Documentation for package "reportlab.graphics"
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reportlab.graphics

eanbc

Classes

Ean13BarcodeWidget(PlotArea)

Public Attributes

background Handle to background object.

barFillColor bar color

barHeight Height of bars.

barStrokeColor Color of bar borders.

barStrokeWidth Width of bar borders.

barWidth Width of bars.

debug Used only for debugging.

fillColor Color of the plot area interior.

fontName fontName

fontSize font size

height Height of the chart.

humanReadable if human readable

lquiet left quiet zone length

quiet if quiet zone to be used

rquiet right quiet zone length

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

textColor human readable text color

value the number

width Width of the chart.

x x-coord

y y-coord

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        value = '123456789012'
```

Ean8BarcodeWidget(Ean13BarcodeWidget)

Public Attributes

background Handle to background object.

barFillColor bar color

barHeight Height of bars.

barStrokeColor Color of bar borders.

barStrokeWidth Width of bar borders.

barWidth Width of bars.

debug Used only for debugging.

fillColor Color of the plot area interior.

fontName fontName

fontSize font size

height Height of the chart.

humanReadable if human readable

lquiet left quiet zone length

quiet if quiet zone to be used

rquiet right quiet zone length

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

textColor human readable text color

value the number

width Width of the chart.

x x-coord

y y-coord

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        value = '1234567'
```

legends

This will be a collection of legends to be used with charts.

Classes

Legend(Widget)

A simple legend containing rectangular swatches and strings.

The swatches are filled rectangles whenever the respective
color object in 'colorNamePairs' is a subclass of Color in
reportlab.lib.colors. Otherwise the object passed instead is
assumed to have 'x', 'y', 'width' and 'height' attributes.
A legend then tries to set them or catches any error. This
lets you plug-in any widget you like as a replacement for
the default rectangular swatches.

Strings can be nicely aligned left or right to the swatches.

Public Attributes

alignment Alignment of text with respect to swatches

autoXPadding x Padding between columns if deltax=None

autoYPadding y Padding between rows if deltay=None

boxAnchor Anchor point for the legend area

callout a user callout(self,g,x,y,(color,text))

colEndCallout a user callout(self,g, x, xt, y,width, lWidth)

colorNamePairs List of color/name tuples (color can also be widget)

columnMaximum Max. number of items per column

deltax x-distance between neighbouring swatches

deltay y-distance between neighbouring swatches

dividerColor dividerLines color

dividerDashArray Dash array for dividerLines.

dividerLines If 1 we have dividers between the rows | 2 for extra top | 4 for bottom

dividerOffsX divider lines X offsets

dividerOffsY dividerLines Y offset

dividerWidth dividerLines width

dx Width of swatch rectangle

dxTextSpace Distance between swatch rectangle and text

dy Height of swatch rectangle

fillColor

fontName Font name of the strings

fontSize Font size of the strings

strokeColor Border color of the swatches

strokeWidth Width of the border color of the swatches

subCols subColumn properties

swatchMarker None, Auto() or makeMarker('Diamond') ...

variColumn If true column widths may vary (default is false)

x x-coordinate of upper-left reference point

y y-coordinate of upper-left reference point

yGap Additional gap between rows

Example

```
            def demo(self):
                "Make sample legend."

                d = Drawing(200, 100)

                legend = Legend()
                legend.alignment = 'left'
                legend.x = 0
                legend.y = 100
                legend.dxTextSpace = 5
                items = 'red green blue yellow pink black white'.split()
                items = map(lambda i:(getattr(colors, i), i), items)
                legend.colorNamePairs = items

                d.add(legend, 'legend')

                return d
```

Properties of Example Widget

```
        alignment = 'left'
        autoXPadding = 5
        autoYPadding = 2
        boxAnchor = 'nw'
        colEndCallout = None
        colorNamePairs = [(Color(1,0,0), 'red'),
                          (Color(0,0,1), 'blue'),
                          (Color(0,.501961,0), 'green'),
                          (Color(1,.752941,.796078), 'pink'),
                          (Color(1,1,0), 'yellow')]
        columnMaximum = 3
        deltax = 75
        deltay = 20
        dividerColor = Color(0,0,0)
        dividerDashArray = None
        dividerLines = 0
        dividerOffsX = (0, 0)
        dividerOffsY = 0
        dividerWidth = 0.5
        dx = 10
        dxTextSpace = 10
        dy = 10
        fillColor = Color(0,0,0)
        fontName = 'Times-Roman'
        fontSize = 10
        strokeColor = Color(0,0,0)
        strokeWidth = 1
        subCols = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2a293f8>
        swatchMarker = None
        variColumn = 0
        x = 0
        y = 0
        yGap = 0
```

LineLegend(Legend)

A subclass of Legend for drawing legends with lines as the swatches rather than rectangles. Useful for lineCharts and linePlots. Should be similar in all other ways the the standard Legend class.

Public Attributes

alignment Alignment of text with respect to swatches

autoXPadding x Padding between columns if deltax=None

autoYPadding y Padding between rows if deltay=None

boxAnchor Anchor point for the legend area

callout a user callout(self,g,x,y,(color,text))

colEndCallout a user callout(self,g, x, xt, y,width, lWidth)

colorNamePairs List of color/name tuples (color can also be widget)

columnMaximum Max. number of items per column

deltax x-distance between neighbouring swatches

deltay y-distance between neighbouring swatches

dividerColor dividerLines color

dividerDashArray Dash array for dividerLines.

dividerLines If 1 we have dividers between the rows | 2 for extra top | 4 for bottom

dividerOffsX divider lines X offsets

dividerOffsY dividerLines Y offset

dividerWidth dividerLines width

dx Width of swatch rectangle

dxTextSpace Distance between swatch rectangle and text

dy Height of swatch rectangle

fillColor

fontName Font name of the strings

fontSize Font size of the strings

strokeColor Border color of the swatches

strokeWidth Width of the border color of the swatches

subCols subColumn properties

swatchMarker None, Auto() or makeMarker('Diamond') ...

variColumn If true column widths may vary (default is false)

x x-coordinate of upper-left reference point

y y-coordinate of upper-left reference point

yGap Additional gap between rows

Example

```
def demo(self):
```

```
        "Make sample legend."

        d = Drawing(200, 100)

        legend = Legend()
        legend.alignment = 'left'
        legend.x = 0
        legend.y = 100
        legend.dxTextSpace = 5
        items = 'red green blue yellow pink black white'.split()
        items = map(lambda i:(getattr(colors, i), i), items)
        legend.colorNamePairs = items

        d.add(legend, 'legend')

        return d
```

Properties of Example Widget

```
alignment = 'left'
autoXPadding = 5
autoYPadding = 2
boxAnchor = 'nw'
colEndCallout = None
colorNamePairs = [(Color(1,0,0), 'red'),
                  (Color(0,0,1), 'blue'),
                  (Color(0,.501961,0), 'green'),
                  (Color(1,.752941,.796078), 'pink'),
                  (Color(1,1,0), 'yellow')]
columnMaximum = 3
deltax = 75
deltay = 20
dividerColor = Color(0,0,0)
dividerDashArray = None
dividerLines = 0
dividerOffsX = (0, 0)
dividerOffsY = 0
dividerWidth = 0.5
dx = 10
dxTextSpace = 10
dy = 2
fillColor = Color(0,0,0)
fontName = 'Times-Roman'
fontSize = 10
strokeColor = Color(0,0,0)
strokeWidth = 1
subCols = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2a2ba70>
swatchMarker = None
variColumn = 0
x = 0
y = 0
yGap = 0
```

`LineSwatch(Widget)`

basically a Line with properties added so it can be used in a LineLegend

Public Attributes

height used for line strokeWidth

strokeColor color of swatch line

strokeDashArray dash array for swatch line

width length of swatch line

x x-coordinate for swatch line start point

y y-coordinate for swatch line start point

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        height = 1
        strokeColor = Color(1,0,0)
        strokeDashArray = None
        width = 20
        x = 0
        y = 0
```

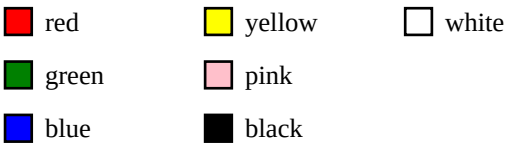
Functions

sample1c(...)

Make sample legend.

Example

```
def sample1c():
    "Make sample legend."

    d = Drawing(200, 100)

    legend = Legend()
    legend.alignment = 'right'
    legend.x = 0
    legend.y = 100
    legend.dxTextSpace = 5
    items = 'red green blue yellow pink black white'.split()
    items = map(lambda i:(getattr(colors, i), i), items)
    legend.colorNamePairs = items

    d.add(legend, 'legend')

    return d
```

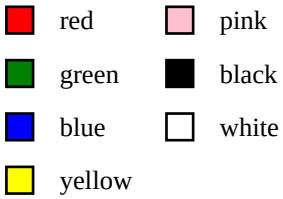


sample2c(...)

Make sample legend.

Example

```
def sample2c():
    "Make sample legend."

    d = Drawing(200, 100)

    legend = Legend()
    legend.alignment = 'right'
    legend.x = 20
    legend.y = 90
    legend.deltax = 60
    legend.dxTextSpace = 10
    legend.columnMaximum = 4
    items = 'red green blue yellow pink black white'.split()
    items = map(lambda i:(getattr(colors, i), i), items)
    legend.colorNamePairs = items

    d.add(legend, 'legend')

    return d
```

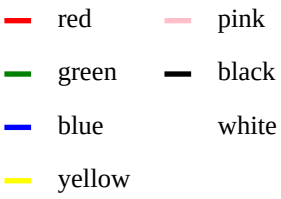


sample3(...)

Make sample legend with line swatches.

Example

```
def sample3():
    "Make sample legend with line swatches."

    d = Drawing(200, 100)

    legend = LineLegend()
    legend.alignment = 'right'
    legend.x = 20
    legend.y = 90
    legend.deltax = 60
    legend.dxTextSpace = 10
    legend.columnMaximum = 4
    items = 'red green blue yellow pink black white'.split()
    items = map(lambda i:(getattr(colors, i), i), items)
    legend.colorNamePairs = items
    d.add(legend, 'legend')

    return d
```

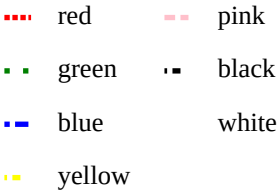


sample3a(...)

Make sample legend with line swatches and dasharrays on the lines.

Example

```
def sample3a():
    "Make sample legend with line swatches and dasharrays on the lines."

    d = Drawing(200, 100)

    legend = LineLegend()
    legend.alignment = 'right'
    legend.x = 20
    legend.y = 90
    legend.deltax = 60
    legend.dxTextSpace = 10
    legend.columnMaximum = 4
    items = 'red green blue yellow pink black white'.split()
    darrays = ([2,1], [2,5], [2,2,5,5], [1,2,3,4], [4,2,3,4], [1,2,3,4,5,6], [1])
    cnp = []
    for i in range(0, len(items)):
        l =  LineSwatch()
        l.strokeColor = getattr(colors, items[i])
        l.strokeDashArray = darrays[i]
        cnp.append((l, items[i]))
    legend.colorNamePairs = cnp
    d.add(legend, 'legend')

    return d
```



barcharts

This module defines a variety of Bar Chart components.

The basic flavors are Side-by-side, available in horizontal and
vertical versions.

Stacked and percentile bar charts to follow...

Classes

BarChart(PlotArea)

Abstract base class, unusable by itself.

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

barLabelArray explicit array of bar label values, must match size of data if present.

barLabelCallOut Callout function(label) label._callOutInfo =
(self,g,rowNo,colNo,x,y,width,height,x00,y00,x0,y0)

barLabelFormat Formatting string or function used for bar labels.

barLabels Handle to the list of bar labels.

barSpacing Width between individual bars.

barWidth The width of an individual bar.

bars Handle of the individual bars.

categoryAxis Handle of the category axis.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing Width between groups of bars.

height Height of the chart.

naLabel Label to use for N/A values.

reversePlotOrder If true, reverse common category plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

BarChart3D(BarChart)

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

barLabelArray explicit array of bar label values, must match size of data if present.

barLabelCallOut Callout function(label) label._callOutInfo = (self,g,rowNo,colNo,x,y,width,height,x00,y00,x0,y0)

barLabelFormat Formatting string or function used for bar labels.

barLabels Handle to the list of bar labels.

barSpacing Width between individual bars.

barWidth The width of an individual bar.

bars Handle of the individual bars.

categoryAxis Handle of the category axis.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing Width between groups of bars.

height Height of the chart.

naLabel Label to use for N/A values.

reversePlotOrder If true, reverse common category plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

theta_x dx/dz

theta_y dy/dz

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

zDepth depth of an individual series

zSpace z gap around series

`HorizontalBarChart(BarChart)`

Horizontal bar chart with multiple side-by-side bars.

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

barLabelArray explicit array of bar label values, must match size of data if present.

barLabelCallOut Callout function(label) label._callOutInfo = (self,g,rowNo,colNo,x,y,width,height,x00,y00,x0,y0)

barLabelFormat Formatting string or function used for bar labels.

barLabels Handle to the list of bar labels.

barSpacing Width between individual bars.

barWidth The width of an individual bar.

bars Handle of the individual bars.

categoryAxis Handle of the category axis.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing Width between groups of bars.

height Height of the chart.

naLabel Label to use for N/A values.

reversePlotOrder If true, reverse common category plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
            def demo(self):
                """Shows basic use of a bar chart"""
                if self.__class__.__name__=='BarChart':
                    raise NotImplementedError, 'Abstract Class BarChart has no demo'
                drawing = Drawing(200, 100)
                bc = self.__class__()
                drawing.add(bc)
                return drawing
```

Properties of Example Widget

```
        background = None
        barLabelArray = None
        barLabelFormat = None
        barLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cea5f0>
        barSpacing = 0
        barWidth = 10
        bars = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cea680>
        categoryAxis.categoryNames = None
        categoryAxis.gridEnd = None
        categoryAxis.gridStart = None
        categoryAxis.gridStrokeColor = Color(0,0,0)
        categoryAxis.gridStrokeDashArray = None
        categoryAxis.gridStrokeWidth = 0.25
        categoryAxis.joinAxis = None
        categoryAxis.joinAxisMode = None
        categoryAxis.joinAxisPos = None
        categoryAxis.labelAxisMode = 'axis'
```

```
categoryAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cea200>
categoryAxis.reverseDirection = 0
categoryAxis.strokeColor = Color(0,0,0)
categoryAxis.strokeDashArray = None
categoryAxis.strokeWidth = 1
categoryAxis.style = 'parallel'
categoryAxis.tickLeft = 5
categoryAxis.tickRight = 0
categoryAxis.tickShift = 0
categoryAxis.visible = 1
categoryAxis.visibleAxis = 1
categoryAxis.visibleGrid = 0
categoryAxis.visibleLabels = 1
categoryAxis.visibleTicks = 1
data = [(100, 110, 120, 130), (70, 80, 85, 90)]
debug = 0
fillColor = None
groupSpacing = 5
height = 85
naLabel = None
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
useAbsolute = 0
valueAxis.avoidBoundFrac = None
valueAxis.forceZero = 0
valueAxis.gridEnd = None
valueAxis.gridStart = None
valueAxis.gridStrokeColor = Color(0,0,0)
valueAxis.gridStrokeDashArray = None
valueAxis.gridStrokeWidth = 0.25
valueAxis.joinAxis = None
valueAxis.joinAxisMode = None
valueAxis.joinAxisPos = None
valueAxis.labelAxisMode = 'axis'
valueAxis.labelTextFormat = None
valueAxis.labelTextPostFormat = None
valueAxis.labelTextScale = None
valueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cea2d8>
valueAxis.maximumTicks = 7
valueAxis.minimumTickSpacing = 10
valueAxis.origShiftIPC = None
valueAxis.origShiftMin = None
valueAxis.origShiftSpecialValue = None
valueAxis.rangeRound = 'none'
valueAxis.skipEndL = 'none'
valueAxis.strokeColor = Color(0,0,0)
valueAxis.strokeDashArray = None
valueAxis.strokeWidth = 1
valueAxis.style = 'normal'
valueAxis.tickAxisMode = 'axis'
valueAxis.tickDown = 5
valueAxis.tickUp = 0
valueAxis.valueMax = None
valueAxis.valueMin = None
valueAxis.valueStep = None
valueAxis.visible = 1
valueAxis.visibleAxis = 1
valueAxis.visibleGrid = 0
valueAxis.visibleLabels = 1
valueAxis.visibleTicks = 1
valueAxis.zrangePref = 0
width = 180
x = 20
y = 10
```

HorizontalBarChart3D(BarChart3D, HorizontalBarChart)

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

barLabelArray explicit array of bar label values, must match size of data if present.

barLabelCallOut Callout function(label) label._callOutInfo = (self,g,rowNo,colNo,x,y,width,height,x00,y00,x0,y0)

barLabelFormat Formatting string or function used for bar labels.

barLabels Handle to the list of bar labels.

barSpacing Width between individual bars.

barWidth The width of an individual bar.

bars Handle of the individual bars.

categoryAxis Handle of the category axis.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing Width between groups of bars.

height Height of the chart.

naLabel Label to use for N/A values.

reversePlotOrder If true, reverse common category plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

theta_x dx/dz

theta_y dy/dz

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

zDepth depth of an individual series

zSpace z gap around series

Example

```
def demo(self):
    """Shows basic use of a bar chart"""
    if self.__class__.__name__=='BarChart':
        raise NotImplementedError, 'Abstract Class BarChart has no demo'
    drawing = Drawing(200, 100)
    bc = self.__class__()
    drawing.add(bc)
    return drawing
```

Properties of Example Widget

```
background = None
barLabelArray = None
barLabelFormat = None
barLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cf0cb0>
barSpacing = 0
barWidth = 10
bars = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cf0d40>
categoryAxis.categoryNames = None
categoryAxis.gridEnd = None
categoryAxis.gridStart = None
categoryAxis.gridStrokeColor = Color(0,0,0)
categoryAxis.gridStrokeDashArray = None
categoryAxis.gridStrokeWidth = 0.25
categoryAxis.joinAxis = None
categoryAxis.joinAxisMode = None
categoryAxis.joinAxisPos = None
categoryAxis.labelAxisMode = 'axis'
categoryAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cf0b00>
categoryAxis.reverseDirection = 0
categoryAxis.strokeColor = Color(0,0,0)
categoryAxis.strokeDashArray = None
categoryAxis.strokeWidth = 1
categoryAxis.style = 'parallel'
categoryAxis.tickLeft = 5
categoryAxis.tickRight = 0
categoryAxis.tickShift = 0
categoryAxis.visible = 1
categoryAxis.visibleAxis = 1
categoryAxis.visibleGrid = 0
categoryAxis.visibleLabels = 1
categoryAxis.visibleTicks = 1
data = [(100, 110, 120, 130), (70, 80, 85, 90)]
debug = 0
fillColor = None
groupSpacing = 5
height = 85
naLabel = None
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
useAbsolute = 0
valueAxis.avoidBoundFrac = None
valueAxis.forceZero = 0
valueAxis.gridEnd = None
valueAxis.gridStart = None
valueAxis.gridStrokeColor = Color(0,0,0)
valueAxis.gridStrokeDashArray = None
valueAxis.gridStrokeWidth = 0.25
valueAxis.joinAxis = None
valueAxis.joinAxisMode = None
valueAxis.joinAxisPos = None
valueAxis.labelAxisMode = 'axis'
valueAxis.labelTextFormat = None
valueAxis.labelTextPostFormat = None
valueAxis.labelTextScale = None
valueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cf0bd8>
valueAxis.maximumTicks = 7
valueAxis.minimumTickSpacing = 10
valueAxis.origShiftIPC = None
valueAxis.origShiftMin = None
valueAxis.origShiftSpecialValue = None
valueAxis.rangeRound = 'none'
valueAxis.skipEndL = 'none'
valueAxis.strokeColor = Color(0,0,0)
valueAxis.strokeDashArray = None
valueAxis.strokeWidth = 1
valueAxis.style = 'normal'
valueAxis.tickAxisMode = 'axis'
valueAxis.tickDown = 5
valueAxis.tickUp = 0
valueAxis.valueMax = None
valueAxis.valueMin = None
valueAxis.valueStep = None
```

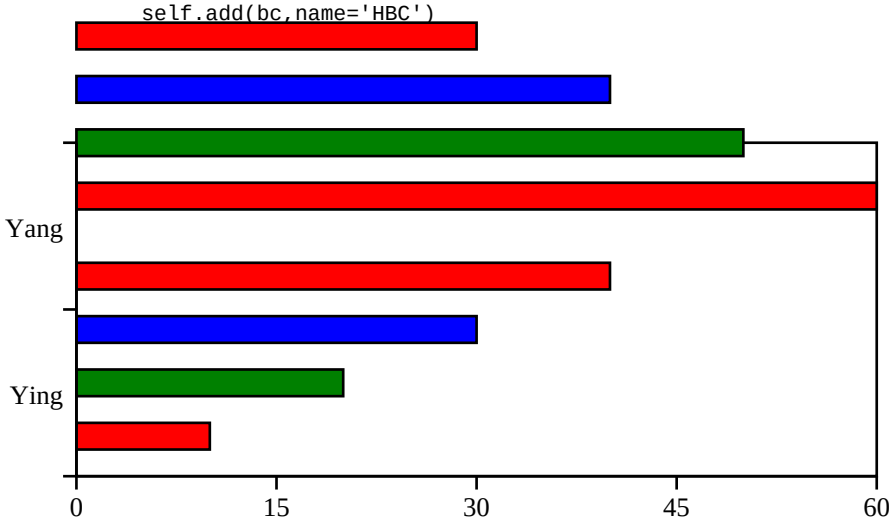
```
valueAxis.visible = 1
valueAxis.visibleAxis = 1
valueAxis.visibleGrid = 0
valueAxis.visibleLabels = 1
valueAxis.visibleTicks = 1
valueAxis.zrangePref = 0
width = 180
x = 20
y = 10
```

SampleH5c4(Drawing)

Simple bar chart with absolute spacing.

Example

```
def __init__(self,width=400,height=200,*args,**kw):
    apply(Drawing.__init__,(self,width,height)+args,kw)
    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = dataSample5
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 10
    bc.groupSpacing = 20
    bc.barSpacing = 10

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    self.add(bc,name='HBC')
```



VerticalBarChart(BarChart)

Vertical bar chart with multiple side-by-side bars.

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

barLabelArray explicit array of bar label values, must match size of data if present.

barLabelCallOut Callout function(label) label._callOutInfo = (self,g,rowNo,colNo,x,y,width,height,x00,y00,x0,y0)

barLabelFormat Formatting string or function used for bar labels.

barLabels Handle to the list of bar labels.

barSpacing Width between individual bars.

barWidth The width of an individual bar.

bars Handle of the individual bars.

categoryAxis Handle of the category axis.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing Width between groups of bars.

height Height of the chart.

naLabel Label to use for N/A values.

reversePlotOrder If true, reverse common category plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
def demo(self):
    """Shows basic use of a bar chart"""
    if self.__class__.__name__=='BarChart':
        raise NotImplementedError, 'Abstract Class BarChart has no demo'
    drawing = Drawing(200, 100)
    bc = self.__class__()
    drawing.add(bc)
    return drawing
```

Properties of Example Widget

```
background = None
barLabelArray = None
barLabelFormat = None
barLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cf8290>
barSpacing = 0
barWidth = 10
bars = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cf8320>
categoryAxis.categoryNames = None
categoryAxis.gridEnd = None
categoryAxis.gridStart = None
categoryAxis.gridStrokeColor = Color(0,0,0)
categoryAxis.gridStrokeDashArray = None
categoryAxis.gridStrokeWidth = 0.25
categoryAxis.joinAxis = None
categoryAxis.joinAxisMode = None
categoryAxis.joinAxisPos = None
categoryAxis.labelAxisMode = 'axis'
categoryAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cf8128>
categoryAxis.reverseDirection = 0
categoryAxis.strokeColor = Color(0,0,0)
```

```
categoryAxis.strokeDashArray = None
categoryAxis.strokeWidth = 1
categoryAxis.style = 'parallel'
categoryAxis.tickDown = 5
categoryAxis.tickShift = 0
categoryAxis.tickUp = 0
categoryAxis.visible = 1
categoryAxis.visibleAxis = 1
categoryAxis.visibleGrid = 0
categoryAxis.visibleLabels = 1
categoryAxis.visibleTicks = 1
data = [(100, 110, 120, 130), (70, 80, 85, 90)]
debug = 0
fillColor = None
groupSpacing = 5
height = 85
naLabel = None
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
useAbsolute = 0
valueAxis.avoidBoundFrac = None
valueAxis.forceZero = 0
valueAxis.gridEnd = None
valueAxis.gridStart = None
valueAxis.gridStrokeColor = Color(0,0,0)
valueAxis.gridStrokeDashArray = None
valueAxis.gridStrokeWidth = 0.25
valueAxis.joinAxis = None
valueAxis.joinAxisMode = None
valueAxis.joinAxisPos = None
valueAxis.labelAxisMode = 'axis'
valueAxis.labelTextFormat = None
valueAxis.labelTextPostFormat = None
valueAxis.labelTextScale = None
valueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cf8200>
valueAxis.maximumTicks = 7
valueAxis.minimumTickSpacing = 10
valueAxis.origShiftIPC = None
valueAxis.origShiftMin = None
valueAxis.origShiftSpecialValue = None
valueAxis.rangeRound = 'none'
valueAxis.skipEndL = 'none'
valueAxis.strokeColor = Color(0,0,0)
valueAxis.strokeDashArray = None
valueAxis.strokeWidth = 1
valueAxis.style = 'normal'
valueAxis.tickAxisMode = 'axis'
valueAxis.tickLeft = 5
valueAxis.tickRight = 0
valueAxis.valueMax = None
valueAxis.valueMin = None
valueAxis.valueStep = None
valueAxis.visible = 1
valueAxis.visibleAxis = 1
valueAxis.visibleGrid = 0
valueAxis.visibleLabels = 1
valueAxis.visibleTicks = 1
valueAxis.zrangePref = 0
width = 180
x = 20
y = 10
```

VerticalBarChart3D(BarChart3D, VerticalBarChart)

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

barLabelArray explicit array of bar label values, must match size of data if present.

barLabelCallOut Callout function(label) label._callOutInfo = (self,g,rowNo,colNo,x,y,width,height,x00,y00,x0,y0)

barLabelFormat Formatting string or function used for bar labels.

barLabels Handle to the list of bar labels.

barSpacing Width between individual bars.

barWidth The width of an individual bar.

bars Handle of the individual bars.

categoryAxis Handle of the category axis.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing Width between groups of bars.

height Height of the chart.

naLabel Label to use for N/A values.

reversePlotOrder If true, reverse common category plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

theta_x dx/dz

theta_y dy/dz

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

zDepth depth of an individual series

zSpace z gap around series

Example

```
def demo(self):
    """Shows basic use of a bar chart"""
    if self.__class__.__name__=='BarChart':
        raise NotImplementedError, 'Abstract Class BarChart has no demo'
    drawing = Drawing(200, 100)
    bc = self.__class__()
    drawing.add(bc)
    return drawing
```

Properties of Example Widget

```
background = None
barLabelArray = None
barLabelFormat = None
barLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cfda28>
barSpacing = 0
barWidth = 10
bars = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cfdab8>
categoryAxis.categoryNames = None
categoryAxis.gridEnd = None
categoryAxis.gridStart = None
categoryAxis.gridStrokeColor = Color(0,0,0)
categoryAxis.gridStrokeDashArray = None
categoryAxis.gridStrokeWidth = 0.25
categoryAxis.joinAxis = None
categoryAxis.joinAxisMode = None
categoryAxis.joinAxisPos = None
categoryAxis.labelAxisMode = 'axis'
categoryAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cfd8c0>
categoryAxis.reverseDirection = 0
categoryAxis.strokeColor = Color(0,0,0)
categoryAxis.strokeDashArray = None
categoryAxis.strokeWidth = 1
categoryAxis.style = 'parallel'
categoryAxis.tickDown = 5
categoryAxis.tickShift = 0
categoryAxis.tickUp = 0
categoryAxis.visible = 1
categoryAxis.visibleAxis = 1
categoryAxis.visibleGrid = 0
categoryAxis.visibleLabels = 1
categoryAxis.visibleTicks = 1
data = [(100, 110, 120, 130), (70, 80, 85, 90)]
debug = 0
fillColor = None
groupSpacing = 5
height = 85
naLabel = None
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
useAbsolute = 0
valueAxis.avoidBoundFrac = None
valueAxis.forceZero = 0
valueAxis.gridEnd = None
valueAxis.gridStart = None
valueAxis.gridStrokeColor = Color(0,0,0)
valueAxis.gridStrokeDashArray = None
valueAxis.gridStrokeWidth = 0.25
valueAxis.joinAxis = None
valueAxis.joinAxisMode = None
valueAxis.joinAxisPos = None
valueAxis.labelAxisMode = 'axis'
valueAxis.labelTextFormat = None
valueAxis.labelTextPostFormat = None
valueAxis.labelTextScale = None
valueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x2cfd998>
valueAxis.maximumTicks = 7
valueAxis.minimumTickSpacing = 10
valueAxis.origShiftIPC = None
valueAxis.origShiftMin = None
valueAxis.origShiftSpecialValue = None
valueAxis.rangeRound = 'none'
valueAxis.skipEndL = 'none'
valueAxis.strokeColor = Color(0,0,0)
valueAxis.strokeDashArray = None
valueAxis.strokeWidth = 1
valueAxis.style = 'normal'
valueAxis.tickAxisMode = 'axis'
valueAxis.tickLeft = 5
valueAxis.tickRight = 0
valueAxis.valueMax = None
valueAxis.valueMin = None
valueAxis.valueStep = None
valueAxis.visible = 1
```

```
valueAxis.visibleAxis = 1
valueAxis.visibleGrid = 0
valueAxis.visibleLabels = 1
valueAxis.visibleTicks = 1
valueAxis.zrangePref = 0
width = 180
x = 20
y = 10
```

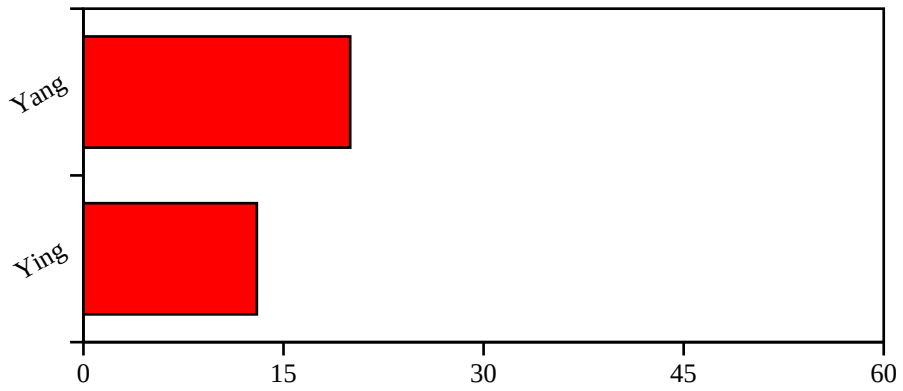
Functions

sampleH0a(...)

Make a slightly pathologic bar chart with only TWO data items.

Example

```
def sampleH0a():
    "Make a slightly pathologic bar chart with only TWO data items."

    drawing = Drawing(400, 200)

    data = [(13, 20)]

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'se'
    bc.categoryAxis.labels.angle = 30
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

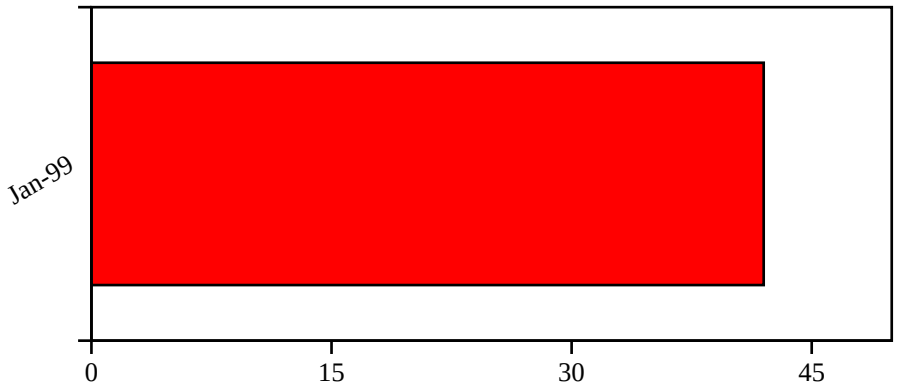


sampleH0b(...)

Make a pathologic bar chart with only ONE data item.

Example

```
def sampleH0b():
    "Make a pathologic bar chart with only ONE data item."

    drawing = Drawing(400, 200)

    data = [(42,)]

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 50
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'se'
    bc.categoryAxis.labels.angle = 30
    bc.categoryAxis.categoryNames = ['Jan-99']

    drawing.add(bc)

    return drawing
```

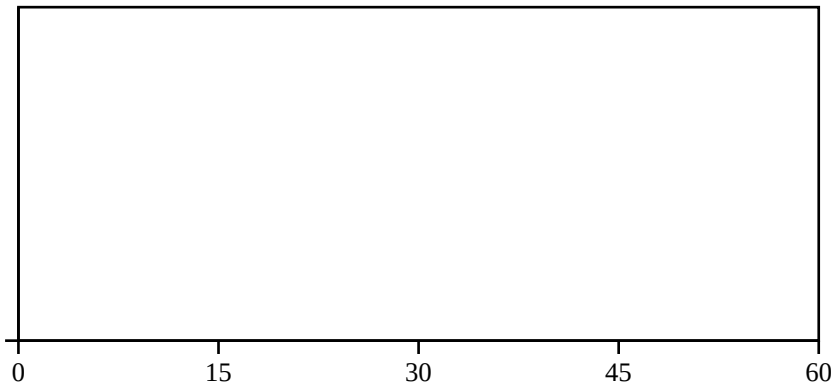


sampleH0c(...)

Make a really pathologic bar chart with NO data items at all!

Example

```
def sampleH0c():
    "Make a really pathologic bar chart with NO data items at all!"

    drawing = Drawing(400, 200)

    data = [()]

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'se'
    bc.categoryAxis.labels.angle = 30
    bc.categoryAxis.categoryNames = []

    drawing.add(bc)

    return drawing
```

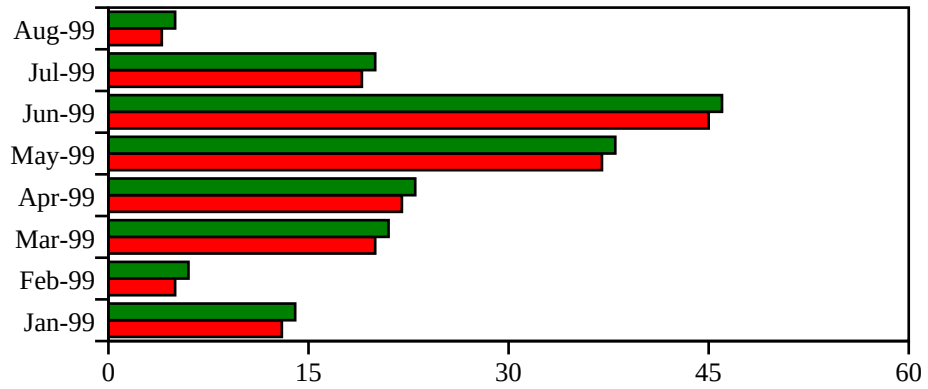


sampleH1(...)

Sample of multi-series bar chart.

Example

```
def sampleH1():
    "Sample of multi-series bar chart."

    drawing = Drawing(400, 200)

    data = [
            (13, 5, 20, 22, 37, 45, 19, 4),
            (14, 6, 21, 23, 38, 46, 20, 5)
            ]

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    catNames = 'Jan Feb Mar Apr May Jun Jul Aug'.split(' ')
    catNames = map(lambda n:n+'-99', catNames)
    bc.categoryAxis.categoryNames = catNames
    drawing.add(bc, 'barchart')

    return drawing
```

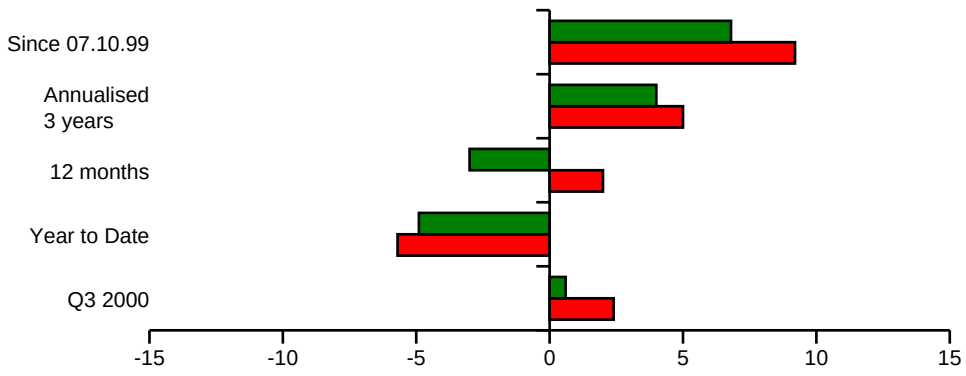


sampleH2a(...)

Sample of multi-series bar chart.

Example

```
def sampleH2a():
    "Sample of multi-series bar chart."

    data = [(2.4, -5.7, 2, 5, 9.2),
            (0.6, -4.9, -3, 4, 6.8)
            ]

    labels = ("Q3 2000", "Year to Date", "12 months",
              "Annualised\n3 years", "Since 07.10.99")

    drawing = Drawing(400, 200)

    bc = HorizontalBarChart()
    bc.x = 80
    bc.y = 50
    bc.height = 120
    bc.width = 300
    bc.data = data

    bc.barSpacing = 0
    bc.groupSpacing = 10
    bc.barWidth = 10

    bc.valueAxis.valueMin = -15
    bc.valueAxis.valueMax = +15
    bc.valueAxis.valueStep = 5
    bc.valueAxis.labels.fontName = 'Helvetica'
    bc.valueAxis.labels.fontSize = 8
    bc.valueAxis.labels.boxAnchor = 'n'   # irrelevant (becomes 'c')
    bc.valueAxis.labels.textAnchor = 'middle'
    bc.valueAxis.configure(bc.data)

    bc.categoryAxis.categoryNames = labels
    bc.categoryAxis.labels.fontName = 'Helvetica'
    bc.categoryAxis.labels.fontSize = 8
    bc.categoryAxis.labels.dx = -150

    drawing.add(bc)

    return drawing
```

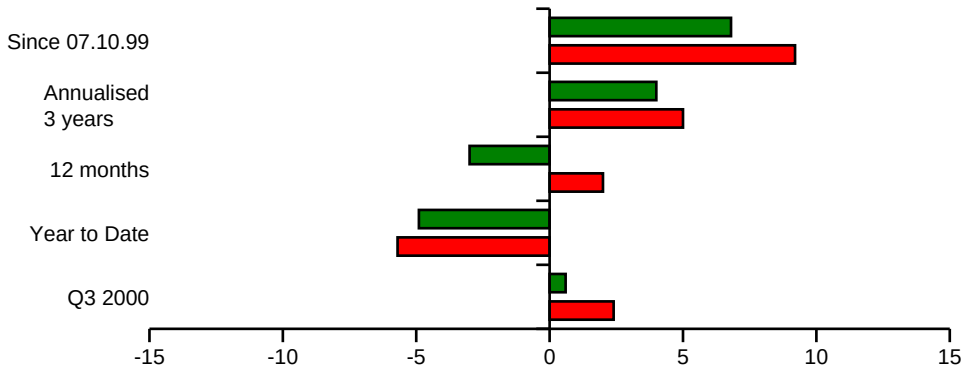


sampleH2b(...)

Sample of multi-series bar chart.

Example

```
def sampleH2b():
    "Sample of multi-series bar chart."

    data = [(2.4, -5.7, 2, 5, 9.2),
            (0.6, -4.9, -3, 4, 6.8)
            ]

    labels = ("Q3 2000", "Year to Date", "12 months",
              "Annualised\n3 years", "Since 07.10.99")

    drawing = Drawing(400, 200)

    bc = HorizontalBarChart()
    bc.x = 80
    bc.y = 50
    bc.height = 120
    bc.width = 300
    bc.data = data

    bc.barSpacing = 5
    bc.groupSpacing = 10
    bc.barWidth = 10

    bc.valueAxis.valueMin = -15
    bc.valueAxis.valueMax = +15
    bc.valueAxis.valueStep = 5
    bc.valueAxis.labels.fontName = 'Helvetica'
    bc.valueAxis.labels.fontSize = 8
    bc.valueAxis.labels.boxAnchor = 'n'   # irrelevant (becomes 'c')
    bc.valueAxis.labels.textAnchor = 'middle'

    bc.categoryAxis.categoryNames = labels
    bc.categoryAxis.labels.fontName = 'Helvetica'
    bc.categoryAxis.labels.fontSize = 8
    bc.categoryAxis.labels.dx = -150

    drawing.add(bc)

    return drawing
```

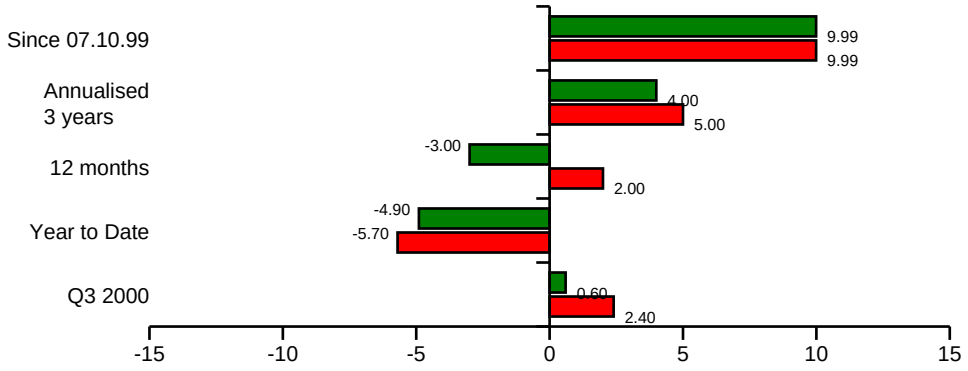


sampleH2c(...)

Sample of multi-series bar chart.

Example

```
def sampleH2c():
    "Sample of multi-series bar chart."

    data = [(2.4, -5.7, 2, 5, 9.99),
            (0.6, -4.9, -3, 4, 9.99)
            ]

    labels = ("Q3 2000", "Year to Date", "12 months",
              "Annualised\n3 years", "Since 07.10.99")

    drawing = Drawing(400, 200)

    bc = HorizontalBarChart()
    bc.x = 80
    bc.y = 50
    bc.height = 120
    bc.width = 300
    bc.data = data

    bc.barSpacing = 2
    bc.groupSpacing = 10
    bc.barWidth = 10

    bc.valueAxis.valueMin = -15
    bc.valueAxis.valueMax = +15
    bc.valueAxis.valueStep = 5
    bc.valueAxis.labels.fontName = 'Helvetica'
    bc.valueAxis.labels.fontSize = 8
    bc.valueAxis.labels.boxAnchor = 'n'
    bc.valueAxis.labels.textAnchor = 'middle'

    bc.categoryAxis.categoryNames = labels
    bc.categoryAxis.labels.fontName = 'Helvetica'
    bc.categoryAxis.labels.fontSize = 8
    bc.categoryAxis.labels.dx = -150

    bc.barLabels.nudge = 10

    bc.barLabelFormat = '%0.2f'
    bc.barLabels.dx = 0
    bc.barLabels.dy = 0
    bc.barLabels.boxAnchor = 'n'  # irrelevant (becomes 'c')
    bc.barLabels.fontName = 'Helvetica'
    bc.barLabels.fontSize = 6

    drawing.add(bc)

    return drawing
```

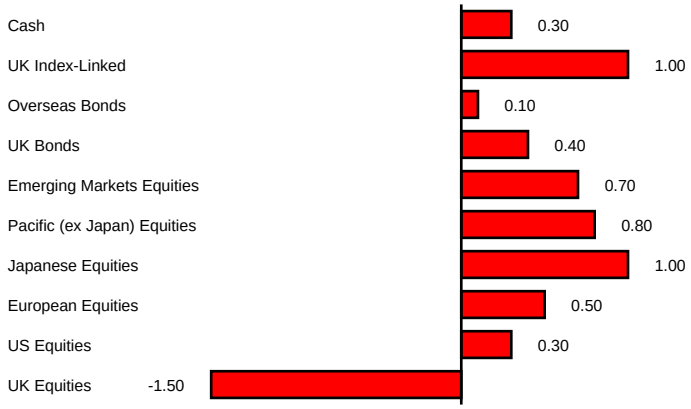

Since 07.10.99
Annualised
3 years
12 months
Year to Date
Q3 2000
9.99
9.99
4.00
5.00
-3.00
2.00
-4.90
-5.70
0.60
2.40
-15
-10
-5
0
5
10
15

sampleH3(...)

A really horizontal bar chart (compared to the equivalent faked one).

Example

```
def sampleH3():
    "A really horizontal bar chart (compared to the equivalent faked one)."

    names = ("UK Equities", "US Equities", "European Equities", "Japanese Equities",
             "Pacific (ex Japan) Equities", "Emerging Markets Equities",
             "UK Bonds", "Overseas Bonds", "UK Index-Linked", "Cash")

    series1 = (-1.5, 0.3, 0.5, 1.0, 0.8, 0.7, 0.4, 0.1, 1.0, 0.3)
    series2 = (0.0, 0.33, 0.55, 1.1, 0.88, 0.77, 0.44, 0.11, 1.10, 0.33)

    assert len(names) == len(series1), "bad data"
    assert len(names) == len(series2), "bad data"

    drawing = Drawing(400, 200)

    bc = HorizontalBarChart()
    bc.x = 100
    bc.y = 20
    bc.height = 150
    bc.width = 250
    bc.data = (series1,)
    bc.bars.fillColor = colors.green

    bc.barLabelFormat = '%0.2f'
    bc.barLabels.dx = 0
    bc.barLabels.dy = 0
    bc.barLabels.boxAnchor = 'w' # irrelevant (becomes 'c')
    bc.barLabels.fontName = 'Helvetica'
    bc.barLabels.fontSize = 6
    bc.barLabels.nudge = 10

    bc.valueAxis.visible = 0
    bc.valueAxis.valueMin = -2
    bc.valueAxis.valueMax = +2
    bc.valueAxis.valueStep = 1

    bc.categoryAxis.tickLeft = 0
    bc.categoryAxis.tickRight = 0
    bc.categoryAxis.categoryNames = names
    bc.categoryAxis.labels.boxAnchor = 'w'
    bc.categoryAxis.labels.dx = -170
    bc.categoryAxis.labels.fontName = 'Helvetica'
    bc.categoryAxis.labels.fontSize = 6

    g = Group(bc)
    drawing.add(g)

    return drawing
```

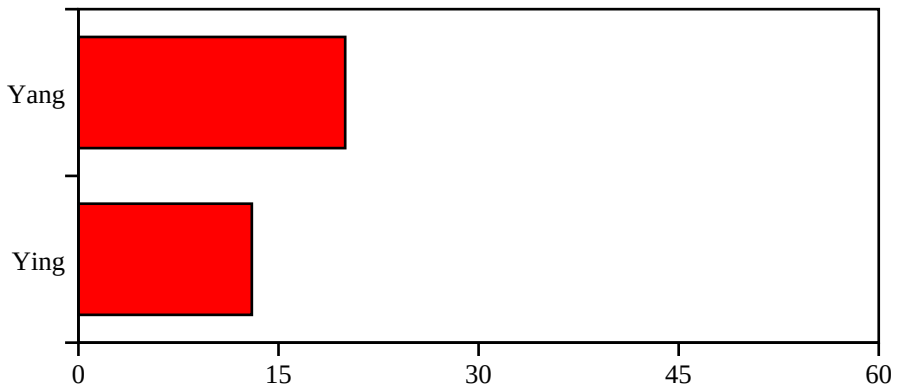

Cash
0.30
UK Index-Linked
1.00
Overseas Bonds
0.10
UK Bonds
0.40
Emerging Markets Equities
0.70
Pacific (ex Japan) Equities
0.80
Japanese Equities
1.00
European Equities
0.50
US Equities
0.30
UK Equities
-1.50

sampleH4a(...)

A bar chart showing value axis region starting at *exactly* zero.

Example

```
def sampleH4a():
    "A bar chart showing value axis region starting at *exactly* zero."

    drawing = Drawing(400, 200)

    data = [(13, 20)]

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

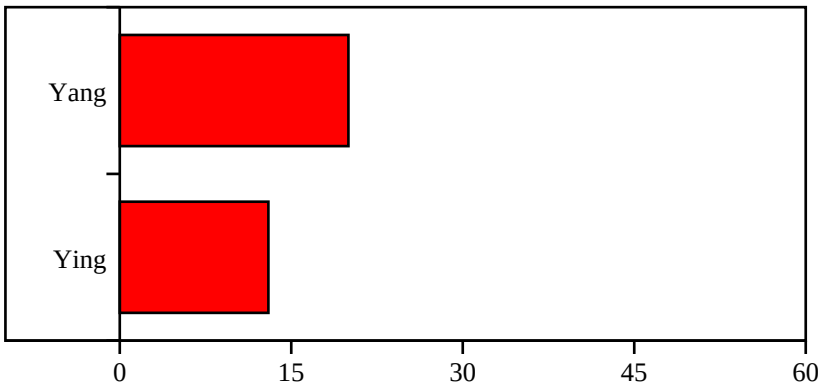


sampleH4b(...)

A bar chart showing value axis region starting *below* zero.

Example

```
def sampleH4b():
    "A bar chart showing value axis region starting *below* zero."

    drawing = Drawing(400, 200)

    data = [(13, 20)]

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = -10
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

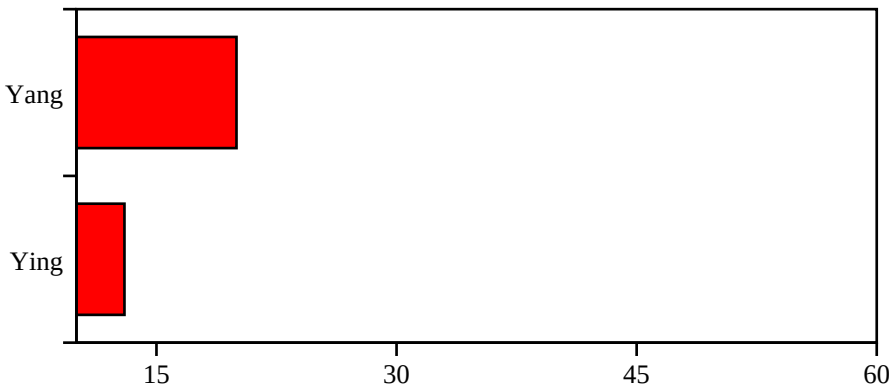


sampleH4c(...)

A bar chart showing value axis region starting *above* zero.

Example

```
def sampleH4c():
    "A bar chart showing value axis region starting *above* zero."

    drawing = Drawing(400, 200)

    data = [(13, 20)]

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 10
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

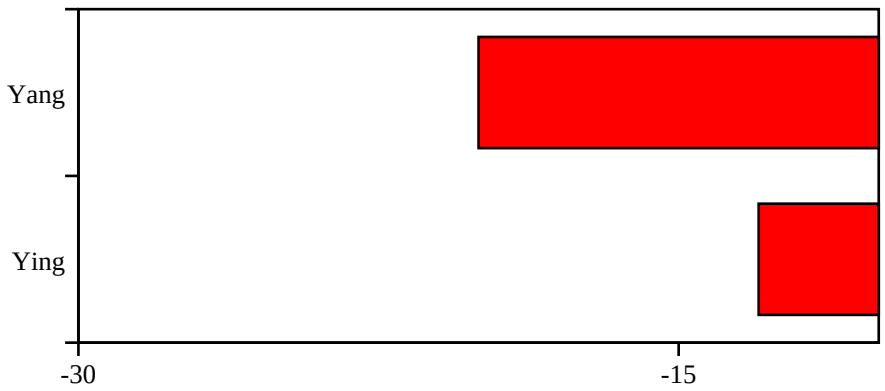


sampleH4d(...)

A bar chart showing value axis region entirely *below* zero.

Example

```
def sampleH4d():
    "A bar chart showing value axis region entirely *below* zero."

    drawing = Drawing(400, 200)

    data = [(-13, -20)]

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = -30
    bc.valueAxis.valueMax = -10
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

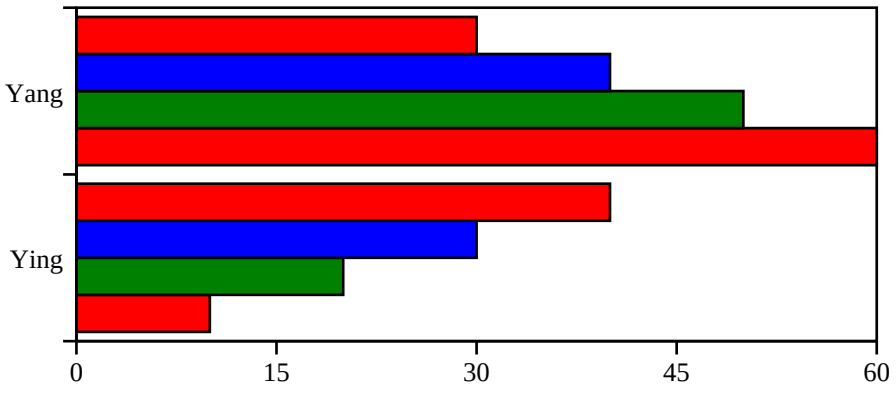


sampleH5a(...)

A simple bar chart with no expressed spacing attributes.

Example

```
def sampleH5a():
    "A simple bar chart with no expressed spacing attributes."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

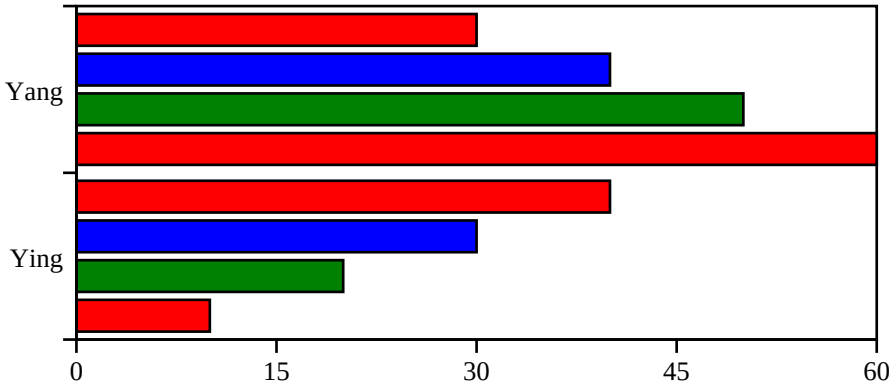


sampleH5b(...)

A simple bar chart with proportional spacing.

Example

```
def sampleH5b():
    "A simple bar chart with proportional spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 0
    bc.barWidth = 40
    bc.groupSpacing = 20
    bc.barSpacing = 10

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

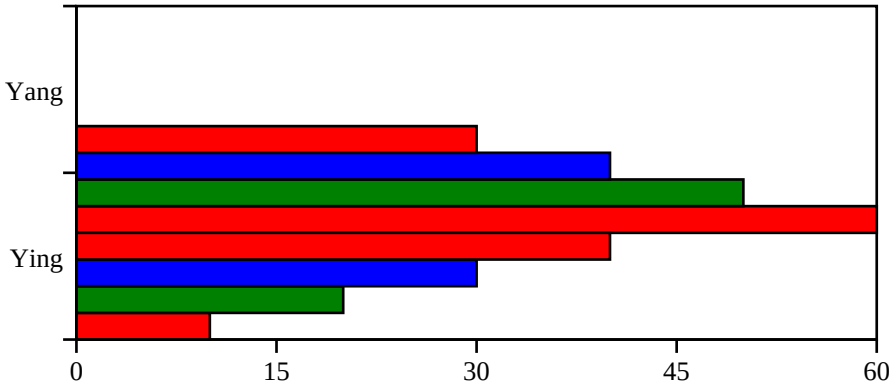


sampleH5c1(...)

A simple bar chart with absolute spacing.

Example

```
def sampleH5c1():
    "A simple bar chart with absolute spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 10
    bc.groupSpacing = 0
    bc.barSpacing = 0

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

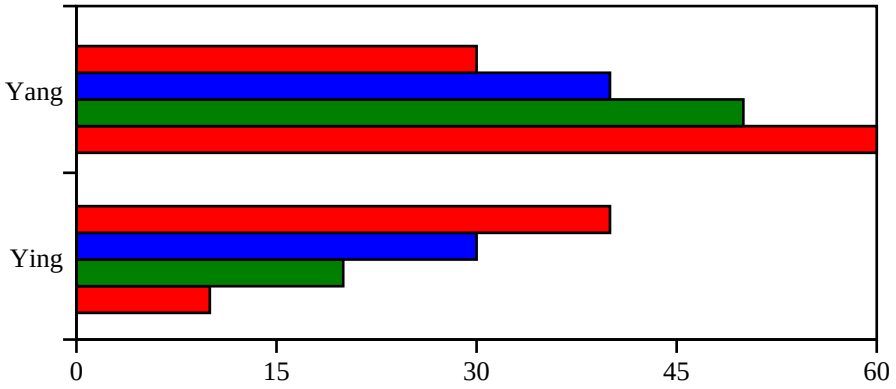


sampleH5c2(...)

Simple bar chart with absolute spacing.

Example

```
def sampleH5c2():
    "Simple bar chart with absolute spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 10
    bc.groupSpacing = 20
    bc.barSpacing = 0

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

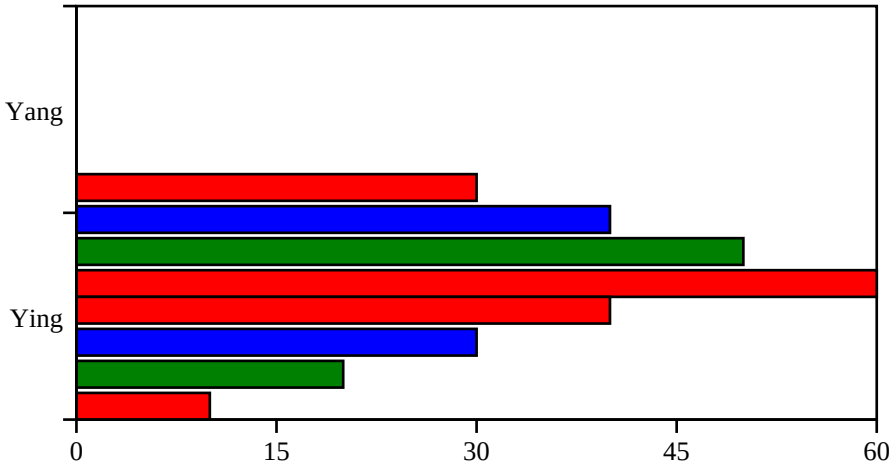


sampleH5c3(...)

Simple bar chart with absolute spacing.

Example

```
def sampleH5c3():
    "Simple bar chart with absolute spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 20
    bc.height = 155
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 10
    bc.groupSpacing = 0
    bc.barSpacing = 2

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

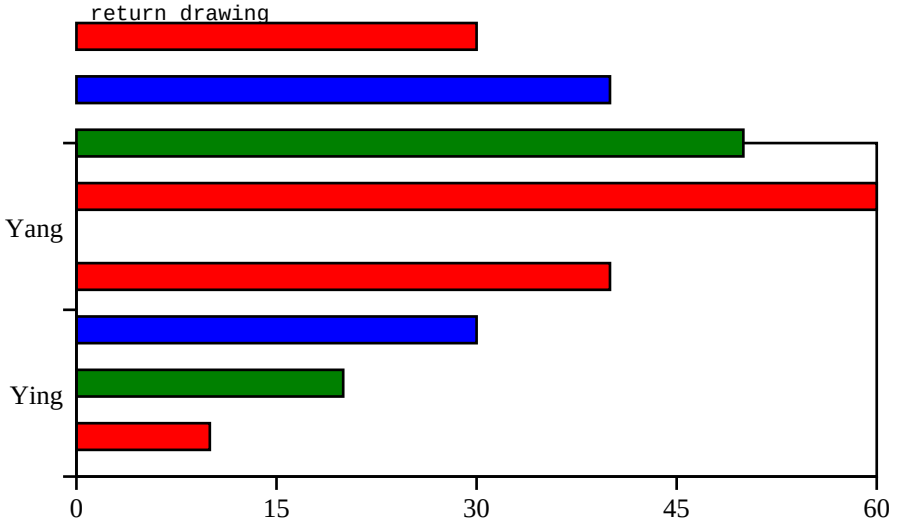


sampleH5c4(...)

Simple bar chart with absolute spacing.

Example

```
def sampleH5c4():
    "Simple bar chart with absolute spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = HorizontalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 10
    bc.groupSpacing = 20
    bc.barSpacing = 10

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

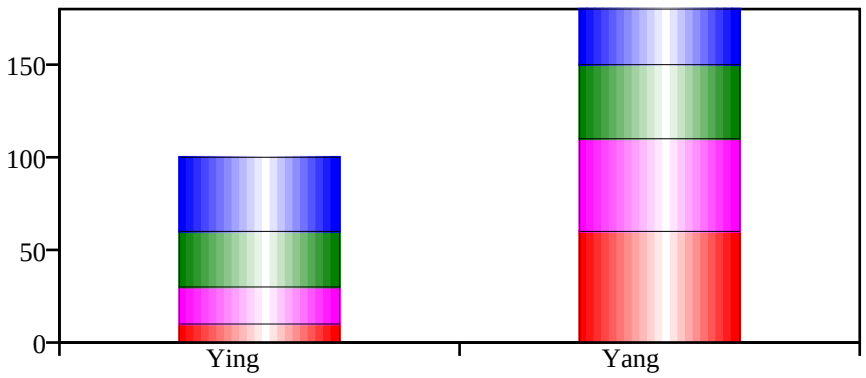


sampleStacked1(...)

Simple bar chart using symbol attribute.

Example

```
def sampleStacked1():
    "Simple bar chart using symbol attribute."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = VerticalBarChart()
    bc.categoryAxis.style = 'stacked'
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.barWidth = 10
    bc.groupSpacing = 15
    bc.valueAxis.valueMin = 0

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    from reportlab.graphics.widgets.grids import ShadedRect
    bc.bars.symbol = ShadedRect()
    bc.bars.symbol.fillColorStart = colors.red
    bc.bars.symbol.fillColorEnd = colors.white
    bc.bars.symbol.orientation = 'vertical'
    bc.bars.symbol.cylinderMode = 1
    bc.bars.symbol.strokeWidth = 0

    bc.bars[1].symbol = ShadedRect()
    bc.bars[1].symbol.fillColorStart = colors.magenta
    bc.bars[1].symbol.fillColorEnd = colors.white
    bc.bars[1].symbol.orientation = 'vertical'
    bc.bars[1].symbol.cylinderMode = 1
    bc.bars[1].symbol.strokeWidth = 0

    bc.bars[2].symbol = ShadedRect()
    bc.bars[2].symbol.fillColorStart = colors.green
    bc.bars[2].symbol.fillColorEnd = colors.white
    bc.bars[2].symbol.orientation = 'vertical'
    bc.bars[2].symbol.cylinderMode = 1
    bc.bars[2].symbol.strokeWidth = 0

    bc.bars[3].symbol = ShadedRect()
    bc.bars[3].symbol.fillColorStart = colors.blue
    bc.bars[3].symbol.fillColorEnd = colors.white
    bc.bars[3].symbol.orientation = 'vertical'
    bc.bars[3].symbol.cylinderMode = 1
    bc.bars[3].symbol.strokeWidth = 0

    drawing.add(bc)

    return drawing
```

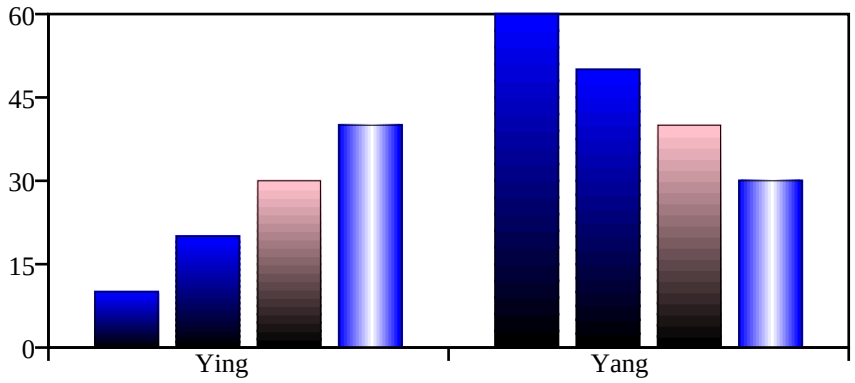

150
100
50
0
Ying
Yang

sampleSymbol1(...)

Simple bar chart using symbol attribute.

Example

```
def sampleSymbol1():
    "Simple bar chart using symbol attribute."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.barWidth = 10
    bc.groupSpacing = 15
    bc.barSpacing = 3

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'e'
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    from reportlab.graphics.widgets.grids import ShadedRect
    sym1 = ShadedRect()
    sym1.fillColorStart = colors.black
    sym1.fillColorEnd = colors.blue
    sym1.orientation = 'horizontal'
    sym1.strokeWidth = 0

    sym2 = ShadedRect()
    sym2.fillColorStart = colors.black
    sym2.fillColorEnd = colors.pink
    sym2.orientation = 'horizontal'
    sym2.strokeWidth = 0

    sym3 = ShadedRect()
    sym3.fillColorStart = colors.blue
    sym3.fillColorEnd = colors.white
    sym3.orientation = 'vertical'
    sym3.cylinderMode = 1
    sym3.strokeWidth = 0

    bc.bars.symbol = sym1
    bc.bars[2].symbol = sym2
    bc.bars[3].symbol = sym3

    drawing.add(bc)

    return drawing
```

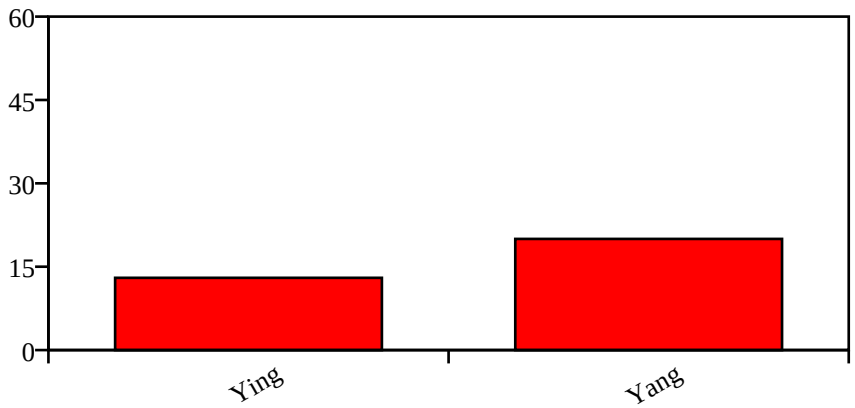

60
45
30
15
0
Ying
Yang

sampleV0a(...)

A slightly pathologic bar chart with only TWO data items.

Example

```
def sampleV0a():
    "A slightly pathologic bar chart with only TWO data items."

    drawing = Drawing(400, 200)

    data = [(13, 20)]

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'ne'
    bc.categoryAxis.labels.dx = 8
    bc.categoryAxis.labels.dy = -2
    bc.categoryAxis.labels.angle = 30
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

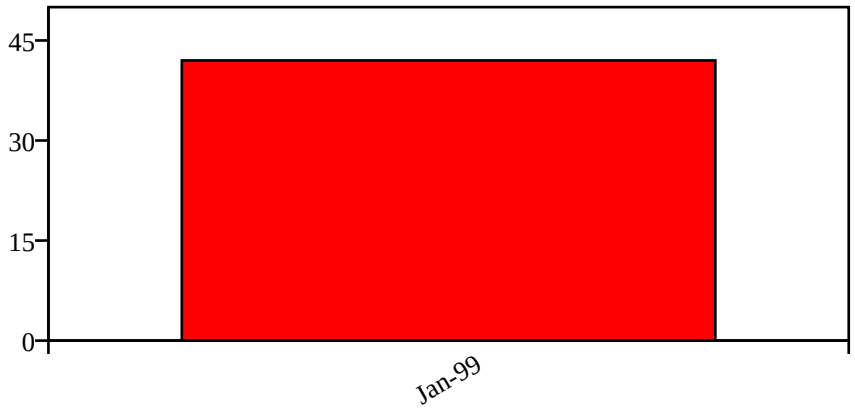


sampleV0b(...)

A pathologic bar chart with only ONE data item.

Example

```
def sampleV0b():
    "A pathologic bar chart with only ONE data item."

    drawing = Drawing(400, 200)

    data = [(42,)]

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 50
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'ne'
    bc.categoryAxis.labels.dx = 8
    bc.categoryAxis.labels.dy = -2
    bc.categoryAxis.labels.angle = 30
    bc.categoryAxis.categoryNames = ['Jan-99']

    drawing.add(bc)

    return drawing
```

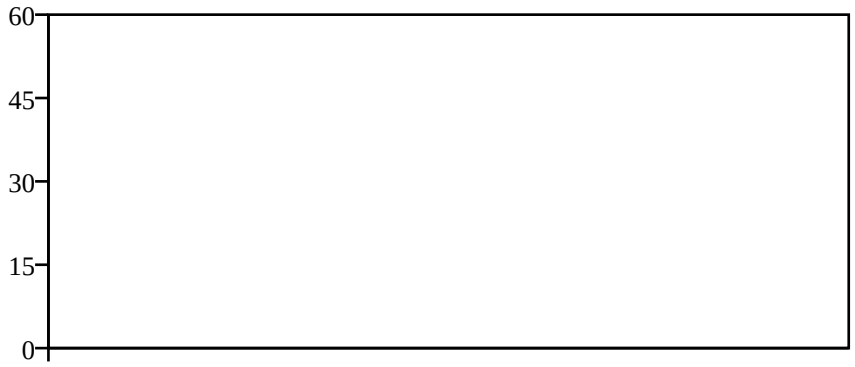


sampleV0c(...)

A really pathologic bar chart with NO data items at all!

Example

```
def sampleV0c():
    "A really pathologic bar chart with NO data items at all!"

    drawing = Drawing(400, 200)

    data = [()]

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'ne'
    bc.categoryAxis.labels.dx = 8
    bc.categoryAxis.labels.dy = -2
    bc.categoryAxis.categoryNames = []

    drawing.add(bc)

    return drawing
```

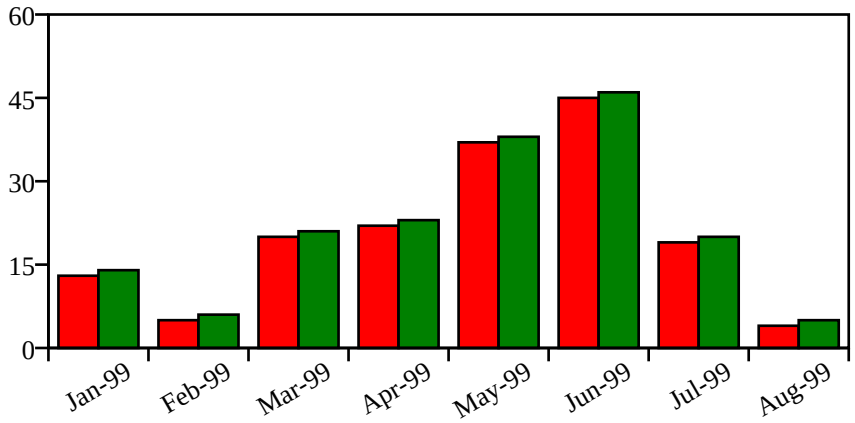


sampleV1(...)

Sample of multi-series bar chart.

Example

```
def sampleV1():
    "Sample of multi-series bar chart."

    drawing = Drawing(400, 200)

    data = [
            (13, 5, 20, 22, 37, 45, 19, 4),
            (14, 6, 21, 23, 38, 46, 20, 5)
            ]

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'ne'
    bc.categoryAxis.labels.dx = 8
    bc.categoryAxis.labels.dy = -2
    bc.categoryAxis.labels.angle = 30

    catNames = 'Jan Feb Mar Apr May Jun Jul Aug'.split(' ')
    catNames = map(lambda n:n+'-99', catNames)
    bc.categoryAxis.categoryNames = catNames
    drawing.add(bc)

    return drawing
```

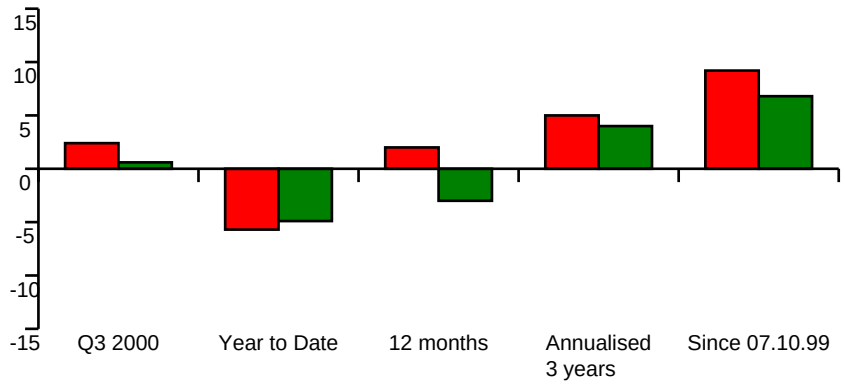


sampleV2a(...)

Sample of multi-series bar chart.

Example

```
def sampleV2a():
    "Sample of multi-series bar chart."

    data = [(2.4, -5.7, 2, 5, 9.2),
            (0.6, -4.9, -3, 4, 6.8)
            ]

    labels = ("Q3 2000", "Year to Date", "12 months",
              "Annualised\n3 years", "Since 07.10.99")

    drawing = Drawing(400, 200)

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 120
    bc.width = 300
    bc.data = data

    bc.barSpacing = 0
    bc.groupSpacing = 10
    bc.barWidth = 10

    bc.valueAxis.valueMin = -15
    bc.valueAxis.valueMax = +15
    bc.valueAxis.valueStep = 5
    bc.valueAxis.labels.fontName = 'Helvetica'
    bc.valueAxis.labels.fontSize = 8
    bc.valueAxis.labels.boxAnchor = 'n'   # irrelevant (becomes 'c')
    bc.valueAxis.labels.textAnchor = 'middle'

    bc.categoryAxis.categoryNames = labels
    bc.categoryAxis.labels.fontName = 'Helvetica'
    bc.categoryAxis.labels.fontSize = 8
    bc.categoryAxis.labels.dy = -60

    drawing.add(bc)

    return drawing
```

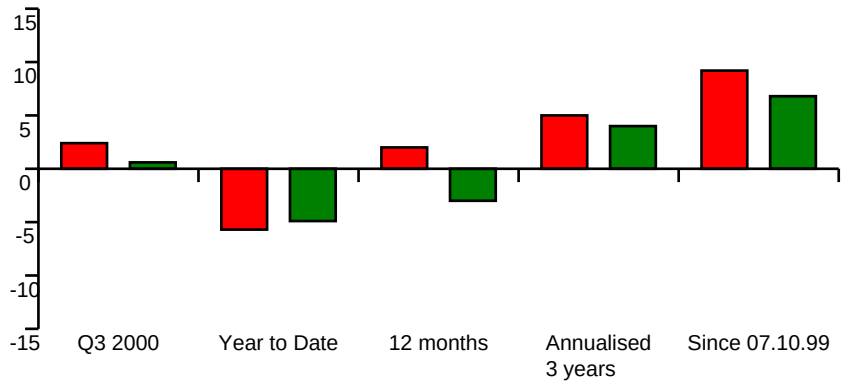


sampleV2b(...)

Sample of multi-series bar chart.

Example

```
def sampleV2b():
    "Sample of multi-series bar chart."

    data = [(2.4, -5.7, 2, 5, 9.2),
            (0.6, -4.9, -3, 4, 6.8)
            ]

    labels = ("Q3 2000", "Year to Date", "12 months",
              "Annualised\n3 years", "Since 07.10.99")

    drawing = Drawing(400, 200)

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 120
    bc.width = 300
    bc.data = data

    bc.barSpacing = 5
    bc.groupSpacing = 10
    bc.barWidth = 10

    bc.valueAxis.valueMin = -15
    bc.valueAxis.valueMax = +15
    bc.valueAxis.valueStep = 5
    bc.valueAxis.labels.fontName = 'Helvetica'
    bc.valueAxis.labels.fontSize = 8
    bc.valueAxis.labels.boxAnchor = 'n'   # irrelevant (becomes 'c')
    bc.valueAxis.labels.textAnchor = 'middle'

    bc.categoryAxis.categoryNames = labels
    bc.categoryAxis.labels.fontName = 'Helvetica'
    bc.categoryAxis.labels.fontSize = 8
    bc.categoryAxis.labels.dy = -60

    drawing.add(bc)

    return drawing
```

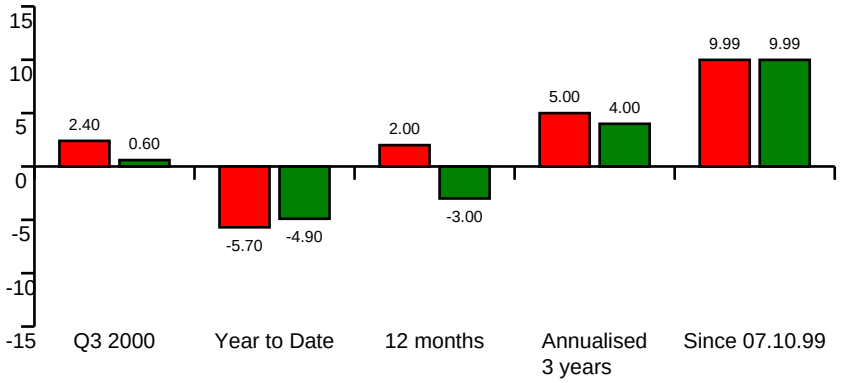


sampleV2c(...)

Sample of multi-series bar chart.

Example

```
def sampleV2c():
    "Sample of multi-series bar chart."

    data = [(2.4, -5.7, 2, 5, 9.99),
            (0.6, -4.9, -3, 4, 9.99)
            ]

    labels = ("Q3 2000", "Year to Date", "12 months",
              "Annualised\n3 years", "Since 07.10.99")

    drawing = Drawing(400, 200)

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 120
    bc.width = 300
    bc.data = data

    bc.barSpacing = 2
    bc.groupSpacing = 10
    bc.barWidth = 10

    bc.valueAxis.valueMin = -15
    bc.valueAxis.valueMax = +15
    bc.valueAxis.valueStep = 5
    bc.valueAxis.labels.fontName = 'Helvetica'
    bc.valueAxis.labels.fontSize = 8

    bc.categoryAxis.categoryNames = labels
    bc.categoryAxis.labels.fontName = 'Helvetica'
    bc.categoryAxis.labels.fontSize = 8
    bc.valueAxis.labels.boxAnchor = 'n'
    bc.valueAxis.labels.textAnchor = 'middle'
    bc.categoryAxis.labels.dy = -60

    bc.barLabels.nudge = 10

    bc.barLabelFormat = '%0.2f'
    bc.barLabels.dx = 0
    bc.barLabels.dy = 0
    bc.barLabels.boxAnchor = 'n'  # irrelevant (becomes 'c')
    bc.barLabels.fontName = 'Helvetica'
    bc.barLabels.fontSize = 6

    drawing.add(bc)

    return drawing
```

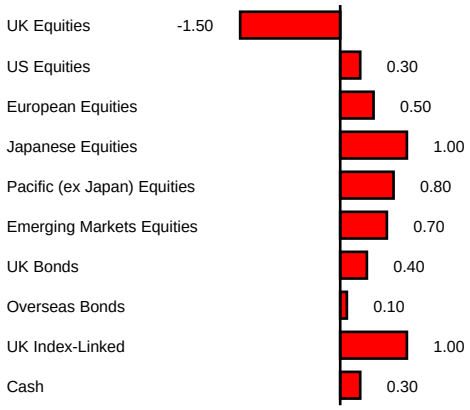

15
10
5
0
-5
-10
-15
2.40
0.60
-5.70
-4.90
2.00
-3.00
5.00
4.00
9.99
9.99
Q3 2000
Year to Date
12 months
Annualised
3 years
Since 07.10.99

sampleV3(...)

Faked horizontal bar chart using a vertical real one (deprecated).

Example

```
def sampleV3():
    "Faked horizontal bar chart using a vertical real one (deprecated)."

    names = ("UK Equities", "US Equities", "European Equities", "Japanese Equities",
             "Pacific (ex Japan) Equities", "Emerging Markets Equities",
             "UK Bonds", "Overseas Bonds", "UK Index-Linked", "Cash")

    series1 = (-1.5, 0.3, 0.5, 1.0, 0.8, 0.7, 0.4, 0.1, 1.0, 0.3)
    series2 = (0.0, 0.33, 0.55, 1.1, 0.88, 0.77, 0.44, 0.11, 1.10, 0.33)

    assert len(names) == len(series1), "bad data"
    assert len(names) == len(series2), "bad data"

    drawing = Drawing(400, 200)

    bc = VerticalBarChart()
    bc.x = 0
    bc.y = 0
    bc.height = 100
    bc.width = 150
    bc.data = (series1,)
    bc.bars.fillColor = colors.green

    bc.barLabelFormat = '%0.2f'
    bc.barLabels.dx = 0
    bc.barLabels.dy = 0
    bc.barLabels.boxAnchor = 'w' # irrelevant (becomes 'c')
    bc.barLabels.angle = 90
    bc.barLabels.fontName = 'Helvetica'
    bc.barLabels.fontSize = 6
    bc.barLabels.nudge = 10

    bc.valueAxis.visible = 0
    bc.valueAxis.valueMin = -2
    bc.valueAxis.valueMax = +2
    bc.valueAxis.valueStep = 1

    bc.categoryAxis.tickUp = 0
    bc.categoryAxis.tickDown = 0
    bc.categoryAxis.categoryNames = names
    bc.categoryAxis.labels.angle = 90
    bc.categoryAxis.labels.boxAnchor = 'w'
    bc.categoryAxis.labels.dx = 0
    bc.categoryAxis.labels.dy = -125
    bc.categoryAxis.labels.fontName = 'Helvetica'
    bc.categoryAxis.labels.fontSize = 6

    g = Group(bc)
    g.translate(100, 175)
    g.rotate(-90)

    drawing.add(g)

    return drawing
```

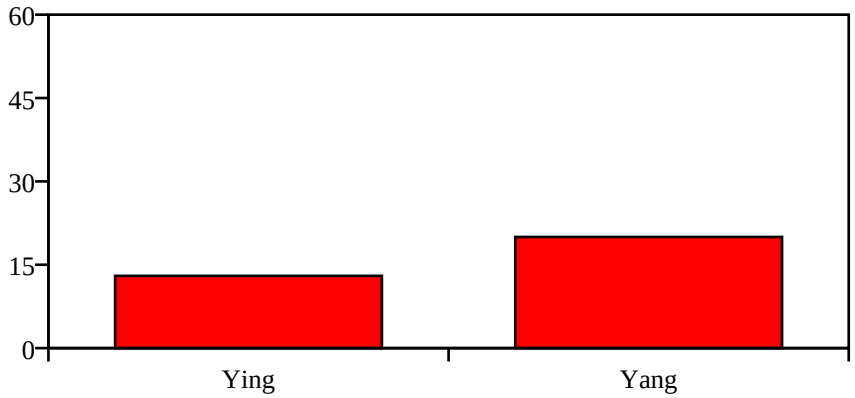

UK Equities
-1.50
US Equities
0.30
European Equities
0.50
Japanese Equities
1.00
Pacific (ex Japan) Equities
0.80
Emerging Markets Equities
0.70
UK Bonds
0.40
Overseas Bonds
0.10
UK Index-Linked
1.00
Cash
0.30

sampleV4a(...)

A bar chart showing value axis region starting at *exactly* zero.

Example

```
def sampleV4a():
    "A bar chart showing value axis region starting at *exactly* zero."

    drawing = Drawing(400, 200)

    data = [(13, 20)]

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

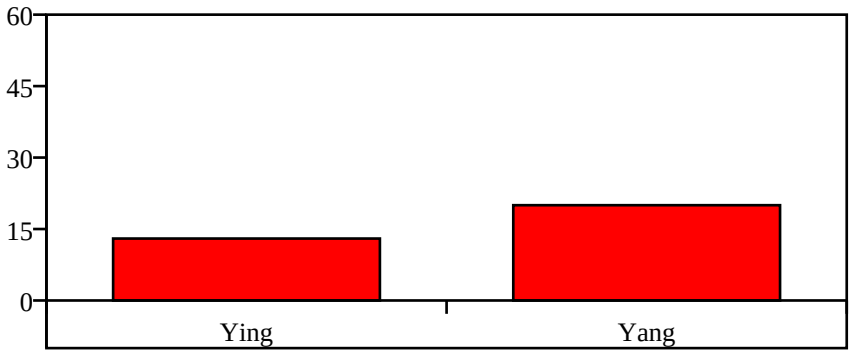


sampleV4b(...)

