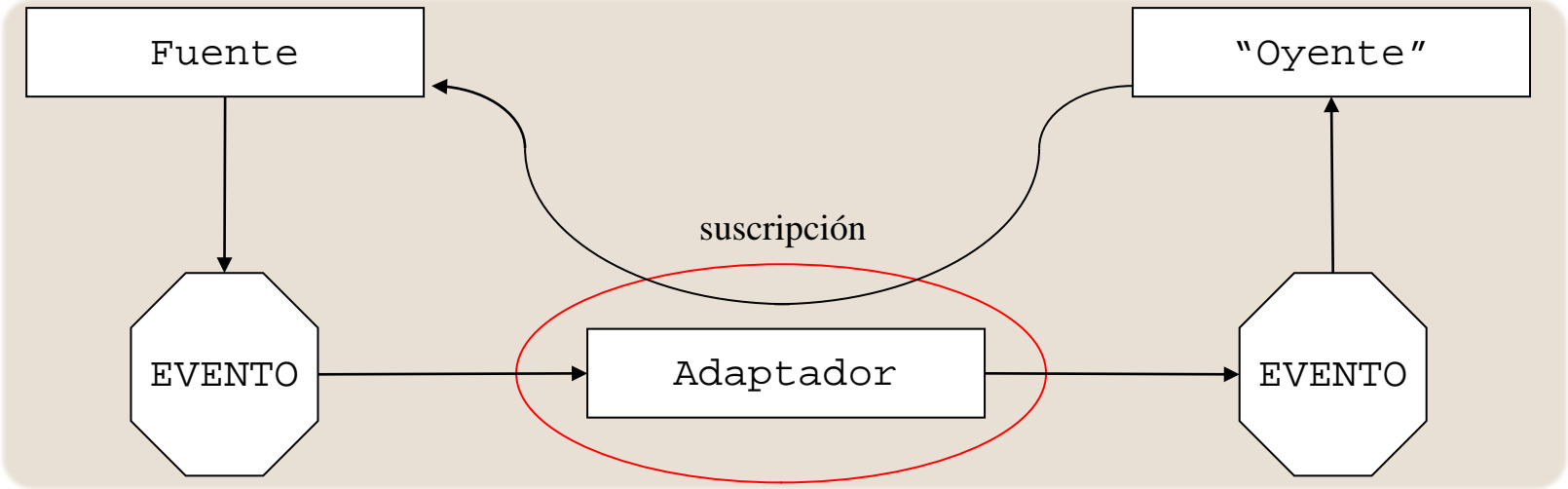
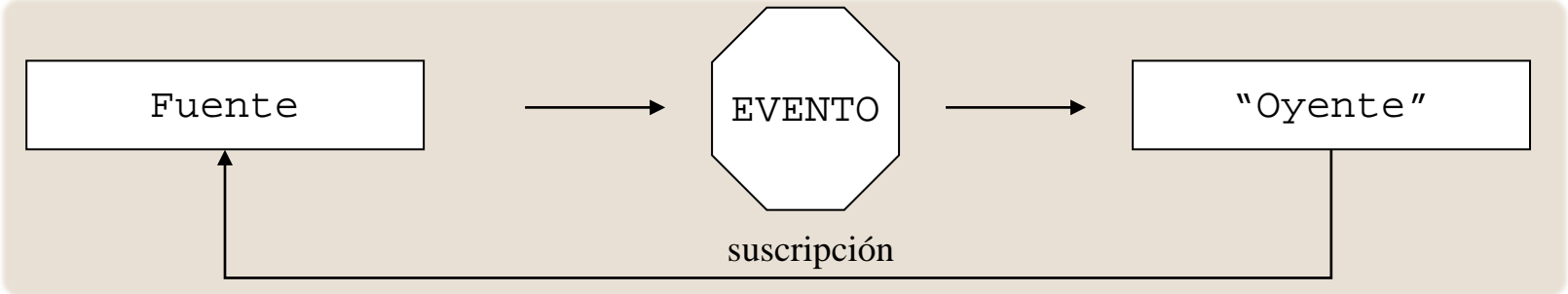
