



Laborator 2 – Aplicatii Java

Introducere in programarea vizuala - Pachetul AWT

Scriti, compilati si rulati toate exemplele din acest laborator:

1.

```
import java.awt.*;
```

```
class First extends Frame{
```

```
First(){
```

```
    Button b=new Button("click me");  
    b.setBounds(30,100,80,30);// setting button position
```

```
    add(b);           //adding button into frame  
    setSize(300,300); //frame size 300 width and 300 height  
    setLayout(null); //no layout now bydefault BorderLayout  
    setVisible(true); //now frame willbe visible, bydefault not visible
```

```
}
```

```
public static void main(String args[]){
```

```
    First f=new First();
```

```
}
```

```
}
```

2.

```
import java.awt.*;
```

```
class First2{
```

```
    First2(){
```

```
        Frame f=new Frame();  
        Button b=new Button("click me");  
        b.setBounds(30,50,80,30);  
        f.add(b);  
        f.setSize(300,300);  
        f.setLayout(null);  
        f.setVisible(true);
```

```
}
```

```
public static void main(String args[]){
```

```
    First2 f=new First2();
```

```
}
```

```
}
```

3. AwtControlDemo.java

```

import java.awt.*;
import java.awt.event.*;

public class AwtControlDemo {

    private Frame mainFrame;
    private Label headerLabel;
    private Label statusLabel;
    private Panel controlPanel;

    public AwtControlDemo(){
        prepareGUI();
    }

    public static void main(String[] args){
        AwtControlDemo awtControlDemo = new AwtControlDemo();
        awtControlDemo.showEventDemo();
    }

    private void prepareGUI(){
        mainFrame = new Frame("Java AWT Examples");
        mainFrame.setSize(400,400);
        mainFrame.setLayout(new GridLayout(3, 1));
        mainFrame.addWindowListener(new WindowAdapter() {
            public void windowClosing(WindowEvent windowEvent){
                System.exit(0);
            }
        });
        headerLabel = new Label();
        headerLabel.setAlignment(Label.CENTER);
        statusLabel = new Label();
        statusLabel.setAlignment(Label.CENTER);
        statusLabel.setSize(350,100);

        controlPanel = new Panel();
        controlPanel.setLayout(new FlowLayout());

        mainFrame.add(headerLabel);
        mainFrame.add(controlPanel);
        mainFrame.add(statusLabel);
        mainFrame.setVisible(true);
    }

    private void showEventDemo(){
        headerLabel.setText("Control in action: Button");

        Button okButton = new Button("OK");
        Button submitButton = new Button("Submit");
    }
}

```

```
Button cancelButton = new Button("Cancel");

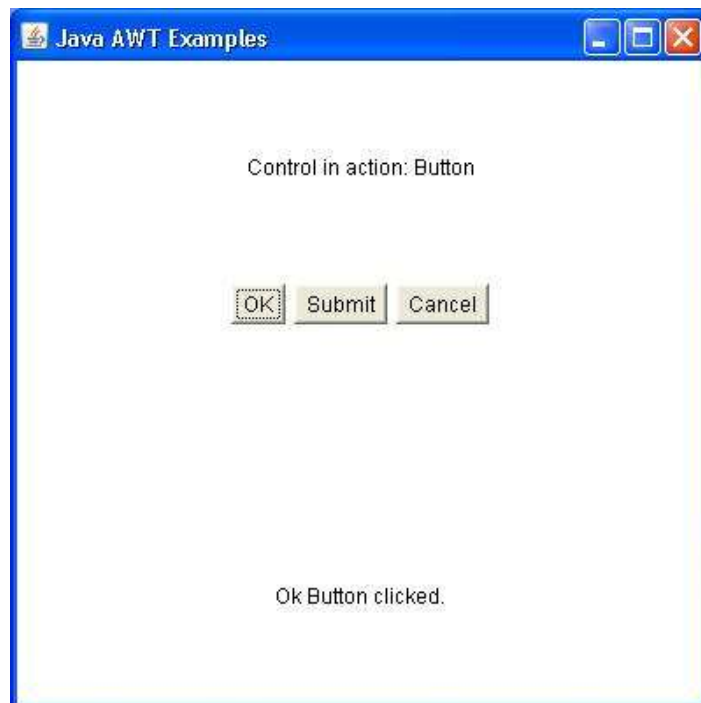
okButton.setActionCommand("OK");
submitButton.setActionCommand("Submit");
cancelButton.setActionCommand("Cancel");

okButton.addActionListener(new ButtonClickListener());
submitButton.addActionListener(new ButtonClickListener());
cancelButton.addActionListener(new ButtonClickListener());

controlPanel.add(okButton);
controlPanel.add(submitButton);
controlPanel.add(cancelButton);

mainFrame.setVisible(true);
}

private class ButtonClickListener implements ActionListener{
    public void actionPerformed(ActionEvent e) {
        String command = e.getActionCommand();
        if( command.equals("OK") ) {
            statusLabel.setText("Ok Button clicked.");
        }
        else if( command.equals("Submit") ) {
            statusLabel.setText("Submit Button clicked.");
        }
        else {
            statusLabel.setText("Cancel Button clicked.");
        }
    }
}
}
```