A bar chart showing value axis region starting *below* zero.

Example

```
def sampleV4b():
    "A bar chart showing value axis region starting *below* zero."

    drawing = Drawing(400, 200)

    data = [(13, 20)]

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = -10
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

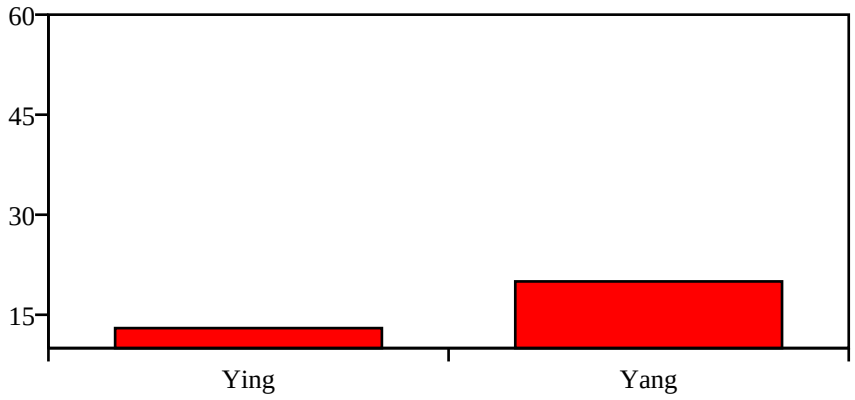


sampleV4c(...)

A bar chart showing value axis region staring *above* zero.

Example

```
def sampleV4c():
    "A bar chart showing value axis region staring *above* zero."

    drawing = Drawing(400, 200)

    data = [(13, 20)]

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 10
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

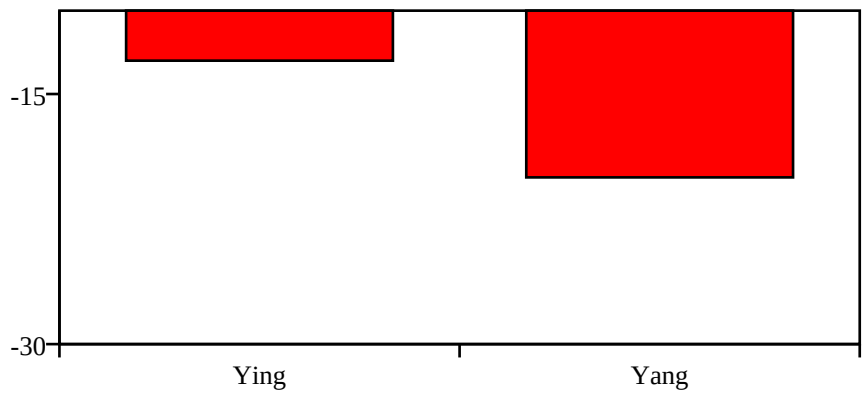


sampleV4d(...)

A bar chart showing value axis region entirely *below* zero.

Example

```
def sampleV4d():
    "A bar chart showing value axis region entirely *below* zero."

    drawing = Drawing(400, 200)

    data = [(-13, -20)]

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data

    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = -30
    bc.valueAxis.valueMax = -10
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

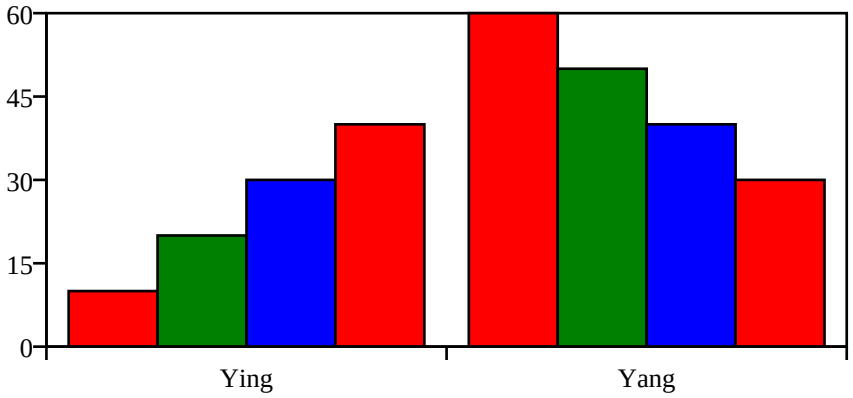


sampleV5a(...)

A simple bar chart with no expressed spacing attributes.

Example

```
def sampleV5a():
    "A simple bar chart with no expressed spacing attributes."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

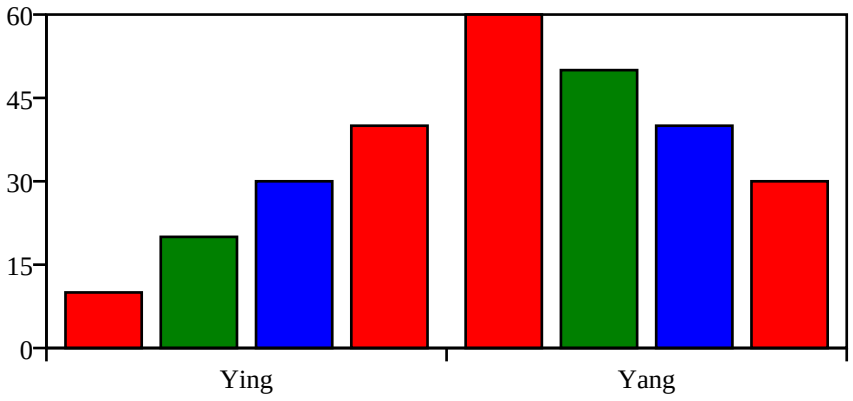


sampleV5b(...)

A simple bar chart with proportional spacing.

Example

```
def sampleV5b():
    "A simple bar chart with proportional spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 0
    bc.barWidth = 40
    bc.groupSpacing = 20
    bc.barSpacing = 10

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

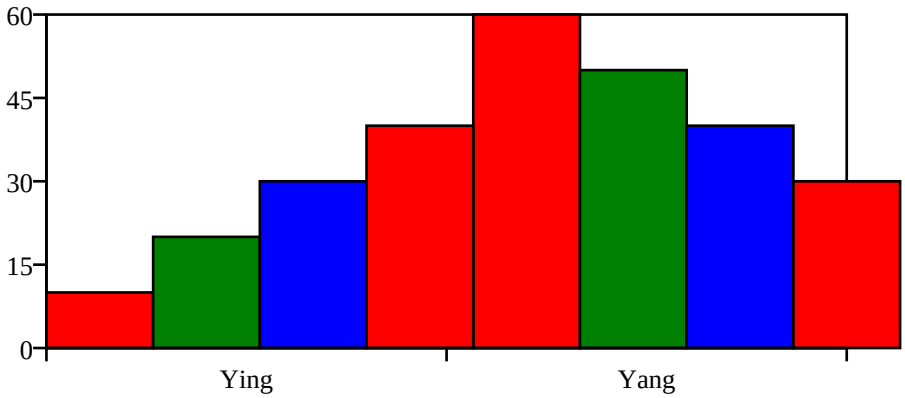


sampleV5c1(...)

Make sampe simple bar chart but with absolute spacing.

Example

```
def sampleV5c1():
    "Make sampe simple bar chart but with absolute spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 40
    bc.groupSpacing = 0
    bc.barSpacing = 0

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

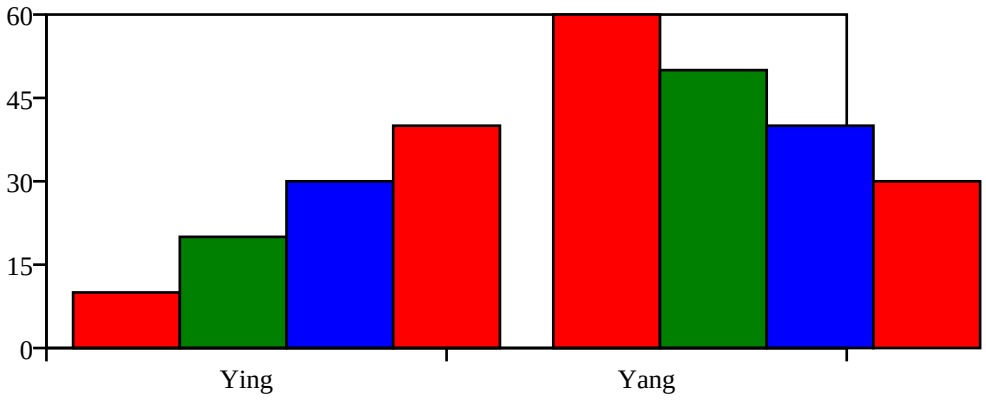


sampleV5c2(...)

Make sampe simple bar chart but with absolute spacing.

Example

```
def sampleV5c2():
    "Make sampe simple bar chart but with absolute spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 40
    bc.groupSpacing = 20
    bc.barSpacing = 0

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

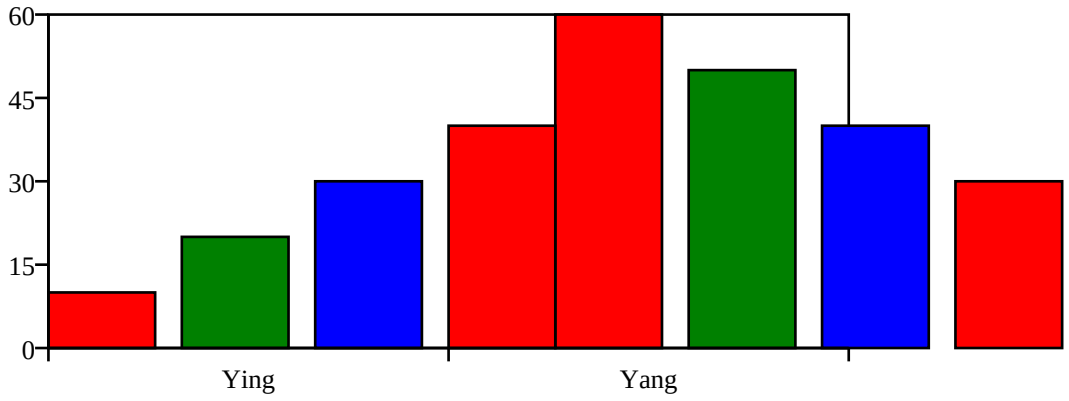


sampleV5c3(...)

Make sampe simple bar chart but with absolute spacing.

Example

```
def sampleV5c3():
    "Make sampe simple bar chart but with absolute spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 40
    bc.groupSpacing = 0
    bc.barSpacing = 10

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```

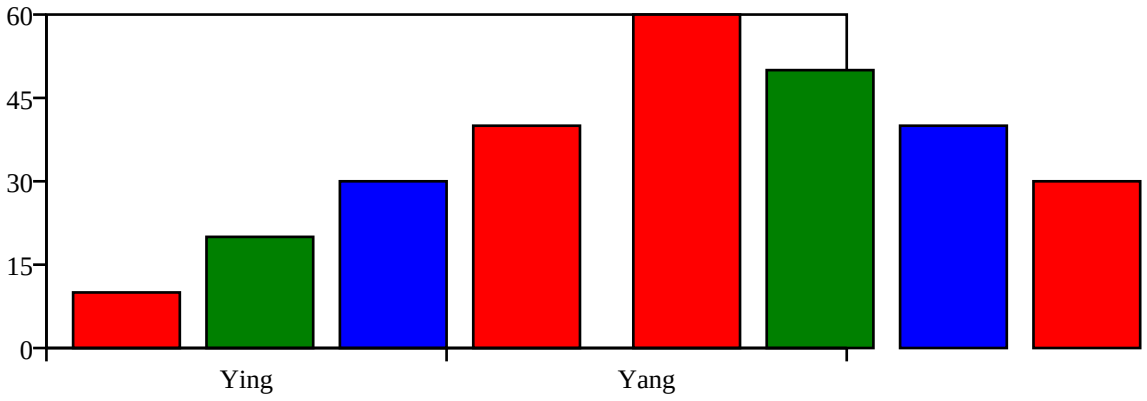


sampleV5c4(...)

Make sampe simple bar chart but with absolute spacing.

Example

```
def sampleV5c4():
    "Make sampe simple bar chart but with absolute spacing."

    drawing = Drawing(400, 200)

    data = dataSample5

    bc = VerticalBarChart()
    bc.x = 50
    bc.y = 50
    bc.height = 125
    bc.width = 300
    bc.data = data
    bc.strokeColor = colors.black

    bc.useAbsolute = 1
    bc.barWidth = 40
    bc.groupSpacing = 20
    bc.barSpacing = 10

    bc.valueAxis.valueMin = 0
    bc.valueAxis.valueMax = 60
    bc.valueAxis.valueStep = 15

    bc.categoryAxis.labels.boxAnchor = 'n'
    bc.categoryAxis.labels.dy = -5
    bc.categoryAxis.categoryNames = ['Ying', 'Yang']

    drawing.add(bc)

    return drawing
```



areas

This module defines a Area mixin classes

Classes

PlotArea(Widget)

Abstract base class representing a chart's plot area, pretty unusable by itself.

Public Attributes

background Handle to background object.

debug Used only for debugging.

fillColor Color of the plot area interior.

height Height of the chart.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        background = None
        debug = 0
        fillColor = None
        height = 85
        strokeColor = None
        strokeWidth = 1
        width = 180
        x = 20
        y = 10
```

axes

Collection of axes for charts.

The current collection comprises axes for charts using cartesian coordinate systems. All axes might have tick marks and labels. There are two dichotomies for axes: one of X and Y flavours and another of category and value flavours.

Category axes have an ordering but no metric. They are divided into a number of equal-sized buckets. Their tick marks or labels, if available, go BETWEEN the buckets, and the labels are placed below to/left of the X/Y-axis, respectively.

Value axes have an ordering AND metric. They correspond to a numeric quantity. Value axis have a real number quantity associated with it. The chart tells it where to go.
The most basic axis divides the number line into equal spaces and has tickmarks and labels associated with each; later we will add variants where you can specify the sampling interval.

The charts using axis tell them where the labels should be placed.

Axes of complementary X/Y flavours can be connected to each other in various ways, i.e. with a specific reference point, like an x/value axis to a y/value (or category) axis. In this case the connection can be either at the top or bottom of the former or at any absolute value (specified in points) or at some value of the former axes in its own coordinate system.

Classes

AdjYValueAxis(YValueAxis)

A Y-axis applying additional rules.

Depending on the data and some built-in rules, the axis may choose to adjust its range and origin.

Public Attributes

avoidBoundFrac Fraction of interval to allow above and below.

forceZero Ensure zero in range if true.

gridEnd End of grid lines wrt axis origin

gridStart Start of grid lines wrt axis origin

gridStrokeColor Color of grid lines.

gridStrokeDashArray Dash array used for grid lines.

gridStrokeWidth Width of grid lines.

joinAxis Join both axes if true.

joinAxisMode Mode used for connecting axis ('left', 'right', 'value', 'points', None).

joinAxisPos Position at which to join with other axis.

labelAxisMode Like joinAxisMode, but for the axis labels

labelTextFormat Formatting string or function used for axis labels.

labelTextPostFormat Extra Formatting string.

labelTextScale Scaling for label tick values.

labels Handle of the axis labels.

leftAxisOrigShiftIPC Lowest label shift interval ratio.

leftAxisOrigShiftMin Minimum amount to shift.

leftAxisPercent When true add percent sign to label values.

leftAxisSkipLL0 Skip/Keep lowest tick label when true/false. Or skiplist

maximumTicks Maximum number of ticks.

minimumTickSpacing Minimum value for distance between ticks.

origShiftIPC Lowest label shift interval ratio.

origShiftMin Minimum amount to shift.

origShiftSpecialValue special value for shift

rangeRound How to round the axis limits

requiredRange Minimum required value range.

skipEndL Skip high/low tick labels

strokeColor Color of axis line and ticks.

strokeDashArray Dash array used for axis line.

strokeWidth Width of axis line and ticks.

style How values are plotted!

tickAxisMode Like joinAxisMode, but for the ticks

tickLeft Tick length left of the axis.

tickRight Tick length right of the axis.

valueMax Maximum value on axis.

valueMin Minimum value on axis.

valueStep Step size used between ticks.

valueSteps List of step sizes used between ticks.

visible Display entire object, if true.

visibleAxis Display axis line, if true.

visibleGrid Display axis grid, if true.

visibleLabels Display axis labels, if true.

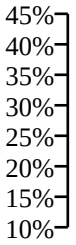
visibleTicks Display axis ticks, if true.

zrangePref Zero range axis limit preference.

Example

```
            def demo(self):
                data = [(10, 20, 30, 42)]
                self.setPosition(100, 10, 80)
                self.configure(data)
                drawing = Drawing(200, 100)
```

```
        drawing.add(self)
        return drawing
```



Properties of Example Widget

```
avoidBoundFrac = None
forceZero = 0
gridEnd = None
gridStart = None
gridStrokeColor = Color(0,0,0)
gridStrokeDashArray = None
gridStrokeWidth = 0.25
joinAxis = None
joinAxisMode = None
joinAxisPos = None
labelAxisMode = 'axis'
labelTextFormat = None
labelTextPostFormat = None
labelTextScale = None
labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3016d88>
leftAxisOrigShiftIPC = 0.14999999999999999
leftAxisOrigShiftMin = 12
leftAxisPercent = 1
leftAxisSkipLL0 = 0
maximumTicks = 7
minimumTickSpacing = 10
origShiftIPC = None
origShiftMin = None
origShiftSpecialValue = None
rangeRound = 'none'
requiredRange = 30
skipEndL = 'none'
strokeColor = Color(0,0,0)
strokeDashArray = None
strokeWidth = 1
style = 'normal'
tickAxisMode = 'axis'
tickLeft = 5
tickRight = 0
valueMax = None
valueMin = None
valueStep = None
valueSteps = [10.0, 15.0, 20.0, 25.0, 30.0, 35.0, 40.0, 45.0]
visible = 1
visibleAxis = 1
visibleGrid = 0
visibleLabels = 1
visibleTicks = 1
zrangePref = 0
```

CategoryAxis(_AxisG)

Abstract category axis, unusable in itself.

Public Attributes

categoryNames List of category names.

gridEnd End of grid lines wrt axis origin

gridStart Start of grid lines wrt axis origin

gridStrokeColor Color of grid lines.

gridStrokeDashArray Dash array used for grid lines.

gridStrokeWidth Width of grid lines.

joinAxis Join both axes if true.

joinAxisPos Position at which to join with other axis.

labelAxisMode Like joinAxisMode, but for the axis labels

labels Handle of the axis labels.

reverseDirection If true reverse category direction.

strokeColor Color of axis line and ticks.

strokeDashArray Dash array used for axis line.

strokeWidth Width of axis line and ticks.

style How common category bars are plotted

tickShift Tick shift typically

visible Display entire object, if true.

visibleAxis Display axis line, if true.

visibleGrid Display axis grid, if true.

visibleLabels Display axis labels, if true.

visibleTicks Display axis ticks, if true.

NormalDateXValueAxis(XValueAxis)

An X axis applying additional rules.

Depending on the data and some built-in rules, the axis
displays normalDate values as nicely formatted dates.

The client chart should have NormalDate X values.

Public Attributes

avoidBoundFrac Fraction of interval to allow above and below.

bottomAxisLabelSlack Fractional amount used to adjust label spacing

dailyFreq True if we are to assume daily data to be ticked at end of month.

dayOfWeekName Weekday names.

forceDatesEachYear List of dates in format "31-Dec","1-Jan". If present they will always be used for tick marks in the current year, rather than the dates chosen by the automatic algorithm. Hyphen compulsory, case of month optional.

forceEndDate Flag for enforced displaying of last date value.

forceFirstDate Flag for enforced displaying of first date value.

forceZero Ensure zero in range if true.

gridEnd End of grid lines wrt axis origin

gridStart Start of grid lines wrt axis origin

gridStrokeColor Color of grid lines.

gridStrokeDashArray Dash array used for grid lines.

gridStrokeWidth Width of grid lines.

joinAxis Join both axes if true.

joinAxisMode Mode used for connecting axis ('bottom', 'top', 'value', 'points', None).

joinAxisPos Position at which to join with other axis.

labelAxisMode Like joinAxisMode, but for the axis labels

labelTextFormat Formatting string or function used for axis labels.

labelTextPostFormat Extra Formatting string.

labelTextScale Scaling for label tick values.

labels Handle of the axis labels.

maximumTicks Maximum number of ticks.

minimumTickSpacing Minimum value for distance between ticks.

monthName Month names.

niceMonth Flag for displaying months 'nicely'.

origShiftIPC Lowest label shift interval ratio.

origShiftMin Minimum amount to shift.

origShiftSpecialValue special value for shift

rangeRound How to round the axis limits

skipEndL Skip high/low tick labels

specifiedTickDates Actual tick values to use; no calculations done

strokeColor Color of axis line and ticks.

strokeDashArray Dash array used for axis line.

strokeWidth Width of axis line and ticks.

style How values are plotted!

tickAxisMode Like joinAxisMode, but for the ticks

tickDown Tick length down the axis.

tickUp Tick length up the axis.

valueMax Maximum value on axis.

valueMin Minimum value on axis.

valueStep Step size used between ticks.

valueSteps List of step sizes used between ticks.

visible Display entire object, if true.

visibleAxis Display axis line, if true.

visibleGrid Display axis grid, if true.

visibleLabels Display axis labels, if true.

visibleTicks Display axis ticks, if true.

xLabelFormat Label format string (e.g. '{mm}/{yy}') or function.

zrangePref Zero range axis limit preference.

Example

```
        def demo(self):
            self.setPosition(20, 50, 150)
            self.configure([(10,20,30,40,50)])

            d = Drawing(200, 100)
            d.add(self)
            return d
```

Properties of Example Widget

```
avoidBoundFrac = None
bottomAxisLabelSlack = 0.10000000000000001
dailyFreq = 0
dayOfWeekName = ['Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', 'Sunday']
forceDatesEachYear = []
forceEndDate = 0
forceFirstDate = 0
forceZero = 0
gridEnd = None
gridStart = None
gridStrokeColor = Color(0,0,0)
gridStrokeDashArray = None
gridStrokeWidth = 0.25
joinAxis = None
joinAxisMode = None
joinAxisPos = None
labelAxisMode = 'axis'
labelTextFormat = None
labelTextPostFormat = None
labelTextScale = None
labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3021098>
maximumTicks = 7
minimumTickSpacing = 10
monthName = ['January',
             'February',
             'March',
             'April',
             'May',
             'June',
             'July',
             'August',
             'September',
             'October',
             'November',
             'December']
niceMonth = 1
origShiftIPC = None
origShiftMin = None
origShiftSpecialValue = None
rangeRound = 'none'
skipEndL = 'none'
specifiedTickDates = None
strokeColor = Color(0,0,0)
strokeDashArray = None
strokeWidth = 1
style = 'normal'
```

```
tickAxisMode = 'axis'
tickDown = 5
tickUp = 0
valueMax = None
valueMin = None
valueStep = None
valueSteps = None
visible = 1
visibleAxis = 1
visibleGrid = 0
visibleLabels = 1
visibleTicks = 1
xLabelFormat = '{mm}/{yy}'
zrangePref = 0
```

ValueAxis(_AxisG)

Abstract value axis, unusable in itself.

Public Attributes

avoidBoundFrac Fraction of interval to allow above and below.

forceZero Ensure zero in range if true.

gridEnd End of grid lines wrt axis origin

gridStart Start of grid lines wrt axis origin

gridStrokeColor Color of grid lines.

gridStrokeDashArray Dash array used for grid lines.

gridStrokeWidth Width of grid lines.

labelAxisMode Like joinAxisMode, but for the axis labels

labelTextFormat Formatting string or function used for axis labels.

labelTextPostFormat Extra Formatting string.

labelTextScale Scaling for label tick values.

labels Handle of the axis labels.

maximumTicks Maximum number of ticks.

minimumTickSpacing Minimum value for distance between ticks.

origShiftIPC Lowest label shift interval ratio.

origShiftMin Minimum amount to shift.

origShiftSpecialValue special value for shift

rangeRound How to round the axis limits

skipEndL Skip high/low tick labels

strokeColor Color of axis line and ticks.

strokeDashArray Dash array used for axis line.

strokeWidth Width of axis line and ticks.

style How values are plotted!

tickAxisMode Like joinAxisMode, but for the ticks

valueMax Maximum value on axis.

valueMin Minimum value on axis.

valueStep Step size used between ticks.

valueSteps List of step sizes used between ticks.

visible Display entire object, if true.

visibleAxis Display axis line, if true.

visibleGrid Display axis grid, if true.

visibleLabels Display axis labels, if true.

visibleTicks Display axis ticks, if true.

zrangePref Zero range axis limit preference.

XCategoryAxis(_XTicks, CategoryAxis)

X/category axis

Public Attributes

categoryNames List of category names.

gridEnd End of grid lines wrt axis origin

gridStart Start of grid lines wrt axis origin

gridStrokeColor Color of grid lines.

gridStrokeDashArray Dash array used for grid lines.

gridStrokeWidth Width of grid lines.

joinAxis Join both axes if true.

joinAxisMode Mode used for connecting axis ('bottom', 'top', 'value', 'points', None).

joinAxisPos Position at which to join with other axis.

labelAxisMode Like joinAxisMode, but for the axis labels

labels Handle of the axis labels.

reverseDirection If true reverse category direction.

strokeColor Color of axis line and ticks.

strokeDashArray Dash array used for axis line.

strokeWidth Width of axis line and ticks.

style How common category bars are plotted

tickDown Tick length down the axis.

tickShift Tick shift typically

tickUp Tick length up the axis.

visible Display entire object, if true.

visibleAxis Display axis line, if true.

visibleGrid Display axis grid, if true.

visibleLabels Display axis labels, if true.

visibleTicks Display axis ticks, if true.

XValueAxis(_XTicks, ValueAxis)

X/value axis

Public Attributes

avoidBoundFrac Fraction of interval to allow above and below.

forceZero Ensure zero in range if true.

gridEnd End of grid lines wrt axis origin

gridStart Start of grid lines wrt axis origin

gridStrokeColor Color of grid lines.

gridStrokeDashArray Dash array used for grid lines.

gridStrokeWidth Width of grid lines.

joinAxis Join both axes if true.

joinAxisMode Mode used for connecting axis ('bottom', 'top', 'value', 'points', None).

joinAxisPos Position at which to join with other axis.

labelAxisMode Like joinAxisMode, but for the axis labels

labelTextFormat Formatting string or function used for axis labels.

labelTextPostFormat Extra Formatting string.

labelTextScale Scaling for label tick values.

labels Handle of the axis labels.

maximumTicks Maximum number of ticks.

minimumTickSpacing Minimum value for distance between ticks.

origShiftIPC Lowest label shift interval ratio.

origShiftMin Minimum amount to shift.

origShiftSpecialValue special value for shift

rangeRound How to round the axis limits

skipEndL Skip high/low tick labels

strokeColor Color of axis line and ticks.

strokeDashArray Dash array used for axis line.

strokeWidth Width of axis line and ticks.

style How values are plotted!

tickAxisMode Like joinAxisMode, but for the ticks

tickDown Tick length down the axis.

tickUp Tick length up the axis.

valueMax Maximum value on axis.

valueMin Minimum value on axis.

valueStep Step size used between ticks.

valueSteps List of step sizes used between ticks.

visible Display entire object, if true.

visibleAxis Display axis line, if true.

visibleGrid Display axis grid, if true.

visibleLabels Display axis labels, if true.

visibleTicks Display axis ticks, if true.

zrangePref Zero range axis limit preference.

Example

```
            def demo(self):
                self.setPosition(20, 50, 150)
                self.configure([(10,20,30,40,50)])

                d = Drawing(200, 100)
```

```
        d.add(self)
        return d
```

Properties of Example Widget

```
avoidBoundFrac = None
forceZero = 0
gridEnd = None
gridStart = None
gridStrokeColor = Color(0,0,0)
gridStrokeDashArray = None
gridStrokeWidth = 0.25
joinAxis = None
joinAxisMode = None
joinAxisPos = None
labelAxisMode = 'axis'
labelTextFormat = None
labelTextPostFormat = None
labelTextScale = None
labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3032560>
maximumTicks = 7
minimumTickSpacing = 10
origShiftIPC = None
origShiftMin = None
origShiftSpecialValue = None
rangeRound = 'none'
skipEndL = 'none'
strokeColor = Color(0,0,0)
strokeDashArray = None
strokeWidth = 1
style = 'normal'
tickAxisMode = 'axis'
tickDown = 5
tickUp = 0
valueMax = None
valueMin = None
valueStep = None
visible = 1
visibleAxis = 1
visibleGrid = 0
visibleLabels = 1
visibleTicks = 1
zrangePref = 0
```

YCategoryAxis(_YTicks, CategoryAxis)

Y/category axis

Public Attributes

categoryNames List of category names.

gridEnd End of grid lines wrt axis origin

gridStart Start of grid lines wrt axis origin

gridStrokeColor Color of grid lines.

gridStrokeDashArray Dash array used for grid lines.

gridStrokeWidth Width of grid lines.

joinAxis Join both axes if true.

joinAxisMode Mode used for connecting axis ('left', 'right', 'value', 'points', None).

joinAxisPos Position at which to join with other axis.

labelAxisMode Like joinAxisMode, but for the axis labels

labels Handle of the axis labels.

reverseDirection If true reverse category direction.

strokeColor Color of axis line and ticks.

strokeDashArray Dash array used for axis line.

strokeWidth Width of axis line and ticks.

style How common category bars are plotted

tickLeft Tick length left of the axis.

tickRight Tick length right of the axis.

tickShift Tick shift typically

visible Display entire object, if true.

visibleAxis Display axis line, if true.

visibleGrid Display axis grid, if true.

visibleLabels Display axis labels, if true.

visibleTicks Display axis ticks, if true.

YValueAxis(_YTicks, ValueAxis)

Y/value axis

Public Attributes

avoidBoundFrac Fraction of interval to allow above and below.

forceZero Ensure zero in range if true.

gridEnd End of grid lines wrt axis origin

gridStart Start of grid lines wrt axis origin

gridStrokeColor Color of grid lines.

gridStrokeDashArray Dash array used for grid lines.

gridStrokeWidth Width of grid lines.

joinAxis Join both axes if true.

joinAxisMode Mode used for connecting axis ('left', 'right', 'value', 'points', None).

joinAxisPos Position at which to join with other axis.

labelAxisMode Like joinAxisMode, but for the axis labels

labelTextFormat Formatting string or function used for axis labels.

labelTextPostFormat Extra Formatting string.

labelTextScale Scaling for label tick values.

labels Handle of the axis labels.

maximumTicks Maximum number of ticks.

minimumTickSpacing Minimum value for distance between ticks.

origShiftIPC Lowest label shift interval ratio.

origShiftMin Minimum amount to shift.

origShiftSpecialValue special value for shift

rangeRound How to round the axis limits

skipEndL Skip high/low tick labels

strokeColor Color of axis line and ticks.

strokeDashArray Dash array used for axis line.

strokeWidth Width of axis line and ticks.

style How values are plotted!

tickAxisMode Like joinAxisMode, but for the ticks

tickLeft Tick length left of the axis.

tickRight Tick length right of the axis.

valueMax Maximum value on axis.

valueMin Minimum value on axis.

valueStep Step size used between ticks.

valueSteps List of step sizes used between ticks.

visible Display entire object, if true.

visibleAxis Display axis line, if true.

visibleGrid Display axis grid, if true.

visibleLabels Display axis labels, if true.

visibleTicks Display axis ticks, if true.

zrangePref Zero range axis limit preference.

Example

```
            def demo(self):
                data = [(10, 20, 30, 42)]
                self.setPosition(100, 10, 80)
                self.configure(data)
                drawing = Drawing(200, 100)
```

```
        drawing.add(self)
        return drawing
```

Properties of Example Widget

```
avoidBoundFrac = None
forceZero = 0
gridEnd = None
gridStart = None
gridStrokeColor = Color(0,0,0)
gridStrokeDashArray = None
gridStrokeWidth = 0.25
joinAxis = None
joinAxisMode = None
joinAxisPos = None
labelAxisMode = 'axis'
labelTextFormat = None
labelTextPostFormat = None
labelTextScale = None
labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x303d638>
maximumTicks = 7
minimumTickSpacing = 10
origShiftIPC = None
origShiftMin = None
origShiftSpecialValue = None
rangeRound = 'none'
skipEndL = 'none'
strokeColor = Color(0,0,0)
strokeDashArray = None
strokeWidth = 1
style = 'normal'
tickAxisMode = 'axis'
tickLeft = 5
tickRight = 0
valueMax = None
valueMin = None
valueStep = None
visible = 1
visibleAxis = 1
visibleGrid = 0
visibleLabels = 1
visibleTicks = 1
zrangePref = 0
```

_AxisG(Widget)

Public Attributes

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

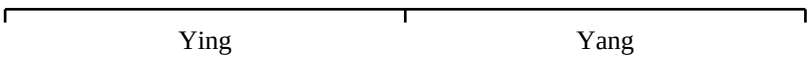
Functions

sample0a(...)

Sample drawing with one xcat axis and two buckets.

Example

```
def sample0a():
    "Sample drawing with one xcat axis and two buckets."

    drawing = Drawing(400, 200)

    data = [(10, 20)]

    xAxis = XCategoryAxis()
    xAxis.setPosition(75, 75, 300)
    xAxis.configure(data)
    xAxis.categoryNames = ['Ying', 'Yang']
    xAxis.labels.boxAnchor = 'n'
    drawing.add(xAxis)
    return drawing
```

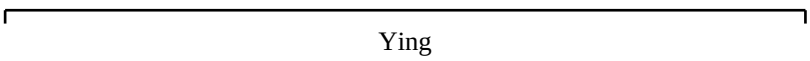


sample0b(...)

Sample drawing with one xcat axis and one bucket only.

Example

```
def sample0b():
    "Sample drawing with one xcat axis and one bucket only."

    drawing = Drawing(400, 200)

    data = [(10,)]

    xAxis = XCategoryAxis()
    xAxis.setPosition(75, 75, 300)
    xAxis.configure(data)
    xAxis.categoryNames = ['Ying']
    xAxis.labels.boxAnchor = 'n'
    drawing.add(xAxis)
    return drawing
```

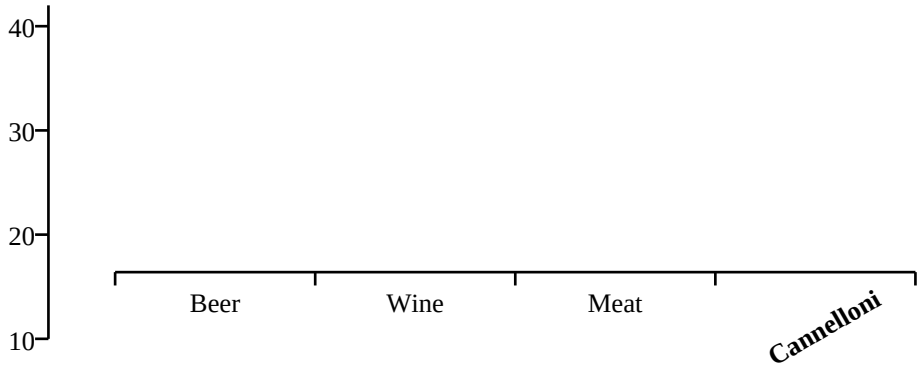


sample1(...)

Sample drawing containing two unconnected axes.

Example

```
def sample1():
    "Sample drawing containing two unconnected axes."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XCategoryAxis()
    xAxis.setPosition(75, 75, 300)
    xAxis.configure(data)
    xAxis.categoryNames = ['Beer','Wine','Meat','Cannelloni']
    xAxis.labels.boxAnchor = 'n'
    xAxis.labels[3].dy = -15
    xAxis.labels[3].angle = 30
    xAxis.labels[3].fontName = 'Times-Bold'
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

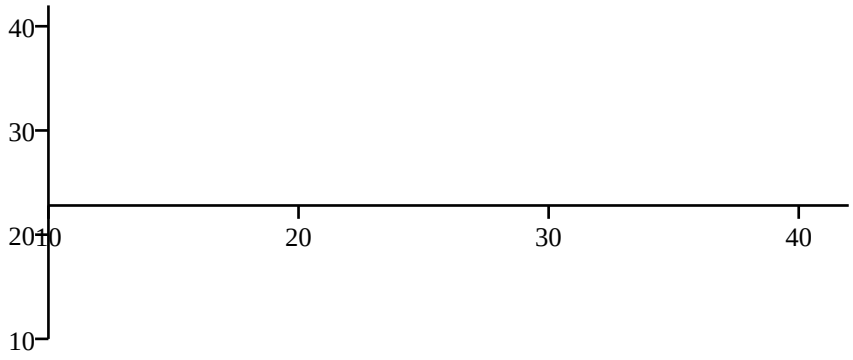


sample4a(...)

Sample drawing, xvalue/yvalue axes, y connected at 100 pts to x.

Example

```
def sample4a():
    "Sample drawing, xvalue/yvalue axes, y connected at 100 pts to x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'points'
    xAxis.joinAxisPos = 100
    xAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

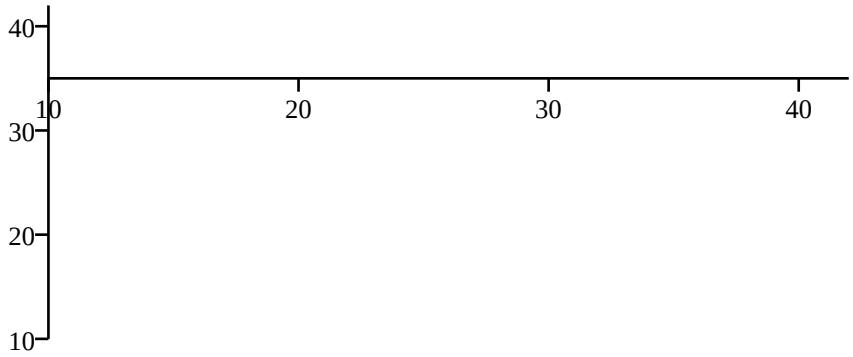


sample4b(...)

Sample drawing, xvalue/yvalue axes, y connected at value 35 of x.

Example

```
def sample4b():
    "Sample drawing, xvalue/yvalue axes, y connected at value 35 of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'value'
    xAxis.joinAxisPos = 35
    xAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

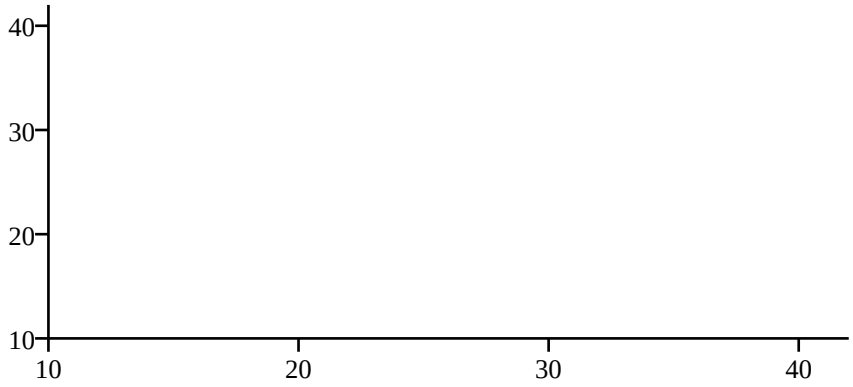


sample4c(...)

Sample drawing, xvalue/yvalue axes, y connected to bottom of x.

Example

```
def sample4c():
    "Sample drawing, xvalue/yvalue axes, y connected to bottom of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'bottom'
    xAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

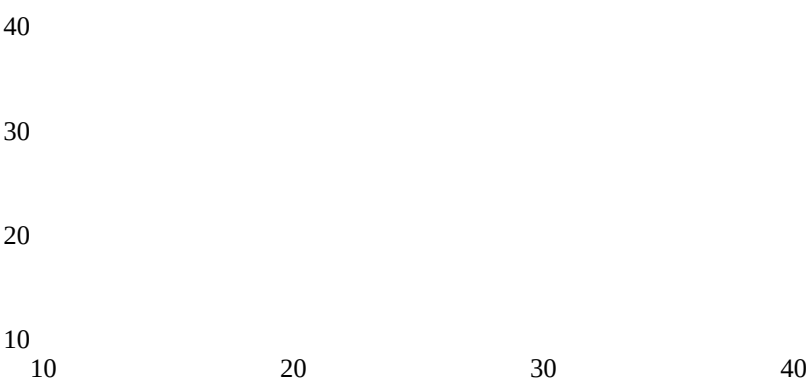


sample4c1(...)

xvalue/yvalue axes, without drawing axis lines/ticks.

Example

```
def sample4c1():
    "xvalue/yvalue axes, without drawing axis lines/ticks."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    yAxis.visibleAxis = 0
    yAxis.visibleTicks = 0
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'bottom'
    xAxis.configure(data)
    xAxis.visibleAxis = 0
    xAxis.visibleTicks = 0
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

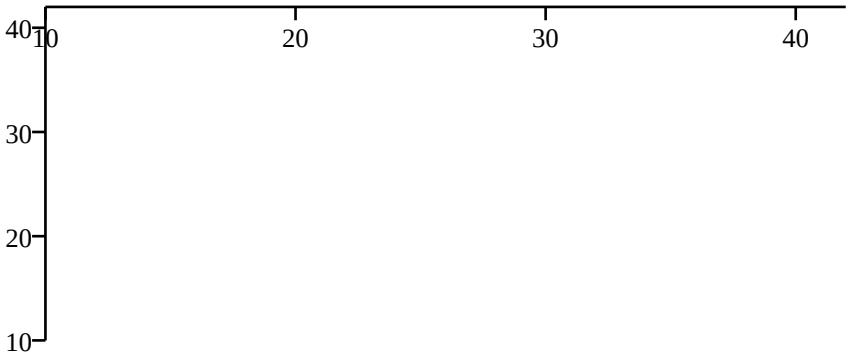


sample4d(...)

