

GUI 1

```
import java.awt.Color;
import java.awt.Container;
import javax.swing.JFrame;
import javax.swing.JButton;
import java.awt.GridLayout;
class Gui
{
    JFrame frame;
    frame.setBackground(Color.blue);;
    JButton Button1,Button2,Button3;
    JButton Button4,Button5,Button6;
    public void init()
    {
        frame = new JFrame("example 2");
        Button1 = new JButton("1");
        Button2 = new JButton("2");
        Button3 = new JButton("3");
        Button4 = new JButton("4");
        Button4.setBackground(Color.red);
        Button4.setForeground(Color.white);
```

```
Button5 = new JButton("5");
Button6 = new JButton("6");
frame.add(Button1); frame.add(Button2); frame.add(Button3);
frame.add(Button4); frame.add(Button5); frame.add(Button6);
frame.setVisible(true);
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.setSize(300,200);
frame.setLayout(new GridLayout(2,3));
}
public Gui()
{
init();
}
}
```

GUI 2

```
import javax.swing.JFrame;
import javax.swing.JButton;
import java.awt.GridLayout;
class GUI
{
JFrame frame;
JButton btn1,btn2,btn3,btn4,btn5,btn6;
public void init()
```

```
{
    frame = new JFrame("GUI Example 1");
    btn1 = new JButton("1");
    btn2 = new JButton("2");
    btn3 = new JButton("3");
    btn4 = new JButton("4");
    btn5 = new JButton("5");
    btn6 = new JButton("6");
    frame.setLayout(new GridLayout(2,3));
    frame.add(btn1); frame.add(btn2); frame.add(btn3);
    frame.add(btn4); frame.add(btn5); frame.add(btn6);
    frame.setVisible(true);
    frame.setSize(300,200);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}
public GUI()
{
    init();
}
}
```

GUI 3

```
import javax.swing.JFrame;
import javax.swing.JButton;
```

```
import java.awt.BorderLayout;

public class GUI
{
    JFrame frame;
    JButton east,west,north,south,center;
    public void init()
    {
        frame = new JFrame("BorderLayout");
        east = new JButton("EAST");
        west = new JButton("WEST");
        north = new JButton("NORTH");
        south = new JButton("SOUTH");
        center = new JButton("CENTER");
        //frame.setLayout(new BorderLayout(20,40));
        frame.add(east,BorderLayout.EAST);
        frame.add(north,BorderLayout.NORTH);
        frame.add(south,BorderLayout.SOUTH);
        frame.add(west,BorderLayout.WEST);
        frame.add(center,BorderLayout.CENTER);
        frame.setVisible(true);
        frame.setSize(200,300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    }
}
```

```
public GUI()
```

```
{
```

```
    init(); }
```

GUI 4

```
import javax.swing.JFrame;
```

```
import javax.swing.JPanel;
```

```
import javax.swing.JButton;
```

```
import javax.swing.JTextField;
```

```
import javax.swing.JLabel;
```

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

```
import java.awt.GridLayout;
```

```
class GUI
```

```
{
```

```
    JFrame frame;
```

```
    JPanel panel;
```

```
    JLabel label;
```

```
    JTextField text;
```

```
    JButton btn0, btn1, btn2, btn3, btn4, btn5, btn6, btn7, btn8,
```

```
        btn9, btnPlus, btnMinus, btnMul, btnDiv, btnDecimal,
```

```
        btnEqual;
```

```
    public void init()
```

```
{
```

```
frame = new JFrame("My Calculater");
panel = new JPanel();
label = new JLabel("My Calculater");
text = new JTextField(10);
btn0 = new JButton("0");
btn1 = new JButton("1");
btn2 = new JButton("2");
btn3 = new JButton("3");
btn4 = new JButton("4");
btn5 = new JButton("5");
btn6 = new JButton("6");
btn7 = new JButton("7");
btn8 = new JButton("8");
btn9 = new JButton("9");
btnPlus = new JButton("+");
btnMinus = new JButton("-");
btnMul = new JButton("X");
btnDiv = new JButton("/");
btnEqual = new JButton("=");
btnDecimal = new JButton(".");
panel.setLayout(new GridLayout(4,4));
panel.add(btn1);panel.add(btn2);panel.add(btn3);panel.add(btnPlus);
```

```
panel.add(btn4);panel.add(btn5);panel.add(btn6);panel.add(btnMinus);  
panel.add(btn7);panel.add(btn8);panel.add(btn9);panel.add(btnDiv);
```

```
panel.add(btnEqual);panel.add(btnDecimal);panel.add(btn0);panel.add(b  
tnMul);
```

```
frame.setLayout(new BorderLayout());
```

```
frame.add(text,BorderLayout.NORTH);
```

```
frame.add(label,BorderLayout.SOUTH);
```

