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Write a program that creates a user interface to perform integer divisions. The user enters 2 nos in text fields, Num1 and Num 2. The division of Num1 and 2 in displayed in the result field when the divide button is clicked if Num1 or Num2 where not an integer. The program would throw NumberFormat Exception of Num2 were zero, No program could throw an Arithmetic Exception display exception to message display box.

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

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

```
button.addActionListener(new ActionListener()) {
    public void actionPerformed(ActionEvent ae) {
        calculateDivision();
    }
});
f.frm.setVisible(true);
}   // addActionListener e = new ActionListener()
private void calculateDivision() { // actionPerformed(ActionEvent ae)
    try {
        int a = Integer.parseInt(af.getText());
        int b = Integer.parseInt(bf.getText());
        if(b==0){
            throw new ArithmeticException("Division by zero");
        }
        int ans = a/b;
        alab.setText("A="+a);
        blab.setText("B="+b);
        anslab.setText("Ans="+ans); // catch(NumberFormatException e)
        err.setText(" ");
    }
    catch(NumberFormatException e){
        alab.setText(" ");
        blab.setText(" ");
        anslab.setText(" ");
        err.setText("B should be non-zero!!");
    }
}
public static void main(String args[]) {
    SwingUtilities.invokeLater(new Runnable()) {
        public void run() {
            new SwingDemo();
        }
    });
}
```

displayErrorMessage("Enter only Integers");
} catch(ArithmeticException e){
displayErrorMessage("B should be nonzero");
}
// public void displayErrorMessage(String message){
alab.setText(" ");
blab.setText(" ");
anslab.setText(" ");
err.setText(message);
}
// button.addActionListener(calculateListener);
// frm.setVisible(true);
}

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Output:

Enter the divider and dividend

[4] [1]

[Calculate] A = 4 B = 1 Ans = 4

Functions:

(1) JFrame: It is a top level container in Java Swing that represent a window with a title bar, border and optional menubar.

(2) setSize: It is used to resize of the frame

(3) setLayout: This line sets the layout manager for the frame to FlowLayout which arranges components from left to right in a flow like manner.

(4) Add: This line adds the user label to the frame

(7) InvokeLater: to perform task asynchronously in awt event dispatching thread.

(5) SetVisible: This line makes the frame visible.

(6) SetText: This lines sets the text of 'n' label to display value of n