

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 and Num2 were not an integer, the program would throw a NumberFormatException. If Num2 were zero, the program would throw an ArithmeticException. Display the exception in a message dialog box.

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

```
class SwingDemo {  
    private JFrame jfrm;  
    private JTextField ajtf, bjtf;  
    private JLabel alab, blab, anslab, err;  
  
    public SwingDemo() {  
        jfrm = new JFrame("Divider App");  
        jfrm.setSize(275, 200);  
        jfrm.setLayout(new FlowLayout());  
        jfrm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);  
  
        JLabel glab = new JLabel("Enter the  
divider 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(erro);
jfrm.add(jlab);
jfrm.add(a+j);
jfrm.add(b+j);
jfrm.add(button);
jfrm.add(alab);
jfrm.add(blabb);
jfrm.add(anslab);

```

```

button.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent evt) {
        calculateDivision();
    }
});

```

```

jfrm.setVisible(true);

```

```

private void calculateDivision() {
    try {
        int a = Integer.parseInt(a+j.getText());
        int b = Integer.parseInt(b+j.getText());
        if (b == 0) {
            throw new ArithmeticException("Division by zero!");
        }
    }
}

```

```

int ans = a/b;
alab.setText("A = " + a);
blabb.setText("B = " + b);
anslab.setText("Ans = " + ans);
erro.setText("");

```

```

} catch (NumberFormatException e) {
    alab.setText("");
    blabb.setText("");
    anslab.setText("");
}

```

```

    eor.setText("rs should be non-zero!");
}

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

```

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 member.
- 2) setSize :- It is used to set size of the frame.
- 3) SetLayout :- This line sets the layout manager for the frame to flow layout. Which arranges components from left to right in a flow like manner.
- 4) Add :- This line adds the user label to the frame.
- 5) setVisible :- This line makes the frame visible.

21/2/2024