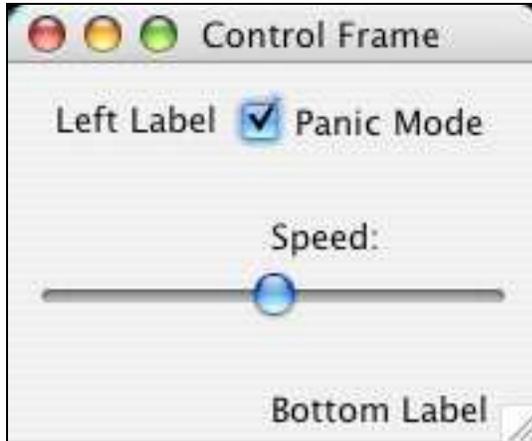


Simple GUI Control Frame

Thanks to Nick Parlante for much of this handout

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 BorderLayout(box, BorderLayout.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");
}
}

```