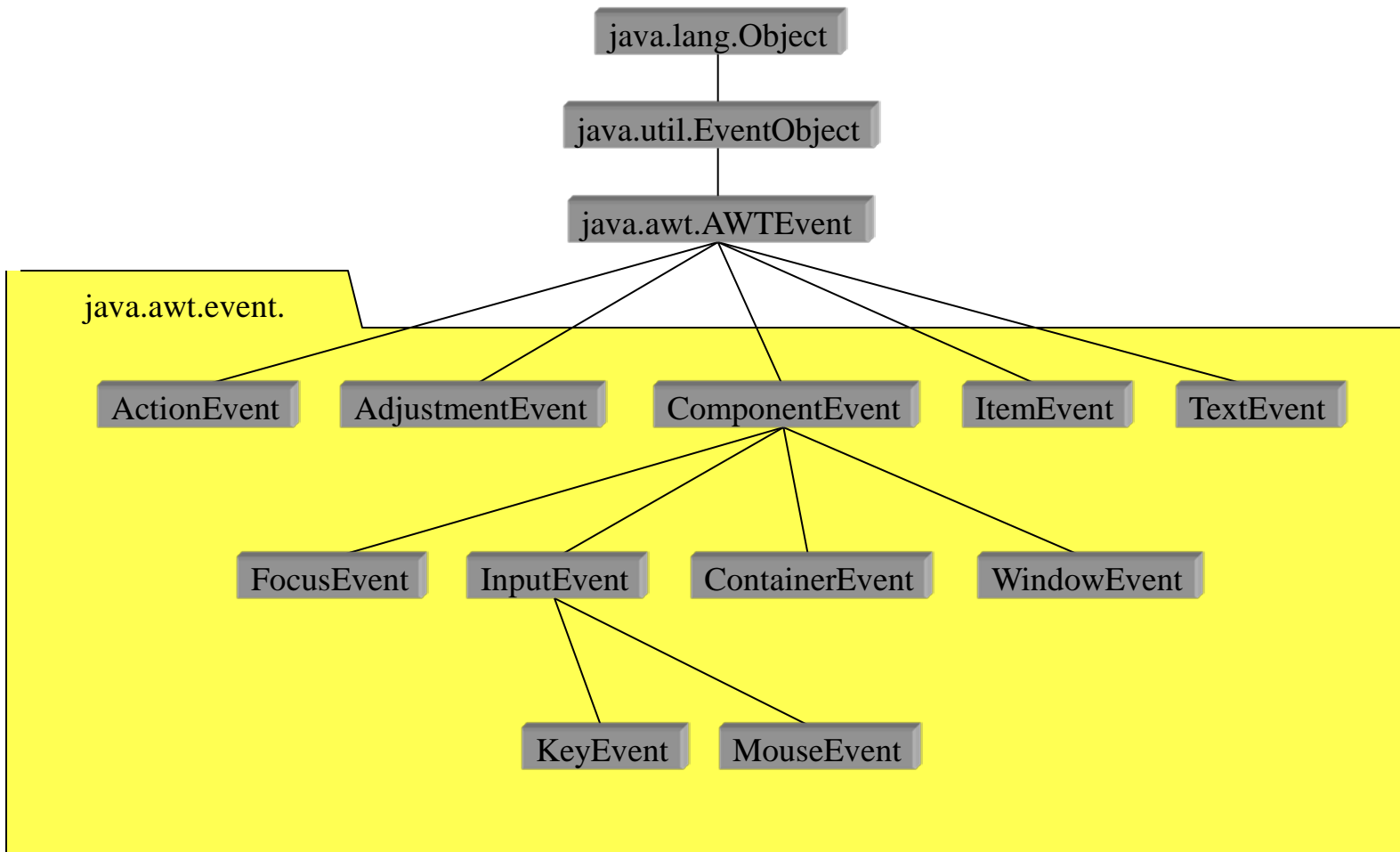


