

All Online Learning

www.allonlinelearning.com

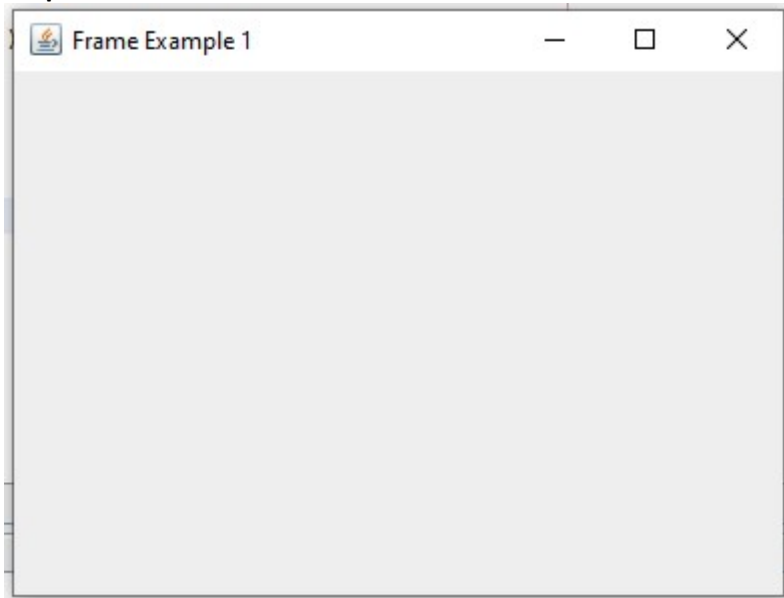
AWT & SWING

1. Creating a frame:

package awt; // awt is package name you can change it

```
import javax.swing.*;
public class FrameExample1
{
    public static void main(String args[])
    {
        JFrame f = new JFrame("Frame Example 1");
        f.setSize(400, 300);
        f.show();
    }
}
```

Output:



2. HelloWorldSwing:

```
package awt;
import javax.swing.*;
public class HelloWorldSwing {
    public static void main(String[] args) {
        JFrame frame = new JFrame("HelloWorldSwing");
        final JLabel label = new JLabel("Hello World");
        frame.getContentPane().add(label);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    }
}
```

All Online Learning

www.allonlinelearning.com

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

Output:



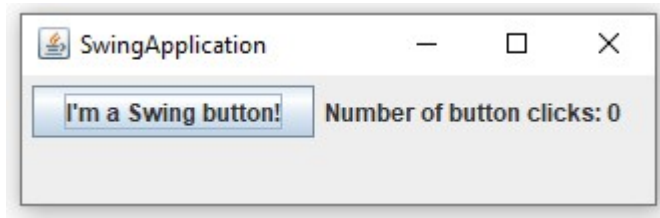
3. Event Example : No of button click

```
package awt;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
public class SwingApplication extends JFrame {
    private static String labelPrefix = "Number of button clicks: ";
    private int numClicks = 0;
    JLabel label = new JLabel(labelPrefix + "0 ");
    public SwingApplication(String title) {
        super(title);
        JButton button = new JButton("I'm a Swing button!");
        button.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                label.setText(labelPrefix + ++numClicks);
            }
        });
        JPanel panel = new JPanel();
        panel.add(button);
        panel.add(label);
        getContentPane().add(panel);
        pack();
        setVisible(true);
    }
    public static void main(String[] args) {
        new SwingApplication("SwingApplication");
    }
}
```

Output:

All Online Learning

www.allonlinelearning.com



4. Implement an Event Handler:

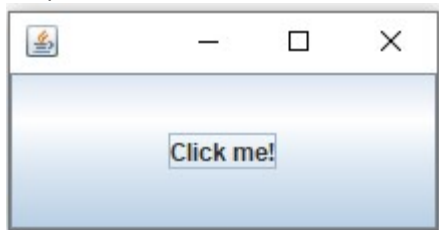
```
package awt;
```

```
import java.awt.Color;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.JButton;
import javax.swing.JFrame;
```

```
public class ButtonClickExample extends JFrame implements
ActionListener {
    JButton b = new JButton("Click me!");
    public ButtonClickExample() {
        b.addActionListener(this);
        getContentPane().add(b);
        pack();
        setVisible(true);
    }
    public void actionPerformed(ActionEvent e) {
        b.setBackground(Color.CYAN);
    }
    public static void main(String[] args) {
        new ButtonClickExample();
    }
}
```

```
}
```