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

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

```
frame.setSize(350,500);
```

```
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
frame.setResizable(false);
```

```
}
```

```
public GUI()
```

```
{
```

```
init();
```

```
}
```

```
}
```

GUI 5

```
import javax.swing.JPanel;
import javax.swing.JFrame;
import javax.swing.JButton;
import javax.swing.JLabel;
import javax.swing.JTextField;
import java.awt.GridLayout;
import java.awt.BorderLayout;
```

```
class GUI
```

```
{
    JFrame frame;
    JPanel textPanel, buttonPanel;
    JButton btnFirst, btnPrevious, btnNext, btnLast, btnSave,
        btnInsert, btnUpdate, btnDelete, btnShow, btnExit;
    JLabel rollNumber, name, address;
    JTextField textRoll, textName, textAddress;
    public void init()
    {
        frame = new JFrame("Student Record");
        textPanel = new JPanel();
        buttonPanel = new JPanel();
        btnFirst = new JButton("First");
        btnPrevious = new JButton("Previous");
```



```
btnNext = new JButton("Next");
btnLast = new JButton("Last");
btnSave = new JButton("Save");
btnInsert = new JButton("Insert");
btnUpdate = new JButton("Update");
btnDelete = new JButton("Delete");
btnShow = new JButton("Show");
btnExit = new JButton("Exit");
rollNumber = new JLabel("Student's Roll Number");
name = new JLabel("Student Name");
address = new JLabel("Student Address");
textRoll = new JTextField(10);
textName = new JTextField(10);
textAddress = new JTextField(10);
////////////////////////////////////
textPanel.setLayout(new GridLayout(3,2));
textPanel.add(rollNumber); textPanel.add(textRoll);
textPanel.add(name); textPanel.add(textName);
textPanel.add(address); textPanel.add(textAddress);
////////////////////////////////////
buttonPanel.setLayout(new GridLayout(2,5));
```

```
buttonPanel.add(btnFirst);buttonPanel.add(btnPrevious);buttonPanel.add
(btnNext); buttonPanel.add(btnLast); buttonPanel.add(btnSave);
```

```
buttonPanel.add(btnInsert);buttonPanel.add(btnUpdate);buttonPanel.add  
(btnDelete); buttonPanel.add(btnShow); buttonPanel.add(btnExit);
```

```
////////////////////////////////////
```

```
frame.setLayout(new BorderLayout());
```

```
frame.add(textPanel,BorderLayout.NORTH);
```

```
frame.add(buttonPanel,BorderLayout.SOUTH);
```

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

```
frame.setSize(500,300);
```

```
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
}
```

```
public GUI()
```

```
{
```

```
    init();
```

```
}
```

```
}
```

GUI 5

```
import javax.swing.JFrame;
```

```
import javax.swing.JButton;
```

```
import javax.swing.JTextField;
```

```
import java.awt.FlowLayout;
```

```
import java.awt.Color;
```

```
import java.awt.Container;
```

```
class GUI
```

```
{
JFrame frame;
JButton ok,cancel;
JTextField text;
public void init()
{
    frame = new JFrame("GUI Example 1");
    Container c = frame.getContentPane();
    c.setBackground(new Color(194,233,124));
    ok = new JButton("OK");
    ok.setBackground(Color.black);
    ok.setForeground(Color.white);
    cancel = new JButton("Cancel");
    cancel.setBackground(Color.black);
    cancel.setForeground(Color.white);
    text = new JTextField(10);
    frame.setLayout(new FlowLayout());
    c.add(ok);
    c.add(cancel);
    c.add(text);
    frame.setVisible(true);
    frame.setSize(300,200);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}
```

```
}  
public GUI()  
{  
    init();  
}  
}
```

