

# BlackBerry Java Application Custom Buttons

Sample Application Overview



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# Overview

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The custom buttons sample application demonstrates how to extend the `Field` class to create a variety of different button UI components.

The sample application demonstrates how to create the following types of buttons:

- rectangle
- triangle
- octagon
- rectangle with a fixed width
- rectangle with a fixed width and a long text label
- rectangle with a full screen width
- rectangle with a color background
- rectangle with a `.bmp` image as the background

In addition to creating and displaying these custom buttons, the sample application also demonstrates how to attach listeners to these custom buttons. Listeners are components that execute code when an event occurs. In the sample application, when you click one of these buttons, a dialog box appears with text specifying which of the buttons you clicked.

## Featured classes

## 2

### **net.rim.device.api.ui.Field**

This class provides the fundamental functionality for all UI components. All the built-in components you can add to a `Screen` are subclasses of the `Field` class. You cannot create the `Field` class directly; you must either use one of the implemented subclasses or extend this class to create your own custom component.

In the sample application, the subclasses of the of the `Field` class are the `CustomButtonField`, (which you use to create all the custom buttons except for the button with an image as its background), and the `PictureBackgroundButtonField` class.

## Featured interfaces

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### **net.rim.device.api.ui.Drawstyle**

This interface provides access to drawing styles that `Graphics` and `Field` objects use. The drawing styles include the alignment and position of text.

The sample application uses the `DrawStyle` interface when the `Graphics` object invokes the `drawText()` method to set the properties of the rendered text on the buttons.

## Files in the sample application

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Filename	Description
CustomButtonsDemo.java	The application, which includes the entry point that starts the screen, creates and adds each of the UI components, and adds the application to the Event Dispatcher.
CustomButtonField.java	<p>This class provides constructors to create a custom button that is a rectangle, a triangle, an octagon, a rectangle with a fixed width, a rectangle with a fixed width that has a long text label, a rectangle with a full screen width, or a rectangle with a background of a specified color.</p> <p>This class extends the <code>Field</code> class and overrides the <code>getPreferredHeight()</code> and <code>getPreferredWidth()</code> methods. These methods use the size of the text label to return a height and width respectively to create a custom button that fully encapsulates the text label.</p> <p>This class also overrides the <code>Field</code> class methods <code>drawFocus(Graphics, boolean)</code>, <code>layout(int, int)</code>, and <code>paint(Graphics)</code> to render the specific shapes and styles.</p>
PictureBackgroundButtonField.java	<p>This class provides methods to create a custom button with a <code>Bitmap</code> as its background. This class also extends the <code>Field</code> class but, unlike the <code>CustomButtonField</code> class, this class does not implement the <code>DrawStyle</code> interface. This is because this class does not need the text alignment and position constants that the <code>DrawStyle</code> interface provides.</p> <p>There are two <code>Bitmap</code> objects, (defined within the class, not in the constructor), for when the button is in focus or not in focus. The switching of these <code>Bitmap</code> objects is managed by the overridden <code>onFocus()</code> and <code>onUnfocus()</code> methods from the <code>Field</code> class.</p> <p>Similar to the <code>CustomButtonField</code> class, the <code>PictureBackgroundButtonField</code> class overrides the <code>getPreferredHeight()</code>, <code>getPreferredWidth()</code>, <code>layout(int, int)</code>, and <code>paint(Graphics)</code> methods from the <code>Field</code> class to manage the rendering of the <code>PictureBackgroundButtonField</code> object. However, since</p>

Filename	Description
	the switching of the background image on focus is already managed by the <code>onFocus()</code> and <code>onUnfocus()</code> methods, the <code>drawFocus(Graphics, boolean)</code> does not need to perform any actions.
img/bluescribble.bmp	This is a .bmp file that the <code>PictureBackgroundButtonField</code> object uses as the background when the button is not in focus.
img/pinkscribble.bmp	This is a .bmp file that the <code>PictureBackgroundButtonField</code> object uses as the background when the button is in focus.

# System requirements

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To run the sample application, you must have one of the following development tools:

- BlackBerry® Java® Plug-in for Eclipse® 1.1 or later ([www.blackberry.com/developers/javaplugin1.1](http://www.blackberry.com/developers/javaplugin1.1)) with the BlackBerry Component Package version 4.2 or later.
- BlackBerry® Java® Development Environment 3.6 or later ([na.blackberry.com/eng/developers/javaappdev/javadevenv.jsp](http://na.blackberry.com/eng/developers/javaappdev/javadevenv.jsp))

# Setting up the sample application in the BlackBerry JDE

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## Install the sample application

1. Visit <http://www.blackberry.com/go/custombuttonssample> to download the sample application.
2. Extract the **custombuttonsdemo.zip** file.
3. On the taskbar, click **Start > Programs > Research In Motion > BlackBerry JDE 4.7.0 > JDE**.
4. Open the workspace that you want to add the sample application to.
5. In the workspace tree, right-click the project that you want to add the sample application to.
6. Click **Add project to <workspace directory>**.
7. In the Add project to <workspace> dialog box, browse to the folder where you extracted the sample application.
8. Click the **CustomButtonsDemo.jdp** file.
9. Click **Open**.

## Run the sample application

1. In the workspace where you added the custombuttonsdemo project, right-click **custombuttonsdemo**.
2. Click **Build project**.
3. On the taskbar, click **Start > Applications > Research in Motion > BlackBerry JDE 4.7.0 > Device Simulator**.
4. On the Home screen of the BlackBerry® Smartphone Simulator, click the **Downloads** folder.
5. Click the **Custom Buttons Demo** icon.

# Setting up the sample application in the BlackBerry Java Plug-in for Eclipse

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## Install the sample application

1. In Eclipse®, on the **File** menu, click **Import**.
2. In the **Import** dialog box, expand the **BlackBerry** folder.
3. Click **Import BlackBerry Samples**.
4. Click **Next**.
5. Perform one of the following actions:
  - To specify a specific JRE™, select the **Use a project specific JRE** option.
  - To specify the default JRE in the workspace, select the **Use default JRE** option.
6. In the BlackBerry Projects section, click **Deselect All**.
7. Select the check box beside the **CustomButtonsDemo** project.
8. Click **Finish**.

## Run the sample application

1. In Eclipse®, in the **Navigator** pane, right-click the **CustomButtonsDemo** folder.
2. Click **Run As > BlackBerry Simulator**.
3. On the Home screen of the BlackBerry® Smartphone Simulator, click the **Downloads** folder.
4. Click the **Custom Buttons Demo** icon.

## Provide feedback

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