Output:



All Online Learning

www.allonlinelearning.com

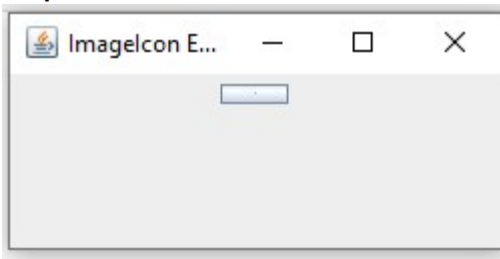


5. Image Icon:

package awt;

```
import javax.swing.*;
public class ImagenIconExample extends JFrame {
    public static void main(String[] args) {
        JFrame frame = new JFrame("ImagenIcon Example");
        ImagenIcon icon = new ImagenIcon("smallfrog.jpg");
        JPanel panel = new JPanel();
        JButton button = new JButton(icon);
        panel.add(button);
        frame.getContentPane().add(panel);
        frame.pack();
        frame.setVisible(true);
    }
}
```

Output:



6. JTextField Example: CelsiusConverter

```
package awt;
import java.awt.BorderLayout;
import java.awt.GridLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JTextField;
import javax.swing.SwingConstants;
import javax.swing.UIManager;
public class CelsiusConverter implements ActionListener {
    JFrame converterFrame;
    JPanel converterPanel;
```

All Online Learning

www.allonlinelearning.com

```

    JTextField tempCelsius;
    JLabel celsiusLabel, fahrenheitLabel;
    JButton convertTemp;
    public CelsiusConverter() {
        converterFrame = new JFrame("Convert Celsius to Fahrenheit");
        converterPanel = new JPanel();
        converterPanel.setLayout(new GridLayout(2, 2));
        addWidgets();
        converterFrame.getContentPane().add(converterPanel, BorderLayout.CENTER);
        converterFrame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        converterFrame.pack();
        converterFrame.setVisible(true);
    }
    private void addWidgets() {
        tempCelsius = new JTextField(2);
        celsiusLabel = new JLabel("Celsius", SwingConstants.LEFT);
        convertTemp = new JButton("Convert...");
        fahrenheitLabel = new JLabel("Fahrenheit", SwingConstants.LEFT);
        convertTemp.addActionListener(this);
        converterPanel.add(tempCelsius);
        converterPanel.add(celsiusLabel);
        converterPanel.add(convertTemp);
        converterPanel.add(fahrenheitLabel);
    }
    public void actionPerformed(ActionEvent event) {
        int tempFahr = (int)((Double.parseDouble(
            tempCelsius.getText())) * 1.8 + 32);
        fahrenheitLabel.setText(tempFahr + " Fahrenheit");
    }

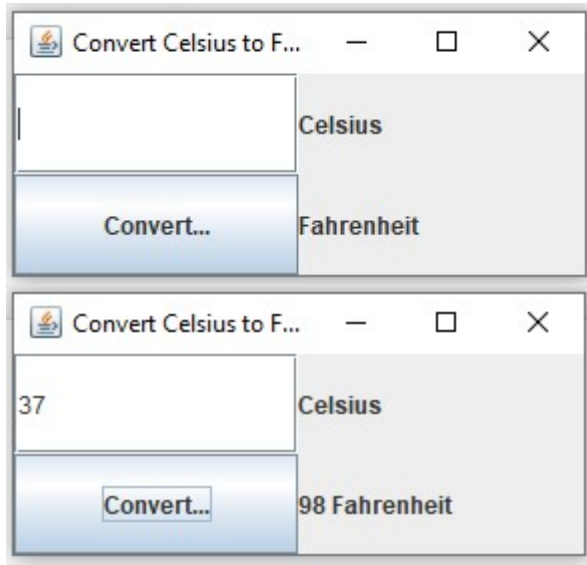
    public static void main(String[] args) {
        try {
            UIManager.setLookAndFeel(UIManager.getCrossPlatformLookAndFeelClassName());
        } catch (Exception e) {}

        CelsiusConverter converter = new CelsiusConverter();
    }
} // end CelciusConverter class
```