GUI 6

```
import javax.swing.JFrame;  
import javax.swing.JButton;  
import javax.swing.JTextField;  
import java.awt.FlowLayout;  
import java.awt.Color;  
import java.awt.Container;  
class GUI  
{  
    JFrame frame;  
    JButton ok, cancel;  
    JTextField text;  
    public void init()  
    {  
        frame = new JFrame("GUI Example 1");  
        Container c = frame.getContentPane();  
        c.setBackground(new Color(194,233,124));
```

```
    ok = new JButton("OK");
    ok.setBackground(Color.black);
    ok.setForeground(Color.white);
cancel = new JButton("Cancel");
    cancel.setBackground(Color.black);
    cancel.setForeground(Color.white);
    text = new JTextField(10);
    frame.setLayout(new FlowLayout());
    c.add(ok);
    c.add(cancel);
    c.add(text);
    frame.setVisible(true);
    frame.setSize(300,200);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}
public GUI()
{
    init();
}
}
```

EVENT HANDLING 1

```
import javax.swing.JFrame;
import javax.swing.JButton;
```

```
import java.awt.FlowLayout;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;
class GUI implements ActionListener
{
    JFrame frame;
    JButton ok, cancel, exit;
    public GUI()
    {
        frame = new JFrame();
        ok = new JButton("OK");
        cancel = new JButton("CANCEL");
        exit = new JButton("EXIT");
        frame.setLayout(new FlowLayout());
        frame.add(ok);
        frame.add(cancel);
        frame.add(exit);
        frame.setVisible(true);
        frame.setSize(300,300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        ok.addActionListener(this);
        cancel.addActionListener(this);
        exit.addActionListener(this);
    }
}
```

```

    }
    public void actionPerformed(ActionEvent ae)
    {
        if(ae.getSource() == ok)
            System.out.println("You have clicked the OK button");
        if (ae.getSource() == cancel)
            System.out.println("You have clicked the CANCEL button");
        if (ae.getSource() == exit)
            System.exit(0);
    }
}

```

EVENT HANDLING 2

```

import javax.swing.JFrame;
import javax.swing.JButton;
import java.awt.FlowLayout;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;
import javax.swing.JOptionPane;
class GUI implements ActionListener
{
    JFrame frame;
    JButton ok, cancel, exit;
    public GUI()

```

```
{
    frame = new JFrame();
    ok = new JButton("OK");
    cancel = new JButton("CANCEL");
    exit = new JButton("EXIT");
    frame.setLayout(new FlowLayout());
    frame.add(ok);
    frame.add(cancel);
    frame.add(exit);
    frame.setVisible(true);
    frame.setSize(300,300);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    ok.addActionListener(this);
    cancel.addActionListener(this);
    exit.addActionListener(this);
}

public void actionPerformed(ActionEvent ae)
{
    if(ae.getSource() == ok)
        JOptionPane.showMessageDialog(frame, "You have clicked the
OK button");
    if (ae.getSource() == cancel)
        JOptionPane.showMessageDialog(frame, "You have clicked the
CANCEL button");
}
```



```

        if (ae.getSource() == exit)
        {
            int option = JOptionPane.showConfirmDialog(frame,"Do you
really want to exit?","Exit
Application",JOptionPane.YES_NO_OPTION);
            if(option == 0)
                System.exit(0);
        }
    }
}

```

EVENT HANDLING 3

```

import javax.swing.JFrame;
import javax.swing.JButton;
import javax.swing.JLabel;
import javax.swing.JTextField;
import java.awt.FlowLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
class GUI implements ActionListener
{
    JFrame frame;
    JButton btnPlus, btnMul;
    JLabel firstOperand, secondOperand,answer;

```

```
    JTextField firstNumber, secondNumber, result;
    String val;
    int num1, num2, res;
    public GUI()
    {
        frame = new JFrame();
        btnPlus = new JButton("+");
        btnMul = new JButton("X");
        firstOperand = new JLabel("First Operand");
        secondOperand = new JLabel("Second Operand");
        answer = new JLabel("Answer");
        firstNumber = new JTextField(10);
        secondNumber = new JTextField(10);
        result = new JTextField(10);
        frame.setLayout(new FlowLayout());
        frame.add(firstOperand);
        frame.add(firstNumber);
        frame.add(secondOperand);
        frame.add(secondNumber);
        frame.add(btnPlus);
        frame.add(btnMul);
        frame.add(answer);
        frame.add(result);
```

```

frame.setVisible(true);
frame.setSize(115,250);
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
btnPlus.addActionListener(this);
btnMul.addActionListener(this);
}

public void actionPerformed(ActionEvent ae)
{
    val = firstNumber.getText();
    num1 = Integer.parseInt(val);
    val = secondNumber.getText();
    num2 = Integer.parseInt(val);

    if(ae.getSource() == btnPlus)
        res = num1 + num2;
    if(ae.getSource() == btnMul)
        res = num1 * num2;
    result.setText(res+"");
}
}

import javax.swing.JFrame;