# Interacción con GUIs

# Delegation Event Model



# Eventos



# Listeners

ActionListener	actionPerformed(ActionEvent)
ItemListener	itemStateChanged(ItemEvent)
MouseListener	mousePressed(MouseEvent) mouseReleased(MouseEvent) mouseEntered(MouseEvent) mouseExited(MouseEvent) mouseClicked(MouseEvent)
MouseMotionListener	mouseDragged(MouseEvent) mouseMoved(MouseEvent)
KeyListener	keyPressed(KeyEvent) keyReleased(KeyEvent) keyTyped(KeyEvent)
FocusListener	focusGained(FocusEvent) focusLost(FocusEvent)
AdjustmentListener	adjustmentValueChanged(AdjustmentEvent)
ComponentListener	componentMoved(ComponentEvent) componentHidden(ComponentEvent) componentResized(ComponentEvent) componentShown(ComponentEvent)
WindowListener	windowClosing(WindowEvent) windowOpened(WindowEvent) windowIconified(WindowEvent) windowDeiconified(WindowEvent) windowClosed(WindowEvent) windowActivated(WindowEvent) windowDeactivated(WindowEvent)
ContainerListener	componentAdded(ContainerEvent) componentAdded(ContainerEvent)
TextListener	textValueChanged(TextEvent)

```

import java.awt.*;
public class EjemploMensaje extends java.awt.Panel {

    public EjemploMensaje() {
        initComponents ();
    }

    private void initComponents () {
        labell = new java.awt.Label ();
        panell = new java.awt.Panel ();
        boton1 = new java.awt.Button ();
        setLayout (new java.awt.BorderLayout ());

        labell.setFont (new java.awt.Font ("Book Antiqua", 2, 14));
        labell.setName ("label6");
        labell.setBackground (new java.awt.Color (204, 204, 204));
        labell.setForeground (java.awt.Color.black);
        labell.setText ("El bot\u00f3n no se ha pulsado ni una sola vez");
        labell.setAlignment (java.awt.Label.CENTER);

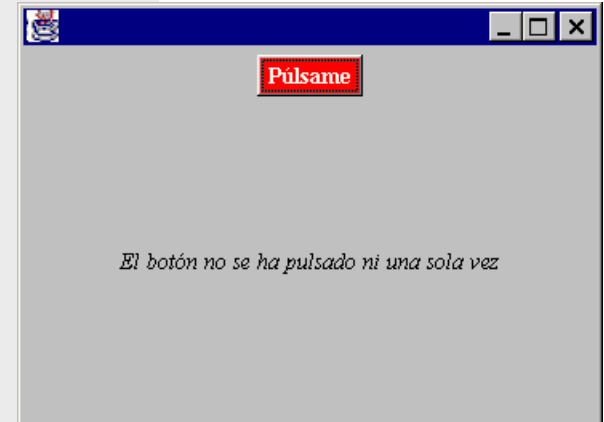
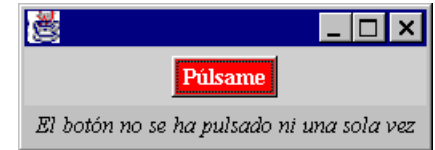
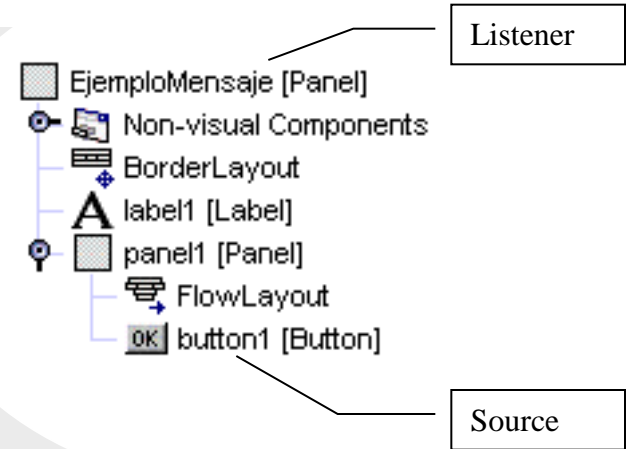
        add (labell, java.awt.BorderLayout.CENTER);

        panell.setFont (new java.awt.Font ("Dialog", 0, 11));
        panell.setName ("panel8");
        panell.setBackground (new java.awt.Color (204, 204, 204));
        panell.setForeground (java.awt.Color.black);

        boton1.setFont (new java.awt.Font ("Arial", 1, 14));
        boton1.setLabel ("P\u00falsame");
        boton1.setName ("button6");
        boton1.setBackground (new java.awt.Color (255, 0, 51));
        boton1.setForeground (java.awt.Color.white);
    }
}

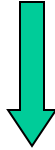
```

(continúa ...)



```
button1.addMouseListener ( nuevo objeto MouseAdapter definido aquí mismo );
```

Source



Adapter "sin nombre"

```
button1.addMouseListener ( new java.awt.event.MouseAdapter () {  
    public void mouseClicked ( java.awt.event.MouseEvent evt ) {  
        button1MouseClicked ( evt );  
    }  
} );
```

El "oyente" del adapter es el propio Panel

```
panell1.add ( button1 );
```

```
add ( panell1, java.awt.BorderLayout.NORTH );
```

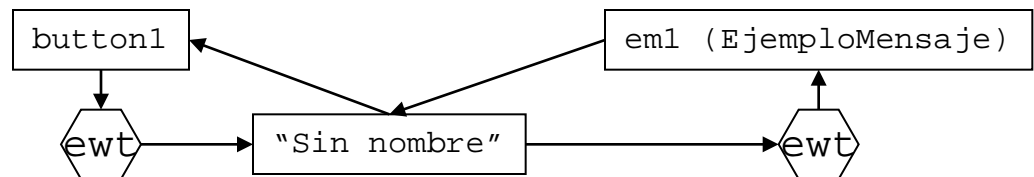
```
}
```

```
private void button1MouseClicked ( java.awt.event.MouseEvent evt ) {  
    labell1.setText ( "El botón se ha pulsado " + (++toques) + ((toques==1)? " vez" : " veces" ) );  
}
```

Rutina "oyente" del adaptador

```
private java.awt.Label labell1;  
private java.awt.Panel panell1;  
private java.awt.Button button1;
```

```
private int toques=0;  
}
```



```
public class FrameTEst extends java.awt.Frame {

    public FrameTEst() {
        initComponents ();
        ejm=new EjemploMensaje();
        add(ejm);
        pack ();
    }

    private void initComponents () {
        addWindowListener (new java.awt.event.WindowAdapter () {
            public void windowClosing (java.awt.event.WindowEvent evt) {
                exitForm (evt);
            }
        });
    }

    private void exitForm(java.awt.event.WindowEvent evt) {
        System.exit (0);
    }

    public static void main (String args[]) {
        new FrameTEst ().show ();
    }

    EjemploMensaje ejm;
}
```