Sample drawing, xvalue/yvalue axes, y connected to top of x.

Example

```
def sample4d():
    "Sample drawing, xvalue/yvalue axes, y connected to top of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'top'
    xAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

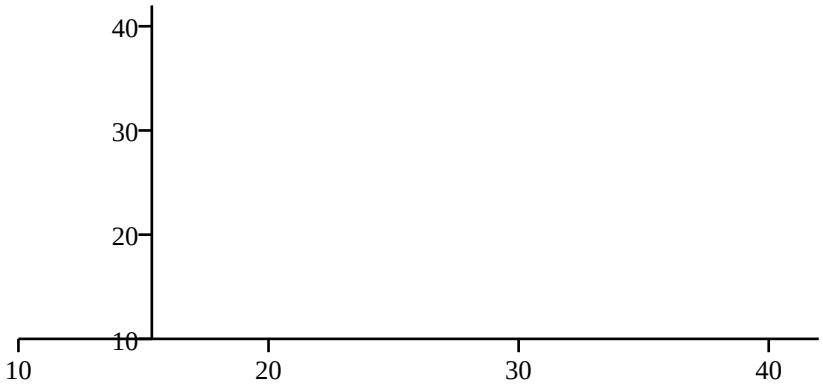


sample5a(...)

Sample drawing, xvalue/yvalue axes, y connected at 100 pts to x.

Example

```
def sample5a():
    "Sample drawing, xvalue/yvalue axes, y connected at 100 pts to x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XValueAxis()
    xAxis.setPosition(50, 50, 300)
    xAxis.configure(data)
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.joinAxis = xAxis
    yAxis.joinAxisMode = 'points'
    yAxis.joinAxisPos = 100
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

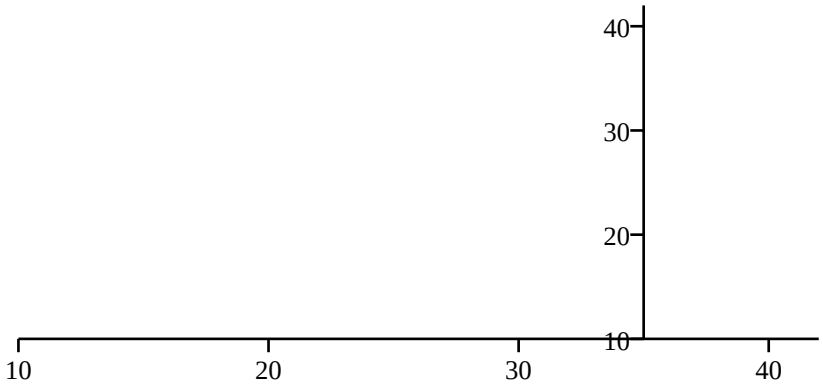


sample5b(...)

Sample drawing, xvalue/yvalue axes, y connected at value 35 of x.

Example

```
def sample5b():
    "Sample drawing, xvalue/yvalue axes, y connected at value 35 of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XValueAxis()
    xAxis.setPosition(50, 50, 300)
    xAxis.configure(data)
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.joinAxis = xAxis
    yAxis.joinAxisMode = 'value'
    yAxis.joinAxisPos = 35
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

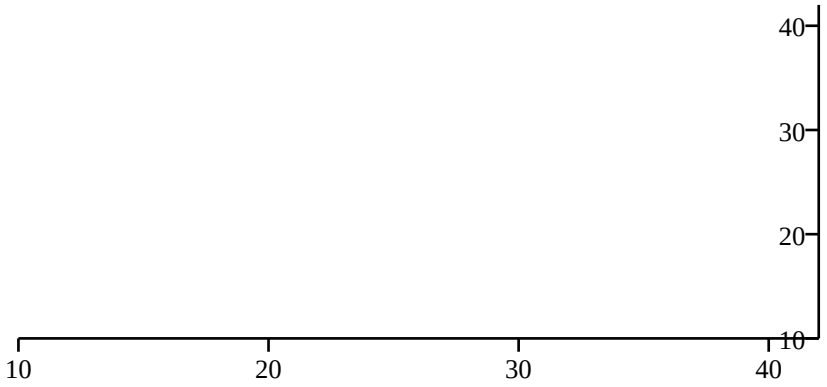


sample5c(...)

Sample drawing, xvalue/yvalue axes, y connected at right of x.

Example

```
def sample5c():
    "Sample drawing, xvalue/yvalue axes, y connected at right of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XValueAxis()
    xAxis.setPosition(50, 50, 300)
    xAxis.configure(data)
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.joinAxis = xAxis
    yAxis.joinAxisMode = 'right'
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

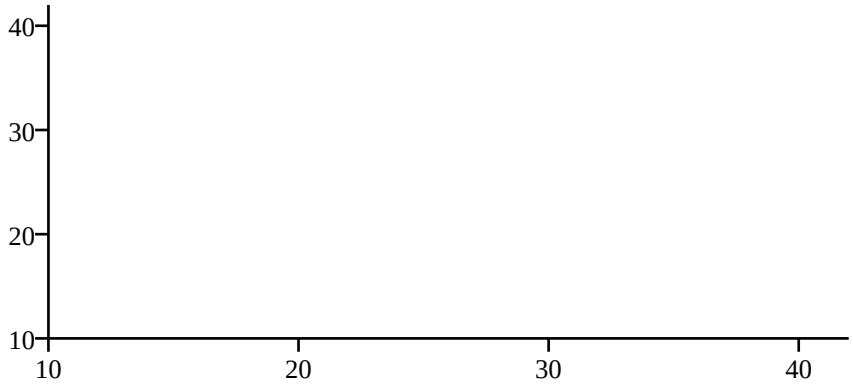


sample5d(...)

Sample drawing, xvalue/yvalue axes, y connected at left of x.

Example

```
def sample5d():
    "Sample drawing, xvalue/yvalue axes, y connected at left of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XValueAxis()
    xAxis.setPosition(50, 50, 300)
    xAxis.configure(data)
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.joinAxis = xAxis
    yAxis.joinAxisMode = 'left'
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

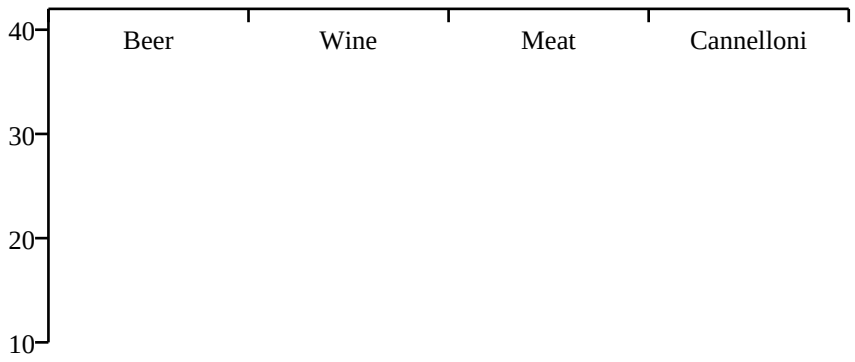


sample6a(...)

Sample drawing, xcat/yvalue axes, x connected at top of y.

Example

```
def sample6a():
    "Sample drawing, xcat/yvalue axes, x connected at top of y."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    xAxis = XCategoryAxis()
    xAxis._length = 300
    xAxis.configure(data)
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'top'
    xAxis.categoryNames = ['Beer', 'Wine', 'Meat', 'Cannelloni']
    xAxis.labels.boxAnchor = 'n'
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

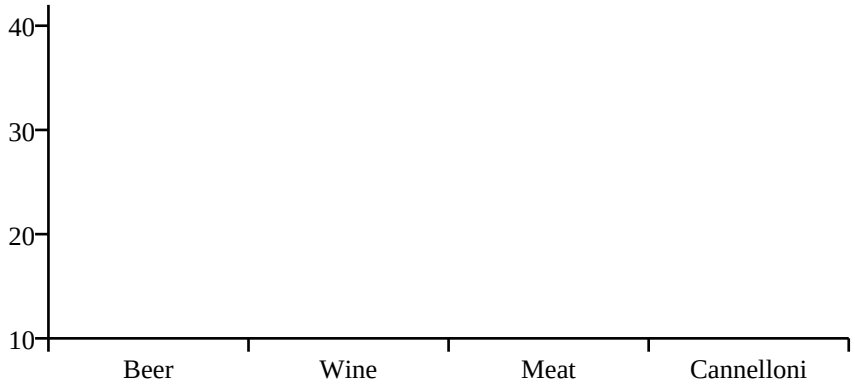


sample6b(...)

Sample drawing, xcat/yvalue axes, x connected at bottom of y.

Example

```
def sample6b():
    "Sample drawing, xcat/yvalue axes, x connected at bottom of y."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    xAxis = XCategoryAxis()
    xAxis._length = 300
    xAxis.configure(data)
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'bottom'
    xAxis.categoryNames = ['Beer', 'Wine', 'Meat', 'Cannelloni']
    xAxis.labels.boxAnchor = 'n'
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

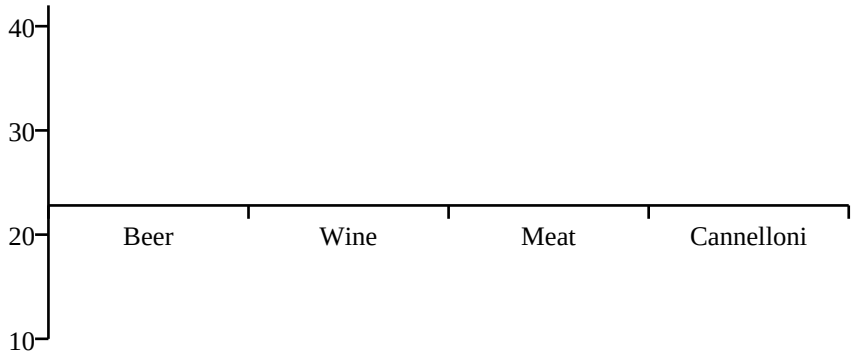


sample6c(...)

Sample drawing, xcat/yvalue axes, x connected at 100 pts to y.

Example

```
def sample6c():
    "Sample drawing, xcat/yvalue axes, x connected at 100 pts to y."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    xAxis = XCategoryAxis()
    xAxis._length = 300
    xAxis.configure(data)
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'points'
    xAxis.joinAxisPos = 100
    xAxis.categoryNames = ['Beer', 'Wine', 'Meat', 'Cannelloni']
    xAxis.labels.boxAnchor = 'n'
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

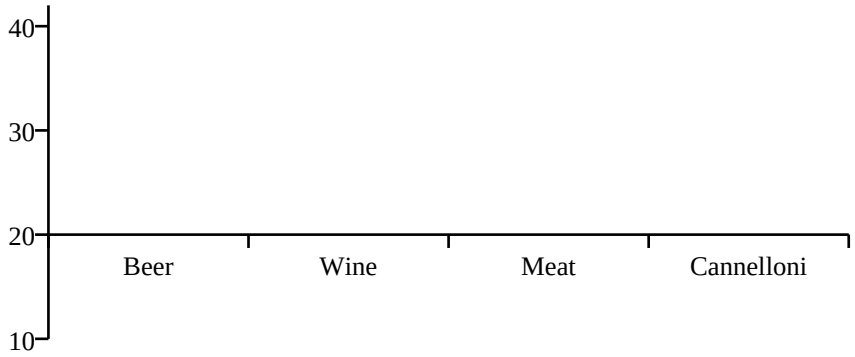


sample6d(...)

Sample drawing, xcat/yvalue axes, x connected at value 20 of y.

Example

```
def sample6d():
    "Sample drawing, xcat/yvalue axes, x connected at value 20 of y."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    yAxis = YValueAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.configure(data)
    xAxis = XCategoryAxis()
    xAxis._length = 300
    xAxis.configure(data)
    xAxis.joinAxis = yAxis
    xAxis.joinAxisMode = 'value'
    xAxis.joinAxisPos = 20
    xAxis.categoryNames = ['Beer', 'Wine', 'Meat', 'Cannelloni']
    xAxis.labels.boxAnchor = 'n'
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

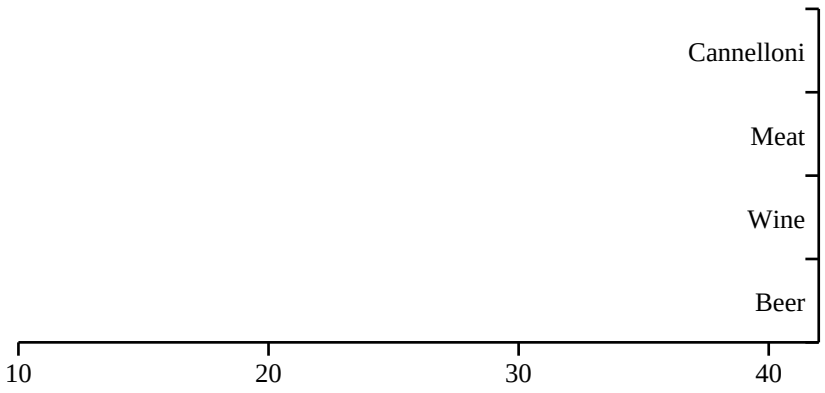


sample7a(...)

Sample drawing, xvalue/ycat axes, y connected at right of x.

Example

```
def sample7a():
    "Sample drawing, xvalue/ycat axes, y connected at right of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.configure(data)
    yAxis = YCategoryAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.joinAxis = xAxis
    yAxis.joinAxisMode = 'right'
    yAxis.categoryNames = ['Beer', 'Wine', 'Meat', 'Cannelloni']
    yAxis.labels.boxAnchor = 'e'
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

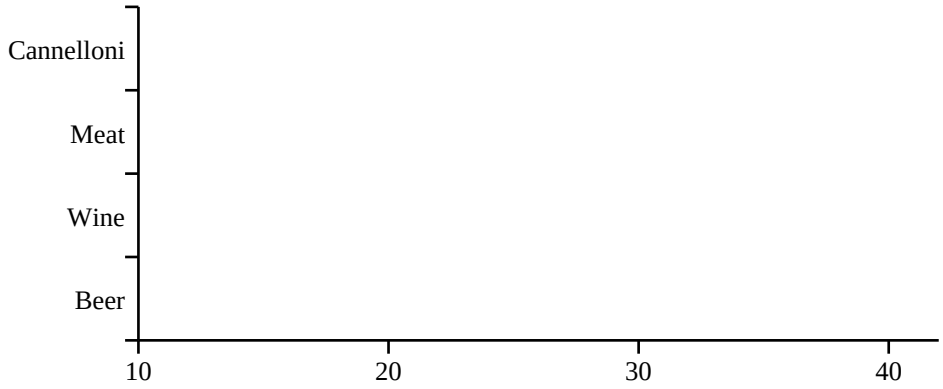


sample7b(...)

Sample drawing, xvalue/ycat axes, y connected at left of x.

Example

```
def sample7b():
    "Sample drawing, xvalue/ycat axes, y connected at left of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.configure(data)
    yAxis = YCategoryAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.joinAxis = xAxis
    yAxis.joinAxisMode = 'left'
    yAxis.categoryNames = ['Beer', 'Wine', 'Meat', 'Cannelloni']
    yAxis.labels.boxAnchor = 'e'
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

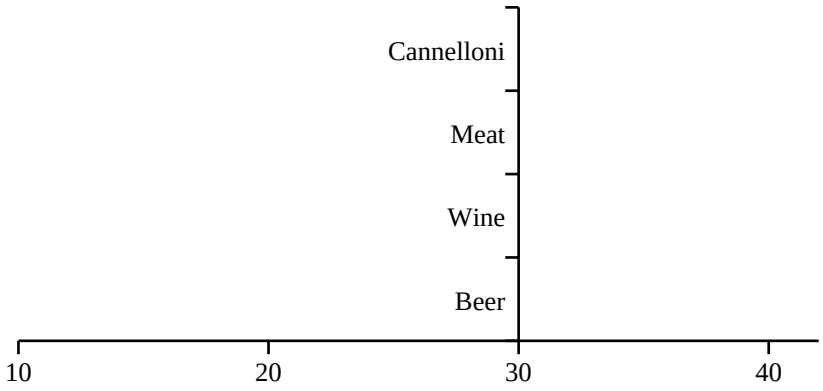


sample7c(...)

Sample drawing, xvalue/ycat axes, y connected at value 30 of x.

Example

```
def sample7c():
    "Sample drawing, xvalue/ycat axes, y connected at value 30 of x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.configure(data)
    yAxis = YCategoryAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.joinAxis = xAxis
    yAxis.joinAxisMode = 'value'
    yAxis.joinAxisPos = 30
    yAxis.categoryNames = ['Beer', 'Wine', 'Meat', 'Cannelloni']
    yAxis.labels.boxAnchor = 'e'
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```

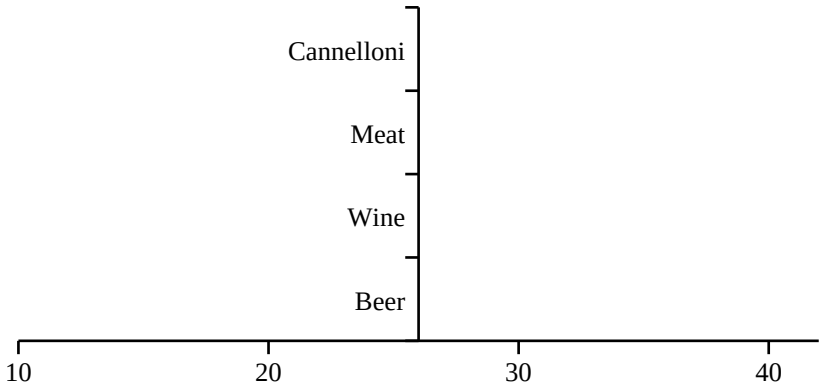


sample7d(...)

Sample drawing, xvalue/ycat axes, y connected at 200 pts to x.

Example

```
def sample7d():
    "Sample drawing, xvalue/ycat axes, y connected at 200 pts to x."
    drawing = Drawing(400, 200)
    data = [(10, 20, 30, 42)]
    xAxis = XValueAxis()
    xAxis._length = 300
    xAxis.configure(data)
    yAxis = YCategoryAxis()
    yAxis.setPosition(50, 50, 125)
    yAxis.joinAxis = xAxis
    yAxis.joinAxisMode = 'points'
    yAxis.joinAxisPos = 200
    yAxis.categoryNames = ['Beer', 'Wine', 'Meat', 'Cannelloni']
    yAxis.labels.boxAnchor = 'e'
    yAxis.configure(data)
    drawing.add(xAxis)
    drawing.add(yAxis)
    return drawing
```



doughnut

Doughnut chart

Produces a circular chart like the doughnut charts produced by Excel.
Can handle multiple series (which produce concentric 'rings' in the chart).

Classes

Doughnut(AbstractPieChart)

Public Attributes

data list of numbers defining sector sizes; need not sum to 1

direction 'clockwise' or 'anticlockwise'

height height of doughnut bounding box. Need not be same as height.

labels optional list of labels to use for each data point

simpleLabels If true(default) use String not super duper WedgeLabel

slices collection of sector descriptor objects

startAngle angle of first slice; like the compass, 0 is due North

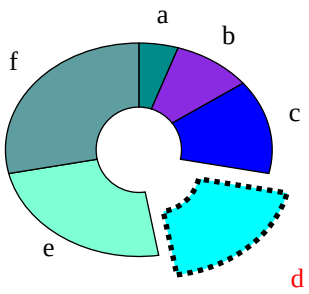
width width of doughnut bounding box. Need not be same as width.

x X position of the chart within its container.

y Y position of the chart within its container.

Example

```
            def demo(self):
                d = Drawing(200, 100)

                dn = Doughnut()
                dn.x = 50
                dn.y = 10
                dn.width = 100
                dn.height = 80
                dn.data = [10,20,30,40,50,60]
                dn.labels = ['a','b','c','d','e','f']

                dn.slices.strokeWidth=0.5
                dn.slices[3].popout = 10
                dn.slices[3].strokeWidth = 2
                dn.slices[3].strokeDashArray = [2,2]
                dn.slices[3].labelRadius = 1.75
                dn.slices[3].fontColor = colors.red
                dn.slices[0].fillColor = colors.darkcyan
                dn.slices[1].fillColor = colors.blueviolet
                dn.slices[2].fillColor = colors.blue
                dn.slices[3].fillColor = colors.cyan
                dn.slices[4].fillColor = colors.aquamarine
                dn.slices[5].fillColor = colors.cadetblue
                dn.slices[6].fillColor = colors.lightcoral

                d.add(dn)
                return d
```



Properties of Example Widget

```
data = [1, 1]
direction = 'clockwise'
height = 100
labels = None
simpleLabels = 1
slices = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3228dd0>
startAngle = 90
width = 100
x = 0
y = 0
```

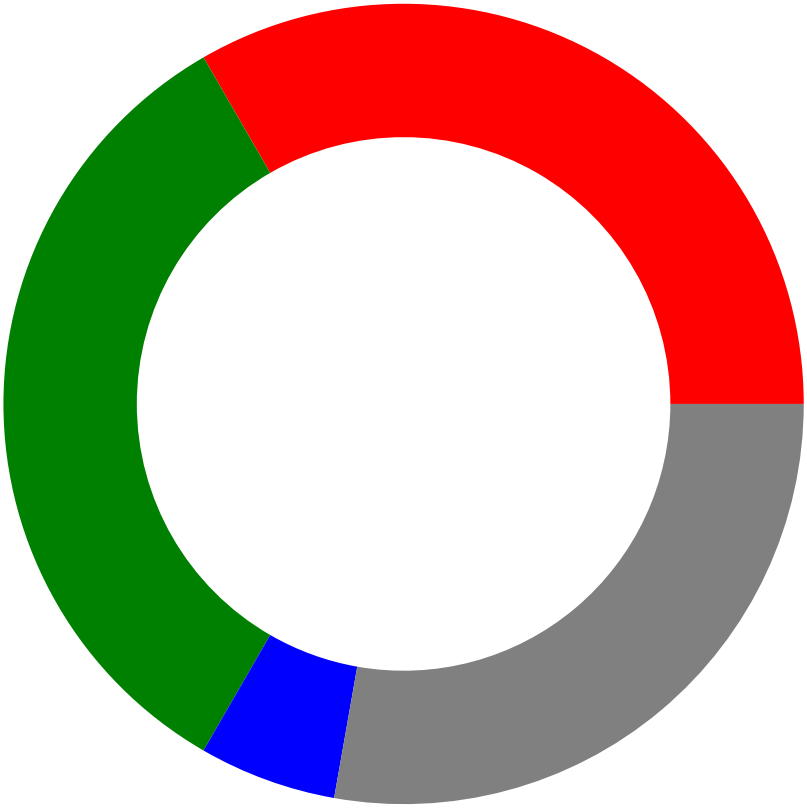
Functions

sample1(...)

Make up something from the individual Sectors

Example

```
def sample1():
    "Make up something from the individual Sectors"

    d = Drawing(400, 400)
    g = Group()

    s1 = Wedge(centerx=200, centery=200, radius=150, startangledegrees=0, endangledegrees=120, radius
    s1.fillColor=colors.red
    s1.strokeColor=None
    d.add(s1)
    s2 = Wedge(centerx=200, centery=200, radius=150, startangledegrees=120, endangledegrees=240, radi
    s2.fillColor=colors.green
    s2.strokeColor=None
    d.add(s2)
    s3 = Wedge(centerx=200, centery=200, radius=150, startangledegrees=240, endangledegrees=260, radi
    s3.fillColor=colors.blue
    s3.strokeColor=None
    d.add(s3)
    s4 = Wedge(centerx=200, centery=200, radius=150, startangledegrees=260, endangledegrees=360, radi
    s4.fillColor=colors.gray
    s4.strokeColor=None
    d.add(s4)

    return d
```

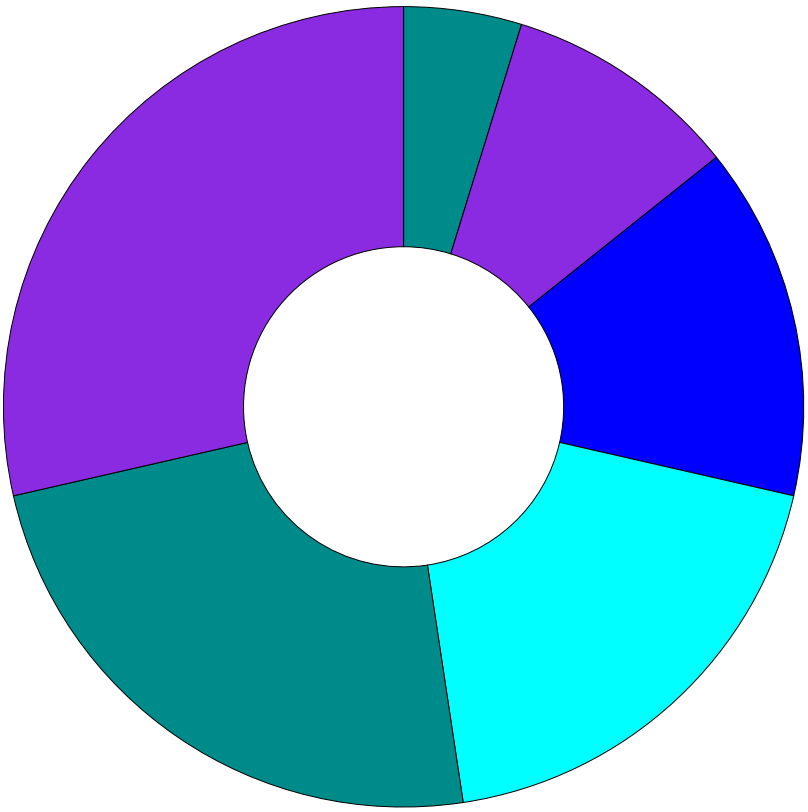


sample2(...)

Make a simple demo

Example

```
def sample2():
    "Make a simple demo"

    d = Drawing(400, 400)

    dn = Doughnut()
    dn.x = 50
    dn.y = 50
    dn.width = 300
    dn.height = 300
    dn.data = [10,20,30,40,50,60]

    d.add(dn)

    return d
```

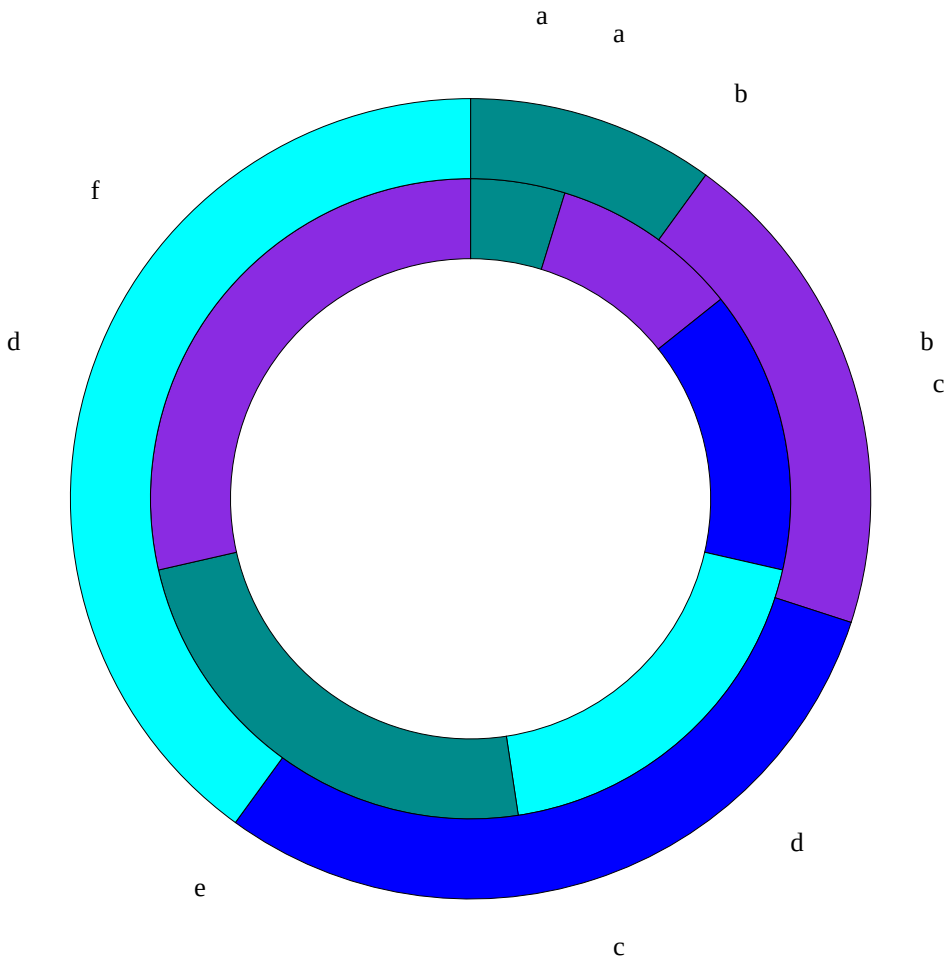


sample3(...)

Make a more complex demo

Example

```
def sample3():
    "Make a more complex demo"

    d = Drawing(400, 400)
    dn = Doughnut()
    dn.x = 50
    dn.y = 50
    dn.width = 300
    dn.height = 300
    dn.data = [[10,20,30,40,50,60], [10,20,30,40]]
    dn.labels = ['a','b','c','d','e','f']

    d.add(dn)

    return d
```



linecharts

This modules defines a very preliminary Line Chart example.

Classes

AbstractLineChart(PlotArea)

Public Attributes

background Handle to background object.

debug Used only for debugging.

fillColor Color of the plot area interior.

height Height of the chart.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        background = None
        debug = 0
        fillColor = None
        height = 85
        strokeColor = None
        strokeWidth = 1
        width = 180
        x = 20
        y = 10
```

HorizontalLineChart(LineChart)

Line chart with multiple lines.

A line chart is assumed to have one category and one value axis.
Despite its generic name this particular line chart class has
a vertical value axis and a horizontal category one. It may
evolve into individual horizontal and vertical variants (like
with the existing bar charts).

Available attributes are:

x: x-position of lower-left chart origin
y: y-position of lower-left chart origin
width: chart width
height: chart height

useAbsolute: disables auto-scaling of chart elements (?)
lineLabelNudge: distance of data labels to data points
lineLabels: labels associated with data values
lineLabelFormat: format string or callback function
groupSpacing: space between categories

joinedLines: enables drawing of lines

strokeColor: color of chart lines (?)
fillColor: color for chart background (?)
lines: style list, used cyclically for data series

valueAxis: value axis object
categoryAxis: category axis object
categoryNames: category names

data: chart data, a list of data series of equal length

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

categoryAxis Handle of the category axis.

categoryNames List of category names.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing ? - Likely to disappear.

height Height of the chart.

inFill Whether infilling should be done.

joinedLines Display data points joined with lines if true.

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

reversePlotOrder If true reverse plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
            def demo(self):
                """Shows basic use of a line chart."""

                drawing = Drawing(200, 100)

                data = [
                        (13, 5, 20, 22, 37, 45, 19, 4),
                        (14, 10, 21, 28, 38, 46, 25, 5)
                        ]

                lc = HorizontalLineChart()

                lc.x = 20
                lc.y = 10
                lc.height = 85
                lc.width = 170
                lc.data = data
                lc.lines.symbol = makeMarker('Circle')

                drawing.add(lc)

                return drawing
```

Properties of Example Widget

```
        background = None
        categoryAxis.categoryNames = None
        categoryAxis.gridEnd = None
        categoryAxis.gridStart = None
        categoryAxis.gridStrokeColor = Color(0,0,0)
        categoryAxis.gridStrokeDashArray = None
        categoryAxis.gridStrokeWidth = 0.25
        categoryAxis.joinAxis = None
        categoryAxis.joinAxisMode = None
        categoryAxis.joinAxisPos = None
        categoryAxis.labelAxisMode = 'axis'
        categoryAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x329d3f8>
        categoryAxis.reverseDirection = 0
        categoryAxis.strokeColor = Color(0,0,0)
        categoryAxis.strokeDashArray = None
        categoryAxis.strokeWidth = 1
        categoryAxis.style = 'parallel'
        categoryAxis.tickDown = 5
        categoryAxis.tickShift = 0
        categoryAxis.tickUp = 0
        categoryAxis.visible = 1
        categoryAxis.visibleAxis = 1
        categoryAxis.visibleGrid = 0
        categoryAxis.visibleLabels = 1
        categoryAxis.visibleTicks = 1
        categoryNames = ('North', 'South', 'East', 'West')
        data = [(100, 110, 120, 130), (70, 80, 80, 90)]
```

```
debug = 0
fillColor = None
groupSpacing = 1
height = 85
inFill = 0
joinedLines = 1
lineLabelArray = None
lineLabelFormat = None
lineLabelNudge = 10
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x329d5f0>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x329d560>
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
useAbsolute = 0
valueAxis.avoidBoundFrac = None
valueAxis.forceZero = 0
valueAxis.gridEnd = None
valueAxis.gridStart = None
valueAxis.gridStrokeColor = Color(0,0,0)
valueAxis.gridStrokeDashArray = None
valueAxis.gridStrokeWidth = 0.25
valueAxis.joinAxis = None
valueAxis.joinAxisMode = None
valueAxis.joinAxisPos = None
valueAxis.labelAxisMode = 'axis'
valueAxis.labelTextFormat = None
valueAxis.labelTextPostFormat = None
valueAxis.labelTextScale = None
valueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x329d4d0>
valueAxis.maximumTicks = 7
valueAxis.minimumTickSpacing = 10
valueAxis.origShiftIPC = None
valueAxis.origShiftMin = None
valueAxis.origShiftSpecialValue = None
valueAxis.rangeRound = 'none'
valueAxis.skipEndL = 'none'
valueAxis.strokeColor = Color(0,0,0)
valueAxis.strokeDashArray = None
valueAxis.strokeWidth = 1
valueAxis.style = 'normal'
valueAxis.tickAxisMode = 'axis'
valueAxis.tickLeft = 5
valueAxis.tickRight = 0
valueAxis.valueMax = None
valueAxis.valueMin = None
valueAxis.valueStep = None
valueAxis.visible = 1
valueAxis.visibleAxis = 1
valueAxis.visibleGrid = 0
valueAxis.visibleLabels = 1
valueAxis.visibleTicks = 1
valueAxis.zrangePref = 0
width = 180
x = 20
y = 10
```

HorizontalLineChart3D(HorizontalLineChart)

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

categoryAxis Handle of the category axis.

categoryNames List of category names.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing ? - Likely to disappear.

height Height of the chart.

inFill Whether infilling should be done.

joinedLines Display data points joined with lines if true.

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

reversePlotOrder If true reverse plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

theta_x dx/dz

theta_y dy/dz

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

zDepth depth of an individual series

zSpace z gap around series

Example

```
            def demo(self):
                """Shows basic use of a line chart."""

                drawing = Drawing(200, 100)

                data = [
                        (13, 5, 20, 22, 37, 45, 19, 4),
                        (14, 10, 21, 28, 38, 46, 25, 5)
                        ]

                lc = HorizontalLineChart()
                lc.x = 20
```

```
        lc.y = 10
        lc.height = 85
        lc.width = 170
        lc.data = data
        lc.lines.symbol = makeMarker('Circle')

        drawing.add(lc)

        return drawing
```

Properties of Example Widget

```
background = None
categoryAxis.categoryNames = None
categoryAxis.gridEnd = None
categoryAxis.gridStart = None
categoryAxis.gridStrokeColor = Color(0,0,0)
categoryAxis.gridStrokeDashArray = None
categoryAxis.gridStrokeWidth = 0.25
categoryAxis.joinAxis = None
categoryAxis.joinAxisMode = None
categoryAxis.joinAxisPos = None
categoryAxis.labelAxisMode = 'axis'
categoryAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x32a33f8>
categoryAxis.reverseDirection = 0
categoryAxis.strokeColor = Color(0,0,0)
categoryAxis.strokeDashArray = None
categoryAxis.strokeWidth = 1
categoryAxis.style = 'parallel'
categoryAxis.tickDown = 5
categoryAxis.tickShift = 0
categoryAxis.tickUp = 0
categoryAxis.visible = 1
categoryAxis.visibleAxis = 1
categoryAxis.visibleGrid = 0
categoryAxis.visibleLabels = 1
categoryAxis.visibleTicks = 1
categoryNames = ('North', 'South', 'East', 'West')
data = [(100, 110, 120, 130), (70, 80, 80, 90)]
debug = 0
fillColor = None
groupSpacing = 1
height = 85
inFill = 0
joinedLines = 1
lineLabelArray = None
lineLabelFormat = None
lineLabelNudge = 10
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x32a35f0>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x32a3560>
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
useAbsolute = 0
valueAxis.avoidBoundFrac = None
valueAxis.forceZero = 0
valueAxis.gridEnd = None
valueAxis.gridStart = None
valueAxis.gridStrokeColor = Color(0,0,0)
valueAxis.gridStrokeDashArray = None
valueAxis.gridStrokeWidth = 0.25
valueAxis.joinAxis = None
valueAxis.joinAxisMode = None
valueAxis.joinAxisPos = None
valueAxis.labelAxisMode = 'axis'
valueAxis.labelTextFormat = None
valueAxis.labelTextPostFormat = None
valueAxis.labelTextScale = None
valueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x32a34d0>
valueAxis.maximumTicks = 7
valueAxis.minimumTickSpacing = 10
valueAxis.origShiftIPC = None
valueAxis.origShiftMin = None
valueAxis.origShiftSpecialValue = None
valueAxis.rangeRound = 'none'
valueAxis.skipEndL = 'none'
```

```
valueAxis.strokeColor = Color(0,0,0)
valueAxis.strokeDashArray = None
valueAxis.strokeWidth = 1
valueAxis.style = 'normal'
valueAxis.tickAxisMode = 'axis'
valueAxis.tickLeft = 5
valueAxis.tickRight = 0
valueAxis.valueMax = None
valueAxis.valueMin = None
valueAxis.valueStep = None
valueAxis.visible = 1
valueAxis.visibleAxis = 1
valueAxis.visibleGrid = 0
valueAxis.visibleLabels = 1
valueAxis.visibleTicks = 1
valueAxis.zrangePref = 0
width = 180
x = 20
y = 10
```

LineChart(AbstractLineChart)

Public Attributes

background Handle to background object.

debug Used only for debugging.

fillColor Color of the plot area interior.

height Height of the chart.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        background = None
        debug = 0
        fillColor = None
        height = 85
        strokeColor = None
        strokeWidth = 1
        width = 180
        x = 20
        y = 10
```

SampleHorizontalLineChart(HorizontalLineChart)

Sample class overwriting one method to draw additional horizontal lines.

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

categoryAxis Handle of the category axis.

categoryNames List of category names.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

fillColor Color of the plot area interior.

groupSpacing ? - Likely to disappear.

height Height of the chart.

inFill Whether infilling should be done.

joinedLines Display data points joined with lines if true.

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

reversePlotOrder If true reverse plot order.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

useAbsolute Flag to use absolute spacing values.

valueAxis Handle of the value axis.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
            def demo(self):
                """Shows basic use of a line chart."""

                drawing = Drawing(200, 100)

                data = [
                        (13, 5, 20, 22, 37, 45, 19, 4),
                        (14, 10, 21, 28, 38, 46, 25, 5)
                        ]

                lc = SampleHorizontalLineChart()

                lc.x = 20
                lc.y = 10
                lc.height = 85
                lc.width = 170
                lc.data = data
```

```
        lc.strokeColor = colors.white
        lc.fillColor = colors.HexColor(0xCCCCCC)

        drawing.add(lc)

        return drawing
```

Properties of Example Widget

```
background = None
categoryAxis.categoryNames = None
categoryAxis.gridEnd = None
categoryAxis.gridStart = None
categoryAxis.gridStrokeColor = Color(0,0,0)
categoryAxis.gridStrokeDashArray = None
categoryAxis.gridStrokeWidth = 0.25
categoryAxis.joinAxis = None
categoryAxis.joinAxisMode = None
categoryAxis.joinAxisPos = None
categoryAxis.labelAxisMode = 'axis'
categoryAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x32ad7e8>
categoryAxis.reverseDirection = 0
categoryAxis.strokeColor = Color(0,0,0)
categoryAxis.strokeDashArray = None
categoryAxis.strokeWidth = 1
categoryAxis.style = 'parallel'
categoryAxis.tickDown = 5
categoryAxis.tickShift = 0
categoryAxis.tickUp = 0
categoryAxis.visible = 1
categoryAxis.visibleAxis = 1
categoryAxis.visibleGrid = 0
categoryAxis.visibleLabels = 1
categoryAxis.visibleTicks = 1
categoryNames = ('North', 'South', 'East', 'West')
data = [(100, 110, 120, 130), (70, 80, 80, 90)]
debug = 0
fillColor = None
groupSpacing = 1
height = 85
inFill = 0
joinedLines = 1
lineLabelArray = None
lineLabelFormat = None
lineLabelNudge = 10
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x32ad9e0>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x32ad950>
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
useAbsolute = 0
valueAxis.avoidBoundFrac = None
valueAxis.forceZero = 0
valueAxis.gridEnd = None
valueAxis.gridStart = None
valueAxis.gridStrokeColor = Color(0,0,0)
valueAxis.gridStrokeDashArray = None
valueAxis.gridStrokeWidth = 0.25
valueAxis.joinAxis = None
valueAxis.joinAxisMode = None
valueAxis.joinAxisPos = None
valueAxis.labelAxisMode = 'axis'
valueAxis.labelTextFormat = None
valueAxis.labelTextPostFormat = None
valueAxis.labelTextScale = None
valueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x32ad8c0>
valueAxis.maximumTicks = 7
valueAxis.minimumTickSpacing = 10
valueAxis.origShiftIPC = None
valueAxis.origShiftMin = None
valueAxis.origShiftSpecialValue = None
valueAxis.rangeRound = 'none'
valueAxis.skipEndL = 'none'
valueAxis.strokeColor = Color(0,0,0)
valueAxis.strokeDashArray = None
valueAxis.strokeWidth = 1
```

```
valueAxis.style = 'normal'
valueAxis.tickAxisMode = 'axis'
valueAxis.tickLeft = 5
valueAxis.tickRight = 0
valueAxis.valueMax = None
valueAxis.valueMin = None
valueAxis.valueStep = None
valueAxis.visible = 1
valueAxis.visibleAxis = 1
valueAxis.visibleGrid = 0
valueAxis.visibleLabels = 1
valueAxis.visibleTicks = 1
valueAxis.zrangePref = 0
width = 180
x = 20
y = 10
```

VerticalLineChart(LineChart)

Public Attributes

background Handle to background object.

debug Used only for debugging.

fillColor Color of the plot area interior.

height Height of the chart.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

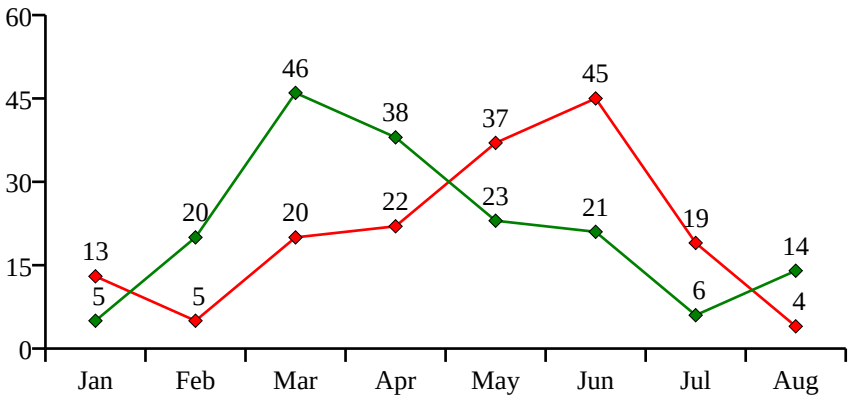
```
        background = None
        debug = 0
        fillColor = None
        height = 85
        strokeColor = None
        strokeWidth = 1
        width = 180
        x = 20
        y = 10
```

Functions

sample1(...)