```

EVENT HANDLING 5

```

import javax.swing.JLabel;

```

```
import java.awt.FlowLayout;
import java.awt.event.MouseMotionListener;
import java.awt.event.MouseEvent;
class GUI implements MouseMotionListener
{
    JFrame frame;
    JLabel label;
    int x, y;
    public GUI()
    {
        frame = new JFrame();
        label = new JLabel("Move mouse on the frame");
        frame.setLayout(new FlowLayout());
        frame.add(label);
        frame.setVisible(true);
        frame.setSize(400,400);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.addMouseMotionListener(this);
    }
    public void mouseDragged(MouseEvent e)
    {
    }
    public void mouseMoved(MouseEvent e)
```

```
{  
    x = e.getX();  
    y = e.getY();  
    label.setText(x + " , " + y);  
}  
}
```

EVENT HANDLING 6

```
import javax.swing.JFrame; import java.awt.event.WindowListener;  
import java.awt.event.WindowEvent;  
import javax.swing.JOptionPane;  
class GUI implements WindowListener  
{  
    JFrame frame;  
    public GUI()  
    {  
        frame = new JFrame();  
        frame.setVisible(true);  
        frame.setSize(200,200);  
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);  
        frame.addWindowListener(this);  
    }  
    public void windowOpened(WindowEvent e) {  
        JOptionPane.showMessageDialog(null, "Welcome!!!!");  
    }  
}
```

```

}
public void windowClosing(WindowEvent e) {
    JOptionPane.showMessageDialog(null, "Good Bye!!!!");
}
public void windowClosed(WindowEvent e) {
}
public void windowIconified(WindowEvent e) {
    System.out.println("Frame window has been iconified");
}
public void windowDeiconified(WindowEvent e) {
    System.out.println("Frame window has been De-iconified");
}
public void windowActivated(WindowEvent e) {
    System.out.println("Frame window has been activated");
}

public void windowDeactivated(WindowEvent e) {
    System.out.println("Frame window has been de-activated");
}}

```

EVENT HANDLING 7

```

import javax.swing.JFrame; import javax.swing.JButton;
import java.awt.FlowLayout;
import java.awt.event.MouseListener;

```

```
import java.awt.event.MouseEvent;
class GUI implements MouseListener
{
    JFrame frame;
    JButton click,press,release,enter,exit;
    public GUI()
    {
        frame = new JFrame();
        click = new JButton("CLICK");
        press = new JButton("PRESS");
        release = new JButton("RELEASE");
        enter = new JButton("ENTER");
        exit = new JButton("EXIT");
        frame.setLayout(new FlowLayout());
        frame.add(click);
        frame.add(press);
        frame.add(release);
        frame.add(enter);
        frame.add(exit);
        frame.setVisible(true);
        frame.setSize(400,200);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        click.addMouseListener(this);
```

```
press.addMouseListener(this);
release.addMouseListener(this);
enter.addMouseListener(this);
exit.addMouseListener(this);
}
public void mouseClicked(MouseEvent e) {
    if(e.getSource() == click)
        System.out.println("Mouse Button has been clicked");
}
public void mousePressed(MouseEvent e) {
}
public void mouseReleased(MouseEvent e) {
}
public void mouseEntered(MouseEvent e) {
    if(e.getSource() == enter)
        System.out.println("Mouse pointer entered into the dimentions of
button");
}
public void mouseExited(MouseEvent e) {
    if (e.getSource() == exit)
        System.out.println("Mouse pointer exited from the dimentions of
button");
}
}
```