4.

```

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
public class TextFieldTest extends JFrame implements ActionListener{
    TextFieldTest()
    {
        setTitle("TextFieldTest");
        addWindowListener(new WindowHandler());
        Container cp = getContentPane();
        cp.setLayout(new FlowLayout()); // override default
        cp.add(new JLabel("Enter your first name"));
        cp.add(first = new JTextField(15));
        cp.add(new JLabel("Enter your last name"));
        cp.add(last = new JTextField(15));
        JButton done = new JButton("Done");
        cp.add(done);
        done.addActionListener(this);
        result = new JLabel("*****");
        cp.add(result);
    }
    public void actionPerformed(ActionEvent e)
    {
        String firstName = first.getText();
        String lastName = last.getText();
        result.setText("Hello, " + firstName + " " + lastName);
    }
}

class WindowHandler extends WindowAdapter
{
    public void windowClosing(WindowEvent e)
    { System.exit(0); }
}

private JLabel result;
private JTextField first, last;
public static void main(String [] a)
{
    JFrame jf = new TextFieldTest();
    jf.setSize(160, 200);
    jf.setVisible(true);
}
}

```

5.

Grid Layout Demo

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

public class GridLayoutDemo extends JFrame implements ActionListener {
    private JButton b[];
    private String names[] = { "one", "two", "three", "four", "five", "six" };
    private boolean toggle = true;
    private Container c;
    private GridLayout grid1, grid2;

    public GridLayoutDemo(){
        super( "GridLayout Demo" );
        grid1 = new GridLayout( 2, 3, 5, 5 );
        grid2 = new GridLayout( 3, 2 );
        c = getContentPane();
        c.setLayout( grid1 );
        b = new JButton[ names.length ];
        for (int i = 0; i < names.length; i++ ) {
            b[ i ] = new JButton( names[ i ] );
            b[ i ].addActionListener( this );
            c.add( b[ i ] );
        }
        setSize( 300, 150 );
        show();
    }

    public void actionPerformed((ActionEvent e ){
        if ( toggle ) c.setLayout( grid2 );
        else c.setLayout( grid1 );
        toggle = !toggle;
        c.validate();
    }

    public static void main( String args[] ) {
        GridLayoutDemo app = new GridLayoutDemo();
        app.addWindowListener( new WindowAdapter() {
            public void windowClosing( WindowEvent e ){
                System.exit( 0 );
            }
        } );
    }
}
```

6. Aplicatia afiseaza o fereastră cu 3 butoane de diferite culori:

```

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
public class Buttons extends JFrame{
    private JButton yellow, cyan, magenta;
    private JPanel jp;

    Buttons(){
        setTitle("Buttons");
        addWindowListener( new WindowAdapter()
        { public void windowClosing(WindowEvent e)
        { System.exit(0); }
        });
        jp = new JPanel();
        BH bh = new BH();
        yellow = new JButton("Yellow");
        yellow.setBackground(Color.yellow);
        jp.add(yellow);
        yellow.addActionListener(bh);
        cyan = new JButton("Cyan");
        cyan.setBackground(Color.cyan);
        jp.add(cyan);
        cyan.addActionListener(bh);
        magenta = new JButton("Magenta");
        magenta.setBackground(Color.magenta);
        jp.add(magenta);
        magenta.addActionListener(bh);
        getContentPane().add(jp);
    }

class BH implements ActionListener{
// Instance method getSource for an EventObject returns a reference to the
component that caused the event.
public void actionPerformed(ActionEvent evt){
    Object ob = evt.getSource();
    if (ob==yellow)
        jp.setBackground(Color.yellow);
    else if (ob==cyan)
        jp.setBackground(Color.cyan);
    else if (ob==magenta)
        jp.setBackground(Color.magenta);
    jp.repaint();
}
// To use ob as a JButton, it must be downcasted, say ((JButton)ob).getText().
/*****
// Instance method getActionCommand for an ActionEvent
// returns the String label of component that caused the event.
public void actionPerformed(ActionEvent evt)

```

```

{
    String arg = evt.getActionCommand();
    if (arg.equals("Yellow"))
        jp.setBackground(Color.yellow);
    else if (arg.equals("Cyan"))
        jp.setBackground(Color.cyan);
    else if (arg.equals("Magenta"))
        jp.setBackground(Color.magenta);
    jp.repaint();
}
*****/
} // end of inner class
public static void main(String [] args){
    JFrame jf = new Buttons();
    jf.setSize(300,200);
    jf.setVisible(true);
}
}

```

Referinte

<http://www.javatpoint.com/java-awt>

http://www.tutorialspoint.com/awt/awt_event_handling.htm

<http://docs.oracle.com/javase/7/docs/api/java/util/Collection.html>

http://www.tutorialspoint.com/java/java_collections.htm