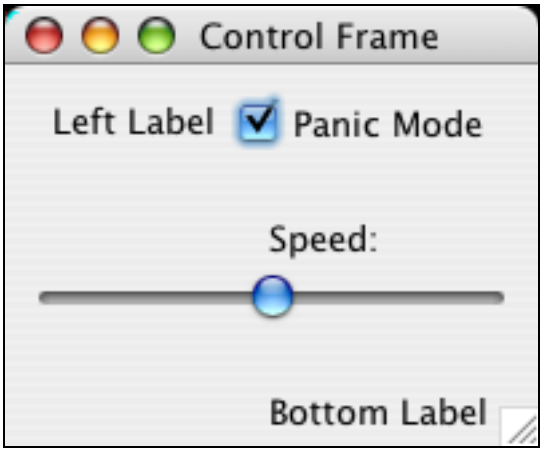
Simple GUI Control Frame

Handout by Nick Parlante

Soon, we will have complete coverage of Swing GUI coding, controls etc. This handout shows the basic use of JCheckBox and JSlider in a frame, just to the extent needed for Tetris. You can also look at the JTetris source code, which demonstrates correct use of these controls. The source code for this example is also available in the hw directory.




```
/*
 ControlFrame.java
 Demonstrates basic use of JCheckBox and JSlider
 */
import javax.swing.*;

import java.awt.*;

public class ControlFrame extends JFrame {
    // keep ivars pointing to on-screen objects that
    // we want to access later
    private JPanel panel;
    private JCheckBox checkbox;
    private JLabel label;
    private JSlider slider;


    // Set up the frame -- create and install some controls in the frame
    public ControlFrame(String title) {
        super(title);  // superclass ctor takes frame title

        // Get content pane -- contents of the window
        JComponent content = (JComponent) getContentPane();

        // Set to use the "flow" layout
        // (controls the arrangement of the components in the content)
        content.setLayout(new FlowLayout());

        // ****
        // Set up controls in the frame
        // ****

        // Create a vertical box component
        JComponent box = new JPanel();
        box.setLayout(new BoxLayout(box, BoxLayout.Y_AXIS));
        content.add(box);


        // make a little panel to group a couple things
```

```
        panel = new JPanel();

        // install the panel
        box.add(panel);

        // put a label in the panel
        panel.add(new JLabel("Left Label"));

        // put a checkbox in the panel
        checkbox = new JCheckBox("Panic Mode");
        panel.add(checkbox);

        box.add(Box.createVerticalStrut(20)); // 20 pixels vertical space

        // put some things in the box
        box.add(new JLabel("Speed:"));

        // slider has min, max, and current int values
        slider = new JSlider(0, 100, 50); // min, max, current
        box.add(slider);

        box.add(Box.createVerticalStrut(20));
        box.add(new JLabel("Bottom Label"));

        // later, access the control's state with:
        // (boolean) checkbox.isSelected()
        // (int) slider.getValue()

        // ****
        // Done installing controls
        // ****

        // Standard three lines to put frame on screen
        pack();
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setVisible(true);   // make it show up on screen
    }

    public static void main(String[] args) {
        // Set GUI Look And Feel Boilerplate.
        // Do this incantation at the start of main() to tell Swing
        // to use the GUI LookAndFeel of the native platform. It's ok
        // to ignore the exception.
        try {
            UIManager.setLookAndFeel(UIManager.getSystemLookAndFeelClassName());
        } catch (Exception ignored) { }

        new ControlFrame("Control Frame");
    }
}
```