Java -Swing

Creating Windows & Applets

(lectures programs)

Sun OnLine Documentations

Sun Swing Tutorial

- Buttons: Show a variety of buttons.

  To run, we may use one of the following methods:

  - % **appletviewer** Buttons.java
  - % **appletviewer** ButtonsFrame.html
  - % **java** Buttons
  - Use any **internet browser** and open: ButtonsFrame.html

BASIC COMPONENTS

- ***Buttons***

```
JButton     b1 = new JButton("Button 1");
b1.setBackground(Color.red);
b2.setEnabled(false);
```

- ***Lables***

```
JLabel     labl1 = new JLabel("TextField t1");
labl1.setText("Hello");
```

- ***TextFields***

```
JTextField     t1 = new JTextField(30);
```

```
String s = new String();
s = t1.getText();
s = t1.getSelectedText();
t1.setText(" ");
```

- *TextAreas*

```
JTextArea t = new JTextArea(5, 20);
t.setText(t.getText()+ "Old Dominion University
\n");
```

- *CheckBoxs*

```
JCheckBox     cb1 = new JCheckBox("Check Box 1");
if(cb.isSelected()) ..
```

- *RadioButtons*

```
ButtonGroup g = new ButtonGroup();
JRadioButton     rb1 = new JRadioButton("one",
false);
g.add(rb1);
```

- *ComboBoxes*

```
JComboBox c = new JComboBox();
c.addItem(description[count++]);
c.getSelectedIndex();
c.getSelectedItem());
```

- *Lists*

```
DefaultListModel lItems=new DefaultListModel();
JList lst = new JList(lItems);
lItems.addElement(flavors[count++]);
Object[] items=lst.getSelectedValues();
```

- *Borders*

```
JPanel jp = new JPanel();
Border b = new TitledBorder("Title");
```

```
// or new EtchedBorder();
// or new LineBorder(Color.blue);
// or …
jp.setBorder(b);
```

CONTROLLING LAYOUT

- ***FlowLayout***

```
Container cp = getContentPane();
cp.setLayout(new FlowLayout());
```

- ***BorderLayout***

```
cp.add(BorderLayout.NORTH, new JButton("North"));
```

- ***GridLayout***

```
cp.setLayout(new GridLayout(7,3));
```

- ***BoxLayout***

```
Box bh = Box.createHorizontalBox();
Box bv = Box.createVerticalBox();
```

COMPOUND COMPONENTS

- ***Dailog Boxes***

```
        JOptionPane.showMessageDialog(null, "There's a
bug on you!",
          "Message(Alert)!",
JOptionPane.ERROR_MESSAGE);


      int answer = JOptionPane.showConfirmDialog(null,
          "Quit? ", "Confirm(Yes/NO”",
JOptionPane.YES_NO_OPTION);

      int sel = JOptionPane.showOptionDialog(null,
"Choose a Color!",
          "Option(Color)", JOptionPane.DEFAULT_OPTION,
JOptionPane.WARNING_MESSAGE,
          null, options, options[0]);

      String val = JOptionPane.showInputDialog("How
many fingers do you see?");
```

- ***Menus***

```
        JMenuBar mb1 = new JMenuBar();
        JMenu    m = new JMenu("Flavors");
        JMenuItem mi = new JMenuItem(flavors[i]);
        m.add(mi);
        mb1.add(m);
        setJMenuBar(mb1);
```

- ***Popup***

```
        JPopupMenu popup = new JPopupMenu();
        JMenuItem mi = new JMenuItem(flavors[i]);
        popup.add(mi);
        . . .
        popup.show(. . .);
```

Converting Applications to Applets

Application:

```
class A {}
class B {}

public class FileName {

  public static void main(String[] args) {
  <main code>
}
```

Applete:

```
//<applet code = FileName width=600 height=250> </applet>

import com.bruceeckel.swing.*;

// make sure to modify CLASSPATH
// e.g.,  in file .cshrc in UNIX,  to include where this package is
// e.g.,  in UNIX /home/cs476/java/ThinkingInJava.2ndEditionR12/code

other imports....;

public class  FileName extends JApplet {
  JTextArea  Xout  = new JTextArea(10, 30);
  public void init() {
        Container cp = getContentPane();
        cp.setLayout(new FlowLayout());
        cp.add(new JLabel("FileName"));
        cp.add(new JScrollPane(Xout));

    <main code>

      Anywhere inside the code of main or any other
      class:
      replace:     System.out.println("string");
      with:        Xout.append("string");
  }

 class A { }
 class B { }
 public static void main(String[] args) {
    Console.run(new FileName(), 350, 250);
```

```
 }
}
```

To execute the program:

```
% java FileName
% appletviewer FileName.java
```

Alternatively:

create a file called FileName.html that contains:

```
   <applet code=FileName width=600 height=250>
</applet>
```

Then:

```
% appletviewer FileName.html
```

OR

open FileName.html from within a browser

Example:

Application Garbage.java

Both Application & Applet: Garbage.java

HTML: Garbage.html

The content of this file is:

```
<applet code=Garbage width=600 height=250> </applet>
```