Example

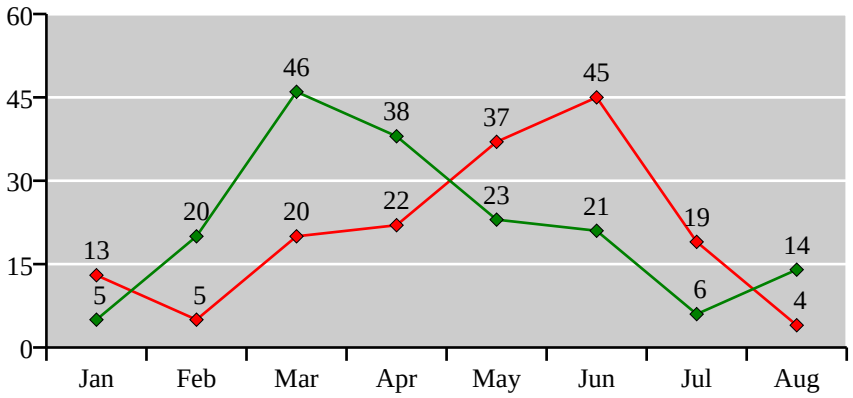
```
def sample1():
    drawing = Drawing(400, 200)

    data = [
            (13, 5, 20, 22, 37, 45, 19, 4),
            (5, 20, 46, 38, 23, 21, 6, 14)
            ]

    lc = HorizontalLineChart()

    lc.x = 50
    lc.y = 50
    lc.height = 125
    lc.width = 300
    lc.data = data
    lc.joinedLines = 1
    lc.lines.symbol = makeMarker('FilledDiamond')
    lc.lineLabelFormat = '%2.0f'

    catNames = 'Jan Feb Mar Apr May Jun Jul Aug'.split(' ')
    lc.categoryAxis.categoryNames = catNames
    lc.categoryAxis.labels.boxAnchor = 'n'

    lc.valueAxis.valueMin = 0
    lc.valueAxis.valueMax = 60
    lc.valueAxis.valueStep = 15

    drawing.add(lc)

    return drawing
```



sample1a(...)

Example

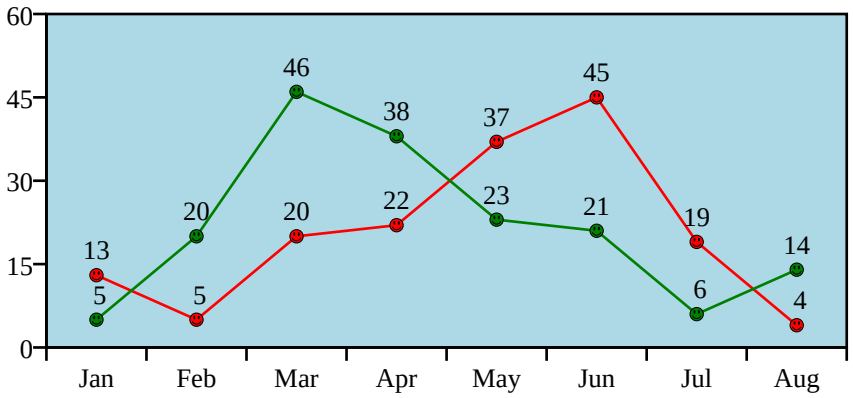
```
def sample1a():
    drawing = Drawing(400, 200)

    data = [
            (13, 5, 20, 22, 37, 45, 19, 4),
            (5, 20, 46, 38, 23, 21, 6, 14)
            ]

    lc = SampleHorizontalLineChart()

    lc.x = 50
    lc.y = 50
    lc.height = 125
    lc.width = 300
    lc.data = data
    lc.joinedLines = 1
    lc.strokeColor = colors.white
    lc.fillColor = colors.HexColor(0xCCCCCC)
    lc.lines.symbol = makeMarker('FilledDiamond')
    lc.lineLabelFormat = '%2.0f'

    catNames = 'Jan Feb Mar Apr May Jun Jul Aug'.split(' ')
    lc.categoryAxis.categoryNames = catNames
    lc.categoryAxis.labels.boxAnchor = 'n'

    lc.valueAxis.valueMin = 0
    lc.valueAxis.valueMax = 60
    lc.valueAxis.valueStep = 15

    drawing.add(lc)

    return drawing
```



sample2(...)

Example

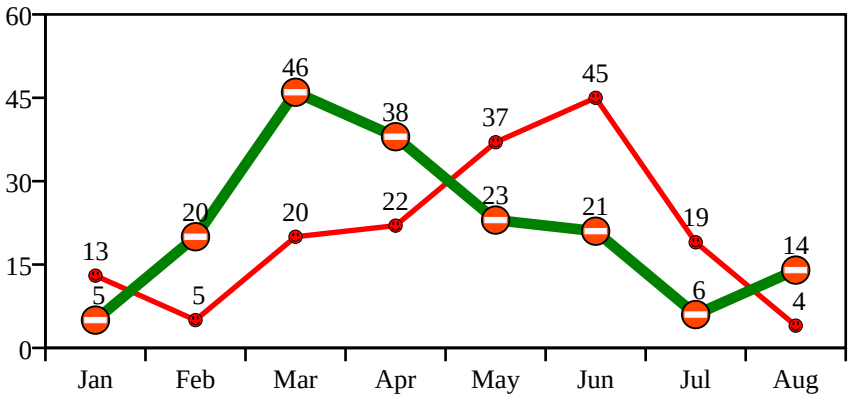
```
def sample2():
    drawing = Drawing(400, 200)

    data = [
            (13, 5, 20, 22, 37, 45, 19, 4),
            (5, 20, 46, 38, 23, 21, 6, 14)
            ]

    lc = HorizontalLineChart()

    lc.x = 50
    lc.y = 50
    lc.height = 125
    lc.width = 300
    lc.data = data
    lc.joinedLines = 1
    lc.lines.symbol = makeMarker('Smiley')
    lc.lineLabelFormat = '%2.0f'
    lc.strokeColor = colors.black
    lc.fillColor = colors.lightblue

    catNames = 'Jan Feb Mar Apr May Jun Jul Aug'.split(' ')
    lc.categoryAxis.categoryNames = catNames
    lc.categoryAxis.labels.boxAnchor = 'n'

    lc.valueAxis.valueMin = 0
    lc.valueAxis.valueMax = 60
    lc.valueAxis.valueStep = 15

    drawing.add(lc)

    return drawing
```



sample3(...)

Example

```
def sample3():
    drawing = Drawing(400, 200)

    data = [
            (13, 5, 20, 22, 37, 45, 19, 4),
            (5, 20, 46, 38, 23, 21, 6, 14)
            ]

    lc = HorizontalLineChart()

    lc.x = 50
    lc.y = 50
    lc.height = 125
    lc.width = 300
    lc.data = data
    lc.joinedLines = 1
    lc.lineLabelFormat = '%2.0f'
    lc.strokeColor = colors.black

    lc.lines[0].symbol = makeMarker('Smiley')
    lc.lines[1].symbol = NoEntry
    lc.lines[0].strokeWidth = 2
    lc.lines[1].strokeWidth = 4

    catNames = 'Jan Feb Mar Apr May Jun Jul Aug'.split(' ')
    lc.categoryAxis.categoryNames = catNames
    lc.categoryAxis.labels.boxAnchor = 'n'

    lc.valueAxis.valueMin = 0
    lc.valueAxis.valueMax = 60
    lc.valueAxis.valueStep = 15

    drawing.add(lc)

    return drawing
```



textlabels

#Copyright ReportLab Europe Ltd. 2000-2004
#see license.txt for license details
#history http://www.reportlab.co.uk/cgi-bin/viewcvs.cgi/public/reportlab/trunk/reportlab/graphics/charts/textlabels.py

Classes

BarChartLabel(Label)

An extended Label allowing for nudging, lines visibility etc

Public Attributes

angle None

bottomPadding padding at bottom of box

boxAnchor None

boxFillColor None

boxStrokeColor None

boxStrokeWidth None

boxTarget None

dx None

dy None

fillColor None

fixedEnd None or fixed draw ends +/-

fixedStart None or fixed draw starts +/-

fontName None

fontSize None

height None

leading None

leftPadding padding at left of box

lineStrokeColor Color for a drawn line

lineStrokeWidth Non-zero for a drawn line

maxWidth None

nudge Non-zero sign dependent nudge

rightPadding padding at right of box

strokeColor None

strokeWidth None

text None

textAnchor None

topPadding padding at top of box

visible True if the label is to be drawn

width None

x None

y None

Example

```
            def demo(self):
                """This shows a label positioned with its top right corner
                at the top centre of the drawing, and rotated 45 degrees."""

                d = Drawing(200, 100)

                # mark the origin of the label
                d.add(Circle(100,90, 5, fillColor=colors.green))

                lab = Label()
                lab.setOrigin(100,90)
                lab.boxAnchor = 'ne'
                lab.angle = 45
                lab.dx = 0
                lab.dy = -20
                lab.boxStrokeColor = colors.green
                lab.setText('Another\nMulti-Line\nString')
                d.add(lab)

                return d
```

Properties of Example Widget

```
        angle = 0
        bottomPadding = 0
        boxAnchor = 'c'
        boxFillColor = None
        boxStrokeColor = None
        boxStrokeWidth = 0.5
        boxTarget = 'normal'
        dx = 0
        dy = 0
        fillColor = Color(0,0,0)
        fixedEnd = None
        fixedStart = None
        fontName = 'Times-Roman'
        fontSize = 10
        height = None
        leading = None
        leftPadding = 0
        lineStrokeColor = None
        lineStrokeWidth = 0
        maxWidth = None
        nudge = 0
        rightPadding = 0
        strokeColor = None
        strokeWidth = 0.10000000000000001
        textAnchor = 'start'
        topPadding = 0
        visible = 1
        width = None
        x = 0
        y = 0
```

Label(Widget)

A text label to attach to something else, such as a chart axis.

This allows you to specify an offset, angle and many anchor properties relative to the label's origin. It allows, for example, angled multiline axis labels.

Public Attributes

angle None

bottomPadding padding at bottom of box

boxAnchor None

boxFillColor None

boxStrokeColor None

boxStrokeWidth None

boxTarget None

dx None

dy None

fillColor None

fontName None

fontSize None

height None

leading None

leftPadding padding at left of box

maxWidth None

rightPadding padding at right of box

strokeColor None

strokeWidth None

text None

textAnchor None

topPadding padding at top of box

visible True if the label is to be drawn

width None

x None

y None

Example

```
            def demo(self):
                """This shows a label positioned with its top right corner
                at the top centre of the drawing, and rotated 45 degrees."""

                d = Drawing(200, 100)

                # mark the origin of the label
                d.add(Circle(100,90, 5, fillColor=colors.green))
```

```
        lab = Label()
        lab.setOrigin(100,90)
        lab.boxAnchor = 'ne'
        lab.angle = 45
        lab.dx = 0
        lab.dy = -20
        lab.boxStrokeColor = colors.green
        lab.setText('Another\nMulti-Line\nString')
        d.add(lab)

        return d
```

Properties of Example Widget

```
angle = 0
bottomPadding = 0
boxAnchor = 'c'
boxFillColor = None
boxStrokeColor = None
boxStrokeWidth = 0.5
boxTarget = 'normal'
dx = 0
dy = 0
fillColor = Color(0,0,0)
fontName = 'Times-Roman'
fontSize = 10
height = None
leading = None
leftPadding = 0
maxWidth = None
rightPadding = 0
strokeColor = None
strokeWidth = 0.10000000000000001
textAnchor = 'start'
topPadding = 0
visible = 1
width = None
x = 0
y = 0
```

NA_Label(BarChartLabel)

An extended Label allowing for nudging, lines visibility etc

Public Attributes

angle None

bottomPadding padding at bottom of box

boxAnchor None

boxFillColor None

boxStrokeColor None

boxStrokeWidth None

boxTarget None

dx None

dy None

fillColor None

fixedEnd None or fixed draw ends +/-

fixedStart None or fixed draw starts +/-

fontName None

fontSize None

height None

leading None

leftPadding padding at left of box

lineStrokeColor Color for a drawn line

lineStrokeWidth Non-zero for a drawn line

maxWidth None

nudge Non-zero sign dependent nudge

rightPadding padding at right of box

strokeColor None

strokeWidth None

text Text to be used for N/A values

textAnchor None

topPadding padding at top of box

visible True if the label is to be drawn

width None

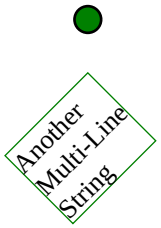
x None

y None

Example

```
            def demo(self):
                """This shows a label positioned with its top right corner
                at the top centre of the drawing, and rotated 45 degrees."""
```

```
    d = Drawing(200, 100)

    # mark the origin of the label
    d.add(Circle(100,90, 5, fillColor=colors.green))

    lab = Label()
    lab.setOrigin(100,90)
    lab.boxAnchor = 'ne'
    lab.angle = 45
    lab.dx = 0
    lab.dy = -20
    lab.boxStrokeColor = colors.green
    lab.setText('Another\nMulti-Line\nString')
    d.add(lab)

    return d
```



Properties of Example Widget

```
angle = 0
bottomPadding = 0
boxAnchor = 'c'
boxFillColor = None
boxStrokeColor = None
boxStrokeWidth = 0.5
boxTarget = 'normal'
dx = 0
dy = 0
fillColor = Color(0,0,0)
fixedEnd = None
fixedStart = None
fontName = 'Times-Roman'
fontSize = 10
height = None
leading = None
leftPadding = 0
lineStrokeColor = None
lineStrokeWidth = 0
maxWidth = None
nudge = 0
rightPadding = 0
strokeColor = None
strokeWidth = 0.10000000000000001
text = 'n/a'
textAnchor = 'start'
topPadding = 0
visible = 1
width = None
x = 0
y = 0
```

slidebox

Classes

SlideBox(Widget)

Returns a slidebox widget

Public Attributes

background Colour of the background to the drawing (if any)

bottomPadding Padding at bottom of drawing

boxHeight Height of the boxes

boxOutlineColor Colour used to outline the boxes (if any)

boxOutlineWidth Width of the box outline (if any)

boxSpacing Space between the boxes

boxWidth Width of the boxes

endColor Color of last box

labelFillColor Colour for number insides

labelFontName Name of font used for the labels

labelFontSize Size of font used for the labels

labelStrokeColor Colour for for number outlines

leftPadding Padding on left of drawing

numberOfBoxes How many boxes there are

rightPadding Padding on right of drawing

sourceLabelFillColor Colour ink for the 'source' label (bottom right)

sourceLabelFontName Name of font used for the 'source' label

sourceLabelFontSize Font size for the 'source' label

sourceLabelOffset Padding at bottom of drawing

sourceLabelText Text used for the 'source' label (can be empty)

startColor Color of first box

topPadding Padding at top of drawing

triangleFillColor Colour of indicator triangles

triangleHeight Height of indicator triangles

trianglePosition Which box is highlighted by the triangles

triangleStrokeColor Colour of indicator triangle outline

triangleStrokeWidth Colour of indicator triangle outline

triangleWidth Width of indicator triangles

Example

```
def demo(self,drawing=None):
```

```
from reportlab.lib import colors
if not drawing:
    tx,ty=self._getDrawingDimensions()
    drawing = Drawing(tx,ty)
drawing.add(self.draw())
return drawing
```

Source: ReportLab

Properties of Example Widget

```
background = None
bottomPadding = 5
boxHeight = 15.590551181102363
boxOutlineColor = Color(0,0,0)
boxOutlineWidth = 0.57999999999999996
boxSpacing = 2.1259842519685037
boxWidth = 20.69291338582677
endColor = Color(.098039,.301961,.529412)
labelFillColor = Color(1,1,1)
labelFontName = 'Helvetica-Bold'
labelFontSize = 10
labelStrokeColor = Color(0,0,0)
leftPadding = 5
numberOfBoxes = 7
rightPadding = 5
sourceLabelFillColor = Color(0,0,0)
sourceLabelFontName = 'Helvetica-Oblique'
sourceLabelFontSize = 6
sourceLabelOffset = 5.6692913385826778
sourceLabelText = 'Source: ReportLab'
startColor = Color(.909804,.878431,.466667)
topPadding = 5
triangleFillColor = Color(1,1,1)
triangleHeight = 3.401574803149606
trianglePosition = 7
triangleStrokeColor = Color(0,0,0)
triangleStrokeWidth = 0.57999999999999996
triangleWidth = 10.771653543307087
```

piecharts

Basic Pie Chart class.

This permits you to customize and pop out individual wedges;
supports elliptical and circular pies.

Classes

AbstractPieChart(PlotArea)

Public Attributes

background Handle to background object.

debug Used only for debugging.

fillColor Color of the plot area interior.

height Height of the chart.

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        background = None
        debug = 0
        fillColor = None
        height = 85
        strokeColor = None
        strokeWidth = 1
        width = 180
        x = 20
        y = 10
```

LegendedPie(Pie)

Pie with a two part legend (one editable with swatches, one hidden without swatches).

Public Attributes

background Handle to background object.

bottomPadding Padding at bottom of drawing

checkLabelOverlap If true check and attempt to fix standard label overlaps(default off)

data list of numbers defining wedge sizes; need not sum to 1

debug Used only for debugging.

direction 'clockwise' or 'anticlockwise'

drawLegend If true then create and draw legend

fillColor Color of the plot area interior.

height Height of the chart.

labels optional list of labels to use for each data point

leftPadding Padding on left of drawing

legend1 Handle to legend for pie

legendNumberFormat Formatting routine for number on right hand side of legend.

legendNumberOffset Horizontal space between legend and numbers on r/hand side

legend_data Numbers used on r/hand side of legend (or None)

legend_names Names used in legend (or None)

orderMode None

other_threshold A value for doing threshholding, not used yet.

pieAndLegend_colors Colours used for both swatches and pie

pointerLabelMode

rightPadding Padding on right of drawing

sameRadii If true make x/y radii the same(default off)

simpleLabels If true(default) use String not super duper WedgeLabel

slices collection of wedge descriptor objects

startAngle angle of first slice; like the compass, 0 is due North

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

topPadding Padding at top of drawing

width Width of the chart.

x X position of the lower-left corner of the chart.

xradius X direction Radius

y Y position of the lower-left corner of the chart.

yradius Y direction Radius

Example

```
        def demo(self, drawing=None):
            if not drawing:
                tx,ty = self._getDrawingDimensions()
                drawing = Drawing(tx, ty)
            drawing.add(self.draw())
            return drawing
```

Properties of Example Widget

```
background = None
bottomPadding = 5
checkLabelOverlap = 0
data = [38.399999999999999,
        20.699999999999999,
        18.899999999999999,
        15.4,
        6.5999999999999996]
debug = 0
direction = 'clockwise'
drawLegend = 1
fillColor = None
height = 100
labels = None
leftPadding = 5
legend1.alignment = 'right'
legend1.autoXPadding = 5
legend1.autoYPadding = 2
legend1.boxAnchor = 'nw'
legend1.colEndCallout = None
legend1.colorNamePairs = [(Color(1,0,0), 'red'),
                          (Color(0,0,1), 'blue'),
                          (Color(0,.501961,0), 'green'),
                          (Color(1,.752941,.796078), 'pink'),
                          (Color(1,1,0), 'yellow'),
                          (PCMYKColor(11,11,72,0,spotName='PANTONE 458 CV'), 'AAA:'),
                          (PCMYKColor(100,65,0,30,spotName='PANTONE 288 CV'), 'AA:'),
                          (PCMYKColor(11,11,72,0,spotName='PANTONE 458 CV',density=75), 'A:'),
                          (PCMYKColor(100,65,0,30,spotName='PANTONE 288 CV',density=75), 'BBB:'),
                          (PCMYKColor(11,11,72,0,spotName='PANTONE 458 CV',density=50), 'NR:')]
legend1.columnMaximum = 7
legend1.deltax = 5.6699999999999999
legend1.deltay = 14.17
legend1.dividerColor = Color(0,0,0)
legend1.dividerDashArray = None
legend1.dividerLines = 0
legend1.dividerOffsX = (0, 0)
legend1.dividerOffsY = 0
legend1.dividerWidth = 0.5
legend1.dx = 5.6699999999999999
legend1.dxTextSpace = 11.390000000000001
legend1.dy = 5.6699999999999999
legend1.fillColor = Color(0,0,0)
legend1.fontName = 'Helvetica-Bold'
legend1.fontSize = 6
legend1.strokeColor = Color(0,0,0)
legend1.strokeWidth = 0.5
legend1.subCols = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x34542d8>
legend1.swatchMarker = None
legend1.variColumn = 0
legend1.x = 117
legend1.y = 100
legend1.yGap = 0
legendNumberFormat = '%.1f%%'
legendNumberOffset = 51
legend_data = [38.399999999999999,
               20.699999999999999,
               18.899999999999999,
               15.4,
               6.5999999999999996]
legend_names = ['AAA:', 'AA:', 'A:', 'BBB:', 'NR:']
orderMode = 'fixed'
pieAndLegend_colors = [PCMYKColor(11,11,72,0,spotName='PANTONE 458 CV'),
                       PCMYKColor(100,65,0,30,spotName='PANTONE 288 CV'),
                       PCMYKColor(11,11,72,0,spotName='PANTONE 458 CV',density=75),
```

```
                        PCMYKColor(100,65,0,30,spotName='PANTONE 288 CV',density=75),
                        PCMYKColor(11,11,72,0,spotName='PANTONE 458 CV',density=50),
                        PCMYKColor(100,65,0,30,spotName='PANTONE 288 CV',density=50)]
pointerLabelMode = None
rightPadding = 5
sameRadii = False
simpleLabels = 1
slices = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3451dd0>
startAngle = 90
strokeColor = None
strokeWidth = 1
topPadding = 5
width = 100
x = 0
xradius = None
y = 0
yradius = None
```

Pie(AbstractPieChart)

Public Attributes

background Handle to background object.

checkLabelOverlap If true check and attempt to fix standard label overlaps(default off)

data list of numbers defining wedge sizes; need not sum to 1

debug Used only for debugging.

direction 'clockwise' or 'anticlockwise'

fillColor Color of the plot area interior.

height Height of the chart.

labels optional list of labels to use for each data point

orderMode None

other_threshold A value for doing threshholding, not used yet.

pointerLabelMode

sameRadii If true make x/y radii the same(default off)

simpleLabels If true(default) use String not super duper WedgeLabel

slices collection of wedge descriptor objects

startAngle angle of first slice; like the compass, 0 is due North

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

xradius X direction Radius

y Y position of the lower-left corner of the chart.

yradius Y direction Radius

Example

```
            def demo(self):
                d = Drawing(200, 100)

                pc = Pie()
                pc.x = 50
                pc.y = 10
                pc.width = 100
                pc.height = 80
                pc.data = [10,20,30,40,50,60]
                pc.labels = ['a','b','c','d','e','f']

                pc.slices.strokeWidth=0.5
                pc.slices[3].popout = 10
                pc.slices[3].strokeWidth = 2
                pc.slices[3].strokeDashArray = [2,2]
                pc.slices[3].labelRadius = 1.75
                pc.slices[3].fontColor = colors.red
                pc.slices[0].fillColor = colors.darkcyan
                pc.slices[1].fillColor = colors.blueviolet
                pc.slices[2].fillColor = colors.blue
                pc.slices[3].fillColor = colors.cyan
                pc.slices[4].fillColor = colors.aquamarine
                pc.slices[5].fillColor = colors.cadetblue
                pc.slices[6].fillColor = colors.lightcoral
```

```
        d.add(pc)
        return d
```

Properties of Example Widget

```
background = None
checkLabelOverlap = 0
data = [1, 2.2999999999999998, 1.7, 4.2000000000000002]
debug = 0
direction = 'clockwise'
fillColor = None
height = 100
labels = None
orderMode = 'fixed'
pointerLabelMode = None
sameRadii = False
simpleLabels = 1
slices = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3458710>
startAngle = 90
strokeColor = None
strokeWidth = 1
width = 100
x = 0
xradius = None
y = 0
yradius = None
```

Pie3d(Pie)

Public Attributes

angle_3d The view angle.

background Handle to background object.

checkLabelOverlap If true check and attempt to fix standard label overlaps(default off)

data list of numbers defining wedge sizes; need not sum to 1

debug Used only for debugging.

depth_3d depth of the pie.

direction 'clockwise' or 'anticlockwise'

fillColor Color of the plot area interior.

height Height of the chart.

labels optional list of labels to use for each data point

orderMode None

other_threshold A value for doing threshholding, not used yet.

perspective A flattening parameter.

pointerLabelMode

sameRadii If true make x/y radii the same(default off)

simpleLabels If true(default) use String not super duper WedgeLabel

slices collection of wedge descriptor objects

startAngle angle of first slice; like the compass, 0 is due North

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

xradius X direction Radius

y Y position of the lower-left corner of the chart.

yradius Y direction Radius

Example

```
            def demo(self):
                d = Drawing(200, 100)

                pc = Pie()
                pc.x = 50
                pc.y = 10
                pc.width = 100
                pc.height = 80
                pc.data = [10,20,30,40,50,60]
                pc.labels = ['a','b','c','d','e','f']

                pc.slices.strokeWidth=0.5
                pc.slices[3].popout = 10
                pc.slices[3].strokeWidth = 2
                pc.slices[3].strokeDashArray = [2,2]
                pc.slices[3].labelRadius = 1.75
                pc.slices[3].fontColor = colors.red
                pc.slices[0].fillColor = colors.darkcyan
```

```
        pc.slices[1].fillColor = colors.blueviolet
        pc.slices[2].fillColor = colors.blue
        pc.slices[3].fillColor = colors.cyan
        pc.slices[4].fillColor = colors.aquamarine
        pc.slices[5].fillColor = colors.cadetblue
        pc.slices[6].fillColor = colors.lightcoral
        self.slices[1].visible = 0
        self.slices[3].visible = 1
        self.slices[4].visible = 1
        self.slices[5].visible = 1
        self.slices[6].visible = 0

        d.add(pc)
        return d
```

Properties of Example Widget

```
checkLabelOverlap = 0
data = [12.5, 20.100000000000001, 2.0, 22.0, 5.0, 18.0, 13.0]
direction = 'clockwise'
height = 200
labels = None
simpleLabels = 1
slices = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3454440>
startAngle = 90
width = 300
x = 0
xradius = None
y = 0
yradius = None
```

WedgeLabel(Label)

Public Attributes

angle None

bottomPadding padding at bottom of box

boxAnchor None

boxFillColor None

boxStrokeColor None

boxStrokeWidth None

boxTarget None

dx None

dy None

fillColor None

fontName None

fontSize None

height None

leading None

leftPadding padding at left of box

maxWidth None

rightPadding padding at right of box

strokeColor None

strokeWidth None

text None

textAnchor None

topPadding padding at top of box

visible True if the label is to be drawn

width None

x None

y None

Example

```
            def demo(self):
                """This shows a label positioned with its top right corner
                at the top centre of the drawing, and rotated 45 degrees."""

                d = Drawing(200, 100)

                # mark the origin of the label
                d.add(Circle(100,90, 5, fillColor=colors.green))

                lab = Label()
                lab.setOrigin(100,90)
                lab.boxAnchor = 'ne'
                lab.angle = 45
                lab.dx = 0
                lab.dy = -20
                lab.boxStrokeColor = colors.green
```

```
        lab.setText('Another\nMulti-Line\nString')
        d.add(lab)

        return d
```

Properties of Example Widget

```
angle = 0
bottomPadding = 0
boxAnchor = 'c'
boxFillColor = None
boxStrokeColor = None
boxStrokeWidth = 0.5
boxTarget = 'normal'
dx = 0
dy = 0
fillColor = Color(0,0,0)
fontName = 'Times-Roman'
fontSize = 10
height = None
leading = None
leftPadding = 0
maxWidth = None
rightPadding = 0
strokeColor = None
strokeWidth = 0.10000000000000001
textAnchor = 'start'
topPadding = 0
visible = 1
width = None
x = 0
y = 0
```

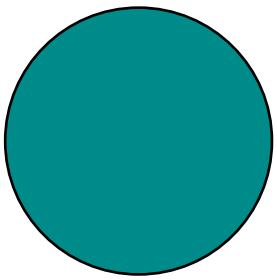
Functions

sample0a(...)

Make a degenerated pie chart with only one slice.

Example

```
def sample0a():
    "Make a degenerated pie chart with only one slice."

    d = Drawing(400, 200)

    pc = Pie()
    pc.x = 150
    pc.y = 50
    pc.data = [10]
    pc.labels = ['a']
    pc.slices.strokeWidth=1#0.5

    d.add(pc)

    return d
```

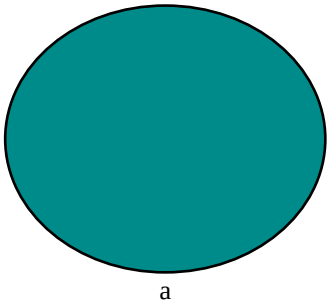


sample0b(...)

Make a degenerated pie chart with only one slice.

Example

```
def sample0b():
    "Make a degenerated pie chart with only one slice."

    d = Drawing(400, 200)

    pc = Pie()
    pc.x = 150
    pc.y = 50
    pc.width = 120
    pc.height = 100
    pc.data = [10]
    pc.labels = ['a']
    pc.slices.strokeWidth=1#0.5

    d.add(pc)

    return d
```

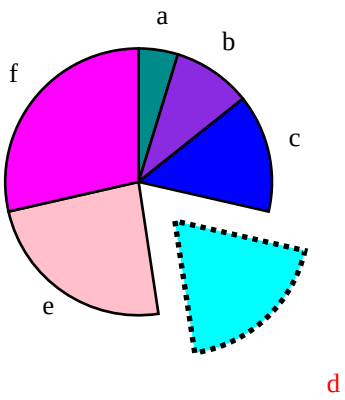


sample1(...)

Make a typical pie chart with with one slice treated in a special way.

Example

```
def sample1():
    "Make a typical pie chart with with one slice treated in a special way."

    d = Drawing(400, 200)

    pc = Pie()
    pc.x = 150
    pc.y = 50
    pc.data = [10, 20, 30, 40, 50, 60]
    pc.labels = ['a', 'b', 'c', 'd', 'e', 'f']

    pc.slices.strokeWidth=1#0.5
    pc.slices[3].popout = 20
    pc.slices[3].strokeWidth = 2
    pc.slices[3].strokeDashArray = [2,2]
    pc.slices[3].labelRadius = 1.75
    pc.slices[3].fontColor = colors.red

    d.add(pc)

    return d
```

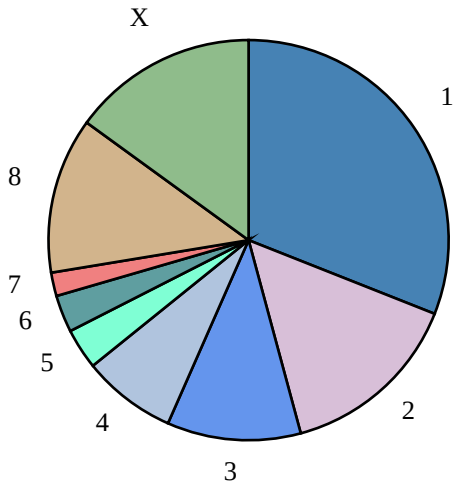


sample2(...)

Make a pie chart with nine slices.

Example

```
def sample2():
    "Make a pie chart with nine slices."

    d = Drawing(400, 200)

    pc = Pie()
    pc.x = 125
    pc.y = 25
    pc.data = [0.31, 0.148, 0.108,
               0.076, 0.033, 0.03,
               0.019, 0.126, 0.15]
    pc.labels = ['1', '2', '3', '4', '5', '6', '7', '8', 'X']

    pc.width = 150
    pc.height = 150
    pc.slices.strokeWidth=1#0.5

    pc.slices[0].fillColor = colors.steelblue
    pc.slices[1].fillColor = colors.thistle
    pc.slices[2].fillColor = colors.cornflower
    pc.slices[3].fillColor = colors.lightsteelblue
    pc.slices[4].fillColor = colors.aquamarine
    pc.slices[5].fillColor = colors.cadetblue
    pc.slices[6].fillColor = colors.lightcoral
    pc.slices[7].fillColor = colors.tan
    pc.slices[8].fillColor = colors.darkseagreen

    d.add(pc)

    return d
```

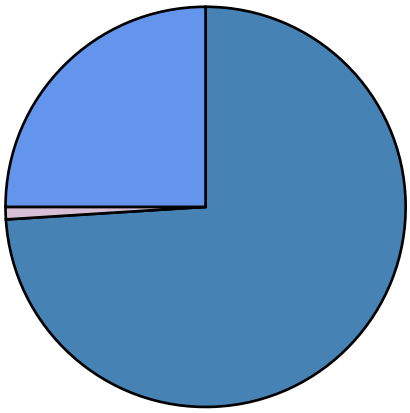


sample3(...)

Make a pie chart with a very slim slice.

Example

```
def sample3():
    "Make a pie chart with a very slim slice."

    d = Drawing(400, 200)

    pc = Pie()
    pc.x = 125
    pc.y = 25

    pc.data = [74, 1, 25]

    pc.width = 150
    pc.height = 150
    pc.slices.strokeWidth=1#0.5
    pc.slices[0].fillColor = colors.steelblue
    pc.slices[1].fillColor = colors.thistle
    pc.slices[2].fillColor = colors.cornflower

    d.add(pc)

    return d
```

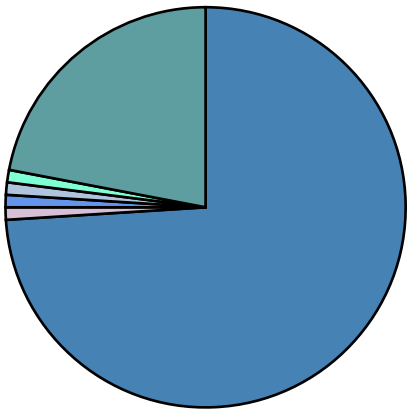


sample4(...)

Make a pie chart with several very slim slices.

Example

```
def sample4():
    "Make a pie chart with several very slim slices."

    d = Drawing(400, 200)

    pc = Pie()
    pc.x = 125
    pc.y = 25

    pc.data = [74, 1, 1, 1, 1, 22]

    pc.width = 150
    pc.height = 150
    pc.slices.strokeWidth=1#0.5
    pc.slices[0].fillColor = colors.steelblue
    pc.slices[1].fillColor = colors.thistle
    pc.slices[2].fillColor = colors.cornflower
    pc.slices[3].fillColor = colors.lightsteelblue
    pc.slices[4].fillColor = colors.aquamarine
    pc.slices[5].fillColor = colors.cadetblue

    d.add(pc)

    return d
```



lineplots

This module defines a very preliminary Line Plot example.

Classes

AreaLinePlot(LinePlot)

we're given data in the form [(X1,Y11,..Y1M)....(Xn,Yn1,...YnM)]

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

behindAxes If true use separate line group.

data Data to be plotted, list of (lists of) x/y tuples.

debug Used only for debugging.

fillColor Color used for background interior of plot area.

gridFirst If true use draw grids before axes.

height Height of the chart.

joinedLines Display data points joined with lines if true.

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

reversePlotOrder If true reverse plot order.

strokeColor Color used for background border of plot area.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

xValueAxis Handle of the x axis.

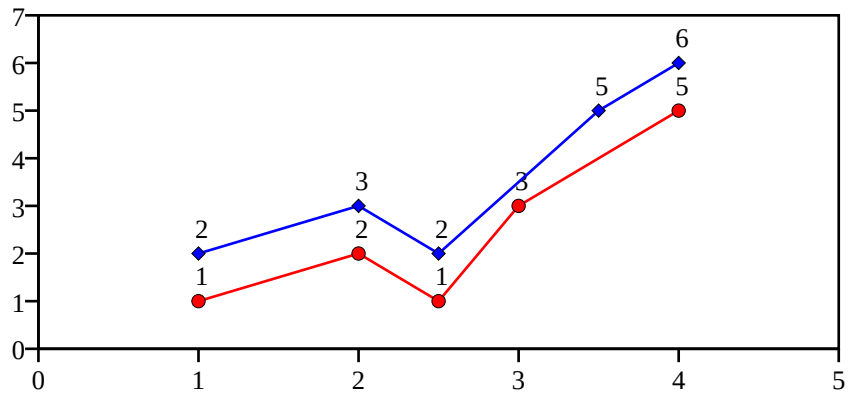
y Y position of the lower-left corner of the chart.

yValueAxis Handle of the y axis.

Example

```
            def demo(self):
                """Shows basic use of a line chart."""

                drawing = Drawing(400, 200)

                data = [
                    ((1,1), (2,2), (2.5,1), (3,3), (4,5)),
                    ((1,2), (2,3), (2.5,2), (3.5,5), (4,6))
                    ]

                lp = LinePlot()
                lp.x = 50
```

```
    lp.y = 50
    lp.height = 125
    lp.width = 300
    lp.data = data
    lp.joinedLines = 1
    lp.lineLabelFormat = '%2.0f'
    lp.strokeColor = colors.black

    lp.lines[0].strokeColor = colors.red
    lp.lines[0].symbol = makeMarker('FilledCircle')
    lp.lines[1].strokeColor = colors.blue
    lp.lines[1].symbol = makeMarker('FilledDiamond')

    lp.xValueAxis.valueMin = 0
    lp.xValueAxis.valueMax = 5
    lp.xValueAxis.valueStep = 1

    lp.yValueAxis.valueMin = 0
    lp.yValueAxis.valueMax = 7
    lp.yValueAxis.valueStep = 1

    drawing.add(lp)

    return drawing
```



Properties of Example Widget

```
annotations = []
background = None
behindAxes = 0
data = [(1, 20, 100, 30), (2, 11, 50, 15), (3, 15, 70, 40)]
debug = 0
fillColor = None
gridFirst = 0
height = 85
joinedLines = 1
lineLabelArray = None
lineLabelFormat = None
lineLabelNudge = 10
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x356e2d8>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x356e248>
reversePlotOrder = 1
strokeColor = None
strokeWidth = 1
width = 180
x = 20
xValueAxis.avoidBoundFrac = None
xValueAxis.forceZero = 0
xValueAxis.gridEnd = None
xValueAxis.gridStart = None
xValueAxis.gridStrokeColor = Color(0,0,0)
xValueAxis.gridStrokeDashArray = None
```

```
xValueAxis.gridStrokeWidth = 0.25
xValueAxis.joinAxis = None
xValueAxis.joinAxisMode = None
xValueAxis.joinAxisPos = None
xValueAxis.labelAxisMode = 'axis'
xValueAxis.labelTextFormat = None
xValueAxis.labelTextPostFormat = None
xValueAxis.labelTextScale = None
xValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x356e0e0>
xValueAxis.maximumTicks = 7
xValueAxis.minimumTickSpacing = 10
xValueAxis.origShiftIPC = None
xValueAxis.origShiftMin = None
xValueAxis.origShiftSpecialValue = None
xValueAxis.rangeRound = 'none'
xValueAxis.skipEndL = 'none'
xValueAxis.strokeColor = Color(0,0,0)
xValueAxis.strokeDashArray = None
xValueAxis.strokeWidth = 1
xValueAxis.style = 'normal'
xValueAxis.tickAxisMode = 'axis'
xValueAxis.tickDown = 5
xValueAxis.tickUp = 0
xValueAxis.valueMax = None
xValueAxis.valueMin = None
xValueAxis.valueStep = None
xValueAxis.visible = 1
xValueAxis.visibleAxis = 1
xValueAxis.visibleGrid = 0
xValueAxis.visibleLabels = 1
xValueAxis.visibleTicks = 1
xValueAxis.zrangePref = 0
y = 10
yValueAxis.avoidBoundFrac = None
yValueAxis.forceZero = 0
yValueAxis.gridEnd = None
yValueAxis.gridStart = None
yValueAxis.gridStrokeColor = Color(0,0,0)
yValueAxis.gridStrokeDashArray = None
yValueAxis.gridStrokeWidth = 0.25
yValueAxis.joinAxis = None
yValueAxis.joinAxisMode = None
yValueAxis.joinAxisPos = None
yValueAxis.labelAxisMode = 'axis'
yValueAxis.labelTextFormat = None
yValueAxis.labelTextPostFormat = None
yValueAxis.labelTextScale = None
yValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x356e1b8>
yValueAxis.maximumTicks = 7
yValueAxis.minimumTickSpacing = 10
yValueAxis.origShiftIPC = None
yValueAxis.origShiftMin = None
yValueAxis.origShiftSpecialValue = None
yValueAxis.rangeRound = 'none'
yValueAxis.skipEndL = 'none'
yValueAxis.strokeColor = Color(0,0,0)
yValueAxis.strokeDashArray = None
yValueAxis.strokeWidth = 1
yValueAxis.style = 'normal'
yValueAxis.tickAxisMode = 'axis'
yValueAxis.tickLeft = 5
yValueAxis.tickRight = 0
yValueAxis.valueMax = None
yValueAxis.valueMin = None
yValueAxis.valueStep = None
yValueAxis.visible = 1
yValueAxis.visibleAxis = 1
yValueAxis.visibleGrid = 0
yValueAxis.visibleLabels = 1
yValueAxis.visibleTicks = 1
yValueAxis.zrangePref = 0
```

GridLinePlot(LinePlot)

A customized version of LinePlot.
It uses NormalDateXValueAxis() and AdjYValueAxis() for the X and Y axes.
The chart has a default grid background with thin horizontal lines
aligned with the tickmarks (and labels). You can change the back-
ground to be any Grid or ShadedRect, or scale the whole chart.
If you do provide a background, you can specify the colours of the
stripes with 'background.stripeColors'.

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Background for chart area (now Grid or ShadedRect).

behindAxes If true use separate line group.

data Data to be plotted, list of (lists of) x/y tuples.

debug Used only for debugging.

fillColor Color used for background interior of plot area.

gridFirst If true use draw grids before axes.

height Height of the chart.

joinedLines Display data points joined with lines if true.

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

reversePlotOrder If true reverse plot order.

scaleFactor Scalefactor to apply to whole drawing.

strokeColor Color used for background border of plot area.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

xValueAxis Handle of the x axis.

y Y position of the lower-left corner of the chart.

yValueAxis Handle of the y axis.

Example

