

Embedding in a Java application (using the JavaBean API)

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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();  
}
```