Output:

All Online Learning

www.allonlinelearning.com



7. JCheckBox Example: package awt;

```
import java.awt.GridLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.JButton;
import javax.swing.JCheckBox;
import javax.swing.JFrame;
import javax.swing.JPanel;
```

```
public class CheckBoxDemo extends JPanel implements ActionListener {
    JCheckBox chinButton;
    JCheckBox glassesButton;
    JCheckBox hairButton;
    JCheckBox teethButton;
    JButton goButton = new JButton("Go!");
```

```
    public CheckBoxDemo() {
        chinButton = new JCheckBox("Chin");
        chinButton.setSelected(true);
        glassesButton = new JCheckBox("Glasses");
        glassesButton.setSelected(true);
        hairButton = new JCheckBox("Hair");
        hairButton.setSelected(true);
        teethButton = new JCheckBox("Teeth");
        teethButton.setSelected(true);
        goButton.addActionListener(this);
        setLayout(new GridLayout(0, 1));
        add(chinButton);
```

All Online Learning

www.allonlinelearning.com

```
add(glassesButton);
add(hairButton);
add(teethButton);
add(goButton);

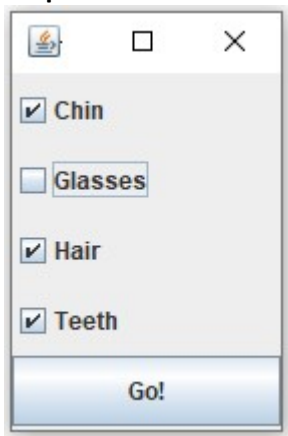
}

public static void main(String[] args){
    JFrame frame = new JFrame("CheckBoxDemo");
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    frame.getContentPane().add(new CheckBoxDemo());
    frame.pack();
    frame.setVisible(true);
}

public void actionPerformed(ActionEvent e) {
    if (glassesButton.isSelected()) {
        System.out.println("Glasses = true");
    }
    else {
        System.out.println("Glasses = false");
    }
    System.exit(0);
}

}
```

Output:



8. JRadioButton Example:

```
package awt;
```

```
import java.awt.BorderLayout;
```

All Online Learning

www.allonlinelearning.com

```
import java.awt.GridLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.ButtonGroup;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JRadioButton;

public class RadioButtonDemo extends JPanel implements ActionListener {
    String birdString = "Bird";
    String catString = "Cat";
    String dogString = "Dog";
    String rabbitString = "Rabbit";
    String pigString = "Pig";
    JRadioButton birdButton = new JRadioButton(birdString);
    JRadioButton catButton = new JRadioButton(catString);
    JRadioButton dogButton = new JRadioButton(dogString);
    JRadioButton rabbitButton = new JRadioButton(rabbitString);
    JRadioButton pigButton = new JRadioButton(pigString);
    JButton goButton = new JButton("Go!");

    public RadioButtonDemo() {
        birdButton.setSelected(true);
        ButtonGroup group = new ButtonGroup();
        group.add(birdButton);
        group.add(catButton);
        group.add(dogButton);
        group.add(rabbitButton);
        group.add(pigButton);
        goButton.addActionListener(this);

        setLayout(new GridLayout(0, 1));
        add(birdButton);
        add(catButton);
        add(dogButton);
        add(rabbitButton);
        add(pigButton);
        add(goButton);
    }

    public static void main(String s[]) {
        JFrame frame = new JFrame("RadioButtonDemo");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.getContentPane().add(new RadioButtonDemo(), BorderLayout.CENTER);
        frame.pack();
    }
}
```

