LAB 9-

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

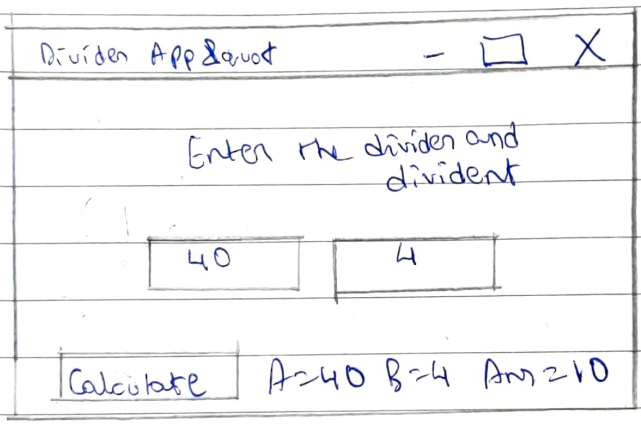
```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

class SwingDemo {
    SwingDemo() {
        JFrame jfrm = new JFrame("Divider App");
        jfrm.setSize(275, 150);
        jfrm.setLayout(new FlowLayout());
        // to terminate on close
        jfrm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        // text label
        JLabel jlab = new JLabel("Enter the divider and dividat");

        //add text field for both numbers
        JTextField ajtf = new JTextField(8);
        JTextfield bjtf = new JTextField(8);

        //Calc button
        JButton button = new JButton("Calculate");
```

```
//labels
JLabel err = new JLabel();
JLabel alab = new JLabel();
JLabel blab = new JLabel();
JLabel anslab = new JLabel();

//add in order
jfrm.add(err);
jfrm.add(jlab);
jfrm.add(ajtf);
jfrm.add(bjtf);
jfrm.add(button);
jfrm.add(alab);
jfrm.add(anslab);

ActionListener I = new ActionListener() {

    public void actionPerformed(ActionEvent evt)
    {
        System.out.println("Action event from a text fie
    }
};

ajtf.addActionListener(I);
bjtf.addActionListener(I);

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("\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[])
{
    // create frame on event dispatching thread
    SwingUtilities.invokeLater(new Runnable() {
```

```
        public void run(){
            new SwingDemo();
        }
    });
  }
}
```

Output :-



Definitions :-

JFrame :-

A class in Java that has its own modules and constructors

FlowLayout () :-

Creates a flow layout with centered alignments and a default 5 unit horizontal and vertical gap.

jfrm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

To terminate on close

JButton ("Calculate:") :
Button with text "Calculate" inside.

JLabel :
To give labels to the objects

jfrm.add(err);
To add error object that has the label

ActionListener ():
Defines what should be done when a user performs a certain operation

getText ();
This method receives a String

SetVisible ():
If you set it to be true, it means you want that thing to be visible in your screen.

JTextField :
A lightweight component that allows the editing of a single line of text.

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