LAB - 9

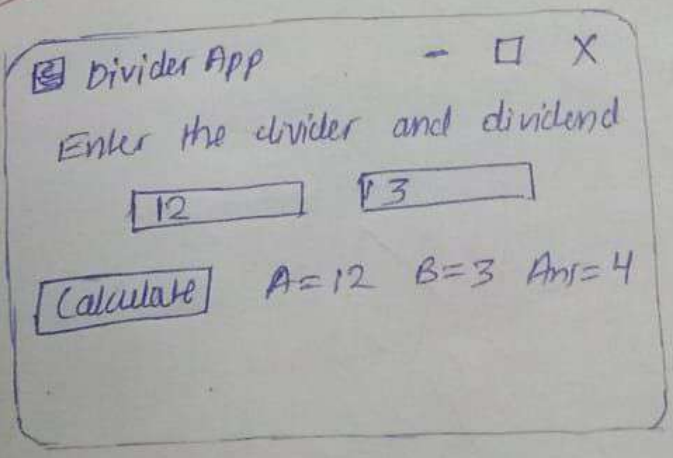
Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the textfields Num1 and Num2. The division of Num1 and Num2 is displayed in the Result field when the devide button is clicked. If Num1 or Num2 were not an integer the program would throw a NumberformatException. 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());
        jfrm.setDefaultCloseOperation(JFrame.
                EXIT_ON_CLOSE);

        JLabel jlab = new JLabel("Enter the
                divider and divident");

        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 I = new ActionListener(){
    public void actionPerformed(ActionEvent ae)
    { System.out.println("Action event from
                a text field");

    }
};
ajtf.addActionListener(I);
bjtf.add Action Listener(I);

button.add ActionListener (new ActionListener(){
    public void actionperformed (ActionEvent ae)
    { try {
        int a = Integer.parseInt(ajtf.getText());
        int b = Integer.parseInt(bjtf.getText());
        int ans = a/b;
        alab.setText("\nA = " + a);
        blab.setText("\nB = " + b);
        anslab.setText("\nAns = " + 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[]){
    SwingUtilities.invokeLater(new Runnable(){
        public void run(){
            new SwingDemo();
        }
    });
}
}
```

output :-



Functions:-

setLayout(): This method allows you to set the layout of the container often a JPanel, to say FlowLayout, BorderLayout etc

setDefaultCloseOperation(): This method specifies the action to be performed after Red cross button has been clicked.

add(): This function adds components to JFrame

addEventListener(): event handlers are functions that contain actions that need to be performed after an event has happened

setText(): setText updates the TextField component to store current value in TextField.

setVisible(): setVisible function determines whether a particular JFrame will be shown or not

JFrame(): It creates a new JFrame

JLabel(): It creates a new Label.

JButton(): It creates a new button

JTextField(): It create a new TextField.

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