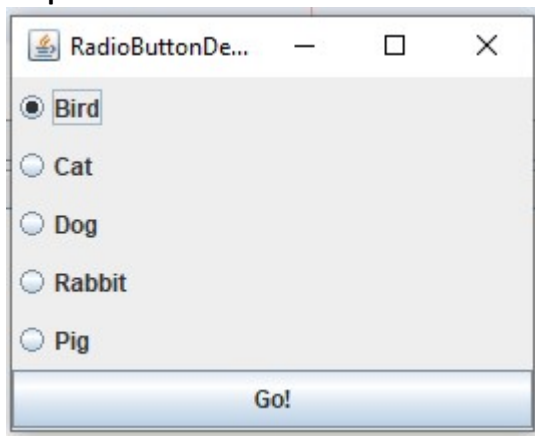
All Online Learning

www.allonlinelearning.com

```
frame.setVisible(true);
}
public void actionPerformed(ActionEvent e) {
    if (birdButton.isSelected()) {
        System.out.println("User finally selected bird.");
        System.exit(0);
    }
    if (catButton.isSelected()) {
        System.out.println("User finally selected cat.");
        System.exit(0);
    }
    if (dogButton.isSelected()) {
        System.out.println("User finally selected dog.");
        System.exit(0);
    }

    if (rabbitButton.isSelected()) {
        System.out.println("User finally selected rabbit.");
        System.exit(0);
    }
    if (pigButton.isSelected()) {
        System.out.println("User finally selected pig.");
        System.exit(0);
    }
}
}
```

Output:



9. JComboBox:

```
package awt;
```

```
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
```

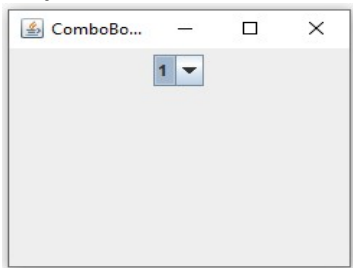
All Online Learning

www.allonlinelearning.com

```
import static java.lang.Character.UnicodeBlock.of;
import java.util.Set;
import java.util.TreeSet;
import javax.swing.JComboBox;
import javax.swing.JFrame;
import javax.swing.JPanel;

public class ComboBoxExample implements ActionListener {
    JComboBox box;
    public ComboBoxExample() {
        JFrame frame = new JFrame("ComboBoxExample");
        JPanel panel = new JPanel();
        Set s = new TreeSet();
        s.add(new Integer(1));
        s.add(new Integer(2));
        s.add(new Integer(3));
        box = new JComboBox(s.toArray());
        box.addActionListener(this);
        panel.add(box);
        frame.getContentPane().add(panel);
        frame.pack();
        frame.setVisible(true);
    }
    public static void main(String[] args) {
        new ComboBoxExample();
    }
    public void actionPerformed(ActionEvent e) {
        if ("comboBoxChanged".equals(e.getActionCommand())) {
            System.out.println("User chose index " +
                box.getSelectedIndex());
        }
    }
}
```

Output:



10. FlowLayout:
package awt;

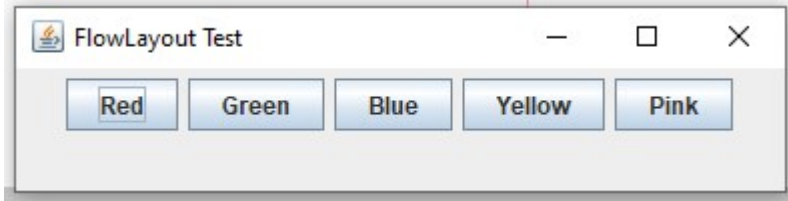
All Online Learning

www.allonlinelearning.com

```
import java.awt.Container;
import java.awt.FlowLayout;
import javax.swing.JButton;
import javax.swing.JFrame;

public class FlowLayoutTest extends JFrame {
    JButton b1=new JButton("Red"),b2=new JButton("Green"),b3=new
JButton("Blue"),b4=new JButton("Yellow"),b5=new JButton("Pink");
    public FlowLayoutTest() {
        setTitle("FlowLayout Test");
        Container pane = getContentPane();
        pane.setLayout(new FlowLayout());
        setBounds(0,0,400,100);
        pane.add(b1); pane.add(b2); pane.add(b3);
        pane.add(b4); pane.add(b5);
    }
    public static void main(String args[]) {
        JFrame f = new FlowLayoutTest();
        f.setVisible(true);
    }
}
```

