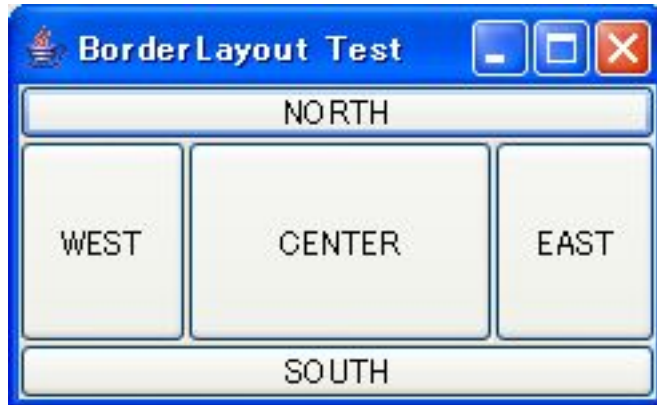


レイアウト 1

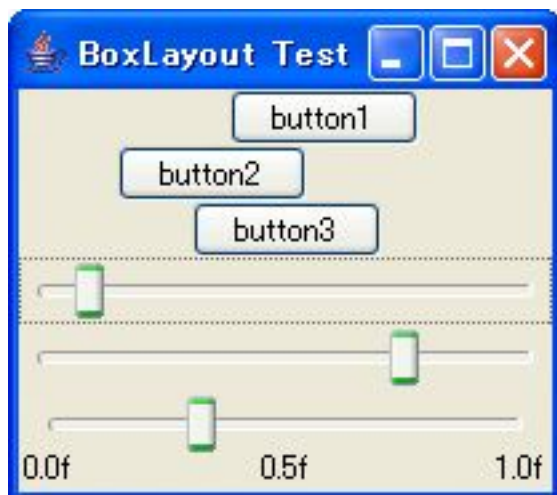
[Swing]

- BorderLayout
- BoxLayout
- CardLayout

BorderLayout



BoxLayout



CardLayout

1 枚目



2 枚目



ソースコード

```
import java.awt.BorderLayout;
import java.awt.CardLayout;
import java.awt.Component;
import java.awt.Container;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.ItemEvent;
import java.awt.event.ItemListener;
import java.util.Dictionary;
import java.util.Hashtable;

import javax.swing.BoxLayout;
import javax.swing.JButton;
import javax.swing.JComboBox;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JSlider;
import javax.swing.JTextField;
import javax.swing.SwingUtilities;
import javax.swing.UIManager;
import javax.swing.event.ChangeEvent;
import javax.swing.event.ChangeListener;

@SuppressWarnings("serial")
public class LayoutTest extends JFrame {
    /**
     * BorderLayout test
     * @see http://java.sun.com/docs/books/tutorial/uiswing/layout/border.html
     */
    public void testBorderLayout() {
        JFrame frame = new JFrame("BorderLayout Test");

        Container pane = frame.getContentPane();
        pane.setLayout(new BorderLayout());

        pane.add(new JButton("NORTH"), BorderLayout.NORTH);
        pane.add(new JButton("WEST"), BorderLayout.WEST);
        pane.add(new JButton("CENTER"), BorderLayout.CENTER);
        pane.add(new JButton("EAST"), BorderLayout.EAST);
        pane.add(new JButton("SOUTH"), BorderLayout.SOUTH);

        frame.pack();
        frame.setVisible(true);
    }
    /**
     * BoxLayout test
     * @see http://java.sun.com/docs/books/tutorial/uiswing/layout/box.html
     */
    public void testBoxLayout() {
        JFrame frame = new JFrame("BoxLayout Test");

        Container pane = frame.getContentPane();
        pane.setLayout(new BoxLayout(pane, BoxLayout.Y_AXIS));

        JButton btn1 = new JButton("button1");
        btn1.setAlignmentX(Component.CENTER_ALIGNMENT); // 0.5f
        JButton btn2 = new JButton("button2");
        btn2.setAlignmentX(Component.CENTER_ALIGNMENT); // 0.5f
        JButton btn3 = new JButton("button3");
        btn3.setAlignmentX(Component.CENTER_ALIGNMENT); // 0.5f

        pane.add(btn1);
        pane.add(btn2);
        pane.add(btn3);
    }
}
```

```

JPanel ctrlPanel = new JPanel();
Dictionary<Integer, JLabel> dic = new Hashtable<Integer, JLabel>();
dic.put(0, new JLabel("0.0f"));
dic.put(5, new JLabel("0.5f"));
dic.put(10, new JLabel("1.0f"));

ctrlPanel.setLayout(new BorderLayout(ctrlPanel, BorderLayout.Y_AXIS));
JSlider sld1 = new JSlider(0, 10);
sld1.addChangeListener(new SliderChangeListener(btn1));
JSlider sld2 = new JSlider(0, 10);
sld2.addChangeListener(new SliderChangeListener(btn2));
JSlider sld3 = new JSlider(0, 10);
sld3.addChangeListener(new SliderChangeListener(btn3));

sld3.setLabelTable(dic);
sld3.setPaintLabels(true);

ctrlPanel.add(sld1);
ctrlPanel.add(sld2);
ctrlPanel.add(sld3);

pane.add(ctrlPanel);

frame.pack();
frame.setVisible(true);
}
class SliderChangeListener implements ChangeListener {
    JButton btn = null;
    SliderChangeListener(JButton btn) {
        this.btn = btn;
    }
    public void stateChanged(ChangeEvent e) {
        float val = (float)((JSlider)e.getSource()).getValue();
        this.btn.setAlignmentX(val / 10.0f);
        this.btn.revalidate(); // 遅延自動レイアウト
    }
}
/**
 * CardLayout test
 * @see http://java.sun.com/docs/books/tutorial/uiswing/layout/card.html
 */
public void testCardLayout() {
    JFrame frame = new JFrame("CardLayout Test");
    Container pane = frame.getContentPane();

    final String BUTTON_CARD = "buttons";
    final String TEXT_CARD = "texts";

    final JPanel cards = new JPanel(new CardLayout());

    JPanel ctrlPane = new JPanel();
    String comboBoxItems[] = { BUTTON_CARD, TEXT_CARD };
    JComboBox cb = new JComboBox(comboBoxItems);
    cb.addItemListener(
        new ItemListener() {
            public void itemStateChanged(ItemEvent e) {
                ((CardLayout)cards.getLayout()).show(
                    cards, (String)e.getItem()
                );
            }
        }
    );

    cb.setEditable(false);
    ctrlPane.add(cb);

    JPanel card1 = new JPanel();
    card1.add(new JButton("Button 1"));
    card1.add(new JButton("Button 2"));
    card1.add(new JButton("Button 3"));

    JPanel card2 = new JPanel();
    card2.add(new JTextField("TextField", 10));
    card2.add(new JTextField("TextField", 10));
    card2.add(new JTextField("TextField", 10));

    cards.add(card1, BUTTON_CARD);
    cards.add(card2, TEXT_CARD);

    pane.add(ctrlPane, BorderLayout.NORTH);

```

```

        pane.add(cards, BorderLayout.CENTER);

        frame.pack();
        frame.setVisible(true);
    }

    /* ***** 以下メニュー用 ***** */
    public LayoutTest() {
        setTitle("Layout Test");

        JButton btn1 = new JButton("border");
        btn1.addActionListener(new MyActionListener("border"));

        JButton btn2 = new JButton("box");
        btn2.addActionListener(new MyActionListener("box"));

        JButton btn3 = new JButton("card");
        btn3.addActionListener(new MyActionListener("card"));

        JPanel pane = new JPanel();
        pane.setLayout(new BoxLayout(pane, BoxLayout.Y_AXIS));

        pane.add(btn1);
        pane.add(btn2);
        pane.add(btn3);
        getContentPane().add(pane);

        pack();
    }

    class MyActionListener implements ActionListener {
        private String type = null;
        public MyActionListener(String type) {
            this.type = type;
        }
        public void actionPerformed(ActionEvent e) {
            if ("border".equals(this.type)) {
                testBorderLayout();
            }
            if ("box".equals(this.type)) {
                testBoxLayout();
            }
            if ("card".equals(this.type)) {
                testCardLayout();
            }
        }
    }

    public static void main(String[] args) {
        try {
            UIManager.setLookAndFeel("com.sun.java.swing.plaf.windows.WindowsLookAndFeel");
            // UIManager.setLookAndFeel("javax.swing.plaf.metal.MetalLookAndFeel");
        } catch (Exception e) {
            e.printStackTrace();
        }
        SwingUtilities.invokeLater(
            new Runnable() {
                public void run() {
                    LayoutTest lt = new LayoutTest();
                    lt.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
                    lt.setVisible(true);
                }
            }
        );
    }
}

```