

Course API Comparison

Chapter C1: A Java Application

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Preliminaries

- 1) Install Eclipse Platform 3.4.2.
- 2) Start Eclipse → File → New → Java Project → Project name: compareJava → Finish.
- 3) Main menu of Eclipse → File → New → Class → Name: compareJava → Finish.
- 4) Minimize the Welcome-tab of Eclipse and remove any default code from compareJava.java.

compareJava.java

Copy the following 64 lines of code into the empty compareJava.java:

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import javax.swing.border.*;
class compareJava extends JFrame implements ActionListener, WindowListener
{ public static void main( String args[] ) { new compareJava(); }
  JButton button1 = new JButton( "Talk!" );
  JButton button2 = new JButton( "Clear" );
  JLabel label = new JLabel ( "" );

  public compareJava()
  { super( "Java Program" );
    setDefaultCloseOperation( JFrame.EXIT_ON_CLOSE );
    setSize( 600, 80 );
    Container pane = getContentPane();
    JPanel panel = new JPanel( new BorderLayout() );
    Border border = BorderFactory.createLineBorder( Color.BLACK, 3 );
    Border margin = new EmptyBorder( 3,3,3,3 );
    panel.setBorder( new CompoundBorder( border, margin ) );
    panel.add( button1, BorderLayout.WEST );
    panel.add( button2, BorderLayout.EAST );
    panel.add( label, BorderLayout.CENTER );
    label.setOpaque( true );
    label.setBackground( Color.GRAY );
    label.setHorizontalAlignment( SwingConstants.CENTER );
    pane.add( panel );
    ActionListener click = new ActionListener()
    { public void actionPerformed((ActionEvent actionEvent) )
      { if ( (JButton)actionEvent.getSource() == button1 )
        { label.setText( "Java Application. Resize!" ); }
        else label.setText( "" );
      }
    };

    ComponentListener resize = new ComponentListener()
    { public void componentResized( ComponentEvent evt )
      { Component c = (Component)evt.getSource();
        double w = (c.getSize()).getWidth();
        Font font = new Font( "Arial", Font.BOLD, (int)(w/25) );
        button1.setFont( font );
        label.setFont( font );
        button2.setFont( font );
      }
      public void componentMoved ( ComponentEvent evt ) {}
      public void componentShown ( ComponentEvent evt ) {}
      public void componentHidden( ComponentEvent evt ) {}
    };
  }
};
```

```
pane.addComponentListener( resize );
button1.addActionListener( click );
button2.addActionListener( click );
addWindowListener(this);
setVisible(true);
}

protected void processWindowEvent(WindowEvent e)
{ if (e.getID() == WindowEvent.WINDOW_CLOSING) System.exit(0);
  super.processWindowEvent(e);
}

public void windowClosing    ( WindowEvent e ) {}
public void windowOpened     ( WindowEvent e ) {}
public void windowIconified  ( WindowEvent e ) {}
public void windowDeiconified( WindowEvent e ) {}
public void windowClosed     ( WindowEvent e ) {}
public void windowActivated  ( WindowEvent e ) {}
public void windowDeactivated( WindowEvent e ) {}
public void actionPerformed   ( ActionEvent e ) {}
}
```

Main menu of Eclipse → Run → Run → Save and Launch → Check this CheckBox: Always save resources before launching → OK.