**Design Specification**

Use function of d3js to create charts, define chart element tags

**Class name rules**

This defines HTML/SVG element class names for chart elements; different chart element is set different class names. A chart element can be set more than one class names.

## Form: [Prefix name] + [top level chart element class name] or [second level chart element class name]

## Prefix Name: User specifies, default name is ‘d3charts-‘

## Chart Element Class Names

Chart element classTop chart element class names:

Chart

Title (Label)

Label

Legend

Title (Label)

Item

Label

Icon

Series

Marker

Tooltip

Axis

X

Y

Title (Label)

Label

Tick

Major

Minor

ChartArea

Plot

Marker

MarkerLine

MarkerRange

## Examples:

* The basic class names with prefix should look like d3charts-Chart, d3charts-Legend, d3charts-Axis and so on.
* For chart title, the full classes should include three classes like ‘d3charts-Chart title label’.
* For all x axis element, the full classes should include two classes like ‘d3charts-Axis X’.
* For all x axis major ticks, the full classes should include four classes like‘d3charts-Axis X Tick Major’.
* For all series labels, the full classes should include two classes like ‘d3charts-Series Label’.

# **Chart Options**

options = {

lang:{},

chart:{

colorPalette:{},

title:{

enabled:, // default is true.

text:,

rotation:,

vAlign:, // top, bottom, center

hAlign:, // left, bottom, center

margin:, // number or {top:1, bottom:1, left:1, right:1}

position: ,// left, top, bottom, right, floating

x: , // valid when position is floating.

y: , // valid when position is floating.

height:,

width:,

border: {

enabled:, // default is false

style:{ // CSSObject

},

weight:,

lineStyle:,

color:,

},

style:{} // CSSObject

},

legend:{

enabled:,

position:,// top, bottom, left, right, floating

style:{}, // CSSObject

title:,

border:,

margin:,

direction:,// vertical order or horizontal order of legend items

x:, valid when position is floating

y:, valid when position is floating,

item: {

style:{},// CSSObject

border:,

margin:

}

},

xAxis:[],

yAxis:[],

plot:{},

series:{},

seriesGroup:{},

category:{}

}

};

Title object extends from label object, structure of label object is

label :{

enabled:, // default is true.

text:,

x:,

y:,

anchor:,// start/middle/end

rotation:,

rotationAnchor:,// start/middle/end

padding:, // top/bottom/left/right

border: {

enabled:, // default is false

color:,

dashstyle:,

width,

style:{

}

},

style:{} // CSSObject

}

# chart:{

# container:,

# width:,

# height:,

# background:,

# border:{

# enabled:,

# color:,

# dashstyle:,

# width:,

# style:{}

# },

# padding:{},// top/bottom/left/right

# margin:{}, // top/bottom/left/right

# }

**Fill property:**

Fill property has four forms:

**Name color:** 'red' 'black'

**Hex color:** '#ffffff'

**RGB color:** rgb(255, 255, 255)

**Fill object:** // Gradient or Image

{

Type: ‘’, // image, linearGradient, radialGradient

parameters : [x1, y1, x2, y2], // or ‘LT,BR’ indicates start from left/top corner and end at bottom/right corner.

parameters : [cx, cy, r, fx, fy],

stop : [

{offset: '',

stopColor:'',

stopOpacity:1}

]

}

# **Chart APIs**

## Object namespace

Window.d3charts = {};

## Object/Class

Element

Chart

Label

Title

Axis

Series

Legend

LegendItem

BarSeries

LineSeries

AreaSeries

PieSeries

MeterSeries

ScatterSeries

BubbleSeries

GanttSeries

StockSeries

## Objects/Classes APIs

### Element class

#### Attribute:

##### options

##### chartContext

#### Function:

##### options

##### getBBox

### Chart class : Element class

### Label class : Element class

### Title class : Label class

### Axis class : Element class

### Series class : Element class

### Legend class: Element class

### LegendItem class: Element class

### BarSeries class: Series class

### LineSeries class: Series class

### AreaSeries class: LineSeries class

### PieSeries class: Series class

### MeterSeries class: Series class

### ScatterSeries class: Series class

### BubbleSeries class: ScatterSeries class

### GanttSeries class: Series class

### StockSeries class: Series class