```
def demo(self,drawing=None):
    from reportlab.lib import colors
    if not drawing:
        drawing = Drawing(400, 200)
    lp = AdjLinePlot()
    lp.x = 50
    lp.y = 50
    lp.height = 125
    lp.width = 300
    lp.data = _monthlyIndexData
    lp.joinedLines = 1
```

```
        lp.strokeColor = colors.black
        c0 = colors.PCMYKColor(100,65,0,30, spotName='PANTONE 288 CV', density=100)
        lp.lines[0].strokeColor = c0
        lp.lines[0].strokeWidth = 2
        lp.lines[0].strokeDashArray = None
        c1 = colors.PCMYKColor(0,79,91,0, spotName='PANTONE Wm Red CV', density=100)
        lp.lines[1].strokeColor = c1
        lp.lines[1].strokeWidth = 1
        lp.lines[1].strokeDashArray = [3,1]
        lp.xValueAxis.labels.fontSize = 10
        lp.xValueAxis.labels.textAnchor = 'start'
        lp.xValueAxis.labels.boxAnchor = 'w'
        lp.xValueAxis.labels.angle = -45
        lp.xValueAxis.labels.dx = 0
        lp.xValueAxis.labels.dy = -8
        lp.xValueAxis.xLabelFormat = '{mm}/{yy}'
        lp.yValueAxis.labelTextFormat = '%5d%% '
        lp.yValueAxis.tickLeft = 5
        lp.yValueAxis.labels.fontSize = 10
        lp.background = Grid()
        lp.background.stripeColors = [colors.pink, colors.lightblue]
        lp.background.orientation = 'vertical'
        drawing.add(lp,'plot')
        return drawing
```

Properties of Example Widget

```
annotations = []
background.delta = 20
background.delta0 = 0
background.deltaSteps = []
background.fillColor = Color(1,1,1)
background.height = 100
background.orientation = 'horizontal'
background.stripeColors = [Color(1,0,0), Color(0,.501961,0), Color(0,0,1)]
background.strokeColor = Color(0,0,0)
background.strokeWidth = 0.5
background.useLines = 1
background.useRects = 0
background.width = 100
background.x = 0
background.y = 0
behindAxes = 0
data = [[(19971202, 100.0),
         (19971231, 100.1704367),
         (19980131, 101.5639577),
         (19980228, 102.1879927),
         (19980331, 101.6337257),
         (19980430, 102.76404460000001),
         (19980531, 102.9198038),
         (19980630, 103.25938789999999),
         (19980731, 103.2516421),
         (19980831, 105.4744329),
         (19980930, 109.3242705),
         (19981031, 111.98592910000001),
         (19981130, 110.9184642),
         (19981231, 110.9184642),
         (19990131, 111.9882532),
         (19990228, 109.7912614),
         (19990331, 110.24189629999999),
         (19990430, 110.42793210000001),
         (19990531, 109.33955469999999),
         (19990630, 108.23417480000001),
         (19990731, 110.21294469999999),
         (19990831, 110.9683062),
         (19990930, 112.4425371),
         (19991031, 112.7314032),
         (19991130, 112.3509645),
         (19991231, 112.3660659),
         (20000131, 110.92552480000001),
         (20000229, 110.5266306),
         (20000331, 113.3116101),
         (20000430, 111.0449133),
         (20000531, 111.70271700000001),
         (20000630, 113.5832178)],
        [(19971202, 100.0),
```

```
            (19971231, 100.0),
            (19980131, 100.8),
            (19980228, 102.0),
            (19980331, 101.90000000000001),
            (19980430, 103.0),
            (19980531, 103.0),
            (19980630, 103.09999999999999),
            (19980731, 103.09999999999999),
            (19980831, 102.8),
            (19980930, 105.59999999999999),
            (19981031, 108.3),
            (19981130, 108.09999999999999),
            (19981231, 111.90000000000001),
            (19990131, 113.09999999999999),
            (19990228, 110.2),
            (19990331, 111.8),
            (19990430, 112.3),
            (19990531, 110.09999999999999),
            (19990630, 109.3),
            (19990731, 111.2),
            (19990831, 111.7),
            (19990930, 112.59999999999999),
            (19991031, 113.2),
            (19991130, 113.90000000000001),
            (19991231, 115.40000000000001),
            (20000131, 112.7),
            (20000229, 113.90000000000001),
            (20000331, 115.8),
            (20000430, 112.2),
            (20000531, 112.59999999999999),
            (20000630, 114.59999999999999)]]
debug = 0
fillColor = None
gridFirst = 0
height = 85
joinedLines = 1
lineLabelArray = None
lineLabelFormat = None
lineLabelNudge = 10
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3571200>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3571170>
reversePlotOrder = 0
scaleFactor = None
strokeColor = None
strokeWidth = 1
width = 180
x = 20
xValueAxis.avoidBoundFrac = None
xValueAxis.bottomAxisLabelSlack = 0.10000000000000001
xValueAxis.dailyFreq = 0
xValueAxis.dayOfWeekName = ['Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', 'Sund
xValueAxis.forceDatesEachYear = []
xValueAxis.forceEndDate = 0
xValueAxis.forceFirstDate = 0
xValueAxis.forceZero = 0
xValueAxis.gridEnd = None
xValueAxis.gridStart = None
xValueAxis.gridStrokeColor = Color(0,0,0)
xValueAxis.gridStrokeDashArray = None
xValueAxis.gridStrokeWidth = 0.25
xValueAxis.joinAxis = None
xValueAxis.joinAxisMode = None
xValueAxis.joinAxisPos = None
xValueAxis.labelAxisMode = 'axis'
xValueAxis.labelTextFormat = None
xValueAxis.labelTextPostFormat = None
xValueAxis.labelTextScale = None
xValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3571368>
xValueAxis.maximumTicks = 7
xValueAxis.minimumTickSpacing = 10
xValueAxis.monthName = ['January',
                        'February',
                        'March',
                        'April',
                        'May',
                        'June',
                        'July',
                        'August',
                        'September',
```

```
                        'October',
                        'November',
                        'December']
xValueAxis.niceMonth = 1
xValueAxis.origShiftIPC = None
xValueAxis.origShiftMin = None
xValueAxis.origShiftSpecialValue = None
xValueAxis.rangeRound = 'none'
xValueAxis.skipEndL = 'none'
xValueAxis.specifiedTickDates = None
xValueAxis.strokeColor = Color(0,0,0)
xValueAxis.strokeDashArray = None
xValueAxis.strokeWidth = 1
xValueAxis.style = 'normal'
xValueAxis.tickAxisMode = 'axis'
xValueAxis.tickDown = 5
xValueAxis.tickUp = 0
xValueAxis.valueMax = None
xValueAxis.valueMin = None
xValueAxis.valueStep = None
xValueAxis.valueSteps = None
xValueAxis.visible = 1
xValueAxis.visibleAxis = 1
xValueAxis.visibleGrid = 0
xValueAxis.visibleLabels = 1
xValueAxis.visibleTicks = 1
xValueAxis.xLabelFormat = '{mm}/{yy}'
xValueAxis.zrangePref = 0
y = 10
yValueAxis.avoidBoundFrac = None
yValueAxis.forceZero = 0
yValueAxis.gridEnd = None
yValueAxis.gridStart = None
yValueAxis.gridStrokeColor = Color(0,0,0)
yValueAxis.gridStrokeDashArray = None
yValueAxis.gridStrokeWidth = 0.25
yValueAxis.joinAxis = None
yValueAxis.joinAxisMode = None
yValueAxis.joinAxisPos = None
yValueAxis.labelAxisMode = 'axis'
yValueAxis.labelTextFormat = None
yValueAxis.labelTextPostFormat = None
yValueAxis.labelTextScale = None
yValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3574fc8>
yValueAxis.leftAxisOrigShiftIPC = 0.14999999999999999
yValueAxis.leftAxisOrigShiftMin = 12
yValueAxis.leftAxisPercent = 1
yValueAxis.leftAxisSkipLL0 = 0
yValueAxis.maximumTicks = 7
yValueAxis.minimumTickSpacing = 10
yValueAxis.origShiftIPC = None
yValueAxis.origShiftMin = None
yValueAxis.origShiftSpecialValue = None
yValueAxis.rangeRound = 'none'
yValueAxis.requiredRange = 30
yValueAxis.skipEndL = 'none'
yValueAxis.strokeColor = Color(0,0,0)
yValueAxis.strokeDashArray = None
yValueAxis.strokeWidth = 1
yValueAxis.style = 'normal'
yValueAxis.tickAxisMode = 'axis'
yValueAxis.tickLeft = 5
yValueAxis.tickRight = 0
yValueAxis.valueMax = None
yValueAxis.valueMin = None
yValueAxis.valueStep = None
yValueAxis.valueSteps = None
yValueAxis.visible = 1
yValueAxis.visibleAxis = 1
yValueAxis.visibleGrid = 0
yValueAxis.visibleLabels = 1
yValueAxis.visibleTicks = 1
yValueAxis.zrangePref = 0
```

LinePlot(AbstractLineChart)

Line plot with multiple lines.

Both x- and y-axis are value axis (so there are no seperate
X and Y versions of this class).

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

behindAxes If true use separate line group.

data Data to be plotted, list of (lists of) x/y tuples.

debug Used only for debugging.

fillColor Color used for background interior of plot area.

gridFirst If true use draw grids before axes.

height Height of the chart.

joinedLines Display data points joined with lines if true.

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

reversePlotOrder If true reverse plot order.

strokeColor Color used for background border of plot area.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

xValueAxis Handle of the x axis.

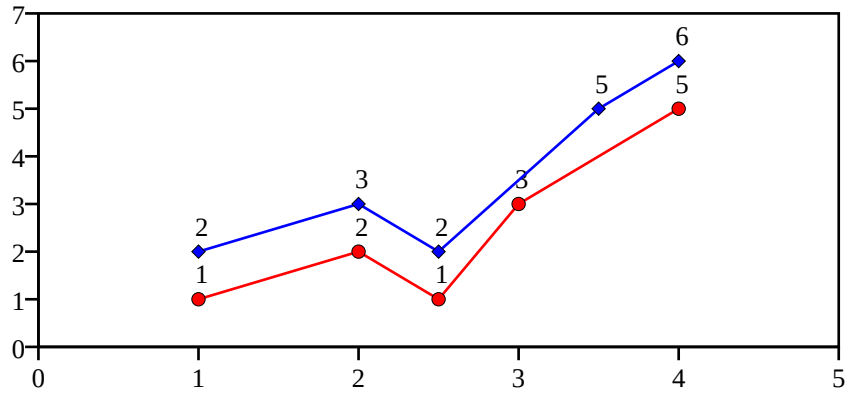
y Y position of the lower-left corner of the chart.

yValueAxis Handle of the y axis.

Example

```
            def demo(self):
                """Shows basic use of a line chart."""

                drawing = Drawing(400, 200)

                data = [
                    ((1,1), (2,2), (2.5,1), (3,3), (4,5)),
                    ((1,2), (2,3), (2.5,2), (3.5,5), (4,6))
                    ]

                lp = LinePlot()

                lp.x = 50
                lp.y = 50
                lp.height = 125
                lp.width = 300
                lp.data = data
```

```
    lp.joinedLines = 1
    lp.lineLabelFormat = '%2.0f'
    lp.strokeColor = colors.black

    lp.lines[0].strokeColor = colors.red
    lp.lines[0].symbol = makeMarker('FilledCircle')
    lp.lines[1].strokeColor = colors.blue
    lp.lines[1].symbol = makeMarker('FilledDiamond')

    lp.xValueAxis.valueMin = 0
    lp.xValueAxis.valueMax = 5
    lp.xValueAxis.valueStep = 1

    lp.yValueAxis.valueMin = 0
    lp.yValueAxis.valueMax = 7
    lp.yValueAxis.valueStep = 1

    drawing.add(lp)

    return drawing
```



Properties of Example Widget

```
annotations = []
background = None
behindAxes = 0
data = [((1, 1), (2, 2), (2.5, 1), (3, 3), (4, 5)),
        ((1, 2), (2, 3), (2.5, 2), (3, 4), (4, 6))]
debug = 0
fillColor = None
gridFirst = 0
height = 85
joinedLines = 1
lineLabelArray = None
lineLabelFormat = None
lineLabelNudge = 10
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x357bd40>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x357bcb0>
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
width = 180
x = 20
xValueAxis.avoidBoundFrac = None
xValueAxis.forceZero = 0
xValueAxis.gridEnd = None
xValueAxis.gridStart = None
xValueAxis.gridStrokeColor = Color(0,0,0)
xValueAxis.gridStrokeDashArray = None
xValueAxis.gridStrokeWidth = 0.25
xValueAxis.joinAxis = None
xValueAxis.joinAxisMode = None
```

```
xValueAxis.joinAxisPos = None
xValueAxis.labelAxisMode = 'axis'
xValueAxis.labelTextFormat = None
xValueAxis.labelTextPostFormat = None
xValueAxis.labelTextScale = None
xValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x357bb48>
xValueAxis.maximumTicks = 7
xValueAxis.minimumTickSpacing = 10
xValueAxis.origShiftIPC = None
xValueAxis.origShiftMin = None
xValueAxis.origShiftSpecialValue = None
xValueAxis.rangeRound = 'none'
xValueAxis.skipEndL = 'none'
xValueAxis.strokeColor = Color(0,0,0)
xValueAxis.strokeDashArray = None
xValueAxis.strokeWidth = 1
xValueAxis.style = 'normal'
xValueAxis.tickAxisMode = 'axis'
xValueAxis.tickDown = 5
xValueAxis.tickUp = 0
xValueAxis.valueMax = None
xValueAxis.valueMin = None
xValueAxis.valueStep = None
xValueAxis.visible = 1
xValueAxis.visibleAxis = 1
xValueAxis.visibleGrid = 0
xValueAxis.visibleLabels = 1
xValueAxis.visibleTicks = 1
xValueAxis.zrangePref = 0
y = 10
yValueAxis.avoidBoundFrac = None
yValueAxis.forceZero = 0
yValueAxis.gridEnd = None
yValueAxis.gridStart = None
yValueAxis.gridStrokeColor = Color(0,0,0)
yValueAxis.gridStrokeDashArray = None
yValueAxis.gridStrokeWidth = 0.25
yValueAxis.joinAxis = None
yValueAxis.joinAxisMode = None
yValueAxis.joinAxisPos = None
yValueAxis.labelAxisMode = 'axis'
yValueAxis.labelTextFormat = None
yValueAxis.labelTextPostFormat = None
yValueAxis.labelTextScale = None
yValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x357bc20>
yValueAxis.maximumTicks = 7
yValueAxis.minimumTickSpacing = 10
yValueAxis.origShiftIPC = None
yValueAxis.origShiftMin = None
yValueAxis.origShiftSpecialValue = None
yValueAxis.rangeRound = 'none'
yValueAxis.skipEndL = 'none'
yValueAxis.strokeColor = Color(0,0,0)
yValueAxis.strokeDashArray = None
yValueAxis.strokeWidth = 1
yValueAxis.style = 'normal'
yValueAxis.tickAxisMode = 'axis'
yValueAxis.tickLeft = 5
yValueAxis.tickRight = 0
yValueAxis.valueMax = None
yValueAxis.valueMin = None
yValueAxis.valueStep = None
yValueAxis.visible = 1
yValueAxis.visibleAxis = 1
yValueAxis.visibleGrid = 0
yValueAxis.visibleLabels = 1
yValueAxis.visibleTicks = 1
yValueAxis.zrangePref = 0
```

LinePlot3D(LinePlot)

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

behindAxes If true use separate line group.

data Data to be plotted, list of (lists of) x/y tuples.

debug Used only for debugging.

fillColor Color used for background interior of plot area.

gridFirst If true use draw grids before axes.

height Height of the chart.

joinedLines Display data points joined with lines if true.

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

reversePlotOrder If true reverse plot order.

strokeColor Color used for background border of plot area.

strokeWidth Width plot area border.

theta_x dx/dz

theta_y dy/dz

width Width of the chart.

x X position of the lower-left corner of the chart.

xValueAxis Handle of the x axis.

y Y position of the lower-left corner of the chart.

yValueAxis Handle of the y axis.

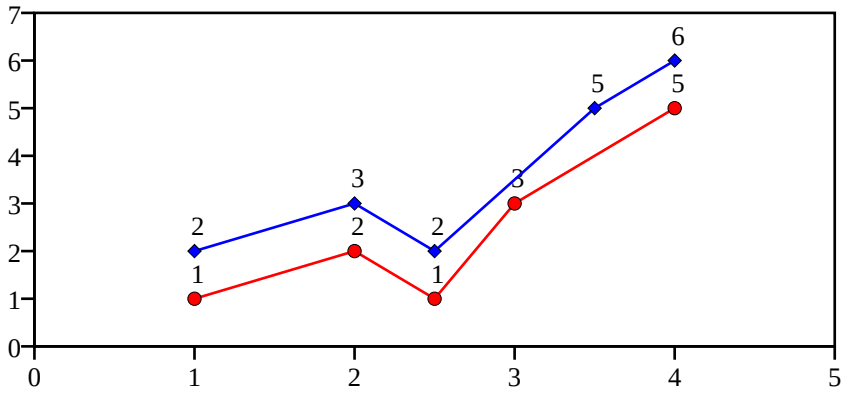
zDepth depth of an individual series

zSpace z gap around series

Example

```
            def demo(self):
                """Shows basic use of a line chart."""

                drawing = Drawing(400, 200)

                data = [
                    ((1,1), (2,2), (2.5,1), (3,3), (4,5)),
                    ((1,2), (2,3), (2.5,2), (3.5,5), (4,6))
                    ]

                lp = LinePlot()

                lp.x = 50
                lp.y = 50
                lp.height = 125
                lp.width = 300
```

```
    lp.data = data
    lp.joinedLines = 1
    lp.lineLabelFormat = '%2.0f'
    lp.strokeColor = colors.black

    lp.lines[0].strokeColor = colors.red
    lp.lines[0].symbol = makeMarker('FilledCircle')
    lp.lines[1].strokeColor = colors.blue
    lp.lines[1].symbol = makeMarker('FilledDiamond')

    lp.xValueAxis.valueMin = 0
    lp.xValueAxis.valueMax = 5
    lp.xValueAxis.valueStep = 1

    lp.yValueAxis.valueMin = 0
    lp.yValueAxis.valueMax = 7
    lp.yValueAxis.valueStep = 1

    drawing.add(lp)

    return drawing
```



Properties of Example Widget

```
annotations = []
background = None
behindAxes = 0
data = [((1, 1), (2, 2), (2.5, 1), (3, 3), (4, 5)),
        ((1, 2), (2, 3), (2.5, 2), (3, 4), (4, 6))]
debug = 0
fillColor = None
gridFirst = 0
height = 85
joinedLines = 1
lineLabelArray = None
lineLabelFormat = None
lineLabelNudge = 10
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3585710>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3585680>
reversePlotOrder = 0
strokeColor = None
strokeWidth = 1
width = 180
x = 20
xValueAxis.avoidBoundFrac = None
xValueAxis.forceZero = 0
xValueAxis.gridEnd = None
xValueAxis.gridStart = None
xValueAxis.gridStrokeColor = Color(0,0,0)
xValueAxis.gridStrokeDashArray = None
xValueAxis.gridStrokeWidth = 0.25
xValueAxis.joinAxis = None
```

```
xValueAxis.joinAxisMode = None
xValueAxis.joinAxisPos = None
xValueAxis.labelAxisMode = 'axis'
xValueAxis.labelTextFormat = None
xValueAxis.labelTextPostFormat = None
xValueAxis.labelTextScale = None
xValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x35711b8>
xValueAxis.maximumTicks = 7
xValueAxis.minimumTickSpacing = 10
xValueAxis.origShiftIPC = None
xValueAxis.origShiftMin = None
xValueAxis.origShiftSpecialValue = None
xValueAxis.rangeRound = 'none'
xValueAxis.skipEndL = 'none'
xValueAxis.strokeColor = Color(0,0,0)
xValueAxis.strokeDashArray = None
xValueAxis.strokeWidth = 1
xValueAxis.style = 'normal'
xValueAxis.tickAxisMode = 'axis'
xValueAxis.tickDown = 5
xValueAxis.tickUp = 0
xValueAxis.valueMax = None
xValueAxis.valueMin = None
xValueAxis.valueStep = None
xValueAxis.visible = 1
xValueAxis.visibleAxis = 1
xValueAxis.visibleGrid = 0
xValueAxis.visibleLabels = 1
xValueAxis.visibleTicks = 1
xValueAxis.zrangePref = 0
y = 10
yValueAxis.avoidBoundFrac = None
yValueAxis.forceZero = 0
yValueAxis.gridEnd = None
yValueAxis.gridStart = None
yValueAxis.gridStrokeColor = Color(0,0,0)
yValueAxis.gridStrokeDashArray = None
yValueAxis.gridStrokeWidth = 0.25
yValueAxis.joinAxis = None
yValueAxis.joinAxisMode = None
yValueAxis.joinAxisPos = None
yValueAxis.labelAxisMode = 'axis'
yValueAxis.labelTextFormat = None
yValueAxis.labelTextPostFormat = None
yValueAxis.labelTextScale = None
yValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x35855f0>
yValueAxis.maximumTicks = 7
yValueAxis.minimumTickSpacing = 10
yValueAxis.origShiftIPC = None
yValueAxis.origShiftMin = None
yValueAxis.origShiftSpecialValue = None
yValueAxis.rangeRound = 'none'
yValueAxis.skipEndL = 'none'
yValueAxis.strokeColor = Color(0,0,0)
yValueAxis.strokeDashArray = None
yValueAxis.strokeWidth = 1
yValueAxis.style = 'normal'
yValueAxis.tickAxisMode = 'axis'
yValueAxis.tickLeft = 5
yValueAxis.tickRight = 0
yValueAxis.valueMax = None
yValueAxis.valueMin = None
yValueAxis.valueStep = None
yValueAxis.visible = 1
yValueAxis.visibleAxis = 1
yValueAxis.visibleGrid = 0
yValueAxis.visibleLabels = 1
yValueAxis.visibleTicks = 1
yValueAxis.zrangePref = 0
```

ScatterPlot(LinePlot)

A scatter plot widget

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

axisStrokeWidth Stroke width for both axes

axisTickLengths Lenth of the ticks on both axes

background Background color (if any)

behindAxes If true use separate line group.

bottomPadding Padding at bottom of drawing

data Data points - a list of x/y tuples.

debug Used only for debugging.

fillColor Color used for background interior of plot area.

gridFirst If true use draw grids before axes.

height Height of the area inside the axes

joinedLines Display data points joined with lines if true.

labelOffset Space between label and Axis (or other labels)

leftPadding Padding on left of drawing

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

outerBorderColor Color of outer border (if any)

outerBorderOn Is there an outer border (continuation of axes)

reversePlotOrder If true reverse plot order.

rightPadding Padding on right of drawing

strokeColor Color used for border of plot area.

strokeWidth Width plot area border.

topPadding Padding at top of drawing

width Width of the area inside the axes

x X position of the lower-left corner of the chart.

xLabel Label for the whole X-Axis

xValueAxis Handle of the x axis.

y Y position of the lower-left corner of the chart.

yLabel Label for the whole Y-Axis

yValueAxis Handle of the y axis.

Example

```
        def demo(self,drawing=None):
            if not drawing:
                tx,ty=self._getDrawingDimensions()
                drawing = Drawing(tx,ty)
            drawing.add(self.draw())
            return drawing
```

Properties of Example Widget

```
annotations = []
background = None
behindAxes = 0
bottomPadding = 5
data = [((0.029999999999999999, 62.729999999999997),
         (0.073999999999999996, 54.363),
         (1.216, 17.963999999999999)),
        ((1.3600000000000001, 11.621),
         (1.387, 50.011000000000003),
         (1.4279999999999999, 68.953000000000003)),
        ((1.444, 86.888000000000005),
         (1.754, 35.579999999999998),
         (1.766, 36.049999999999997))]
debug = 0
fillColor = None
gridFirst = 0
height = 77
joinedLines = 0
leftPadding = 5
lineLabelArray = None
lineLabelFormat = '%.2f'
lineLabelNudge = 0
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x358ae60>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x358add0>
outerBorderColor = Color(0,0,0)
outerBorderOn = 1
reversePlotOrder = 0
rightPadding = 10
strokeColor = None
strokeWidth = 1
topPadding = 5
width = 142
x = 25.995999999999999
xLabel = 'X Lable'
xValueAxis.avoidBoundFrac = None
xValueAxis.forceZero = 0
xValueAxis.gridEnd = None
xValueAxis.gridStart = None
xValueAxis.gridStrokeColor = Color(0,0,0)
xValueAxis.gridStrokeDashArray = None
xValueAxis.gridStrokeWidth = 0.25
xValueAxis.joinAxis = None
xValueAxis.joinAxisMode = None
xValueAxis.joinAxisPos = None
xValueAxis.labelAxisMode = 'axis'
xValueAxis.labelTextFormat = None
xValueAxis.labelTextPostFormat = None
xValueAxis.labelTextScale = None
xValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x358ac68>
xValueAxis.maximumTicks = 7
xValueAxis.minimumTickSpacing = 10
xValueAxis.origShiftIPC = None
xValueAxis.origShiftMin = None
xValueAxis.origShiftSpecialValue = None
xValueAxis.rangeRound = 'both'
xValueAxis.skipEndL = 'none'
xValueAxis.strokeColor = Color(0,0,0)
xValueAxis.strokeDashArray = None
xValueAxis.strokeWidth = 0.5
xValueAxis.style = 'normal'
xValueAxis.tickAxisMode = 'axis'
xValueAxis.tickDown = 2
xValueAxis.tickUp = 0
xValueAxis.valueMax = None
xValueAxis.valueMin = None
```

```
xValueAxis.valueStep = None
xValueAxis.visible = 1
xValueAxis.visibleAxis = 1
xValueAxis.visibleGrid = 0
xValueAxis.visibleLabels = 1
xValueAxis.visibleTicks = 1
xValueAxis.zrangePref = 0
y = 16
yLabel = 'Y Lable'
yValueAxis.avoidBoundFrac = None
yValueAxis.forceZero = 0
yValueAxis.gridEnd = None
yValueAxis.gridStart = None
yValueAxis.gridStrokeColor = Color(0,0,0)
yValueAxis.gridStrokeDashArray = None
yValueAxis.gridStrokeWidth = 0.25
yValueAxis.joinAxis = None
yValueAxis.joinAxisMode = None
yValueAxis.joinAxisPos = None
yValueAxis.labelAxisMode = 'axis'
yValueAxis.labelTextFormat = '%s'
yValueAxis.labelTextPostFormat = None
yValueAxis.labelTextScale = None
yValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x358ad40>
yValueAxis.maximumTicks = 7
yValueAxis.minimumTickSpacing = 10
yValueAxis.origShiftIPC = None
yValueAxis.origShiftMin = None
yValueAxis.origShiftSpecialValue = None
yValueAxis.rangeRound = 'both'
yValueAxis.skipEndL = 'none'
yValueAxis.strokeColor = Color(0,0,0)
yValueAxis.strokeDashArray = None
yValueAxis.strokeWidth = 0.5
yValueAxis.style = 'normal'
yValueAxis.tickAxisMode = 'axis'
yValueAxis.tickLeft = 2
yValueAxis.tickRight = 0
yValueAxis.valueMax = None
yValueAxis.valueMin = None
yValueAxis.valueStep = None
yValueAxis.visible = 1
yValueAxis.visibleAxis = 1
yValueAxis.visibleGrid = 0
yValueAxis.visibleLabels = 1
yValueAxis.visibleTicks = 1
yValueAxis.zrangePref = 0
```

ShadedPolyFiller(Filler, ShadedPolygon)

Public Attributes

fillColor filler interior color

strokeColor filler edge color

strokeWidth filler edge width

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

SplitLinePlot(AreaLinePlot)

Public Attributes

annotations list of callables, will be called with self, xscale, yscale.

background Handle to background object.

behindAxes If true use separate line group.

data Data to be plotted, list of (lists of) x/y tuples.

debug Used only for debugging.

fillColor Color used for background interior of plot area.

gridFirst If true use draw grids before axes.

height Height of the chart.

joinedLines Display data points joined with lines if true.

lineLabelArray explicit array of line label values, must match size of data if present.

lineLabelFormat Formatting string or function used for data point labels.

lineLabelNudge Distance between a data point and its label.

lineLabels Handle to the list of data point labels.

lines Handle of the lines.

reversePlotOrder If true reverse plot order.

strokeColor Color used for background border of plot area.

strokeWidth Width plot area border.

width Width of the chart.

x X position of the lower-left corner of the chart.

xValueAxis Handle of the x axis.

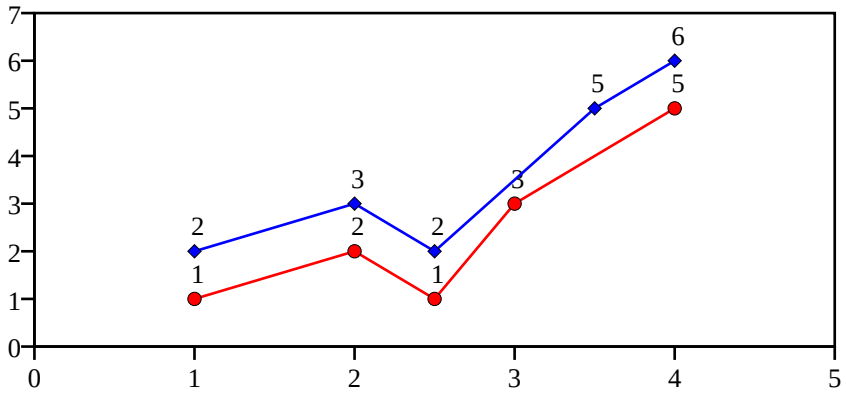
y Y position of the lower-left corner of the chart.

yValueAxis Handle of the y axis.

Example

```
            def demo(self):
                """Shows basic use of a line chart."""

                drawing = Drawing(400, 200)

                data = [
                    ((1,1), (2,2), (2.5,1), (3,3), (4,5)),
                    ((1,2), (2,3), (2.5,2), (3.5,5), (4,6))
                    ]

                lp = LinePlot()

                lp.x = 50
                lp.y = 50
                lp.height = 125
                lp.width = 300
                lp.data = data
                lp.joinedLines = 1
                lp.lineLabelFormat = '%2.0f'
                lp.strokeColor = colors.black

                lp.lines[0].strokeColor = colors.red
                lp.lines[0].symbol = makeMarker('FilledCircle')
                lp.lines[1].strokeColor = colors.blue
```

```
        lp.lines[1].symbol = makeMarker('FilledDiamond')

        lp.xValueAxis.valueMin = 0
        lp.xValueAxis.valueMax = 5
        lp.xValueAxis.valueStep = 1

        lp.yValueAxis.valueMin = 0
        lp.yValueAxis.valueMax = 7
        lp.yValueAxis.valueStep = 1

        drawing.add(lp)

        return drawing
```



Properties of Example Widget

```
annotations = []
background = None
behindAxes = 0
data = [(20030601, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20030701, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20030801, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20030901, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20031001, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20031101, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20031201, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040101, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040201, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040301, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040401, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040501, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040601, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040701, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040801, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20040901, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20041001, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20041101, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20041201, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050101, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050201, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050301, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050401, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050501, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050601, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050701, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050801, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20050901, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20051001, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20051101, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20051201, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20060101, 0.94999999999999996, 0.050000000000000003, 0.0),
        (20060201, 0.94999999999999996, 0.050000000000000003, 0.0),
```

```
(20060301, 0.94999999999999996, 0.050000000000000003, 0.0),
(20060401, 0.94999999999999996, 0.050000000000000003, 0.0),
(20060501, 0.94999999999999996, 0.050000000000000003, 0.0),
(20060601, 0.94999999999999996, 0.050000000000000003, 0.0),
(20060701, 0.94999999999999996, 0.050000000000000003, 0.0),
(20060801, 0.94999999999999996, 0.050000000000000003, 0.0),
(20060901, 0.94999999999999996, 0.050000000000000003, 0.0),
(20061001, 0.94999999999999996, 0.050000000000000003, 0.0),
(20061101, 0.94999999999999996, 0.050000000000000003, 0.0),
(20061201, 0.94999999999999996, 0.050000000000000003, 0.0),
(20070101, 0.94999999999999996, 0.050000000000000003, 0.0),
(20070201, 0.94999999999999996, 0.050000000000000003, 0.0),
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(20070501, 0.94999999999999996, 0.050000000000000003, 0.0),
(20070601, 0.94999999999999996, 0.050000000000000003, 0.0),
(20070701, 0.94999999999999996, 0.050000000000000003, 0.0),
(20070801, 0.94999999999999996, 0.050000000000000003, 0.0),
(20070901, 0.94999999999999996, 0.050000000000000003, 0.0),
(20071001, 0.94999999999999996, 0.050000000000000003, 0.0),
(20071101, 0.94999999999999996, 0.050000000000000003, 0.0),
(20071201, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080101, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080201, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080301, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080401, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080501, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080601, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080701, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080801, 0.94999999999999996, 0.050000000000000003, 0.0),
(20080901, 0.94999999999999996, 0.050000000000000003, 0.0),
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(20081101, 0.94999999999999996, 0.050000000000000003, 0.0),
(20081201, 0.94999999999999996, 0.050000000000000003, 0.0),
(20090101, 0.94999999999999996, 0.050000000000000003, 0.0),
(20090201, 0.91000000000000003, 0.089999999999999997, 0.0),
(20090301, 0.91000000000000003, 0.089999999999999997, 0.0),
(20090401, 0.91000000000000003, 0.089999999999999997, 0.0),
(20090501, 0.91000000000000003, 0.089999999999999997, 0.0),
(20090601, 0.91000000000000003, 0.089999999999999997, 0.0),
(20090701, 0.91000000000000003, 0.089999999999999997, 0.0),
(20090801, 0.91000000000000003, 0.089999999999999997, 0.0),
(20090901, 0.91000000000000003, 0.089999999999999997, 0.0),
(20091001, 0.91000000000000003, 0.089999999999999997, 0.0),
(20091101, 0.91000000000000003, 0.089999999999999997, 0.0),
(20091201, 0.91000000000000003, 0.089999999999999997, 0.0),
(20100101, 0.91000000000000003, 0.089999999999999997, 0.0),
(20100201, 0.81000000000000005, 0.19, 0.0),
(20100301, 0.81000000000000005, 0.19, 0.0),
(20100401, 0.81000000000000005, 0.19, 0.0),
(20100501, 0.81000000000000005, 0.19, 0.0),
(20100601, 0.81000000000000005, 0.19, 0.0),
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```

```
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debug = 0
fillColor = None
gridFirst = 0
height = 85
joinedLines = 1
lineLabelArray = None
lineLabelFormat = None
lineLabelNudge = 10
lineLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3594c20>
lines = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3594b90>
reversePlotOrder = 1
strokeColor = None
strokeWidth = 1
width = 180
x = 20
xValueAxis.avoidBoundFrac = None
xValueAxis.bottomAxisLabelSlack = 0.10000000000000001
xValueAxis.dailyFreq = 0
xValueAxis.dayOfWeekName = ['Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', 'Sund
xValueAxis.forceDatesEachYear = []
xValueAxis.forceEndDate = 0
xValueAxis.forceFirstDate = 0
xValueAxis.forceZero = 0
xValueAxis.gridEnd = None
xValueAxis.gridStart = None
xValueAxis.gridStrokeColor = Color(0,0,0)
xValueAxis.gridStrokeDashArray = None
xValueAxis.gridStrokeWidth = 0.25
xValueAxis.joinAxis = None
xValueAxis.joinAxisMode = None
xValueAxis.joinAxisPos = None
xValueAxis.labelAxisMode = 'axis'
xValueAxis.labelTextFormat = None
xValueAxis.labelTextPostFormat = None
xValueAxis.labelTextScale = None
xValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3594d88>
xValueAxis.maximumTicks = 7
xValueAxis.minimumTickSpacing = 10
xValueAxis.monthName = ['January',
                        'February',
                        'March',
                        'April',
                        'May',
                        'June',
                        'July',
                        'August',
                        'September',
                        'October',
                        'November',
                        'December']
xValueAxis.niceMonth = 1
xValueAxis.origShiftIPC = None
xValueAxis.origShiftMin = None
xValueAxis.origShiftSpecialValue = None
xValueAxis.rangeRound = 'none'
xValueAxis.skipEndL = 'none'
xValueAxis.specifiedTickDates = None
xValueAxis.strokeColor = Color(0,0,0)
xValueAxis.strokeDashArray = None
xValueAxis.strokeWidth = 1
xValueAxis.style = 'normal'
xValueAxis.tickAxisMode = 'axis'
xValueAxis.tickDown = 5
xValueAxis.tickUp = 0
xValueAxis.valueMax = None
xValueAxis.valueMin = None
xValueAxis.valueStep = None
xValueAxis.valueSteps = None
xValueAxis.visible = 1
xValueAxis.visibleAxis = 1
```

```
xValueAxis.visibleGrid = 0
xValueAxis.visibleLabels = 1
xValueAxis.visibleTicks = 1
xValueAxis.xLabelFormat = '{mm}/{yy}'
xValueAxis.zrangePref = 0
y = 10
yValueAxis.avoidBoundFrac = None
yValueAxis.forceZero = 0
yValueAxis.gridEnd = None
yValueAxis.gridStart = None
yValueAxis.gridStrokeColor = Color(0,0,0)
yValueAxis.gridStrokeDashArray = None
yValueAxis.gridStrokeWidth = 0.25
yValueAxis.joinAxis = None
yValueAxis.joinAxisMode = None
yValueAxis.joinAxisPos = None
yValueAxis.labelAxisMode = 'axis'
yValueAxis.labelTextFormat = None
yValueAxis.labelTextPostFormat = None
yValueAxis.labelTextScale = None
yValueAxis.labels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3594a28>
yValueAxis.leftAxisOrigShiftIPC = 0
yValueAxis.leftAxisOrigShiftMin = 0
yValueAxis.leftAxisPercent = 0
yValueAxis.leftAxisSkipLL0 = 0
yValueAxis.maximumTicks = 7
yValueAxis.minimumTickSpacing = 10
yValueAxis.origShiftIPC = None
yValueAxis.origShiftMin = None
yValueAxis.origShiftSpecialValue = None
yValueAxis.rangeRound = 'none'
yValueAxis.requiredRange = None
yValueAxis.skipEndL = 'none'
yValueAxis.strokeColor = Color(0,0,0)
yValueAxis.strokeDashArray = None
yValueAxis.strokeWidth = 1
yValueAxis.style = 'normal'
yValueAxis.tickAxisMode = 'axis'
yValueAxis.tickLeft = 5
yValueAxis.tickRight = 0
yValueAxis.valueMax = None
yValueAxis.valueMin = None
yValueAxis.valueStep = None
yValueAxis.valueSteps = None
yValueAxis.visible = 1
yValueAxis.visibleAxis = 1
yValueAxis.visibleGrid = 0
yValueAxis.visibleLabels = 1
yValueAxis.visibleTicks = 1
yValueAxis.zrangePref = 0
```

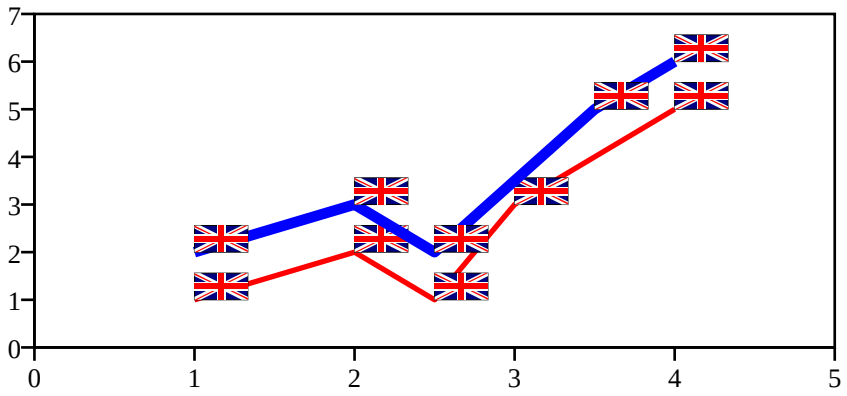
Functions

sample1a(...)

A line plot with non-equidistant points in x-axis.

