

Q. Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the text field, NUM1 & NUM2. The division of NUM1 & NUM2 is displayed in the Result field when Divide button is clicked. If NUM1 or NUM2 were not an integer, the program would throw a NumberFormatException. If NUM1 were zero, the program would throw an ArithmeticException. Display the Exception in a message dialog box.

CODE:

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

class SwingDemo {
    SwingDemo() {
        JFrame jfrm = new JFrame("Divisor 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 err = new JLabel("");
JLabel alab = new JLabel("");
JLabel blab = new JLabel("");
JLabel anslab = new JLabel("");
```

```
jfrm.add(err);
jfrm.add(jlab);
jfrm.add(ajtf);
jfrm.add(bjtf);
jfrm.add(button);
jfrm.add(alab);
jfrm.add(blab);
jfrm.add(anslab);
```

```
ActionListener listener = new ActionListener() {
    public void actionPerformed(ActionEvent evt) {
        System.out.println("Action event from a  
text field");
    }
}
```

```
};
```

```
ajtf.addActionListener(listener);
```

```
bjtf.addActionListener(listener);
```

```
button.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent evt) {
```

```
try { int a = Integer.parseInt(ajtf.getText());
    int b = Integer.parseInt(bjtf.getText());
```

```
if (b == 0) {
```

```
    throw new ArithmeticException(); }
```

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

```
alab.setText("\nA = " + a);
```

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

```
anslab.setText("\nAns = " + ans);
```

```
err.setText(""); }
```


Catch (NumberFormatException) {
err. setText("Enter only Integers!");

}

Catch (ArithmeticException) {

err. setText("B should be Non zero!");

}

ifrm.setVisible(true);

}

```
public static void main(String args[]) {  
    System.out.println("Sarthosh's 2023 BM02586");  
    SwingUtilities.invokeLater(new Runnable() {  
        public void run() {  
            new SwingDemo();  
        }  
    });  
}
```

output:-

Sarthosh -S 2023BM02586

20

0

Calculate

B should be Non zero!

Calculate

Enter only Integers

Functions :-

JFrame:-

Represents the main window of a GUI application. It can provide functionalities to create, manipulate and manage top-level containers. We can add buttons Text field using this.

setSize :

setSize (int width, int height) is a method of the JFrame class used to set size of the frame window in pixels.

setLayout :

setLayout (LayoutManager layout) is a method of the Container which chooses how components inside the window are arranged. ~~Layout~~

JLabel:

Displays the text or images on the window.

JField:

Provides an editable text box for user input.

addFrame :

Used to add new frame.

~~20/2/24~~