

LAB 9

```

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

class SwingDemo {
    SwingDemo() {
        JFrame frame = new JFrame("Divider App");
        frame.setSize(275, 150);
        frame.setLayout(new FlowLayout());
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        JLabel glab = new JLabel("Enter the divisor");
        JTextField gtf = new JTextField(8);
        JTextField dtf = new JTextField(8);
        JButton button = new JButton("calculate");
        JLabel err = new JLabel();
        JLabel alab = new JLabel();
        JLabel blab = new JLabel();
        JLabel anslab = new JLabel();
        frame.add(glab);
        frame.add(gtf);
        frame.add(dtf);
        frame.add(button);
        frame.add(alab);
        frame.add(blab);
        frame.add(anslab);
        frame.add(err);
    }
}

```

```
gjam.add(alab);  
fjam.add(blab);  
fjam.add(anslab);
```

```
ActionListener l = new ActionListener() {  
    public void actionPerformed(ActionEvent evt) {
```

```
        System.out.println("Action event from  
        text field");
```

```
} ;
```

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

```
button.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent evt) {
```

```
        try {
```

```
            int a = Integer.parseInt(ajtf.getText());
```

```
            int b = Integer.parseInt(bjtf.getText());
```

```
            int ans = a / b;
```

```
            alab.setText("In A = " + a);
```

```
            blab.setText("In B = " + b);
```

```
            anslab.setText("In Ans = " + ans);
```

```
}
```

```
    catch (NumberFormatException e) {
```

```
        alab.setText("");
```

```
        blab.setText("");
```

```
        anslab.setText("");
```

```
err.setText ("Enter only integers! ");  
}  
catch (ArithmaticException e1) {  
    alab.setText (" ");  
    blab.setText (" ");  
    anslab.setText (" ");  
    err.setText ("B should be Non-zero!");  
}  
};  
jframe.setVisible (true);  
public static void main (String args []) {  
    SwingUtilities.invokeLater (new Runnable () {  
        public void run () {  
            new SwingDemo ();  
        }  
    });  
}
```

Output is 1 std::list<char> { 'A', 'B', 'C' }
no destructor called

Enter here divisor and dividend.

$$\boxed{120} \quad | \quad \boxed{30}$$

~~length of chord = $\sqrt{a^2 - b^2}$~~

Calculate $A = 120 \quad B = 30 \quad \text{Ans} = 4$

* imports : *

* javax.swing.*: Imports all classes from the Swing toolkit, used for creating graphical user interfaces.

* * java.awt.*: Imports all classes from the Abstract Window Toolkit (AWT), providing basic GUI components and event handling.

* * java.awt.event.*: Imports classes for handling events like button clicks and text field changes.

* classes : *

* * swingDemo*: The main class defining the application's logic.

* * JFrame*: A top-level window container for Swing components.

* * JLabel*: A non-editable text label to display information.

* * JTextField*: A single-line text field for user input.

* * JButton*: A clickable button that triggers actions.

- * **FlowLayout:** * A Layout manager that arranges components in a horizontal flow.
 - * **ActionListener:** * An interface for handling action events (like button clicks).
 - , * **Action Event:** * An event object representing an action.
 - * **Swing Utilities:** + A utility class for working with Swing components on the event dispatching thread (EDT).
- * Key Functions and Objects: *

+ **JFrame:** *

- **new JFrame ("Divider App"):** * creates a new JFrame with the specified title.

- **setSize (275, 180):** * sets the initial size of the frame

- **setLayout (new FlowLayout()):** * sets the layout manager to FlowLayout

* **setDefaultCloseOperation (JFrame.EXIT_ON_CLOSE):**

terminates the program when the frame closed.

- * `setVisible(true);` + Makes the frame visible

. * `JLabel:` +

- * `new JLabel ("Enter the divisor and dividend");` + creates a label with the given text.

- * `JButton:` +

- * `new JButton ("calculate");` + creates a button with the given text.

~~CDN
JFrame
JPanel
JLabel
JButton~~

*: ("egg robinia") am 27.6 cm -

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