Output:



11. BorderLayout:

```
package awt;

import java.awt.BorderLayout;
import java.awt.Container;
import javax.swing.JButton;
import javax.swing.JFrame;

public class BorderLayoutTest extends JFrame {
    JButton b1=new JButton("Red"),
    b2=new JButton("Green"),b3=new JButton("Blue"),
    b4=new JButton("Yellow"),b5=new JButton("Pink");
    public BorderLayoutTest() {
        setTitle("BorderLayout Test");
        Container pane = getContentPane();
        pane.setLayout(new BorderLayout());
        setBounds(0,0,400,150);
        pane.add(b1,"North"); pane.add(b2,"South"); pane.add(b3,"East");
    }
}
```

All Online Learning

www.allonlinelearning.com

```
pane.add(b4,"West"); pane.add(b5,"Center");
}
public static void main(String args[]) {
    JFrame f = new BorderLayoutTest();
    f.setVisible(true);
}
}
```

Output:



12. GridLayout:

```
package awt;
```

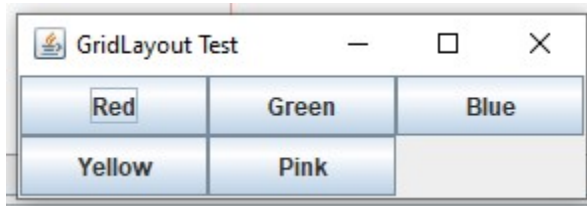
```
import java.awt.Container;
import java.awt.GridLayout;
import javax.swing.JButton;
import javax.swing.JFrame;
```

```
public class GridLayoutTest extends JFrame {
    JButton b1=new JButton("Red"),
    b2=new JButton("Green"),b3=new JButton("Blue"),
    b4=new JButton("Yellow"),b5=new JButton("Pink");
    public GridLayoutTest() {
        setTitle("GridLayout Test");
        Container pane = getContentPane();
        pane.setLayout(new GridLayout(2,3));
        setBounds(0,0,300,100);
        pane.add(b1); pane.add(b2); pane.add(b3);
        pane.add(b4); pane.add(b5);
    }
    public static void main(String args[]) {
        JFrame f = new GridLayoutTest();
        f.setVisible(true);
    }
}
```

Output:

All Online Learning

www.allonlinelearning.com



13. CardLayout:

package awt;

import java.awt.CardLayout;

import java.awt.Container;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import javax.swing.JButton;

import javax.swing.JFrame;

```
public class CardLayoutTest extends JFrame implements ActionListener {
    JButton b1 = new JButton("Red"), b2 = new JButton("Green"),
        b3 = new JButton("Blue"), b4 = new JButton("Yellow"),
        b5 = new JButton("Pink");
    CardLayout lo = new CardLayout();
    Container pane;
    public CardLayoutTest() {
        setTitle("CardLayout Test");
        pane = getContentPane();
        pane.setLayout(lo);
        setBounds(0,0,200,100);
        pane.add(b1,"1"); pane.add(b2,"2"); pane.add(b3,"3"); pane.add(b4,"4"); pane.add(b5,"5");
        b1.addActionListener(this); b2.addActionListener(this);
        b3.addActionListener(this); b4.addActionListener(this);
        b5.addActionListener(this);
    }
}
```

// in the same file...

```
public void actionPerformed(ActionEvent e) {
    if (e.getSource() == b1) lo.next(pane);
    else if (e.getSource() == b2) lo.next(pane);
    else if (e.getSource() == b3) lo.next(pane);
    else if (e.getSource() == b4) lo.next(pane);
    else if (e.getSource() == b5) lo.next(pane);
}
public static void main(String args[]) {
    JFrame f = new CardLayoutTest();
    f.setVisible(true);
}
```

All Online Learning

www.allonlinelearning.com

}

Output:

