Embedding Statistical Charts into Reports

The chart library is not bound to the reporting functions, but can of course be used there in a simple way. You can produce charts and directly embed them into your report. The `REPORTInfo` class hides the internal complexity that is involved in doing this.

This chapter covers the following topics:

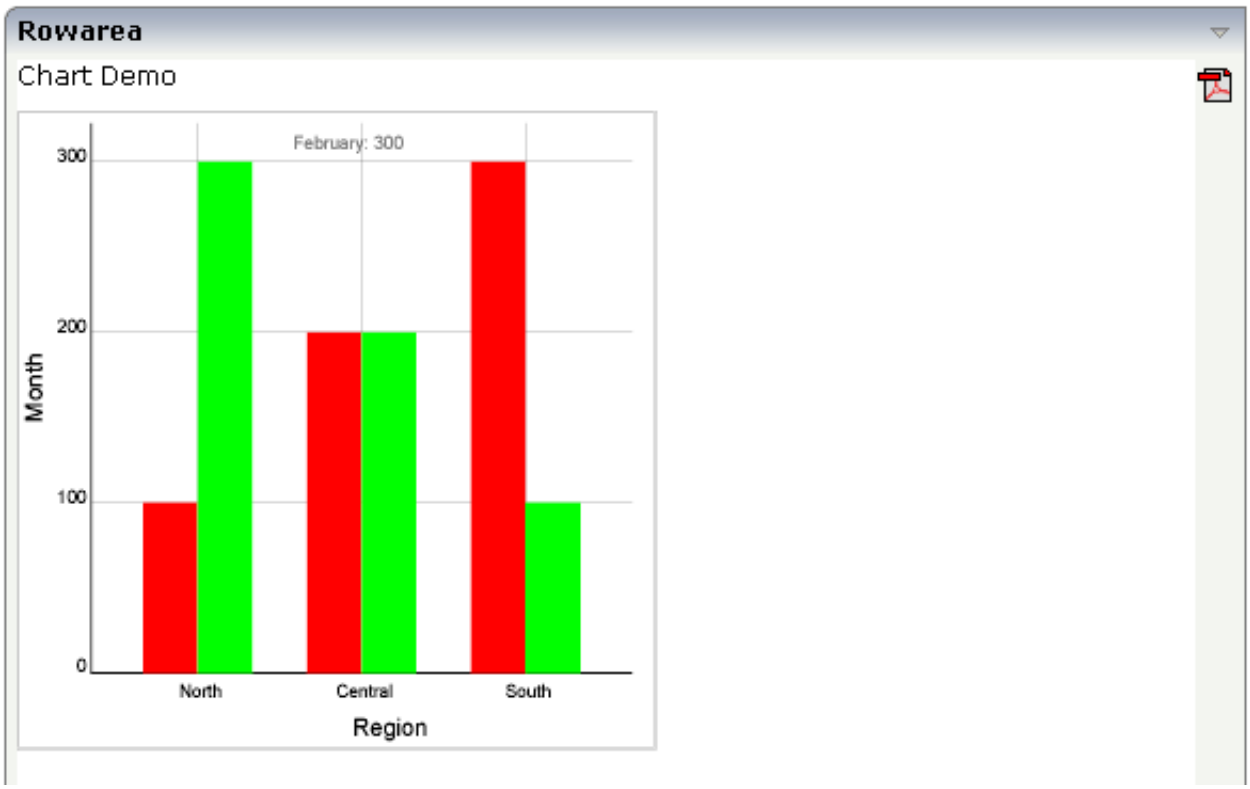
- Creating an SVG Graphic and Embedding it into a Report
- Creating a JPEG Graphic and Embedding it into a Report
- Pay Attention when Sizing your Graphic

Creating an SVG Graphic and Embedding it into a Report

Have a look at the following code:

```
private void renderChart()
{
     // headline in front of chart
     m_report.addText("Chart Demo");
     CHARTInfo chart = buildChart();
     m_report.addVerticalDistance("10");
     String svg = chart.getSVGBarChart();
     m_report.addSVGsource(svg,"300", // width
     "300", // height
     "0"); // indent
}
private CHARTInfo buildChart()
{
    // CHARTInfo chart = new CHARTInfo("300","300"); // width/height
    // set descriptions
    chart.setXAxisDescription("Region","#000000");
    chart.setYAxisDescription("Month","#000000");
    // Define x-axis
    chart.addXAxisScale("North");
    chart.addXAxisScale("Central");
    chart.addXAxisScale("South");
    // Define "value lines"
    chart.addDataDescription("January","#FF0000");
    chart.addDataDescription("February","#00FF00");
    // Define values
    chart.addData("North","January",100);
    chart.addData("Central","January",200);
    chart.addData("South","January",300);
    chart.addData("North","February",300);
    chart.addData("Central","February",200);
    chart.addData("South","February",100);
    return chart;
}
```

It creates an SVG graphic by using CHARTInfo and directly places the SVG graphic into a report. The output looks as follows:



Creating a JPEG Graphic and Embedding it into a Report

Nearly the same code is required for creating the graphic as an JPEG file:

```
private void renderChart()
{
    ...
    String svg = chart.getSVGBarChart();
    byte[] jpegBytes = chart.transformChartToGraphic(svg,CHARTInfo.CREATEJPEGIMAGE);
    m_report.addJPEGsource(jpegBytes);
    ...
}

private CHARTInfo buildChart()
{
    ...
    ...
    ...
}
```

By using the `transformChartToGraphic()` method, you can translate generated SVG into various file formats (JPEG, PNG, TIFF).

Pay Attention when Sizing your Graphic

You may already have recognized that in the previous examples the CHARTInfo object was initialised in the following way:

```
CHARTInfo chart = new CHARTInfo("300","300");
```

On the other hand, when placing the generated SVG into the report output, again the size was passed:

```
m_report.addSVGsource(svg,"300", // width
                          "300", // height
                          "0"); // indent
```

Make sure that both sizes are the same.

When using SVG for reporting, you do not pass sizes like "4 cm" but you pass pixel values. Pixel values are transferred into metric sizes within a calculation factor. You can change the calculation factor by using the method `REPORTInfo.setFactorForTransformPixel2PDF(...)`.