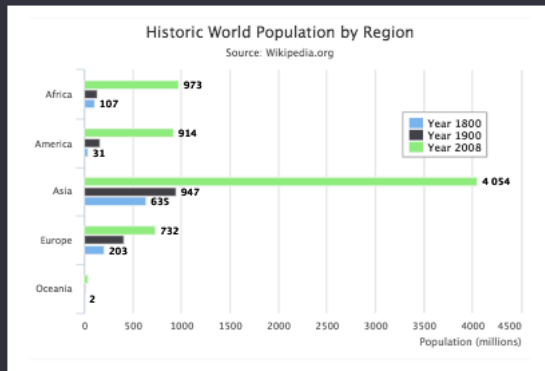


Inverted axes

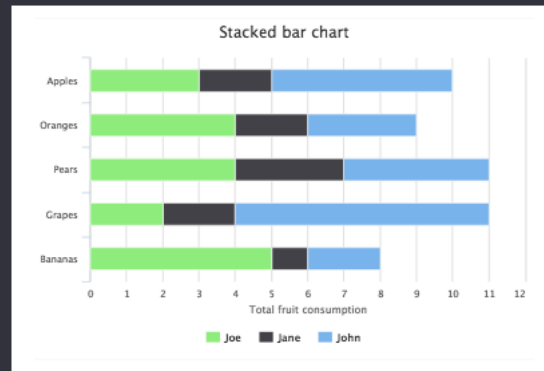


Chart types – column and bar

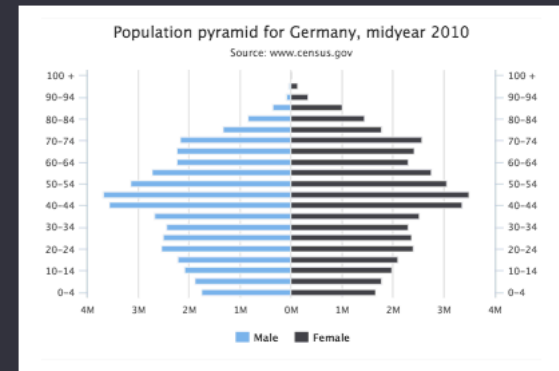
COLUMN AND BAR CHARTS



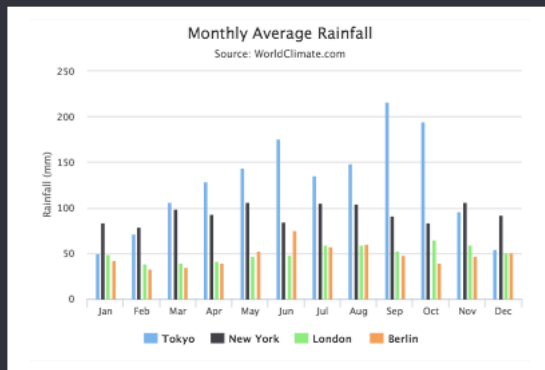
Basic bar



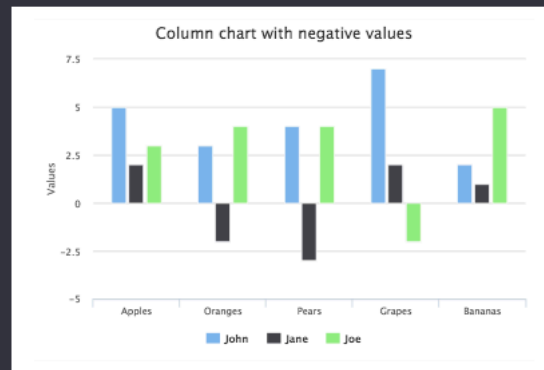
Stacked bar



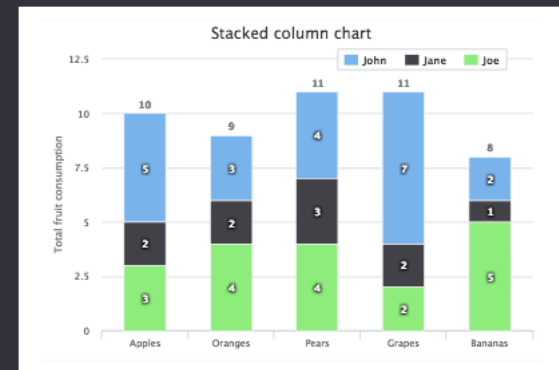
Bar with negative stack



Basic column



Column with negative values



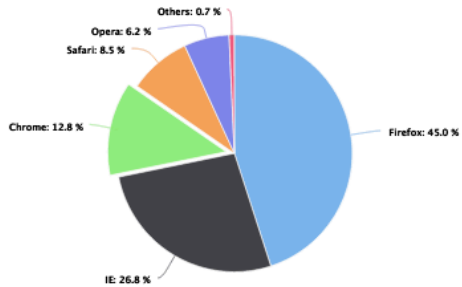
Stacked column



Chart types – pie charts

