LAB-9

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

class SwingDemo {
    SwingDemo() {
        JFrame jfrm = new JFrame("Divider App");
        jfrm.setSize(275, 150);
        jfrm.setLayout(new FlowLayout());
        jfrm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        JLabel jlab = new JLabel("Enter the dividend and divisor");
        JTextField ajtf = new JTextField(8);
        JTextField bjtf = new JTextField(8);
        JButton button = new JButton("Calculate");
        JLabel err = new JLabel();
        JLabel alab = new JLabel();
        JLabel blab = new JLabel();
        JLabel anslab = new JLabel();
        jfrm.add(err);
        jfrm.add(jlab);
        jfrm.add(ajtf);
        jfrm.add(bjtf);
        jfrm.add(button);
        jfrm.add(alab);
        jfrm.add(blab);
        jfrm.add(anslab);
```

```
ActionListener l = new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        System.out.println("Action event from a text field");
    }
};

ajtf.addActionListener(l);
bjtf.addActionListener(l);

button.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        try {
            int a = Integer.parseInt(ajtf.getText());
            int b = Integer.parseInt(bjtf.getText());
            int ans = a/b;
            alab.setText("\n A = " + a);
            blab.setText("\n B = " + b);
            anslab.setText("\n Ans = " + ans);
        }
        catch (NumberFormatException e) {
            alab.setText("");
            blab.setText("");
            anslab.setText("");
            err.setText("Enter only integers!");
        }
        catch (ArithmeticException e) {
            alab.setText("");
            blab.setText("");
            anslab.setText("");
            err.setText("B should be NoN Zero!");
        }
    }
});
```

```
        jfrm.setVisible(true);
    }
}
public static void main(String args[]) {
    SwingUtilities.invokeLater(new Runnable() {
        public void run() {
            new SwingDemo();
        }
    });
}
```

OUTPUT -

Enter divider and dividend

120 30

Calculate A = 120

Explanation -

Import statement -

javax.swing - imports from Swing toolkit (i.e graphics user interface)
java.awt - Imports from abstract window toolkit providing GUI components.
java.event - imports classes for handling button clicks

Classes -

SwingDemo - Main class for defining the app's logic.
JFrame - A top level window container
JLabel - A non editable text label to disp info
JTextField - User input
JButton - Button that triggers actions.
FlowLayout - A manager that arranges components in horizontal flow.
ActionListener - An interface for handling action events.

Functions -

- new JFrame ("Divider App") ; new JFrame with specified title.
- Set Size (275, 150) - Sets the initial size of the frame.
- setLayout - Sets Layout manager to FlowLayout.
- setDefaultCloseOperation - Terminates when frame is closed.
- new JLabel - Creates a label with the given text
- JTextField - Creates field with 8 columns for input.
- JButton - Creates button with the given text.
- ActionListener - Attached to component to handle action events.
- ActionEvent - The method called when action event occurs.
- SwingUtilities - Schedules a runnable task to be executed on EDT.

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