EVENT HANDLING 8

```
import javax.swing.JFrame; import javax.swing.JButton;
import javax.swing.JTextField; import java.awt.FlowLayout;
import java.awt.event.FocusEvent; import java.awt.event.FocusListener;
import java.awt.Color;
class GUI implements FocusListener
{
    JFrame frame;
    JButton ok, cancel;
    JTextField txt1, txt2;
    public GUI()
    {
        frame = new JFrame();
        ok = new JButton("OK");
        cancel = new JButton("Cancel");
        txt1 = new JTextField(10);
        txt2 = new JTextField(10);
        frame.setLayout(new FlowLayout());
        frame.add(ok); frame.add(cancel);
        frame.add(txt1); frame.add(txt2);
        frame.setVisible(true);
        frame.setSize(400,300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
ok.addFocusListener(this);
cancel.addFocusListener(this);
txt1.addFocusListener(this);
txt2.addFocusListener(this);
}
public void focusGained(FocusEvent fe)
{
    if(fe.getSource() == ok)
        ok.setText("Focus Gained");
    if(fe.getSource() == cancel)
        cancel.setText("Focus Gained");
    if(fe.getSource() == txt1)
    {
        txt1.setBackground(Color.red);
        txt1.setForeground(Color.white);
    }
    if(fe.getSource() == txt2)
    {
        txt2.setBackground(Color.red);
        txt2.setForeground(Color.white);
    }
}
public void focusLost(FocusEvent fe)
```

```
{
    if(fe.getSource() == ok)
        ok.setText("Focus Lost");
    if(fe.getSource() == cancel)
        cancel.setText("Focus Lost");
    if(fe.getSource() == txt1)
    {
        txt1.setBackground(Color.white);
        txt1.setForeground(Color.black);
    }
    if(fe.getSource() == txt2)
    {
        txt2.setBackground(Color.white);
        txt2.setForeground(Color.black);
    }
}
}
```

EVENT HANDLING 9

```
import javax.swing.JFrame;
import javax.swing.JLabel;
import java.awt.FlowLayout;
import java.awt.event.MouseMotionAdapter;
import java.awt.event.MouseEvent;
```

```
class GUI extends MouseMotionAdapter
{
    JFrame frame;
    JLabel label;
    int x, y;
    public GUI()
    {
        frame = new JFrame();
        label = new JLabel("Move mouse on the frame");
        frame.setLayout(new FlowLayout());
        frame.add(label);
        frame.setVisible(true);
        frame.setSize(400,400);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.addMouseMotionListener(this);
    }
    public void mouseMoved(MouseEvent e)
    {
        x = e.getX();
        y = e.getY();
        label.setText(x + " , " + y);
    }
}
```

EVENT HANDLING 10

```
import javax.swing.JFrame;
import java.awt.event.WindowAdapter;
import java.awt.event.WindowEvent;
import javax.swing.JOptionPane;
class GUI extends WindowAdapter
{
    JFrame frame;
    public GUI()
    {
        frame = new JFrame();
        frame.setVisible(true);
        frame.setSize(200,200);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.addWindowListener(this);
    }
    public void windowOpened(WindowEvent e) {
        JOptionPane.showMessageDialog(null, "Welcome!!!!");
    }
    public void windowClosing(WindowEvent e) {
        JOptionPane.showMessageDialog(null, "Good Bye!!!!");
    }
}
```

EVENT HANDLING 11

```
import java.awt.FlowLayout;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JButton;
import java.awt.event.MouseListener;
import java.awt.event.MouseMotionListener;
import java.awt.event.WindowListener;
import java.awt.event.MouseEvent;
import java.awt.event.WindowEvent;
import javax.swing.JOptionPane;
class GUI implements WindowListener, MouseListener,
MouseMotionListener
{
    int x,y;
    JFrame frame;
    JButton exit;
    JLabel label;
    public GUI()
    {
        frame = new JFrame();
        exit = new JButton("Exit");
        label = new JLabel("Move mouse on the frame");
```

```
frame.setLayout(new FlowLayout());
frame.add(label);
frame.add(exit);
frame.setVisible(true);
frame.setSize(300,400);
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.addWindowListener(this);
frame.addMouseMotionListener(this);
exit.addMouseListener(this);
}

public void windowOpened(WindowEvent e) {
    JOptionPane.showMessageDialog(null, "Welcome !!!!");
}

public void windowClosing(WindowEvent e) {
    JOptionPane.showMessageDialog(null, "Good Bye !!!!");
}

public void windowClosed(WindowEvent e) {
}

public void windowIconified(WindowEvent e) {
}

public void windowDeiconified(WindowEvent e) {
}

public void windowActivated(WindowEvent e) {
```

```
}  
public void windowDeactivated(WindowEvent e) {  
}  
public void mouseClicked(MouseEvent e) {  
    System.exit(0);  
}  
public void mousePressed(MouseEvent e) {  
}  
public void mouseReleased(MouseEvent e) {  
}  
public void mouseEntered(MouseEvent e) {  
}  
public void mouseExited(MouseEvent e) {  
}  
public void mouseDragged(MouseEvent e) {  
}  
public void mouseMoved(MouseEvent e) {  
    x = e.getX();  
    y = e.getY();  
    label.setText(x + " , " + y);  
}  
}
```