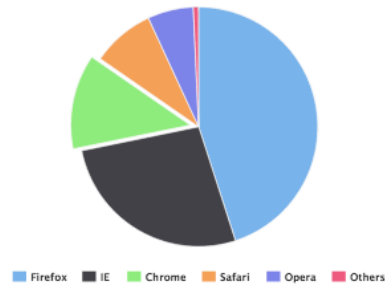
PIE CHARTS

Browser market shares at a specific website, 2014



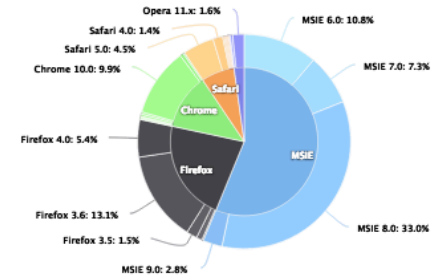
Pie chart

Browser market shares at a specific website, 2014

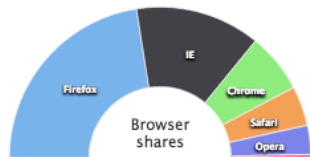


Pie with legend

Browser market share, April, 2011



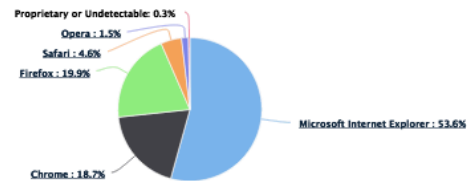
Donut chart



Semi circle donut

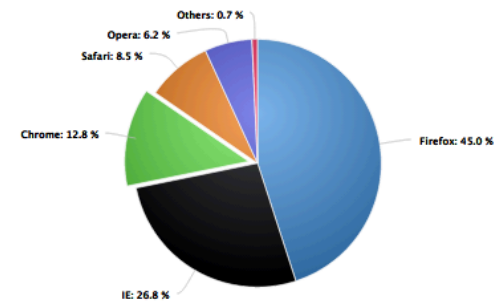
Browser market shares. November, 2013.

Click the slices to view versions. Source: netmarketshare.com.



Pie with drilldown

Browser market shares at a specific website, 2014

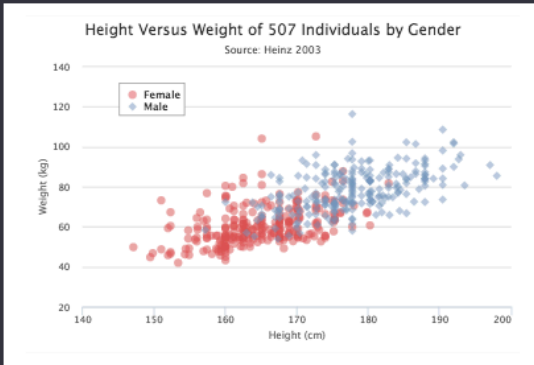


Pie with gradient fill

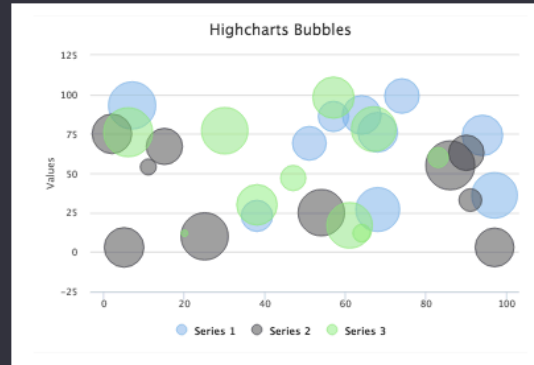


Chart types – scatter, bubble and dynamic

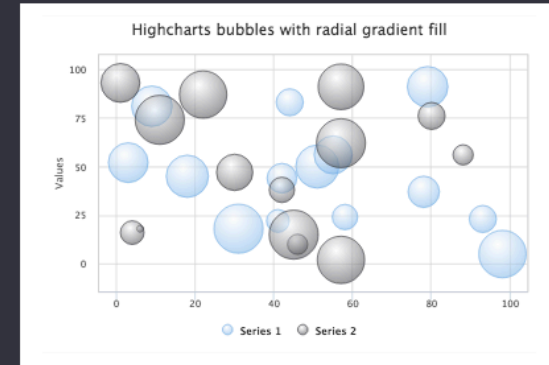
SCATTER AND BUBBLE CHARTS



Scatter plot



Bubble chart

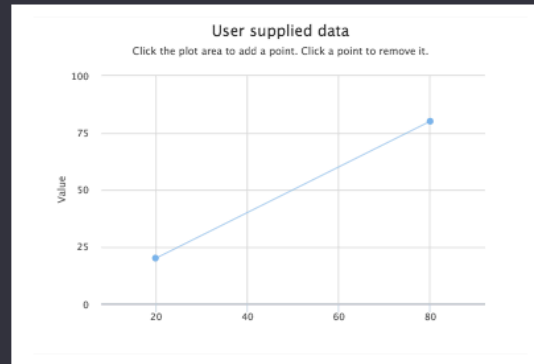


3D bubbles

DYNAMIC CHARTS



Spline updating each second



Click to add a point

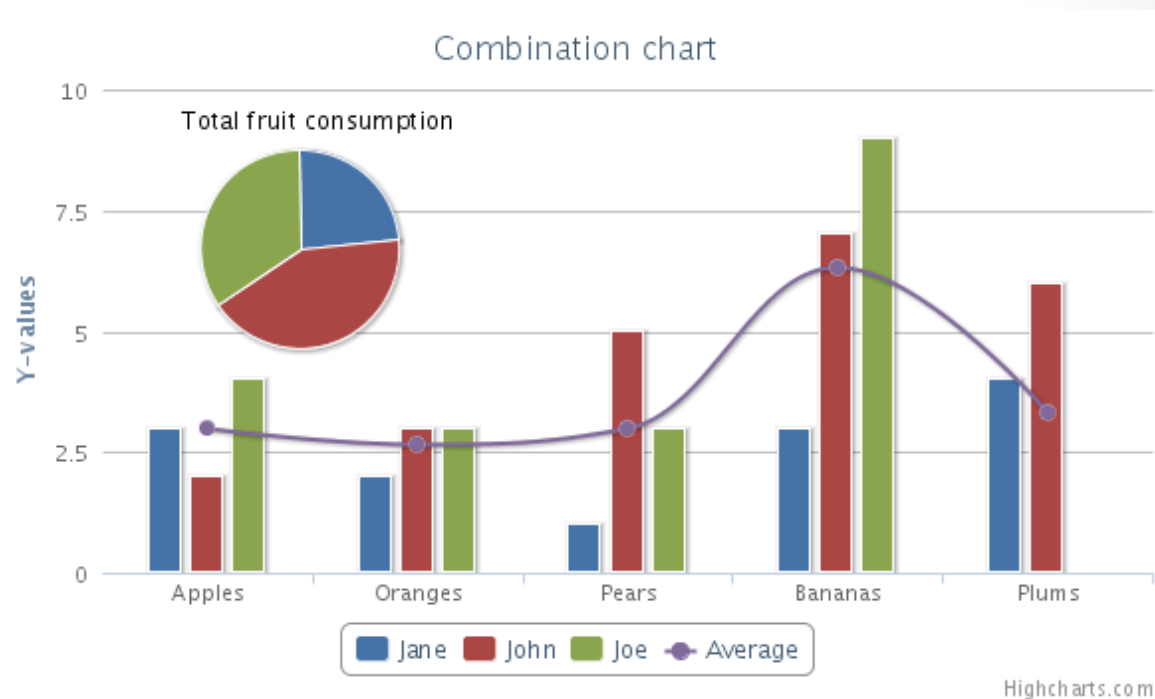


Master-detail chart



Combining charts

```
...  
series: [{  
  type: 'column',  
  name: 'Jane',  
  data: [3, 2, 1, 3, 4]  
}, {  
  type: 'column',  
  name: 'John',  
  data: [2, 3, 5, 7, 6]  
}, {  
  type: 'column',  
  name: 'Joe',  
  data: [4, 3, 3, 9, 0]  
}, {  
  type: 'spline',  
  name: 'Average',  
  data: [3, 2.67, 3, 6.33, 3.33]  
}]
```



Loading Data

- Data module
- Custom preprocessing
- Live Data
- Data from a database
- Getting data across domains (JSONP)



Data module

- The Data module provides options for loading data from external sources, like CSV files, HTML tables or Google Spreadsheets.
- The data module takes an option, **data.csv**, that holds CSV data to be read into the chart.
- By default, the first row of the CSV data is interpreted as series names, the **first column means category names or X values/dates**, and **subsequent columns hold data values**.

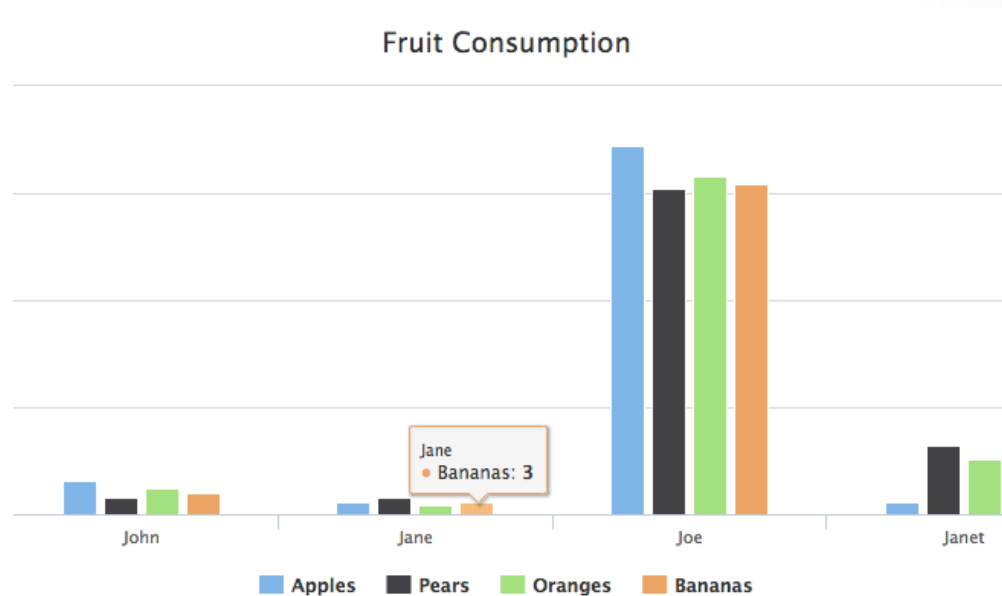


Data module - CSV

```
$.get('data.csv', function(csv) {  
  $('#container').highcharts({  
    chart: {  
      type: 'column'  
    },  
    data: {  
      csv: csv  
    },  
    title: {  
      text: 'Fruit Consumption'  
    },  
    yAxis: {  
      title: {  
        text: 'Units'  
      }  
    }  
  });  
});
```

data.csv

```
Categories,Apples,Pears,Oranges,Bananas  
John,8,4,6,5  
Jane,3,4,2,3  
Joe,86,76,79,77  
Janet,3,16,13,15
```



