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import java.awt.*;

// Carolyn England
// In-Class Java GUI Example

import javax.swing.*;
import javax.swing.border.*;

public class MyInClassGUIExample extends JFrame {

    public MyInClassGUIExample() {
        // create panel to group buttons
        // flow layout (default for JPanel) with left alignment
        // and hgap/vgap of 2 pixels
        JPanel jpbtn = new JPanel(new FlowLayout(FlowLayout.LEFT, 2, 2));
        jpbtn.setBorder(new TitledBorder("Abstract Button Subclass"));

        // create simple text button
        JButton jbt = new JButton("Java is Fun!");
        jbt.setToolTipText("This is the button tool tip text...");
        jbt.setForeground(Color.WHITE); // text is white
        jbt.setBackground(new Color(0, 0, 0)); // background is black
        Font largeFont = new Font("Courier", Font.BOLD, 20);
        jbt.setFont(largeFont);

        // create simple check box
        JCheckBox jchk = new JCheckBox("Student", true);
        jchk.setMnemonic('S');
        jchk.setForeground(Color.RED);
        jchk.setBackground(Color.CYAN);
        jchk.setFont(new Font("Serif", Font.BOLD+Font.ITALIC, 16));

        // create radio buttons panel
        // grid layout with 0 rows and fix column 1
        JPanel jprb = new JPanel(new GridLayout(0, 1, 5, 5));
        jprb.setBorder(new TitledBorder("Languages"));
        JRadioButton jrb1 = new JRadioButton("C/C++");
        JRadioButton jrb2 = new JRadioButton("Java");
        JRadioButton jrb3 = new JRadioButton("Python");
        JRadioButton jrb4 = new JRadioButton("Visual Basic");
        // create radio button group so only one is selected
        ButtonGroup bgroup = new ButtonGroup();
        bgroup.add(jrb1);
        bgroup.add(jrb2);
        bgroup.add(jrb3);
        bgroup.add(jrb4);
        // identify default selected button
        jrb2.setSelected(true);
        // add buttons to panel
        jprb.add(jrb1);
        jprb.add(jrb2);
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jprb.add(jrb3);
jprb.add(jrb4);

// create button with image
ImageIcon dkIcon = new ImageIcon(getClass().getResource("image/duke.jpg"
));
ImageIcon jdIcon = new ImageIcon(getClass().getResource(
"image/javaDuke.jpg"));
ImageIcon adIcon = new ImageIcon(getClass().getResource(
"image/androidDuke.jpg"));
JButton jbIcon = new JButton("Java", dkIcon);
jbIcon.setPressedIcon(jdIcon);
jbIcon.setRolloverIcon(adIcon);
// set alignments
jbIcon.setPreferredSize(new Dimension(200, 200));
jbIcon.setHorizontalAlignment(SwingConstants.RIGHT);
jbIcon.setVerticalAlignment(SwingConstants.BOTTOM);
jbIcon.setHorizontalTextPosition(SwingConstants.CENTER);
jbIcon.setVerticalTextPosition(SwingConstants.TOP);

// add items to buttons panel
jpbtn.add(jbt);
jpbtn.add(jchk);
jpbtn.add(jprb);
jpbtn.add(jbIcon);

// create panel to hold labels and text fields
// grid layout with 1 row 4 columns
JPanel jplbl = new JPanel(new GridLayout(1, 4, 5, 5));
// create icon label
JLabel jlblUS = new JLabel("US", new ImageIcon(getClass()
    .getResource("image/usIcon.gif")), SwingConstants.CENTER);
jlblUS.setHorizontalTextPosition(SwingConstants.CENTER);
jlblUS.setVerticalTextPosition(SwingConstants.BOTTOM);
// create populated text field
JTextField jtfMessage = new JTextField("Illinois");
jtfMessage.setForeground(Color.RED);
jtfMessage.setFont(largeFont);
jtfMessage.setBorder(new LineBorder(Color.BLACK, 2));
// label and empty textbox
JLabel jlblName = new JLabel("Your Name:", SwingConstants.RIGHT);
JTextField jtfName = new JTextField("");

// add items to panel
jplbl.add(jlblUS);
jplbl.add(jtfMessage);
jplbl.add(jlblName);
jplbl.add(jtfName);

// add panel to frame
// border layout (default for JFrame)
// use hgap/vgap of 5/10 pixels
this.setLayout(new BorderLayout(5, 10));
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        this.add(new JLabel("NORTH STUFF"), BorderLayout.NORTH);
        this.add(jpbtn, BorderLayout.CENTER);
        //this.add(jprb, BorderLayout.EAST);
        this.add(jplbl, BorderLayout.SOUTH);
    }

    /**
     * @param args
     */
    public static void main(String[] args) {
        // create frame and set properties
        MyInClassGUIExample frame = new MyInClassGUIExample();
        frame.setTitle("In Class GUI Example");
        frame.setLocationRelativeTo(null); // position top/left at center
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        //frame.setSize(500, 400);
        frame.pack(); // sets preferred size
        frame.setVisible(true);
    }
}
```