

Write a program that creates a user interface to perform integer division. The user enters two numbers in the text fields Num1 & Num2. The division of Num1 & Num2 is displayed in the result field when the divided button is clicked. If Num1 & Num2 were not integers, the program would throw NumberFormatException. If Num2 were Zero, the program would throw an arithmetic exception. Display exception in a message dialog box.

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

```
class DialogERR {
    JFrame frame;
```

```
DialogERR() {
```

```
    frame = new JFrame();
```

```
    JOptionPane.showMessageDialog(frame, "cannot  
divide by non-integer values");
```

```
}
```

```
}
```

```
public class AWT_Division extends JFrame  
    implements ActionListener {
```

```
    TextField tf1, tf2;
```

```
    Label l;
```

```
    Button b;
```



```
Main() {  
    tf1 = new TextField();  
    tf1.setBounds(75, 50, 200, 25);  
  
    tf2 = new TextField();  
    tf2.setBounds(75, 100, 200, 25);  
  
    l = new Label();  
  
    b = new Button("Divide");  
    b.setBounds(125, 200, 100, 50);  
    b.addActionListener(this);  
  
    add(b);  
    add(tf1);  
    add(tf2);  
    setSize(350, 350);  
  
    setLayout(null);  
    setVisible(true);  
}
```

```
public void actionPerformed(ActionEvent e) {  
    try {  
        String n1 = tf1.getText();  
        String n2 = tf2.getText();  
        int width, x;  
        int q = Integer.parseInt(n1) /  
                Integer.parseInt(n2);  
  
        if ((int) Math.floor(Math.log10(Math.  
            abs(q))) + 1) == 1)  
            width = 75;  
        else if ((int) Math.floor(Math.log10(Math.  
            abs(q)) + 1) == 2)
```


width = 90;

else

width = 110;

$x = (350 - \text{width}) / 2$;

l.setBounds(x, 150, width, 50);

l.setText("Quotient: " + q);

add(l);

}

catch (NumberFormatException ne) {

new dialogFR2();

}

catch (ArithmeticException ze) {

l.setBounds(125, 150, 100, 50);

l.setText("Cannot divide by zero");

add(l);

}

catch (Exception ex) {

System.out.println(ex);

}

}

public static void main(String [] args) {

new Main();

}

}