Example

```
def sample1a():
    "A line plot with non-equidistant points in x-axis."

    drawing = Drawing(400, 200)

    data = [
            ((1,1), (2,2), (2.5,1), (3,3), (4,5)),
            ((1,2), (2,3), (2.5,2), (3.5,5), (4,6))
        ]

    lp = LinePlot()

    lp.x = 50
    lp.y = 50
    lp.height = 125
    lp.width = 300
    lp.data = data
    lp.joinedLines = 1
    lp.strokeColor = colors.black

    lp.lines.symbol = makeMarker('UK_Flag')

    lp.lines[0].strokeWidth = 2
    lp.lines[1].strokeWidth = 4

    lp.xValueAxis.valueMin = 0
    lp.xValueAxis.valueMax = 5
    lp.xValueAxis.valueStep = 1

    lp.yValueAxis.valueMin = 0
    lp.yValueAxis.valueMax = 7
    lp.yValueAxis.valueStep = 1

    drawing.add(lp)

    return drawing
```

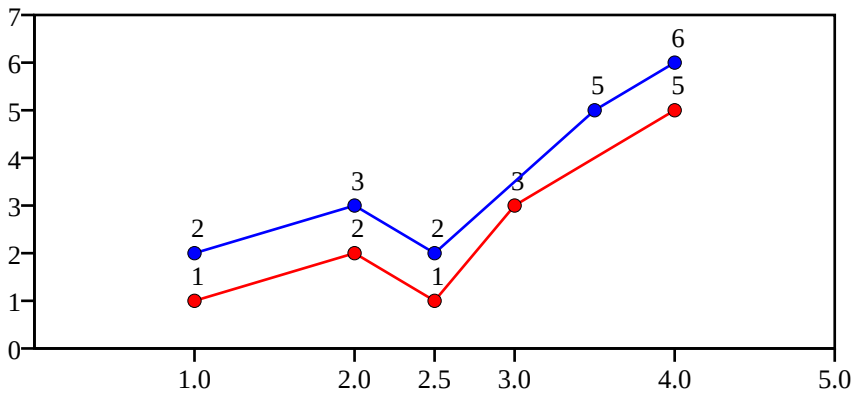


sample1b(...)

A line plot with non-equidistant points in x-axis.

Example

```
def sample1b():
    "A line plot with non-equidistant points in x-axis."

    drawing = Drawing(400, 200)

    data = [
            ((1,1), (2,2), (2.5,1), (3,3), (4,5)),
            ((1,2), (2,3), (2.5,2), (3.5,5), (4,6))
        ]

    lp = LinePlot()

    lp.x = 50
    lp.y = 50
    lp.height = 125
    lp.width = 300
    lp.data = data
    lp.joinedLines = 1
    lp.lines.symbol = makeMarker('Circle')
    lp.lineLabelFormat = '%2.0f'
    lp.strokeColor = colors.black

    lp.xValueAxis.valueMin = 0
    lp.xValueAxis.valueMax = 5
    lp.xValueAxis.valueSteps = [1, 2, 2.5, 3, 4, 5]
    lp.xValueAxis.labelTextFormat = '%2.1f'

    lp.yValueAxis.valueMin = 0
    lp.yValueAxis.valueMax = 7
    lp.yValueAxis.valueStep = 1

    drawing.add(lp)

    return drawing
```

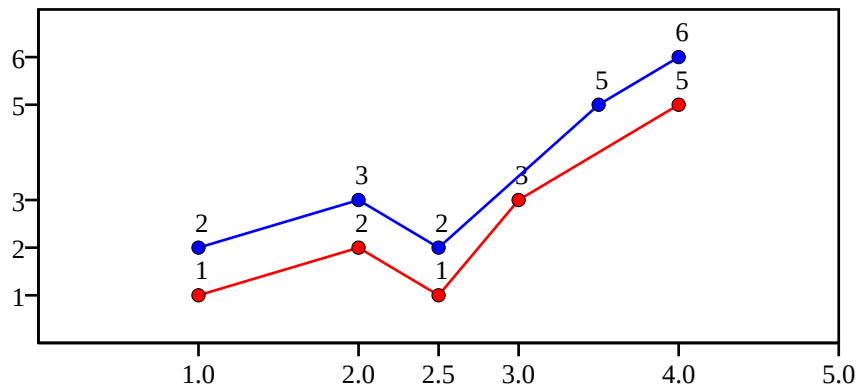


sample1c(...)

A line plot with non-equidistant points in x-axis.

Example

```
def sample1c():
    "A line plot with non-equidistant points in x-axis."

    drawing = Drawing(400, 200)

    data = [
            ((1,1), (2,2), (2.5,1), (3,3), (4,5)),
            ((1,2), (2,3), (2.5,2), (3.5,5), (4,6))
        ]

    lp = LinePlot()

    lp.x = 50
    lp.y = 50
    lp.height = 125
    lp.width = 300
    lp.data = data
    lp.joinedLines = 1
    lp.lines[0].symbol = makeMarker('FilledCircle')
    lp.lines[1].symbol = makeMarker('Circle')
    lp.lineLabelFormat = '%2.0f'
    lp.strokeColor = colors.black

    lp.xValueAxis.valueMin = 0
    lp.xValueAxis.valueMax = 5
    lp.xValueAxis.valueSteps = [1, 2, 2.5, 3, 4, 5]
    lp.xValueAxis.labelTextFormat = '%2.1f'

    lp.yValueAxis.valueMin = 0
    lp.yValueAxis.valueMax = 7
    lp.yValueAxis.valueSteps = [1, 2, 3, 5, 6]

    drawing.add(lp)

    return drawing
```



sample2(...)

A line plot with non-equidistant points in x-axis.

Example

```
def sample2():
    "A line plot with non-equidistant points in x-axis."

    drawing = Drawing(400, 200)

    data = [
        ((('25/11/1991',1),
         ('30/11/1991',1.000933333),
         ('31/12/1991',1.0062),
         ('31/01/1992',1.0112),
         ('29/02/1992',1.0158),
         ('31/03/1992',1.020733333),
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         ('30/06/1992',1.034466667),
         ('31/07/1992',1.038733333),
         ('31/08/1992',1.0422),
         ('30/09/1992',1.045533333),
         ('31/10/1992',1.049866667),
         ('30/11/1992',1.054733333),
         ('31/12/1992',1.061),
         ),
        ]

    data[0] = preprocessData(data[0])

    lp = LinePlot()

    lp.x = 50
    lp.y = 50
    lp.height = 125
    lp.width = 300
    lp.data = data
    lp.joinedLines = 1
    lp.lines.symbol = makeMarker('FilledDiamond')
    lp.strokeColor = colors.black

    start = mktime(mkTimeTuple('25/11/1991'))
    t0 = mktime(mkTimeTuple('30/11/1991'))
    t1 = mktime(mkTimeTuple('31/12/1991'))
    t2 = mktime(mkTimeTuple('31/03/1992'))
    t3 = mktime(mkTimeTuple('30/06/1992'))
    t4 = mktime(mkTimeTuple('30/09/1992'))
    end = mktime(mkTimeTuple('31/12/1992'))
    lp.xValueAxis.valueMin = start
    lp.xValueAxis.valueMax = end
    lp.xValueAxis.valueSteps = [start, t0, t1, t2, t3, t4, end]
    lp.xValueAxis.labelTextFormat = seconds2str
    lp.xValueAxis.labels[1].dy = -20
    lp.xValueAxis.labels[2].dy = -35

    lp.yValueAxis.labelTextFormat = '%4.2f'
    lp.yValueAxis.valueMin = 100
    lp.yValueAxis.valueMax = 110
    lp.yValueAxis.valueStep = 2

    drawing.add(lp)

    return drawing
```
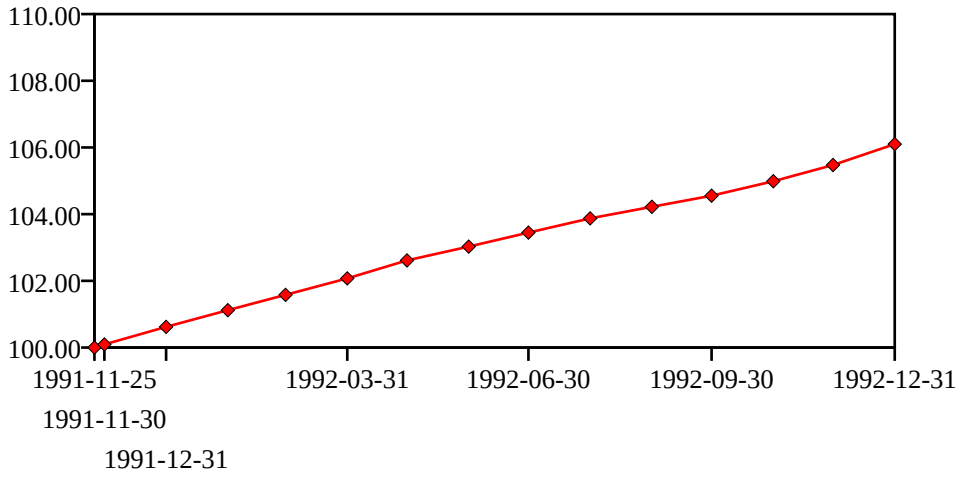


110.00
108.00
106.00
104.00
102.00
100.00
1991-11-25
1991-11-30
1991-12-31
1992-03-31
1992-06-30
1992-09-30
1992-12-31

dotbox

Classes

DotBox(Widget)

Returns a dotbox widget.

Public Attributes

dotColor Colour of the circle on the box

dotDiameter Diameter of the circle used for the 'dot'

dotXPosition X Position of the circle

dotYPosition X Position of the circle

gridColor Colour for the box and gridding

gridDivWidth Width of each 'box'

labelFontName Name of font used for the labels

labelFontSize Size of font used for the labels

labelOffset Space between label text and grid edge

strokeWidth Width of the grid and dot outline

x X Position of dotbox

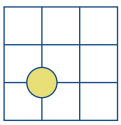
xlabels List of text labels for boxes on left hand side

y Y Position of dotbox

ylabels Text label for second box on left hand side

Example

```
def demo(self,drawing=None):
    if not drawing:
        tx,ty=self._getDrawingDimensions()
        drawing = Drawing(tx,ty)
    drawing.add(self.draw())
    return drawing
```



Properties of Example Widget

```
dotColor = Color(.909804,.878431,.466667)
dotDiameter = 11.338582677165356
dotXPosition = 1
dotYPosition = 1
gridColor = Color(.098039,.301961,.529412)
gridDivWidth = 14.173228346456693
labelFontName = 'Helvetica'
labelFontSize = 6
```

```
labelOffset = 5
strokeWidth = 0.5
x = 30
xlabels = ['Value', 'Blend', 'Growth']
y = 5
ylabels = ['Small', 'Medium', 'Large']
```

spider

Spider Chart

Normal use shows variation of 5-10 parameters against some 'norm' or target.
When there is more than one series, place the series with the largest
numbers first, as it will be overdrawn by each successive one.

Classes

SpiderChart(PlotArea)

Public Attributes

background Handle to background object.

data Data to be plotted, list of (lists of) numbers.

debug Used only for debugging.

direction 'clockwise' or 'anticlockwise'

fillColor Color of the plot area interior.

height Height of the chart.

labels optional list of labels to use for each data point

spokeLabels collection of spoke label descriptor objects

spokes collection of spoke descriptor objects

startAngle angle of first slice; like the compass, 0 is due North

strandLabels collection of strand label descriptor objects

strands collection of strand descriptor objects

strokeColor Color of the plot area border.

strokeWidth Width plot area border.

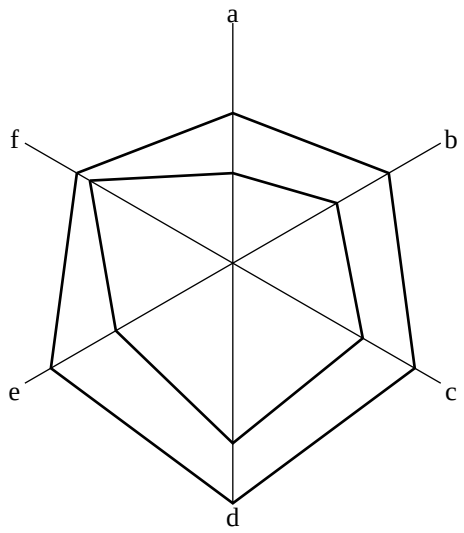
width Width of the chart.

x X position of the lower-left corner of the chart.

y Y position of the lower-left corner of the chart.

Example

```
def demo(self):
    d = Drawing(200, 200)
    d.add(SpiderChart())
    return d
```



Properties of Example Widget

```
background = None
data = [[10, 12, 14, 16, 14, 12], [6, 8, 10, 12, 9, 11]]
debug = 0
direction = 'clockwise'
fillColor = None
height = 180
labels = ['a', 'b', 'c', 'd', 'e', 'f']
spokeLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x36962d8>
spokes = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3696248>
startAngle = 90
strandLabels = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3696368>
strands = <reportlab.graphics.widgetbase.TypedPropertyCollection instance at 0x3696170>
strokeColor = None
strokeWidth = 1
width = 180
x = 10
y = 10
```

SpokeLabel(WedgeLabel)

Public Attributes

angle None

bottomPadding padding at bottom of box

boxAnchor None

boxFillColor None

boxStrokeColor None

boxStrokeWidth None

boxTarget None

dx None

dy None

fillColor None

fontName None

fontSize None

height None

leading None

leftPadding padding at left of box

maxWidth None

rightPadding padding at right of box

strokeColor None

strokeWidth None

text None

textAnchor None

topPadding padding at top of box

visible True if the label is to be drawn

width None

x None

y None

Example

```
            def demo(self):
                """This shows a label positioned with its top right corner
                at the top centre of the drawing, and rotated 45 degrees."""

                d = Drawing(200, 100)

                # mark the origin of the label
                d.add(Circle(100,90, 5, fillColor=colors.green))

                lab = Label()
                lab.setOrigin(100,90)
                lab.boxAnchor = 'ne'
                lab.angle = 45
                lab.dx = 0
                lab.dy = -20
                lab.boxStrokeColor = colors.green
```

```
        lab.setText('Another\nMulti-Line\nString')
        d.add(lab)

        return d
```

Properties of Example Widget

```
angle = 0
bottomPadding = 0
boxAnchor = 'c'
boxFillColor = None
boxStrokeColor = None
boxStrokeWidth = 0.5
boxTarget = 'normal'
dx = 0
dy = 0
fillColor = Color(0,0,0)
fontName = 'Times-Roman'
fontSize = 10
height = None
leading = None
leftPadding = 0
maxWidth = None
rightPadding = 0
strokeColor = None
strokeWidth = 0.10000000000000001
textAnchor = 'start'
topPadding = 0
visible = 1
width = None
x = 0
y = 0
```

StrandLabel(SpokeLabel)

Public Attributes

angle None

bottomPadding padding at bottom of box

boxAnchor None

boxFillColor None

boxStrokeColor None

boxStrokeWidth None

boxTarget None

dR radial shift for label

dx None

dy None

fillColor None

fontName None

fontSize None

format Format for the label

height None

leading None

leftPadding padding at left of box

maxWidth None

rightPadding padding at right of box

strokeColor None

strokeWidth None

text None

textAnchor None

topPadding padding at top of box

visible True if the label is to be drawn

width None

x None

y None

Example

```
            def demo(self):
                """This shows a label positioned with its top right corner
                at the top centre of the drawing, and rotated 45 degrees."""

                d = Drawing(200, 100)

                # mark the origin of the label
                d.add(Circle(100,90, 5, fillColor=colors.green))

                lab = Label()
                lab.setOrigin(100,90)
                lab.boxAnchor = 'ne'
```

```
        lab.angle = 45
        lab.dx = 0
        lab.dy = -20
        lab.boxStrokeColor = colors.green
        lab.setText('Another\nMulti-Line\nString')
        d.add(lab)

        return d
```

Properties of Example Widget

```
angle = 0
bottomPadding = 0
boxAnchor = 'c'
boxFillColor = None
boxStrokeColor = None
boxStrokeWidth = 0.5
boxTarget = 'normal'
dR = 0
dx = 0
dy = 0
fillColor = Color(0,0,0)
fontName = 'Times-Roman'
fontSize = 10
format = ''
height = None
leading = None
leftPadding = 0
maxWidth = None
rightPadding = 0
strokeColor = None
strokeWidth = 0.10000000000000001
textAnchor = 'start'
topPadding = 0
visible = 1
width = None
x = 0
y = 0
```

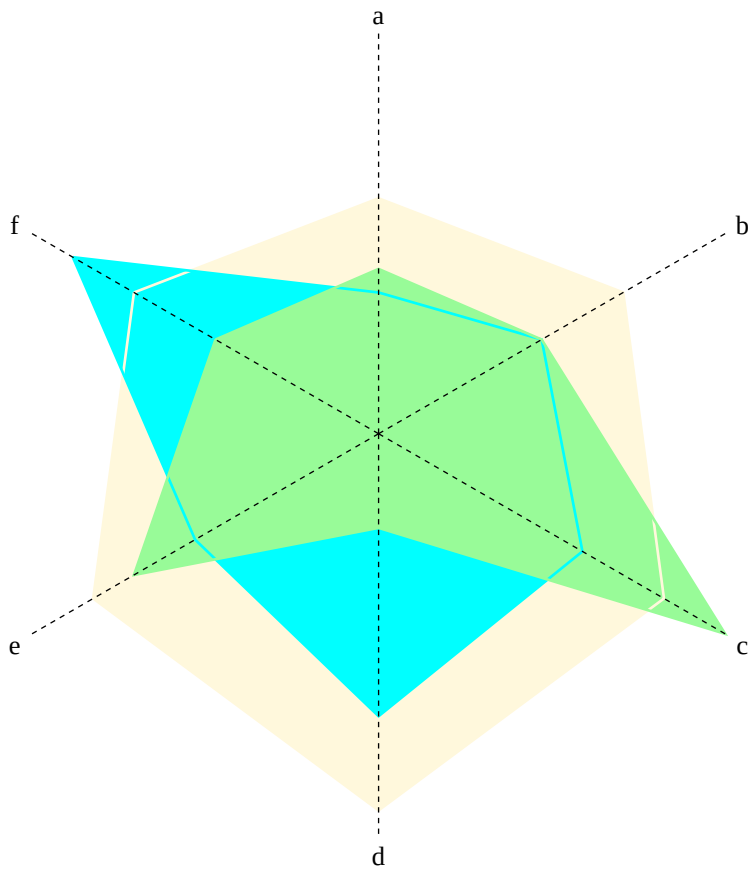
Functions

sample1(...)

Make a simple spider chart

Example

```
def sample1():
    "Make a simple spider chart"
    d = Drawing(400, 400)
    sp = SpiderChart()
    sp.x = 50
    sp.y = 50
    sp.width = 300
    sp.height = 300
    sp.data = [[10,12,14,16,14,12], [6,8,10,12,9,15],[7,8,17,4,12,8]]
    sp.labels = ['a','b','c','d','e','f']
    sp.strands[0].strokeColor = colors.cornsilk
    sp.strands[1].strokeColor = colors.cyan
    sp.strands[2].strokeColor = colors.palegreen
    sp.strands[0].fillColor = colors.cornsilk
    sp.strands[1].fillColor = colors.cyan
    sp.strands[2].fillColor = colors.palegreen
    sp.spokes.strokeDashArray = (2,2)
    d.add(sp)
    return d
```

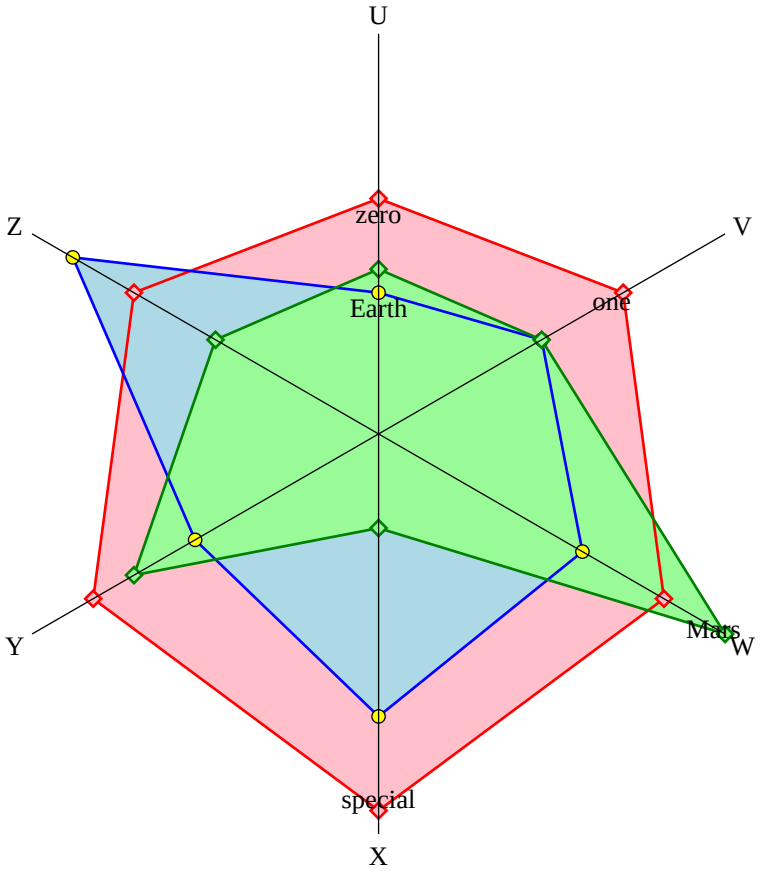


sample2(...)

Make a spider chart with markers, but no fill

Example

```
def sample2():
    "Make a spider chart with markers, but no fill"
    d = Drawing(400, 400)
    sp = SpiderChart()
    sp.x = 50
    sp.y = 50
    sp.width = 300
    sp.height = 300
    sp.data = [[10,12,14,16,14,12], [6,8,10,12,9,15],[7,8,17,4,12,8]]
    sp.labels = ['U','V','W','X','Y','Z']
    sp.strands.strokeWidth = 1
    sp.strands[0].fillColor = colors.pink
    sp.strands[1].fillColor = colors.lightblue
    sp.strands[2].fillColor = colors.palegreen
    sp.strands[0].strokeColor = colors.red
    sp.strands[1].strokeColor = colors.blue
    sp.strands[2].strokeColor = colors.green
    sp.strands.symbol = "FilledDiamond"
    sp.strands[1].symbol = makeMarker("Circle")
    sp.strands[1].symbol.strokeWidth = 0.5
    sp.strands[1].symbol.fillColor = colors.yellow
    sp.strands.symbolSize = 6
    sp.strandLabels[0,3]._text = 'special'
    sp.strandLabels[0,1]._text = 'one'
    sp.strandLabels[0,0]._text = 'zero'
    sp.strandLabels[1,0]._text = 'Earth'
    sp.strandLabels[2,2]._text = 'Mars'
    sp.strandLabels.format = 'values'
    sp.strandLabels.dR = -5
    d.add(sp)
    return d
```


U
V
W
X
Y
Z
zero
one
special
Earth
Mars

stacked_column

#Autogenerated by ReportLab guiedit do not edit

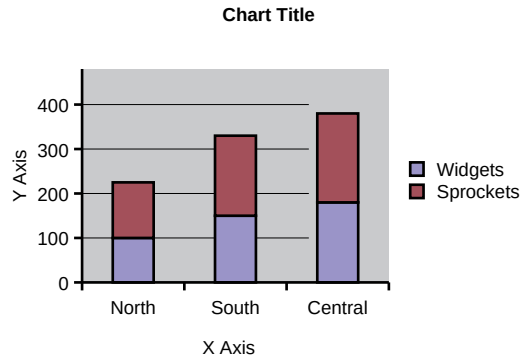
Classes

StackedColumn(_DrawingEditorMixin, Drawing)

Example

```
def __init__(self,width=200,height=150,*args,**kw):
    apply(Drawing.__init__,(self,width,height)+args,kw)
    self._add(self,VerticalBarChart(),name='chart',validate=None,desc="The main chart")
    self.chart.width      = 115
    self.chart.height     = 80
    self.chart.x          = 30
    self.chart.y          = 40
    self.chart.bars[0].fillColor = color01
    self.chart.bars[1].fillColor = color02
    self.chart.bars[2].fillColor = color03
    self.chart.bars[3].fillColor = color04
    self.chart.bars[4].fillColor = color05
    self.chart.bars[5].fillColor = color06
    self.chart.bars[6].fillColor = color07
    self.chart.bars[7].fillColor = color08
    self.chart.bars[8].fillColor = color09
    self.chart.bars[9].fillColor = color10
    self.chart.fillColor         = backgroundGrey
    self.chart.barLabels.fontName              = 'Helvetica'
    self.chart.valueAxis.labels.fontName       = 'Helvetica'
    self.chart.valueAxis.labels.fontSize       = 7
    self.chart.valueAxis.forceZero             = 1
    self.chart.data             = [(100, 150, 180), (125, 180, 200)]
    self.chart.groupSpacing     = 15
    self.chart.valueAxis.avoidBoundFrac           = 1
    self.chart.valueAxis.gridEnd                  = 115
    self.chart.valueAxis.tickLeft                 = 3
    self.chart.valueAxis.visibleGrid              = 1
    self.chart.categoryAxis.categoryNames         = ['North', 'South', 'Central']
    self.chart.categoryAxis.tickDown              = 3
    self.chart.categoryAxis.labels.fontName       = 'Helvetica'
    self.chart.categoryAxis.labels.fontSize       = 7
    self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
    self.Title.fontName   = 'Helvetica-Bold'
    self.Title.fontSize   = 7
    self.Title.x          = 100
    self.Title.y          = 135
    self.Title._text      = 'Chart Title'
    self.Title.maxWidth   = 180
    self.Title.height     = 20
    self.Title.textAnchor ='middle'
    self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
    self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
    self.Legend.fontName       = 'Helvetica'
    self.Legend.fontSize       = 7
    self.Legend.x              = 153
    self.Legend.y              = 85
    self.Legend.dxTextSpace    = 5
    self.Legend.dy             = 5
    self.Legend.dx             = 5
    self.Legend.deltay         = 5
    self.Legend.alignment      ='right'
    self._add(self,Label(),name='XLabel',validate=None,desc="The label on the horizontal axis")
    self.XLabel.fontName       = 'Helvetica'
    self.XLabel.fontSize       = 7
    self.XLabel.x              = 85
    self.XLabel.y              = 10
    self.XLabel.textAnchor     ='middle'
    self.XLabel.maxWidth       = 100
    self.XLabel.height         = 20
    self.XLabel._text          = "X Axis"
    self._add(self,Label(),name='YLabel',validate=None,desc="The label on the vertical axis")
    self.YLabel.fontName       = 'Helvetica'
```

```
        self.YLabel.fontSize       = 7
        self.YLabel.x              = 12
        self.YLabel.y              = 80
        self.YLabel.angle          = 90
        self.YLabel.textAnchor     ='middle'
        self.YLabel.maxWidth       = 100
        self.YLabel.height         = 20
        self.YLabel._text          = "Y Axis"
        self.chart.categoryAxis.style='stacked'
        self._add(self,0,name='preview',validate=None,desc=None)
```



clustered_column

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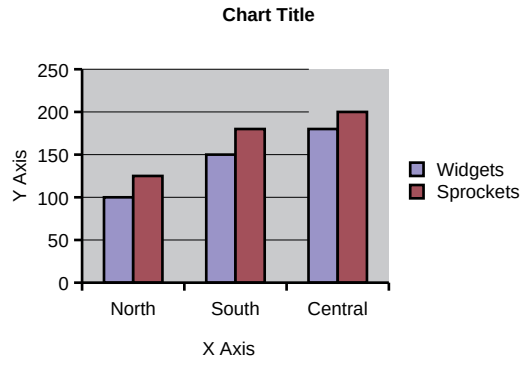
Classes

ClusteredColumn(_DrawingEditorMixin, Drawing)

Example

```
    def __init__(self,width=200,height=150,*args,**kw):
        apply(Drawing.__init__,(self,width,height)+args,kw)
        self._add(self,VerticalBarChart(),name='chart',validate=None,desc="The main chart")
        self.chart.width      = 115
        self.chart.height     = 80
        self.chart.x          = 30
        self.chart.y          = 40
        self.chart.bars[0].fillColor = color01
        self.chart.bars[1].fillColor = color02
        self.chart.bars[2].fillColor = color03
        self.chart.bars[3].fillColor = color04
        self.chart.bars[4].fillColor = color05
        self.chart.bars[5].fillColor = color06
        self.chart.bars[6].fillColor = color07
        self.chart.bars[7].fillColor = color08
        self.chart.bars[8].fillColor = color09
        self.chart.bars[9].fillColor = color10
        self.chart.fillColor         = backgroundGrey
        self.chart.barLabels.fontName              = 'Helvetica'
        self.chart.valueAxis.labels.fontName       = 'Helvetica'
        self.chart.valueAxis.labels.fontSize       = 7
        self.chart.valueAxis.forceZero             = 1
        self.chart.data             = [(100, 150, 180), (125, 180, 200)]
        self.chart.groupSpacing     = 15
        self.chart.valueAxis.avoidBoundFrac           = 1
        self.chart.valueAxis.gridEnd                  = 115
        self.chart.valueAxis.tickLeft                 = 3
        self.chart.valueAxis.visibleGrid              = 1
        self.chart.categoryAxis.categoryNames         = ['North', 'South', 'Central']
        self.chart.categoryAxis.tickDown              = 3
```

```
self.chart.categoryAxis.labels.fontName       = 'Helvetica'
self.chart.categoryAxis.labels.fontSize       = 7
self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
self.Title.fontName   = 'Helvetica-Bold'
self.Title.fontSize   = 7
self.Title.x          = 100
self.Title.y          = 135
self.Title._text      = 'Chart Title'
self.Title.maxWidth  = 180
self.Title.height    = 20
self.Title.textAnchor ='middle'
self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
self.Legend.fontName       = 'Helvetica'
self.Legend.fontSize       = 7
self.Legend.x              = 153
self.Legend.y              = 85
self.Legend.dxTextSpace    = 5
self.Legend.dy             = 5
self.Legend.dx             = 5
self.Legend.deltay         = 5
self.Legend.alignment      ='right'
self._add(self,Label(),name='XLabel',validate=None,desc="The label on the horizontal axis")
self.XLabel.fontName       = 'Helvetica'
self.XLabel.fontSize       = 7
self.XLabel.x              = 85
self.XLabel.y              = 10
self.XLabel.textAnchor     ='middle'
self.XLabel.maxWidth       = 100
self.XLabel.height         = 20
self.XLabel._text           = "X Axis"
self._add(self,Label(),name='YLabel',validate=None,desc="The label on the vertical axis")
self.YLabel.fontName       = 'Helvetica'
self.YLabel.fontSize       = 7
self.YLabel.x              = 12
self.YLabel.y              = 80
self.YLabel.angle          = 90
self.YLabel.textAnchor     ='middle'
self.YLabel.maxWidth       = 100
self.YLabel.height         = 20
self.YLabel._text           = "Y Axis"
self._add(self,0,name='preview',validate=None,desc=None)
```



radar

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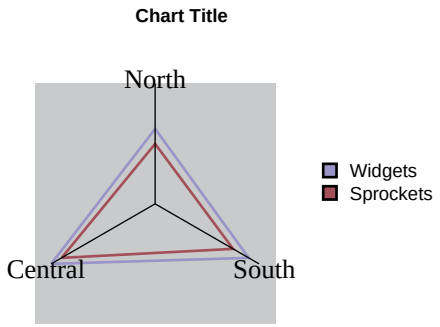
Classes

RadarChart(_DrawingEditorMixin, Drawing)

Example

```
def __init__(self,width=200,height=150,*args,**kw):
    apply(Drawing.__init__,(self,width,height)+args,kw)
    self._add(self,SpiderChart(),name='chart',validate=None,desc="The main chart")
    self.chart.width      = 90
    self.chart.height     = 90
    self.chart.x          = 45
    self.chart.y          = 25
    self.chart.strands[0].strokeColor= color01
    self.chart.strands[1].strokeColor= color02
    self.chart.strands[2].strokeColor= color03
    self.chart.strands[3].strokeColor= color04
    self.chart.strands[4].strokeColor= color05
    self.chart.strands[5].strokeColor= color06
    self.chart.strands[6].strokeColor= color07
    self.chart.strands[7].strokeColor= color08
    self.chart.strands[8].strokeColor= color09
    self.chart.strands[9].strokeColor= color10
    self.chart.strands[0].fillColor  = None
    self.chart.strands[1].fillColor  = None
    self.chart.strands[2].fillColor  = None
    self.chart.strands[3].fillColor  = None
    self.chart.strands[4].fillColor  = None
    self.chart.strands[5].fillColor  = None
    self.chart.strands[6].fillColor  = None
    self.chart.strands[7].fillColor  = None
    self.chart.strands[8].fillColor  = None
    self.chart.strands[9].fillColor  = None
    self.chart.strands.strokeWidth   = 1
    self.chart.strandLabels.fontName = 'Helvetica'
    self.chart.strandLabels.fontSize = 6
    self.chart.fillColor             = backgroundGrey
    self.chart.data                  = [(125, 180, 200), (100, 150, 180)]
    self.chart.labels                = ['North', 'South', 'Central']
    self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
    self.Title.fontName   = 'Helvetica-Bold'
    self.Title.fontSize   = 7
    self.Title.x          = 100
    self.Title.y          = 135
    self.Title._text      = 'Chart Title'
    self.Title.maxWidth   = 180
    self.Title.height     = 20
    self.Title.textAnchor ='middle'
    self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
    self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
    self.Legend.fontName       = 'Helvetica'
    self.Legend.fontSize       = 7
    self.Legend.x              = 153
    self.Legend.y              = 85
    self.Legend.dxTextSpace    = 5
    self.Legend.dy             = 5
    self.Legend.dx             = 5
    self.Legend.deltay         = 5
    self.Legend.alignment      ='right'
    self.chart.strands.strokeWidth     = 1
    self._add(self,0,name='preview',validate=None,desc=None)
```



simple_pie

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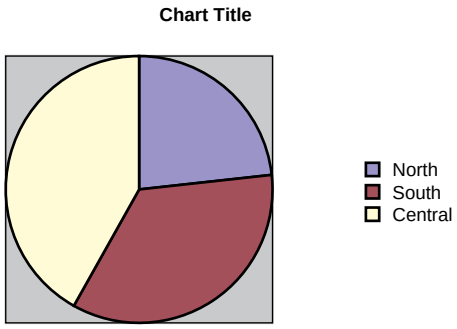
Classes

SimplePie(_DrawingEditorMixin, Drawing)

Example

```
        def __init__(self,width=200,height=150,*args,**kw):
            apply(Drawing.__init__,(self,width,height)+args,kw)
            self._add(self,Pie(),name='chart',validate=None,desc="The main chart")
            self.chart.width      = 100
            self.chart.height     = 100
            self.chart.x          = 25
            self.chart.y          = 25
            self.chart.slices[0].fillColor = color01
            self.chart.slices[1].fillColor = color02
            self.chart.slices[2].fillColor = color03
            self.chart.slices[3].fillColor = color04
            self.chart.slices[4].fillColor = color05
            self.chart.slices[5].fillColor = color06
            self.chart.slices[6].fillColor = color07
            self.chart.slices[7].fillColor = color08
            self.chart.slices[8].fillColor = color09
            self.chart.slices[9].fillColor = color10
            self.chart.data               = (100, 150, 180)
            self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
            self.Title.fontName   = 'Helvetica-Bold'
            self.Title.fontSize   = 7
            self.Title.x          = 100
            self.Title.y          = 135
            self.Title._text      = 'Chart Title'
            self.Title.maxWidth   = 180
            self.Title.height     = 20
            self.Title.textAnchor ='middle'
            self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
            self.Legend.colorNamePairs = [(color01, 'North'), (color02, 'South'),(color03, 'Central')]
            self.Legend.fontName       = 'Helvetica'
            self.Legend.fontSize       = 7
            self.Legend.x              = 160
            self.Legend.y              = 85
            self.Legend.dxTextSpace    = 5
            self.Legend.dy             = 5
            self.Legend.dx             = 5
            self.Legend.deltay         = 5
            self.Legend.alignment      ='right'
            self.chart.slices.strokeWidth  = 1
            self.chart.slices.fontName     = 'Helvetica'
            self.background                = ShadedRect()
            self.background.fillColorStart = backgroundGrey
            self.background.fillColorEnd   = backgroundGrey
            self.background.numShades      = 1
            self.background.strokeWidth    = 0.5
            self.background.x              = 25
            self.background.y              = 25
            self.Legend.columnMaximum  = 10
            self._add(self,0,name='preview',validate=None,desc=None)
```



scatter

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Classes

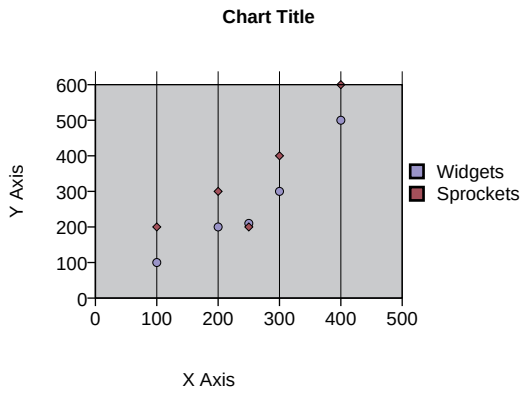
Scatter(_DrawingEditorMixin, Drawing)

Example

```
        def __init__(self,width=200,height=150,*args,**kw):
            apply(Drawing.__init__,(self,width,height)+args,kw)
            self._add(self,ScatterPlot(),name='chart',validate=None,desc="The main chart")
            self.chart.width      = 115
            self.chart.height     = 80
            self.chart.x          = 30
            self.chart.y          = 40
            self.chart.lines[0].strokeColor = color01
            self.chart.lines[1].strokeColor = color02
            self.chart.lines[2].strokeColor = color03
            self.chart.lines[3].strokeColor = color04
            self.chart.lines[4].strokeColor = color05
            self.chart.lines[5].strokeColor = color06
            self.chart.lines[6].strokeColor = color07
            self.chart.lines[7].strokeColor = color08
            self.chart.lines[8].strokeColor = color09
            self.chart.lines[9].strokeColor = color10
            self.chart.fillColor         = backgroundGrey
            self.chart.lineLabels.fontName              = 'Helvetica'
            self.chart.xValueAxis.labels.fontName       = 'Helvetica'
            self.chart.xValueAxis.labels.fontSize       = 7
            self.chart.xValueAxis.forceZero             = 0
            self.chart.data             = [((100,100), (200,200), (250,210), (300,300), (400,500)), ((100
            self.chart.xValueAxis.avoidBoundFrac           = 1
            self.chart.xValueAxis.gridEnd                  = 115
            self.chart.xValueAxis.tickDown                 = 3
            self.chart.xValueAxis.visibleGrid              = 1
            self.chart.yValueAxis.tickLeft              = 3
            self.chart.yValueAxis.labels.fontName       = 'Helvetica'
            self.chart.yValueAxis.labels.fontSize       = 7
            self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
            self.Title.fontName   = 'Helvetica-Bold'
            self.Title.fontSize   = 7
            self.Title.x          = 100
            self.Title.y          = 135
            self.Title._text      = 'Chart Title'
            self.Title.maxWidth   = 180
            self.Title.height     = 20
            self.Title.textAnchor ='middle'
            self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
            self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
            self.Legend.fontName       = 'Helvetica'
            self.Legend.fontSize       = 7
```

```
    self.Legend.x             = 153
    self.Legend.y             = 85
    self.Legend.dxTextSpace   = 5
    self.Legend.dy            = 5
    self.Legend.dx            = 5
    self.Legend.deltay        = 5
    self.Legend.alignment     ='right'
    self.chart.lineLabelFormat  = None
    self.chart.xLabel          = 'X Axis'
    self.chart.y               = 30
    self.chart.yLabel          = 'Y Axis'
    self.chart.yValueAxis.labelTextFormat     = '%d'
    self.chart.yValueAxis.forceZero           = 1
    self.chart.xValueAxis.forceZero           = 1


    self._add(self,0,name='preview',validate=None,desc=None)
```



exploded_pie

#Autogenerated by ReportLab guiedit do not edit

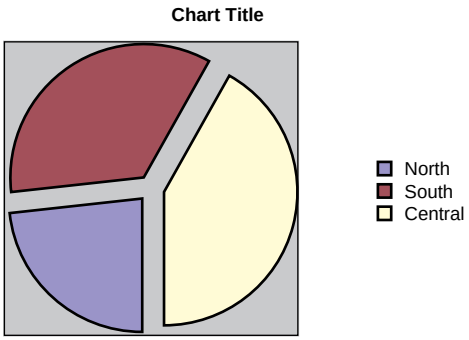
Classes

ExplodedPie(_DrawingEditorMixin, Drawing)

Example

```
def __init__(self,width=200,height=150,*args,**kw):
    apply(Drawing.__init__,(self,width,height)+args,kw)
    self._add(self,Pie(),name='chart',validate=None,desc="The main chart")
    self.chart.width      = 100
    self.chart.height     = 100
    self.chart.x          = 25
    self.chart.y          = 25
    self.chart.slices[0].fillColor = color01
    self.chart.slices[1].fillColor = color02
    self.chart.slices[2].fillColor = color03
    self.chart.slices[3].fillColor = color04
    self.chart.slices[4].fillColor = color05
    self.chart.slices[5].fillColor = color06
    self.chart.slices[6].fillColor = color07
    self.chart.slices[7].fillColor = color08
    self.chart.slices[8].fillColor = color09
    self.chart.slices[9].fillColor = color10
    self.chart.data               = (100, 150, 180)
    self.chart.startAngle         = -90
    self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
    self.Title.fontName   = 'Helvetica-Bold'
    self.Title.fontSize   = 7
    self.Title.x          = 100
```

```
        self.Title.y          = 135
        self.Title._text      = 'Chart Title'
        self.Title.maxWidth   = 180
        self.Title.height     = 20
        self.Title.textAnchor ='middle'
        self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
        self.Legend.colorNamePairs = [(color01, 'North'), (color02, 'South'), (color03, 'Central')]
        self.Legend.fontName       = 'Helvetica'
        self.Legend.fontSize       = 7
        self.Legend.x              = 160
        self.Legend.y              = 85
        self.Legend.dxTextSpace    = 5
        self.Legend.dy             = 5
        self.Legend.dx             = 5
        self.Legend.deltay         = 5
        self.Legend.alignment      ='right'
        self.Legend.columnMaximum  = 10
        self.chart.slices.strokeWidth  = 1
        self.chart.slices.fontName     = 'Helvetica'
        self.background                = ShadedRect()
        self.background.fillColorStart = backgroundGrey
        self.background.fillColorEnd   = backgroundGrey
        self.background.numShades      = 1
        self.background.strokeWidth    = 0.5
        self.background.x              = 20
        self.background.y              = 20
        self.chart.slices.popout       = 5
        self.background.height         = 110
        self.background.width          = 110
        self._add(self,0,name='preview',validate=None,desc=None)
```



clustered_bar

#Autogenerated by ReportLab guiedit do not edit

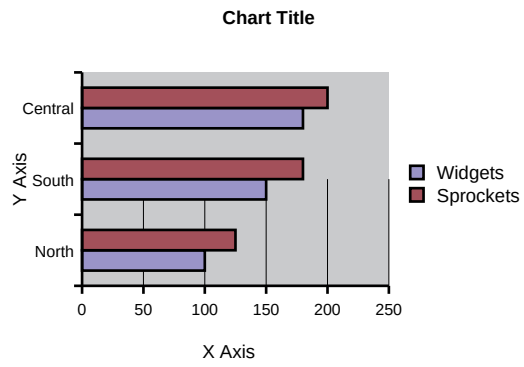
Classes

ClusteredBar(_DrawingEditorMixin, Drawing)