Data module - table

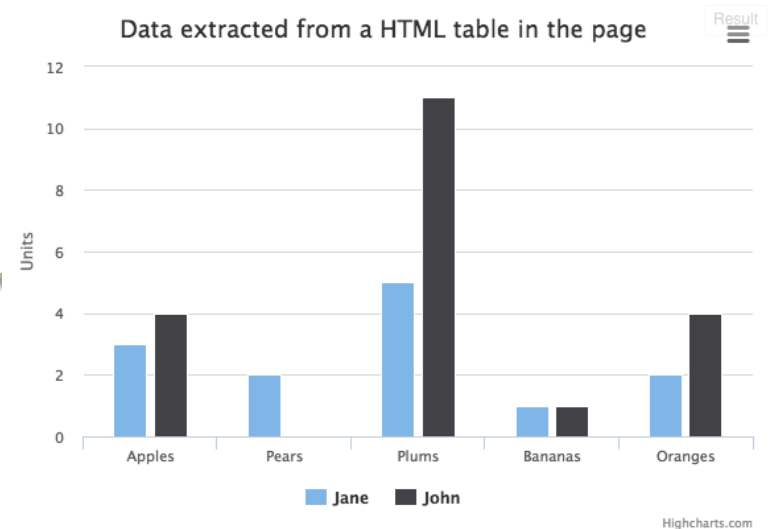
```
$(function () {  
  $('#container').highcharts({  
    data: {  
      table: 'datatable'  
    },  
    chart: {  
      type: 'column'  
    },  
    title: {  
      text: 'Data extracted from a HTML table in the page'  
    },  
    yAxis: {  
      allowDecimals: false,  
      title: {  
        text: 'Units'  
      }  
    },  
    tooltip: {  
      formatter: function () {  
        return '<b>' + this.series.name + '</b><br/>' +  
          this.point.y + ' ' + this.point.name.toLowerCase();  
      }  
    }  
  });  
});
```



Data module - table

```
<table id="datatable">
  <thead>
    <tr>
      <th></th>
      <th>Jane</th>
      <th>John</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <th>Apples</th>
      <td>3</td>
      <td>4</td>
    </tr>
    <tr>
      <th>Pears</th>
      <td>2</td>
      <td>0</td>
    </tr>
    ...
```

```
...
<tr>
  <th>Plums</th>
  <td>5</td>
  <td>11</td>
</tr>
<tr>
  <th>Bananas</th>
  <td>1</td>
  <td>1</td>
</tr>
<tr>
  <th>Oranges</th>
  <td>2</td>
  <td>4</td>
</tr>
</tbody>
</table>
```



Data module - JSON

```
$(function () {  
  
  $("button").click(function(){  
  
    $.getJSON("http://jsbin.com/qutewe/1.js", function(data){  
      $('#container').highcharts({  
        chart: {  
          type: 'bar'  
        },  
        title: {  
          text: 'Fruit Consumption'  
        },  
        xAxis: {  
          categories: ['Apples', 'Bananas', 'Oranges']  
        },  
        yAxis: {  
          title: {  
            text: 'Fruit eaten'  
          }  
        },  
        series: data.series  
      });  
    });  
  });  
});
```

1.js

```
{"series" :  
  [{  
    "name": "Jane",  
    "data": [1, 0, 4]  
  }, {  
    "name": "John",  
    "data": [5, 7, 3]  
  }  
}
```



Any questions?



Live Data

```
$(document).ready(function() {  
  chart = new Highcharts.Chart({  
    chart: {  
      renderTo: 'container',  
      defaultSeriesType: 'spline',  
      ....  
    },  
    series: [{  
      name: 'Random data',  
      data: []  
    }]  
  });  
});
```

