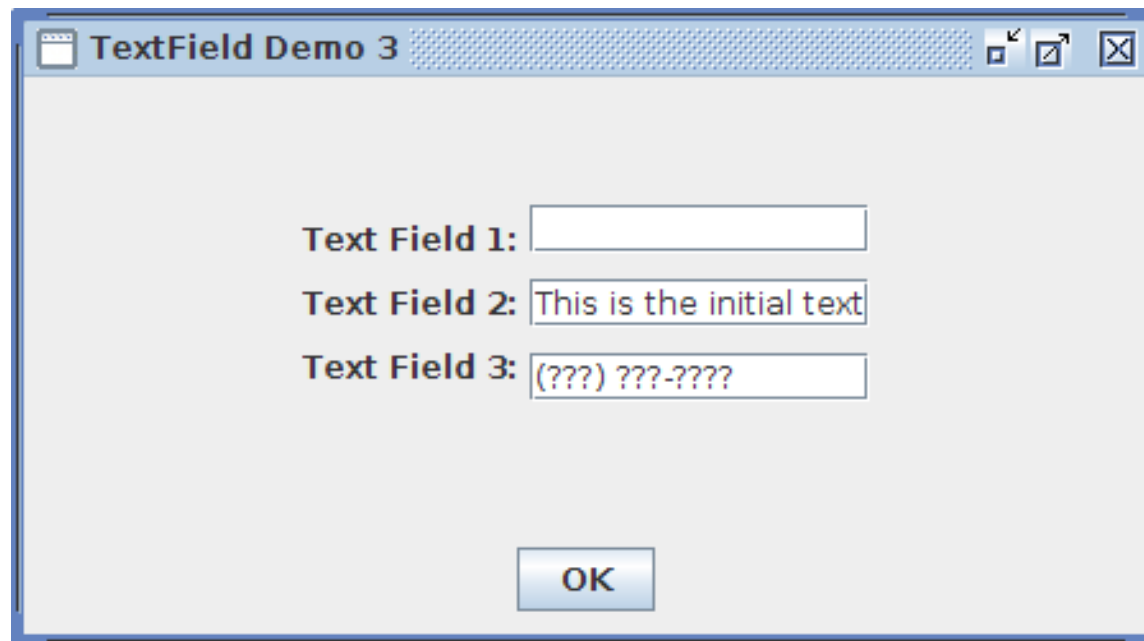# 15. GUI Programming :: The *JTextField* Class :: Using a Button Listener

More commonly, a *JButton* event listener will retrieve the values in a *JTextField* when the button is clicked. *TextFieldDemo3* is a slight modification of *TextFieldDemo2*. We add an OK button and an event listener for the button.

15. GUI Programming :: The *JTextField* Class :: *TextFieldDemo3*

When the button is clicked, we retrieve the text in each of the *JTextFields* by calling the *JTextField.getText*() method. This program displays the contents of the text fields using *JOption Pane.showMessageDialog*(). Note that the *JTextFields* have been changed to **final** so they can be accessed in the anonymous class *actionPerformed*() method.

15. GUI Programming :: The *JTextField* Class :: *TextFieldDemo3* (continued)

```java
//******************************************************************************
// CLASS: TextFieldDemo3 (TextFieldDemo3.java)
//******************************************************************************
import java.awt.FlowLayout;
import java.awt.GridLayout;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;
import javax.swing.BoxLayout;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;

/**
 * This application demonstrates how to create GUI text fields using the javax.
 * swing.JTextField class.
 */
public class TextFieldDemo3 {
   public static void main(String[] args) { new TextFieldDemo3().run(); }
   public void run() {
      // Use the Swing look and feel.
      JFrame.setDefaultLookAndFeelDecorated(true);
```

15. GUI Programming :: The *JTextField* Class :: *TextFieldDemo3* (continued)

```
// Create three JLabels.
JLabel label1 = new JLabel("Text Field 1: ", JLabel.LEFT);
JLabel label2 = new JLabel("Text Field 2: ", JLabel.LEFT);
JLabel label3 = new JLabel("Text Field 3: ", JLabel.LEFT);

// Create a JPanel for the JLabels and use the GridLayout with 3 rows and
// 1 column. Add the labels to the panel.
JPanel panelLabel = new JPanel();
panelLabel.setLayout(new GridLayout(3, 1, 0, 10));
panelLabel.add(label1);
panelLabel.add(label2);
panelLabel.add(label3);

// Create three JTextFields.
final JTextField tf1 = new JTextField("");
final JTextField tf2 = new JTextField("This is the initial text");
final JTextField tf3 = new JTextField("(???) ???-????");

// Create a JPanel for the JTextFields and use the GridLayout with 3 rows
// and 1 column. Add the text fields to the panel.
JPanel panelTextField = new JPanel();
panelTextField.setLayout(new GridLayout(3, 1, 0, 10));
panelTextField.add(tf1);
panelTextField.add(tf2);
panelTextField.add(tf3);
```

15. GUI Programming :: The *JTextField* Class :: *TextFieldDemo3* (continued)

```java
// Create a JPanel for the label and text field panels. The default layout
// of FlowLayout is used, with a 50 pixel vertical gap.
JPanel panelText = new JPanel();
panelText.setLayout(new FlowLayout(FlowLayout.CENTER, 0, 50));
panelText.add(panelLabel);
panelText.add(panelTextField);

JButton butOk = new JButton("OK");
butOk.addActionListener(
  new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent pEvent) {
      String msg = "tf1 = [" + tf1.getText() + "]\n";
      msg += "tf2 = [" + tf2.getText() + "]\n";
      msg += "tf3 = [" + tf3.getText() + "]";
      JOptionPane.showMessageDialog(null, msg);
    }
  });

// Creat a JPanel for the button. Use the default FlowLayout.
JPanel panelButton = new JPanel();
panelButton.add(butOk);
```

15. GUI Programming :: The *JTextField* Class :: *TextFieldDemo3* (continued)

```
    // Create a main panel to hold the panelText and panelButton panels. Use
    // a vertical BoxLayout.
    JPanel mainPanel = new JPanel();
    mainPanel.setLayout(new BoxLayout(mainPanel, BoxLayout.Y_AXIS));
    mainPanel.add(panelText);
    mainPanel.add(panelButton);

    JFrame frame = new JFrame("TextField Demo 3");
    frame.setSize(450, 250);
    frame.add(mainPanel);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    frame.setVisible(true);
  }
}
```

15. GUI Programming :: The *JTextField* Class :: *TextFieldDemo3* (continued)