Embedding in a Java application (using the JavaBean API)

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Table of contents

1 Introduction

Normally, you will configure the barcode generators using XML as described on the Barcode XML page. Some people prefer using JavaBeans instead of XML. Here's how to use that API.

Note:
If you work with the Bean API you don't need avalon-framework.jar in your classpath.

2 Basic steps

The steps necessary to create barcodes using JavaBeans is similar to the steps using XML:

1. Create a barcode bean
2. Set the desired values to configure the barcode generator
3. Create a CanvasProvider (depending on the output format)
4. Finally generate the barcode

3 Creating a barcode bean

As the first step you have to instantiate a barcode bean.

```
Code39Bean bean = new Code39Bean();
```

Here's a list of available bean classes:

- org.krysalis.barcode4j.impl.codabar.CodabarBean
- org.krysalis.barcode4j.impl.code128.Code128Bean
- org.krysalis.barcode4j.impl.code39.Code39Bean
- org.krysalis.barcode4j.impl.int2of5.Interleaved2Of5Bean
- org.krysalis.barcode4j.impl.postnet.POSTNETBean
- org.krysalis.barcode4j.impl.upcean.EAN13Bean
- org.krysalis.barcode4j.impl.upcean.EAN8Bean
- org.krysalis.barcode4j.impl.upcean.UPCABean
- org.krysalis.barcode4j.impl.upcean.UPCEBean

4 Configuring the bean

Each bean has specific getter and setter methods to control various aspects of the individual implementations. Please refer to the JavaDocs for the available properties.

An example:

```
bean.setChecksumMode(ChecksumMode.CP_CHECK);
bean.setWideFactor(3);
```

5 Creating a CanvasProvider and generating the barcode

From here it's the same steps as with XML configuration. Please refer to the primary embedding page.

6 A complete example

```
//Create the barcode bean
Code39Bean bean = new Code39Bean();

final int dpi = 150;

//Configure the barcode generator
bean.setModuleWidth(UnitConv.in2mm(1.0f / dpi)); //makes the narrow bar
                                                 //width exactly one pixel
bean.setWideFactor(3);
bean.doQuietZone(false);

//Open output file
File outputFile = new File("out.png");
OutputStream out = new FileOutputStream(outputFile);
try {
    //Set up the canvas provider for monochrome PNG output
    BitmapCanvasProvider canvas = new BitmapCanvasProvider(
            out, "image/x-png", dpi, BufferedImage.TYPE_BYTE_BINARY, false, 0);

    //Generate the barcode
    bean.generateBarcode(canvas, "123456");

    //Signal end of generation
    canvas.finish();
} finally {
    out.close();
}
```