Example

```
    def __init__(self,width=200,height=150,*args,**kw):
        apply(Drawing.__init__,(self,width,height)+args,kw)
        self._add(self,HorizontalBarChart(),name='chart',validate=None,desc="The main chart")
        self.chart.width      = 115
        self.chart.height     = 80
        self.chart.x          = 30
        self.chart.y          = 40
        self.chart.bars[0].fillColor = color01
        self.chart.bars[1].fillColor = color02
        self.chart.bars[2].fillColor = color03
```

```
        self.chart.bars[3].fillColor = color04
        self.chart.bars[4].fillColor = color05
        self.chart.bars[5].fillColor = color06
        self.chart.bars[6].fillColor = color07
        self.chart.bars[7].fillColor = color08
        self.chart.bars[8].fillColor = color09
        self.chart.bars[9].fillColor = color10
        self.chart.fillColor         = backgroundGrey
        self.chart.barLabels.fontName              = 'Helvetica'
        self.chart.valueAxis.labels.fontName       = 'Helvetica'
        self.chart.valueAxis.labels.fontSize       = 6
        self.chart.valueAxis.forceZero             = 1
        self.chart.data             = [(100, 150, 180), (125, 180, 200)]
        self.chart.groupSpacing     = 15
        self.chart.valueAxis.avoidBoundFrac           = 1
        self.chart.valueAxis.gridEnd                  = 80
        self.chart.valueAxis.tickDown                 = 3
        self.chart.valueAxis.visibleGrid              = 1
        self.chart.categoryAxis.categoryNames         = ['North', 'South', 'Central']
        self.chart.categoryAxis.tickLeft              = 3
        self.chart.categoryAxis.labels.fontName       = 'Helvetica'
        self.chart.categoryAxis.labels.fontSize       = 6
        self.chart.categoryAxis.labels.dx             = -3
        self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
        self.Title.fontName   = 'Helvetica-Bold'
        self.Title.fontSize   = 7
        self.Title.x          = 100
        self.Title.y          = 135
        self.Title._text      = 'Chart Title'
        self.Title.maxWidth   = 180
        self.Title.height     = 20
        self.Title.textAnchor ='middle'
        self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
        self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
        self.Legend.fontName       = 'Helvetica'
        self.Legend.fontSize       = 7
        self.Legend.x              = 153
        self.Legend.y              = 85
        self.Legend.dxTextSpace    = 5
        self.Legend.dy             = 5
        self.Legend.dx             = 5
        self.Legend.deltay         = 5
        self.Legend.alignment      ='right'
        self._add(self,Label(),name='XLabel',validate=None,desc="The label on the horizontal axis")
        self.XLabel.fontName       = 'Helvetica'
        self.XLabel.fontSize       = 7
        self.XLabel.x              = 85
        self.XLabel.y              = 10
        self.XLabel.textAnchor     ='middle'
        self.XLabel.maxWidth       = 100
        self.XLabel.height         = 20
        self.XLabel._text          = "X Axis"
        self._add(self,Label(),name='YLabel',validate=None,desc="The label on the vertical axis")
        self.YLabel.fontName       = 'Helvetica'
        self.YLabel.fontSize       = 7
        self.YLabel.x              = 12
        self.YLabel.y              = 80
        self.YLabel.angle          = 90
        self.YLabel.textAnchor     ='middle'
        self.YLabel.maxWidth       = 100
        self.YLabel.height         = 20
        self.YLabel._text          = "Y Axis"
        self._add(self,0,name='preview',validate=None,desc=None)
```



bubble

#Autogenerated by ReportLab guiedit do not edit

Classes

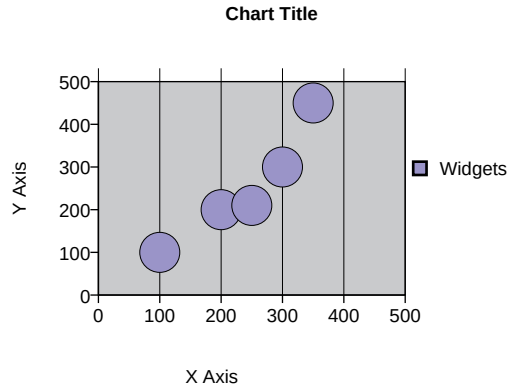
Bubble(_DrawingEditorMixin, Drawing)

Example

```
def __init__(self,width=200,height=150,*args,**kw):
    apply(Drawing.__init__,(self,width,height)+args,kw)
    self._add(self,ScatterPlot(),name='chart',validate=None,desc="The main chart")
    self.chart.width      = 115
    self.chart.height     = 80
    self.chart.x          = 30
    self.chart.y          = 40
    self.chart.lines[0].strokeColor = color01
    self.chart.lines[1].strokeColor = color02
    self.chart.lines[2].strokeColor = color03
    self.chart.lines[3].strokeColor = color04
    self.chart.lines[4].strokeColor = color05
    self.chart.lines[5].strokeColor = color06
    self.chart.lines[6].strokeColor = color07
    self.chart.lines[7].strokeColor = color08
    self.chart.lines[8].strokeColor = color09
    self.chart.lines[9].strokeColor = color10
    self.chart.lines.symbol.kind        ='Circle'
    self.chart.lines.symbol.size        = 15
    self.chart.fillColor         = backgroundGrey
    self.chart.lineLabels.fontName              = 'Helvetica'
    self.chart.xValueAxis.labels.fontName       = 'Helvetica'
    self.chart.xValueAxis.labels.fontSize       = 7
    self.chart.xValueAxis.forceZero             = 0
    self.chart.data             = [((100,100), (200,200), (250,210), (300,300), (350,450))]
    self.chart.xValueAxis.avoidBoundFrac           = 1
    self.chart.xValueAxis.gridEnd                  = 115
    self.chart.xValueAxis.tickDown                 = 3
    self.chart.xValueAxis.visibleGrid              = 1
    self.chart.yValueAxis.tickLeft              = 3
    self.chart.yValueAxis.labels.fontName       = 'Helvetica'
    self.chart.yValueAxis.labels.fontSize       = 7
    self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
    self.Title.fontName   = 'Helvetica-Bold'
    self.Title.fontSize   = 7
    self.Title.x          = 100
    self.Title.y          = 135
    self.Title._text      = 'Chart Title'
    self.Title.maxWidth   = 180
    self.Title.height     = 20
    self.Title.textAnchor ='middle'
    self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
    self.Legend.colorNamePairs = [(color01, 'Widgets')]
```

```
    self.Legend.fontName       = 'Helvetica'
    self.Legend.fontSize       = 7
    self.Legend.x              = 153
    self.Legend.y              = 85
    self.Legend.dxTextSpace    = 5
    self.Legend.dy             = 5
    self.Legend.dx             = 5
    self.Legend.deltay         = 5
    self.Legend.alignment      ='right'
    self.chart.lineLabelFormat  = None
    self.chart.xLabel           = 'X Axis'
    self.chart.y                = 30
    self.chart.yLabel           = 'Y Axis'
    self.chart.yValueAxis.labelTextFormat     = '%d'
    self.chart.yValueAxis.forceZero           = 1
    self.chart.xValueAxis.forceZero           = 1


    self._add(self,0,name='preview',validate=None,desc=None)
```



stacked_bar

#Autogenerated by ReportLab guiedit do not edit

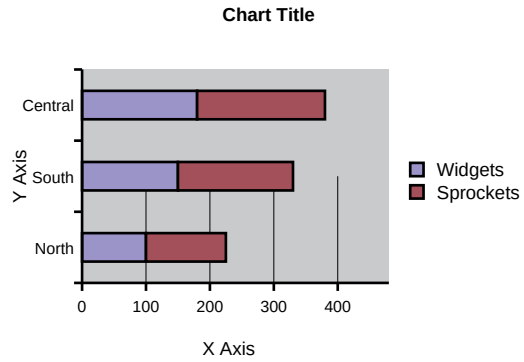
Classes

StackedBar(_DrawingEditorMixin, Drawing)

Example

```
def __init__(self,width=200,height=150,*args,**kw):
    apply(Drawing.__init__,(self,width,height)+args,kw)
    self._add(self,HorizontalBarChart(),name='chart',validate=None,desc="The main chart")
    self.chart.width      = 115
    self.chart.height     = 80
    self.chart.x          = 30
    self.chart.y          = 40
    self.chart.bars[0].fillColor = color01
    self.chart.bars[1].fillColor = color02
    self.chart.bars[2].fillColor = color03
    self.chart.bars[3].fillColor = color04
    self.chart.bars[4].fillColor = color05
    self.chart.bars[5].fillColor = color06
    self.chart.bars[6].fillColor = color07
    self.chart.bars[7].fillColor = color08
    self.chart.bars[8].fillColor = color09
    self.chart.bars[9].fillColor = color10
    self.chart.fillColor         = backgroundGrey
    self.chart.barLabels.fontName              = 'Helvetica'
    self.chart.valueAxis.labels.fontName       = 'Helvetica'
    self.chart.valueAxis.labels.fontSize       = 6
```

```
self.chart.valueAxis.forceZero             = 1
self.chart.data             = [(100, 150, 180), (125, 180, 200)]
self.chart.groupSpacing     = 15
self.chart.valueAxis.avoidBoundFrac           = 1
self.chart.valueAxis.gridEnd                  = 80
self.chart.valueAxis.tickDown                 = 3
self.chart.valueAxis.visibleGrid              = 1
self.chart.categoryAxis.categoryNames         = ['North', 'South', 'Central']
self.chart.categoryAxis.tickLeft              = 3
self.chart.categoryAxis.labels.fontName       = 'Helvetica'
self.chart.categoryAxis.labels.fontSize       = 6
self.chart.categoryAxis.labels.dx             = -3
self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
self.Title.fontName   = 'Helvetica-Bold'
self.Title.fontSize   = 7
self.Title.x          = 100
self.Title.y          = 135
self.Title._text      = 'Chart Title'
self.Title.maxWidth   = 180
self.Title.height     = 20
self.Title.textAnchor ='middle'
self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
self.Legend.fontName       = 'Helvetica'
self.Legend.fontSize       = 7
self.Legend.x              = 153
self.Legend.y              = 85
self.Legend.dxTextSpace    = 5
self.Legend.dy             = 5
self.Legend.dx             = 5
self.Legend.deltay         = 5
self.Legend.alignment      ='right'
self._add(self,Label(),name='XLabel',validate=None,desc="The label on the horizontal axis")
self.XLabel.fontName       = 'Helvetica'
self.XLabel.fontSize       = 7
self.XLabel.x              = 85
self.XLabel.y              = 10
self.XLabel.textAnchor     ='middle'
self.XLabel.maxWidth       = 100
self.XLabel.height         = 20
self.XLabel._text           = "X Axis"
self._add(self,Label(),name='YLabel',validate=None,desc="The label on the vertical axis")
self.YLabel.fontName       = 'Helvetica'
self.YLabel.fontSize       = 7
self.YLabel.x              = 12
self.YLabel.y              = 80
self.YLabel.angle          = 90
self.YLabel.textAnchor     ='middle'
self.YLabel.maxWidth       = 100
self.YLabel.height         = 20
self.YLabel._text          = "Y Axis"
self.chart.categoryAxis.style='stacked'
self._add(self,0,name='preview',validate=None,desc=None)
```



scatter_lines

#Autogenerated by ReportLab guiedit do not edit

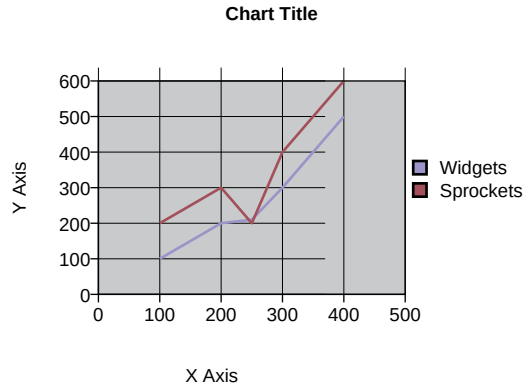
Classes

ScatterLines(_DrawingEditorMixin, Drawing)

Example

```
        def __init__(self,width=200,height=150,*args,**kw):
            apply(Drawing.__init__,(self,width,height)+args,kw)
            self._add(self,ScatterPlot(),name='chart',validate=None,desc="The main chart")
            self.chart.width      = 115
            self.chart.height     = 80
            self.chart.x          = 30
            self.chart.y          = 40
            self.chart.lines[0].strokeColor = color01
            self.chart.lines[1].strokeColor = color02
            self.chart.lines[2].strokeColor = color03
            self.chart.lines[3].strokeColor = color04
            self.chart.lines[4].strokeColor = color05
            self.chart.lines[5].strokeColor = color06
            self.chart.lines[6].strokeColor = color07
            self.chart.lines[7].strokeColor = color08
            self.chart.lines[8].strokeColor = color09
            self.chart.lines[9].strokeColor = color10
            self.chart.lines[0].symbol = None
            self.chart.lines[1].symbol = None
            self.chart.lines[2].symbol = None
            self.chart.lines[3].symbol = None
            self.chart.lines[4].symbol = None
            self.chart.lines[5].symbol = None
            self.chart.lines[6].symbol = None
            self.chart.lines[7].symbol = None
            self.chart.lines[8].symbol = None
            self.chart.lines[9].symbol = None
            self.chart.fillColor         = backgroundGrey
            self.chart.lineLabels.fontName              = 'Helvetica'
            self.chart.xValueAxis.labels.fontName       = 'Helvetica'
            self.chart.xValueAxis.labels.fontSize       = 7
            self.chart.xValueAxis.forceZero             = 0
            self.chart.data             = [((100,100), (200,200), (250,210), (300,300), (400,500)), ((100
            self.chart.xValueAxis.avoidBoundFrac           = 1
            self.chart.xValueAxis.gridEnd                  = 115
            self.chart.xValueAxis.tickDown                 = 3
            self.chart.xValueAxis.visibleGrid              = 1
            self.chart.yValueAxis.tickLeft              = 3
            self.chart.yValueAxis.labels.fontName       = 'Helvetica'
            self.chart.yValueAxis.labels.fontSize       = 7
            self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
            self.Title.fontName   = 'Helvetica-Bold'
            self.Title.fontSize   = 7
            self.Title.x          = 100
            self.Title.y          = 135
            self.Title._text      = 'Chart Title'
            self.Title.maxWidth   = 180
            self.Title.height     = 20
            self.Title.textAnchor ='middle'
            self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
            self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
            self.Legend.fontName       = 'Helvetica'
            self.Legend.fontSize       = 7
            self.Legend.x              = 153
            self.Legend.y              = 85
            self.Legend.dxTextSpace    = 5
            self.Legend.dy             = 5
            self.Legend.dx             = 5
            self.Legend.deltay         = 5
            self.Legend.alignment      ='right'
            self.chart.lineLabelFormat  = None
            self.chart.xLabel           = 'X Axis'
            self.chart.y                = 30
            self.chart.yLabel           = 'Y Axis'
            self.chart.yValueAxis.gridEnd             = 115
            self.chart.yValueAxis.visibleGrid         = 1
```

```
        self.chart.yValueAxis.labelTextFormat     = '%d'
        self.chart.yValueAxis.forceZero           = 1
        self.chart.xValueAxis.forceZero           = 1
        self.chart.joinedLines                    = 1
        self._add(self,0,name='preview',validate=None,desc=None)
```



scatter_lines_markers

#Autogenerated by ReportLab guiedit do not edit

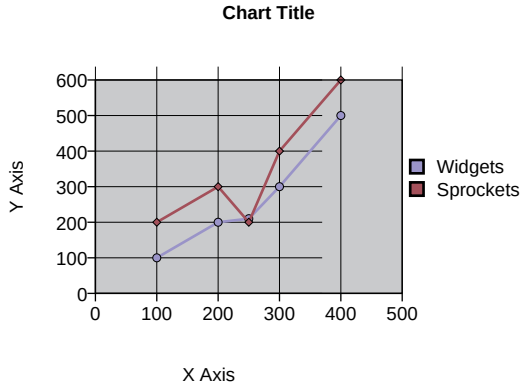
Classes

ScatterLinesMarkers(_DrawingEditorMixin, Drawing)

Example

```
        def __init__(self,width=200,height=150,*args,**kw):
            apply(Drawing.__init__,(self,width,height)+args,kw)
            self._add(self,ScatterPlot(),name='chart',validate=None,desc="The main chart")
            self.chart.width      = 115
            self.chart.height     = 80
            self.chart.x          = 30
            self.chart.y          = 40
            self.chart.lines[0].strokeColor = color01
            self.chart.lines[1].strokeColor = color02
            self.chart.lines[2].strokeColor = color03
            self.chart.lines[3].strokeColor = color04
            self.chart.lines[4].strokeColor = color05
            self.chart.lines[5].strokeColor = color06
            self.chart.lines[6].strokeColor = color07
            self.chart.lines[7].strokeColor = color08
            self.chart.lines[8].strokeColor = color09
            self.chart.lines[9].strokeColor = color10
            self.chart.fillColor         = backgroundGrey
            self.chart.lineLabels.fontName              = 'Helvetica'
            self.chart.xValueAxis.labels.fontName       = 'Helvetica'
            self.chart.xValueAxis.labels.fontSize       = 7
            self.chart.xValueAxis.forceZero             = 0
            self.chart.data             = [((100,100), (200,200), (250,210), (300,300), (400,500)), ((100
            self.chart.xValueAxis.avoidBoundFrac           = 1
            self.chart.xValueAxis.gridEnd                  = 115
            self.chart.xValueAxis.tickDown                 = 3
            self.chart.xValueAxis.visibleGrid              = 1
            self.chart.yValueAxis.tickLeft              = 3
            self.chart.yValueAxis.labels.fontName       = 'Helvetica'
            self.chart.yValueAxis.labels.fontSize       = 7
            self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
            self.Title.fontName   = 'Helvetica-Bold'
            self.Title.fontSize   = 7
            self.Title.x          = 100
            self.Title.y          = 135
```

```
        self.Title._text      = 'Chart Title'
        self.Title.maxWidth   = 180
        self.Title.height     = 20
        self.Title.textAnchor ='middle'
        self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
        self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
        self.Legend.fontName       = 'Helvetica'
        self.Legend.fontSize       = 7
        self.Legend.x              = 153
        self.Legend.y              = 85
        self.Legend.dxTextSpace    = 5
        self.Legend.dy             = 5
        self.Legend.dx             = 5
        self.Legend.deltay         = 5
        self.Legend.alignment      ='right'
        self.chart.lineLabelFormat  = None
        self.chart.xLabel           = 'X Axis'
        self.chart.y                = 30
        self.chart.yLabel           = 'Y Axis'
        self.chart.yValueAxis.gridEnd             = 115
        self.chart.yValueAxis.visibleGrid         = 1
        self.chart.yValueAxis.labelTextFormat     = '%d'
        self.chart.yValueAxis.forceZero           = 1
        self.chart.xValueAxis.forceZero           = 1
        self.chart.joinedLines                    = 1
        self._add(self,0,name='preview',validate=None,desc=None)
```



filled_radar

#Autogenerated by ReportLab guiedit do not edit

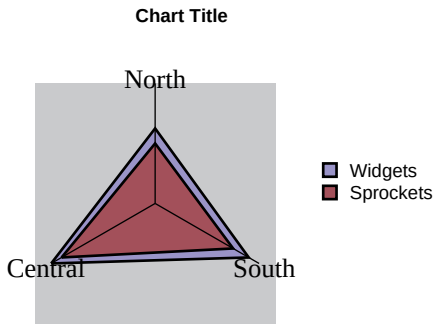
Classes

FilledRadarChart(_DrawingEditorMixin, Drawing)

Example

```
        def __init__(self,width=200,height=150,*args,**kw):
            apply(Drawing.__init__,(self,width,height)+args,kw)
            self._add(self,SpiderChart(),name='chart',validate=None,desc="The main chart")
            self.chart.width      = 90
            self.chart.height     = 90
            self.chart.x          = 45
            self.chart.y          = 25
            self.chart.strands[0].fillColor  = color01
            self.chart.strands[1].fillColor  = color02
            self.chart.strands[2].fillColor  = color03
            self.chart.strands[3].fillColor  = color04
            self.chart.strands[4].fillColor  = color05
            self.chart.strands[5].fillColor  = color06
            self.chart.strands[6].fillColor  = color07
```

```
        self.chart.strands[7].fillColor  = color08
        self.chart.strands[8].fillColor  = color09
        self.chart.strands[9].fillColor  = color10
        self.chart.strandLabels.fontName = 'Helvetica'
        self.chart.strandLabels.fontSize = 6
        self.chart.fillColor             = backgroundGrey
        self.chart.data                  = [(125, 180, 200), (100, 150, 180)]
        self.chart.labels                = ['North', 'South', 'Central']
        self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
        self.Title.fontName   = 'Helvetica-Bold'
        self.Title.fontSize   = 7
        self.Title.x          = 100
        self.Title.y          = 135
        self.Title._text      = 'Chart Title'
        self.Title.maxWidth   = 180
        self.Title.height     = 20
        self.Title.textAnchor ='middle'
        self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
        self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
        self.Legend.fontName       = 'Helvetica'
        self.Legend.fontSize       = 7
        self.Legend.x              = 153
        self.Legend.y              = 85
        self.Legend.dxTextSpace    = 5
        self.Legend.dy             = 5
        self.Legend.dx             = 5
        self.Legend.deltay         = 5
        self.Legend.alignment      ='right'
        self._add(self,0,name='preview',validate=None,desc=None)
```



line_chart

#Autogenerated by ReportLab guiedit do not edit

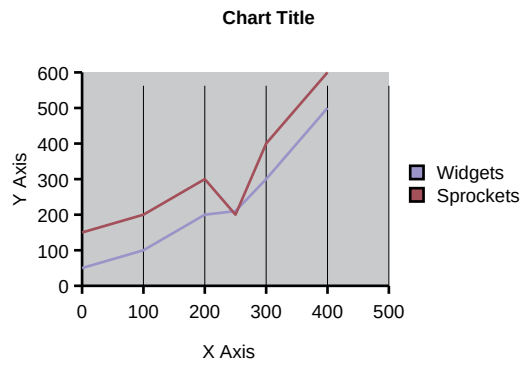
Classes

LineChart(_DrawingEditorMixin, Drawing)

Example

```
        def __init__(self,width=200,height=150,*args,**kw):
            apply(Drawing.__init__,(self,width,height)+args,kw)
            self._add(self,LinePlot(),name='chart',validate=None,desc="The main chart")
            self.chart.width      = 115
            self.chart.height     = 80
            self.chart.x          = 30
            self.chart.y          = 40
            self.chart.lines[0].strokeColor = color01
            self.chart.lines[1].strokeColor = color02
            self.chart.lines[2].strokeColor = color03
            self.chart.lines[3].strokeColor = color04
```

```
self.chart.lines[4].strokeColor = color05
self.chart.lines[5].strokeColor = color06
self.chart.lines[6].strokeColor = color07
self.chart.lines[7].strokeColor = color08
self.chart.lines[8].strokeColor = color09
self.chart.lines[9].strokeColor = color10
self.chart.fillColor         = backgroundGrey
self.chart.lineLabels.fontName              = 'Helvetica'
self.chart.xValueAxis.labels.fontName       = 'Helvetica'
self.chart.xValueAxis.labels.fontSize       = 7
self.chart.xValueAxis.forceZero             = 0
self.chart.data             = [((0, 50), (100,100), (200,200), (250,210), (300,300), (400,500
self.chart.xValueAxis.avoidBoundFrac           = 1
self.chart.xValueAxis.gridEnd                  = 115
self.chart.xValueAxis.tickDown                 = 3
self.chart.xValueAxis.visibleGrid              = 1
self.chart.yValueAxis.tickLeft              = 3
self.chart.yValueAxis.labels.fontName       = 'Helvetica'
self.chart.yValueAxis.labels.fontSize       = 7
self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
self.Title.fontName   = 'Helvetica-Bold'
self.Title.fontSize   = 7
self.Title.x          = 100
self.Title.y          = 135
self.Title._text      = 'Chart Title'
self.Title.maxWidth   = 180
self.Title.height     = 20
self.Title.textAnchor ='middle'
self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
self.Legend.fontName       = 'Helvetica'
self.Legend.fontSize       = 7
self.Legend.x              = 153
self.Legend.y              = 85
self.Legend.dxTextSpace    = 5
self.Legend.dy             = 5
self.Legend.dx             = 5
self.Legend.deltay         = 5
self.Legend.alignment      ='right'
self._add(self,Label(),name='XLabel',validate=None,desc="The label on the horizontal axis")
self.XLabel.fontName       = 'Helvetica'
self.XLabel.fontSize       = 7
self.XLabel.x              = 85
self.XLabel.y              = 10
self.XLabel.textAnchor     ='middle'
self.XLabel.maxWidth       = 100
self.XLabel.height         = 20
self.XLabel._text          = "X Axis"
self._add(self,Label(),name='YLabel',validate=None,desc="The label on the vertical axis")
self.YLabel.fontName       = 'Helvetica'
self.YLabel.fontSize       = 7
self.YLabel.x              = 12
self.YLabel.y              = 80
self.YLabel.angle          = 90
self.YLabel.textAnchor     ='middle'
self.YLabel.maxWidth       = 100
self.YLabel.height         = 20
self.YLabel._text          = "Y Axis"
self.chart.yValueAxis.forceZero           = 1
self.chart.xValueAxis.forceZero           = 1
self._add(self,0,name='preview',validate=None,desc=None)
```



linechart_with_markers

#Autogenerated by ReportLab guiedit do not edit

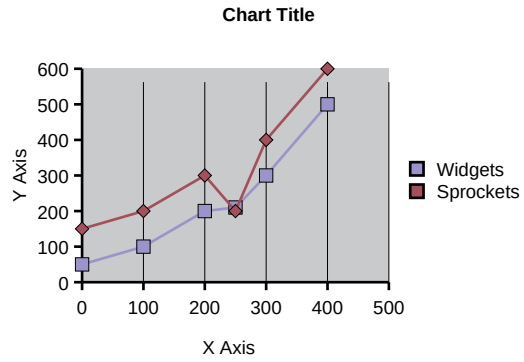
Classes

LineChartWithMarkers(_DrawingEditorMixin, Drawing)

Example

```
        def __init__(self,width=200,height=150,*args,**kw):
            apply(Drawing.__init__,(self,width,height)+args,kw)
            self._add(self,LinePlot(),name='chart',validate=None,desc="The main chart")
            self.chart.width      = 115
            self.chart.height     = 80
            self.chart.x          = 30
            self.chart.y          = 40
            self.chart.lines[0].strokeColor = color01
            self.chart.lines[1].strokeColor = color02
            self.chart.lines[2].strokeColor = color03
            self.chart.lines[3].strokeColor = color04
            self.chart.lines[4].strokeColor = color05
            self.chart.lines[5].strokeColor = color06
            self.chart.lines[6].strokeColor = color07
            self.chart.lines[7].strokeColor = color08
            self.chart.lines[8].strokeColor = color09
            self.chart.lines[9].strokeColor = color10
            self.chart.lines[0].symbol = makeMarker('FilledSquare')
            self.chart.lines[1].symbol = makeMarker('FilledDiamond')
            self.chart.lines[2].symbol = makeMarker('FilledStarFive')
            self.chart.lines[3].symbol = makeMarker('FilledTriangle')
            self.chart.lines[4].symbol = makeMarker('FilledCircle')
            self.chart.lines[5].symbol = makeMarker('FilledPentagon')
            self.chart.lines[6].symbol = makeMarker('FilledStarSix')
            self.chart.lines[7].symbol = makeMarker('FilledHeptagon')
            self.chart.lines[8].symbol = makeMarker('FilledOctagon')
            self.chart.lines[9].symbol = makeMarker('FilledCross')
            self.chart.fillColor       = backgroundGrey
            self.chart.lineLabels.fontName              = 'Helvetica'
            self.chart.xValueAxis.labels.fontName       = 'Helvetica'
            self.chart.xValueAxis.labels.fontSize       = 7
            self.chart.xValueAxis.forceZero             = 0
            self.chart.data             = [((0, 50), (100,100), (200,200), (250,210), (300,300), (400,500
            self.chart.xValueAxis.avoidBoundFrac           = 1
            self.chart.xValueAxis.gridEnd                  = 115
            self.chart.xValueAxis.tickDown                 = 3
            self.chart.xValueAxis.visibleGrid              = 1
            self.chart.yValueAxis.tickLeft              = 3
            self.chart.yValueAxis.labels.fontName       = 'Helvetica'
            self.chart.yValueAxis.labels.fontSize       = 7
            self.chart.yValueAxis.labels.textAnchor     = 'start'
            self.chart.yValueAxis.labels.boxAnchor      = 'w'
            self.chart.yValueAxis.labels.dx             = 2
            self.chart.yValueAxis.visibleGrid           = 1
            self._add(self,Label(),name='Title',validate=None,desc="The title at the top of the chart")
```

```
self.Title.fontName   = 'Helvetica-Bold'
self.Title.fontSize   = 7
self.Title.x          = 100
self.Title.y          = 135
self.Title._text      = 'Chart Title'
self.Title.maxWidth   = 180
self.Title.height     = 20
self.Title.textAnchor ='middle'
self._add(self,Legend(),name='Legend',validate=None,desc="The legend or key for the chart")
self.Legend.colorNamePairs = [(color01, 'Widgets'), (color02, 'Sprockets')]
self.Legend.fontName       = 'Helvetica'
self.Legend.fontSize       = 7
self.Legend.x              = 153
self.Legend.y              = 85
self.Legend.dxTextSpace    = 5
self.Legend.dy             = 5
self.Legend.dx             = 5
self.Legend.deltay         = 5
self.Legend.alignment      ='right'
self._add(self,Label(),name='XLabel',validate=None,desc="The label on the horizontal axis")
self.XLabel.fontName       = 'Helvetica'
self.XLabel.fontSize       = 7
self.XLabel.x              = 85
self.XLabel.y              = 10
self.XLabel.textAnchor     ='middle'
self.XLabel.maxWidth       = 100
self.XLabel.height         = 20
self.XLabel._text          = "X Axis"
self._add(self,Label(),name='YLabel',validate=None,desc="The label on the vertical axis")
self.YLabel.fontName       = 'Helvetica'
self.YLabel.fontSize       = 7
self.YLabel.x              = 12
self.YLabel.y              = 80
self.YLabel.angle          = 90
self.YLabel.textAnchor     ='middle'
self.YLabel.maxWidth       = 100
self.YLabel.height         = 20
self.YLabel._text          = "Y Axis"
self.chart.yValueAxis.forceZero          = 1
self.chart.xValueAxis.forceZero          = 1
self._add(self,0,name='preview',validate=None,desc=None)
```



grids

#Copyright ReportLab Europe Ltd. 2000-2004
#see license.txt for license details
#history http://www.reportlab.co.uk/cgi-bin/viewcvs.cgi/public/reportlab/trunk/reportlab/graphics/widgets/grids.py

Classes

DoubleGrid(Widget)

This combines two ordinary Grid objects orthogonal to each other.

Public Attributes

grid0 The first grid component.

grid1 The second grid component.

height The grid's height.

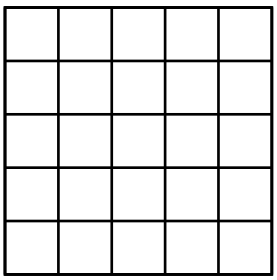
width The grid's width.

x The grid's lower-left x position.

y The grid's lower-left y position.

Example

```
            def demo(self):
                D = Drawing(100, 100)
                g = DoubleGrid()
                D.add(g)
                return D
```



Properties of Example Widget

```
        grid0.delta = 20
        grid0.delta0 = 0
        grid0.deltaSteps = []
        grid0.fillColor = Color(1,1,1)
        grid0.height = 100
        grid0.orientation = 'vertical'
        grid0.stripeColors = [Color(1,0,0), Color(0,.501961,0), Color(0,0,1)]
        grid0.strokeColor = Color(0,0,0)
        grid0.strokeWidth = 1
        grid0.useLines = 1
        grid0.useRects = 0
        grid0.width = 100
        grid0.x = 0
        grid0.y = 0
        grid1.delta = 20
        grid1.delta0 = 0
        grid1.deltaSteps = []
        grid1.fillColor = Color(1,1,1)
        grid1.height = 100
        grid1.orientation = 'horizontal'
        grid1.stripeColors = [Color(1,0,0), Color(0,.501961,0), Color(0,0,1)]
        grid1.strokeColor = Color(0,0,0)
        grid1.strokeWidth = 1
        grid1.useLines = 1
        grid1.useRects = 0
        grid1.width = 100
        grid1.x = 0
        grid1.y = 0
        height = 100
        width = 100
        x = 0
        y = 0
```

Grid(Widget)

This makes a rectangular grid of equidistant stripes.

The grid contains an outer border rectangle, and stripes
inside which can be drawn with lines and/or as solid tiles.
The drawing order is: outer rectangle, then lines and tiles.

The stripes' width is indicated as 'delta'. The sequence of
stripes can have an offset named 'delta0'. Both values need
to be positive!

Public Attributes

delta Determines the width/height of the stripes.

delta0 Determines the stripes initial width/height offset.

deltaSteps List of deltas to be used cyclically.

fillColor Background color for entire rectangle.

height The grid's height.

orientation Determines if stripes are vertical or horizontal.

rectStrokeColor Color for outer rect stroke.

rectStrokeWidth Width for outer rect stroke.

stripeColors Colors applied cyclically in the right or upper direction.

strokeColor Color used for lines.

strokeWidth Width used for lines.

useLines Determines if stripes are drawn with lines.

useRects Determines if stripes are drawn with solid rectangles.

width The grid's width.

x The grid's lower-left x position.

y The grid's lower-left y position.

Example

```
            def demo(self):
                D = Drawing(100, 100)

                g = Grid()
                D.add(g)

                return D
```

Properties of Example Widget

```
        delta = 20
        delta0 = 0
        deltaSteps = []
        fillColor = Color(1,1,1)
        height = 100
        orientation = 'vertical'
        stripeColors = [Color(1,0,0), Color(0,.501961,0), Color(0,0,1)]
        strokeColor = Color(0,0,0)
        strokeWidth = 2
        useLines = 0
```

```
useRects = 1
width = 100
x = 0
y = 0
```

ShadedPolygon(Widget, LineShape)

Public Attributes

angle Shading angle

cylinderMode True if shading reverses in middle.

fillColorEnd None

fillColorStart None

numShades The number of interpolating colors.

points None

strokeColor None

strokeDashArray None

strokeLineCap None

strokeLineJoin None

strokeMiterLimit None

strokeWidth None

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        angle = 90
        cylinderMode = 0
        fillColorEnd = Color(0,.501961,0)
        fillColorStart = Color(1,0,0)
        numShades = 50
        points = [-1, -1, 2, 2, 3, -1]
        strokeColor = Color(0,0,0)
        strokeDashArray = None
        strokeLineCap = 0
        strokeLineJoin = 0
        strokeMiterLimit = 0
        strokeWidth = 1
```

ShadedRect(Widget)

This makes a rectangle with shaded colors between two colors.

Colors are interpolated linearly between 'fillColorStart'
and 'fillColorEnd', both of which appear at the margins.
If 'numShades' is set to one, though, only 'fillColorStart'
is used.

Public Attributes

cylinderMode True if shading reverses in middle.

fillColorEnd End value of the color shade.

fillColorStart Start value of the color shade.

height The grid's height.

numShades The number of interpolating colors.

orientation Determines if stripes are vertical or horizontal.

strokeColor Color used for border line.

strokeWidth Width used for lines.

width The grid's width.

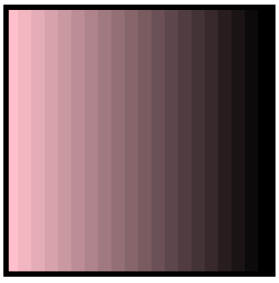
x The grid's lower-left x position.

y The grid's lower-left y position.

Example

```
            def demo(self):
                D = Drawing(100, 100)
                g = ShadedRect()
                D.add(g)

                return D
```



Properties of Example Widget

```
        cylinderMode = 0
        fillColorEnd = Color(0,0,0)
        fillColorStart = Color(1,.752941,.796078)
        height = 100
        numShades = 20
        orientation = 'vertical'
        strokeColor = Color(0,0,0)
        strokeWidth = 2
        width = 100
        x = 0
        y = 0
```

signsandsymbols

This file is a collection of widgets to produce some common signs and symbols.

Widgets include:

- ETriangle (an equilateral triangle),
- RTriangle (a right angled triangle),
- Octagon,
- Crossbox,
- Tickbox,
- SmileyFace,
- StopSign,
- NoEntry,
- NotAllowed (the red roundel from 'no smoking' signs),
- NoSmoking,
- DangerSign (a black exclamation point in a yellow triangle),
- YesNo (returns a tickbox or a crossbox depending on a testvalue),
- FloppyDisk,
- ArrowOne, and
- ArrowTwo

Classes

ArrowOne(_Symbol)

This widget draws an arrow (style one).

possible attributes:
'x', 'y', 'size', 'fillColor'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

ArrowTwo(ArrowOne)

This widget draws an arrow (style two).

possible attributes:
'x', 'y', 'size', 'fillColor'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

Crossbox(_Symbol)

This draws a black box with a red cross in it - a 'checkbox'.

possible attributes:
'x', 'y', 'size', 'crossColor', 'strokeColor', 'crosswidth'

Public Attributes

crossColor None

crosswidth None

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

DangerSign(_Symbol)

This draws a 'danger' sign: a yellow box with a black exclamation point.

possible attributes:
'x', 'y', 'size', 'strokeColor', 'fillColor', 'strokeWidth'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

ETriangle(_Symbol)

This draws an equilateral triangle.

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

FloppyDisk(_Symbol)

This widget draws an icon of a floppy disk.

possible attributes:
'x', 'y', 'size', 'diskcolor'

Public Attributes

diskColor None

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

NoEntry(_Symbol)

This draws a (British) No Entry sign - a red circle with a white line on it.

possible attributes:
'x', 'y', 'size'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

innerBarColor color of the inner bar

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

NoSmoking(NotAllowed)

This draws a no-smoking sign.

possible attributes:
'x', 'y', 'size'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

NotAllowed(_Symbol)

This draws a 'forbidden' roundel (as used in the no-smoking sign).

possible attributes:
'x', 'y', 'size'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

Octagon(_Symbol)

This widget draws an Octagon.

possible attributes:
'x', 'y', 'size', 'fillColor', 'strokeColor'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

RTriangle(_Symbol)

This draws a right-angled triangle.

possible attributes:
'x', 'y', 'size', 'fillColor', 'strokeColor'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

SmileyFace(_Symbol)

This draws a classic smiley face.

possible attributes:
'x', 'y', 'size', 'fillColor'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

StopSign(_Symbol)

This draws a (British) stop sign.

possible attributes:
'x', 'y', 'size'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

stopColor color of the word stop

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

Tickbox(_Symbol)

This draws a black box with a red tick in it - another 'checkbox'.

possible attributes:
'x', 'y', 'size', 'tickColor', 'strokeColor', 'tickwidth'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

tickColor None

tickwidth None

x symbol x coordinate

y symbol y coordinate

YesNo(_Symbol)

This widget draw a tickbox or crossbox depending on 'testValue'.

If this widget is supplied with a 'True' or 1 as a value for
testValue, it will use the tickbox widget. Otherwise, it will
produce a crossbox.

possible attributes:
'x', 'y', 'size', 'tickcolor', 'crosscolor', 'testValue'

Public Attributes

crosscolor None

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

testValue None

tickcolor None

x symbol x coordinate

y symbol y coordinate

_Symbol(Widget)

Abstract base widget
possible attributes:
'x', 'y', 'size', 'fillColor', 'strokeColor'

Public Attributes

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

flags

This file is a collection of flag graphics as widgets.

All flags are represented at the ratio of 1:2, even where the official ratio for the flag is something else
(such as 3:5 for the German national flag). The only exceptions are for where this would look _very_ wrong,
such as the Danish flag whose (ratio is 28:37), or the Swiss flag (which is square).

Unless otherwise stated, these flags are all the 'national flags' of the countries, rather than their state flags, naval flags, ensigns or any other variants. (National flags are the flag flown by civilians of a country and the ones usually used to represent a country abroad. State flags are the variants used by the government and by diplomatic missions overseas).

To check on how close these are to the 'official' representations of flags, check the World Flag Database at http://www.flags.ndirect.co.uk/

The flags this file contains are:

EU Members:
United Kingdom, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Holland (The Netherlands), Spain, Sweden

Others:
USA, Czech Republic, European Union, Switzerland, Turkey, Brazil

(Brazilian flag contributed by Publio da Costa Melo [publio@planetarium.com.br]).

Classes

Flag(_Symbol)

This is a generic flag class that all the flags in this file use as a basis.

This class basically provides edges and a tidy-up routine to hide any bits of line that overlap the 'outside' of the flag

possible attributes:
'x', 'y', 'size', 'fillColor'

Public Attributes

border Whether a background is drawn

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor Background color

kind Which flag

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

Star(_Symbol)

This draws a 5-pointed star.

possible attributes:
'x', 'y', 'size', 'fillColor', 'strokeColor'

Public Attributes

angle angle in degrees

dx symbol x coordinate adjustment

dy symbol x coordinate adjustment

fillColor None

size None

strokeColor None

strokeWidth None

x symbol x coordinate

y symbol y coordinate

eventcal

This file is a

Classes

EventCalendar(Widget)

Public Attributes

Example

```
            def demo(self):
                msg = "demo() must be implemented for each Widget!"
                raise shapes.NotImplementedError, msg
```

Properties of Example Widget

```
        data = []
        day = 0
        endTime = None
        height = 150
        startTime = None
        timeColWidth = None
        trackNames = None
        trackRowHeight = 20
        width = 300
        x = 0
        y = 0
```