

Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 & Num2 is displayed in Result field when the divide is clicked. If Num1 or Num2 were not an integer, the program would throw an Arithmetic Exception. Display the exception in a message dialog box.

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

```
class SwingDemo  
{
```

```
    SwingDemo()  
{
```

```
        JFrame jfrm = new JFrame("Divides 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 crl = new JLabel(1);
```

```
        JLabel alab = new JLabel(1);
```

```
        JLabel blab = new JLabel(1);
```

```
        JLabel anl = new JLabel(1);
```

```

jfrm.add (e1);
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 evt)
    {

```

```

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

```

```

}

```

```

ajtf.add ActionListener (l);
bjtf.add ActionListener (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("\nA = " + a);

```

```

            blab.setText("\nB = " + b);

```

```

            ansLab.setText("\nAns = " + ans);

```

```

        } catch (NumberFormatException e)
        {

```

```

            alab.setText("");

```

```

            blab.setText("");

```

```

            ansLab.setText("");

```

```

            alab.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 the divider and dividend:

10                      2  
Calculate              A=10   B=2   Ans=5

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## Functions

**JFrame** :- The `java.swing.JFrame` class is a type of container which inherits the `java.awt.Frame` class. `JFrame` works like the main window where components like labels, textfields are added to create a GUI.

**`setSize(int width, int height)`** - used to resize a frame using width and height parameters.

**`setLayout()`** - method allows you to set the layout of the container. The layout manager helps lay out the components held by this container.

**`setDefaultCloseOperation()`** - method is used to specify one of several options for the close button.  
`JFrame.EXIT_ON_CLOSE` - Exit the application.

**`JLabel`** - The object of `JLabel` class is a component for placing text in a container. It is used to display a single line of read only text.

**`JTextField`** - The object of a `JTextField` class is a text component that allows the editing of a single line text. It inherits `JTextComponent` class.

**`add(Frame)`** - adds new frame to the existing frame.

**ActionListener** - The Java `ActionListener` is notified whenever you click on the button or menu item. It is notified against `ActionEvent`.

`setText()` - This method substitutes new text for all or part of the text in the text field. This works only with the first line of multi-line text fields.

`setVisible()` - is a method that has return type boolean

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