

## 14. GUI Programming :: The *JTextField* Class :: Event Handling

If we add an *ActionListener* to a *JTextField* object, that listener will be notified when the Enter key is pressed in a *JTextField*:

```
JTextField tf = new JTextField(20);  
tf.addActionListener(new TextFieldListener());
```

*TextFieldDemo2* (a modification of *TextFieldDemo1*) illustrates what happens when we add a *TextFieldListener* object to each text field and then press the Enter key in a text field. Currently, all the event handler does is display the *ActionEvent* object on the console.

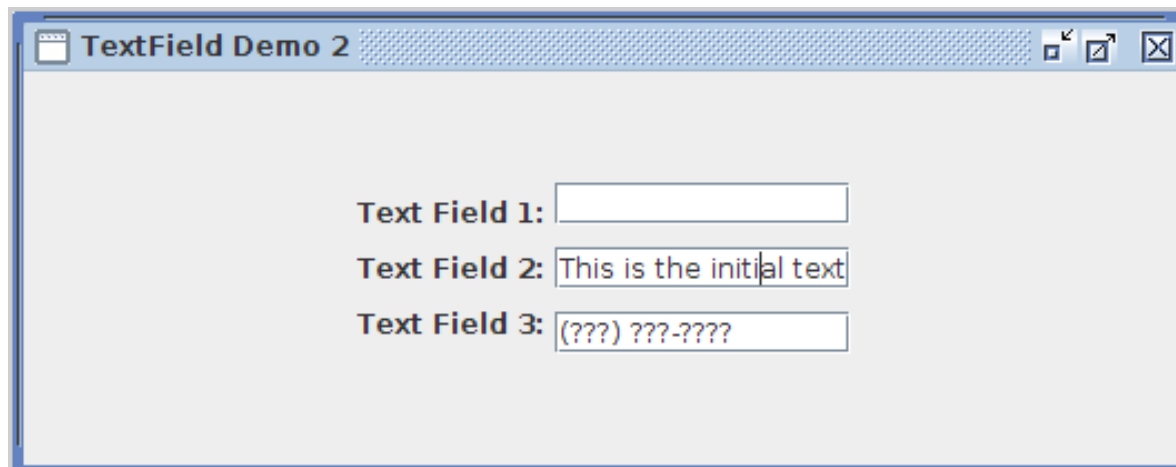
```
private class TextFieldListener implements ActionListener {  
    @Override  
    public void actionPerformed(ActionEvent pEvent) {  
        System.out.println(pEvent);  
    }  
}
```

## 14. GUI Programming :: The *JTextField* Class :: *TextFieldDemo2* Example

```
//*****  
// CLASS: TextFieldDemo2 (TextFieldDemo2.java)  
//*****  
import java.awt.FlowLayout;  
import java.awt.GridLayout;  
import java.awt.event.ActionListener;  
import java.awt.event.ActionEvent;  
import javax.swing.JFrame;  
import javax.swing.JLabel;  
import javax.swing.JPanel;  
import javax.swing.JTextField;  
  
public class TextFieldDemo2 {  
    public void run() {  
        ...  
        // Create three JTextFields.  
        JTextField tf1 = new JTextField("");  
        JTextField tf2 = new JTextField("This is the initial text");  
        JTextField tf3 = new JTextField("(???) ???-????");  
  
        // Add an action listener to each text field.  
        tf1.addActionListener(new TextFieldListener());  
        tf2.addActionListener(new TextFieldListener());  
        tf3.addActionListener(new TextFieldListener());  
        ...  
    }  
}
```

