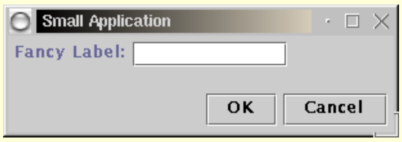
Sample answers for tutorial #7 (for week 12) (Mar 25, 2003)

28th March 2003

The following questions will be considered during the tutorial sessions on Tuesday. They are taken from last year's exam.

Q1: Write the Java/Swing code for a small application with two buttons, and a text entry box with a label, laid out as shown in this image.



Answer: - *perhaps something like this:*

CODE LISTING **SmallFrame.java**

```java
public class SmallFrame extends javax.swing.JFrame {
   public SmallFrame () {
      initComponents();
   }
    private void initComponents() {
      javax.swing.JPanel p = new javax.swing.JPanel ();
      p.setLayout (new java.awt.FlowLayout (java.awt.FlowLayout.RIGHT));
      OKButton = new javax.swing.JButton ("OK");
      p.add (OKButton);
      cancelButton = new javax.swing.JButton ("Cancel");
      p.add (cancelButton);
      getContentPane ().add (p, "South");
      javax.swing.JPanel pn = new javax.swing.JPanel ();
      pn.setLayout (new java.awt.FlowLayout (java.awt.FlowLayout.LEFT));
      pn.add (new javax.swing.JLabel ("Fancy Label:"));
      l_to = new javax.swing.JTextField (10);
      pn.add (l_to);
      getContentPane ().add (pn, "North");
      setTitle ("Small Application");
       setSize (300, 75);
      addWindowListener (new java.awt.event.WindowAdapter () {
         public void windowClosing (java.awt.event.WindowEvent evt) {
            System.exit (0);
         }
      });
   }
   public static void main (String[]args) {
      new SmallFrame().show ();
   }
   private javax.swing.JScrollPane scrollPane;
   private javax.swing.JTextArea textArea;
   private javax.swing.JTextField l_to, l_title;
   private javax.swing.JButton OKButton, cancelButton;
}
```

Q2: When programming using the AWT toolkit, when you add something to a frame, you would do something like

```
...   frame.add(panel,BorderLayout.CENTER);
```

However in Java/Swing you write

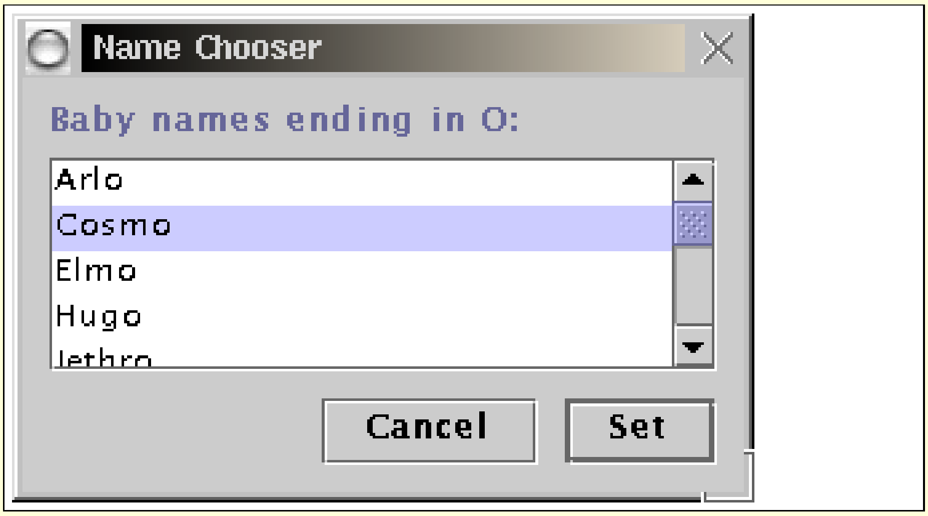
```
...   frame.getContentPane().add(panel,BorderLayout.CENTER);
```

Why is this done? What advantage does it give us?

Answer: *Separation of content from frame - the older AWT frames were inextricably linked with the content. With the new system, the layered pane gives a clear draw-order for the components, ensuring that all components (of all sorts) are redrawn correctly.*

Q3: Examine the following Java/Swing code specifying a dialog. Draw a diagram showing the resultant display when you run the code, and give a brief description of the function of the dialog. (What does it look like? What does it do?). Obvious code has been elided for clarity.

Answer:



Allows you to select names...