## 14. GUI Programming :: The *JTextField* Class :: *TextFieldDemo2* (continued)

```
// TextFiedListener is a inner class of TextFieldDemo2.
private class TextFieldListener implements ActionListener {
    @Override
    public void actionPerformed(ActionEvent pEvent) {
        System.out.println(pEvent);
    }
}
```



```
java.awt.event.ActionEvent[ACTION_PERFORMED,cmd=This is the initial text,when=1391818410919,modifiers=] on javax.swing.JTextField[,0,29,133x19,layout=javax.swing.plaf.basic.BasicTextUI$UpdateHandler,alignmentX=0.0,alignmentY=0.0,border=javax.swing.plaf.BorderUIResource$CompoundBorderUIResource@611fca63,flags=296,maximumSize=,minimumSize=,preferredSize=,caretColor=sun.swing.PrintColorUIResource[r=51,g=51,b=51],disabledTextColor=javax.swing.plaf.ColorUIResource[r=184,g=207,b=229],editable=true,margin=javax.swing.plaf.InsetsUIResource[top=0,left=0,bottom=0,right=0],selectedTextColor=sun.swing.PrintColorUIResource[r=51,g=51,b=51],selectionColor=javax.swing.plaf.ColorUIResource[r=184,g=207,b=229],columns=0,columnWidth=0,command=,horizontalAlignment=LEADING]
```

## 14. GUI Programming :: *ActionEvent.getActionCommand()*

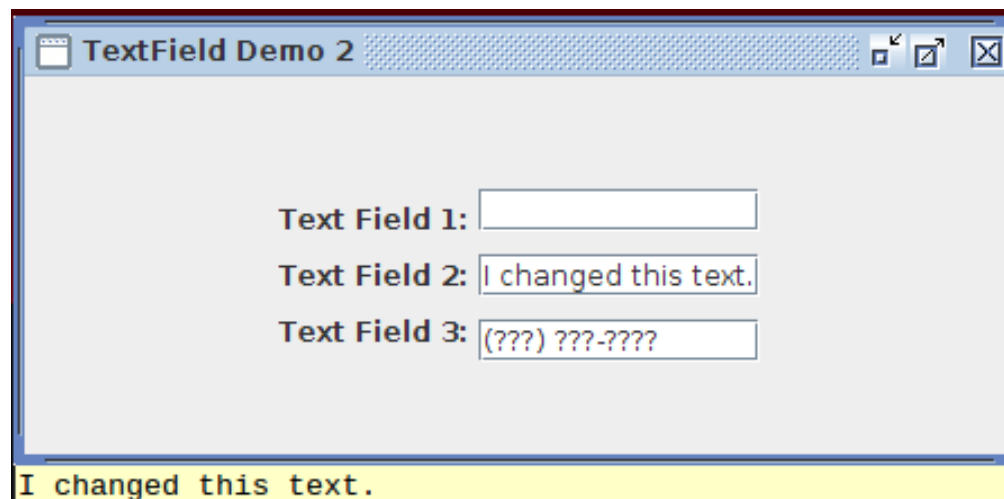
The *ActionEvent* class declares two useful instance methods that may be called on an *ActionEvent* object: *getActionCommand()* and *getSource()*.

*String getActionCommand()*

Returns the command string associated with the *ActionEvent* object. When called on an *ActionEvent* object for a *JTextField*, this method will return the text stored in the text field when the Enter key was pressed. For example, if we modify *TextFieldListener.actionPerformed()*:

```
private class TextFieldListener implements ActionListener {  
    @Override  
    public void actionPerformed(ActionEvent pEvent) {  
        System.out.println(pEvent.getActionCommand());  
    }  
}
```

When we run *TextFieldDemo2* again and press the Enter key in the second text field:



## 14. GUI Programming :: *ActionEvent.getSource()*

*Object getSource()*

Returns the object on which the event occurred. For example, if we modify *TextFieldListener.actionPerformed()*:

```
private class TextFieldListener implements ActionListener {  
    @Override  
    public void actionPerformed(ActionEvent pEvent) {  
        JTextField tf = (JTextField)pEvent.getSource();  
        tf.setText("*****");  
    }  
}
```

We run and type "Blah blah blah" in the second text field. Pressing the Enter key changes the text:

