10 Write a program

Lab Program 9

10] Write a program that creates user interface to perform integer division. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num2 is displayed in result field, when divide button is clicked. If Nums are not Integer throw exception NumberFormatException. If Num2 = 0 then Arithematic 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("Divide App");
        jfrm.setSize(275, 150);
        jfrm.setLayout(new FlowLayout());
        jfrm.setDefaultCloseOperation(JFrame.ON_CLOSE);

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

        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();

        jfrm.add(err);
        jfrm.add(jlab);
        jfrm.add(ajtf);
        jfrm.add(bjtf);
```

```
Jfrm.add(button);
Jfrm.add(alab);
Jfrm.add(blab);
Jfrm.add(anslab);

ActionListner l = new ActionListner(){
    public void actionPerformed(ActionEvent
                                evt){
        System.out.println("Action event
                            from a text
                            field");
};
ajtf.addActionListner(l);
bjtf.addActionListner(l);

button.addActionListner(new ActionListner(){
    public void actionPerformed(ActionEvent
                                evt){
        try{
            int a = Integer.parseInt(ajtf.getText());
            int b = Integer.parseInt(bjtf.getText());
            int ans = a/b;

            alab.setText("InA = "+a);
            blab.setText("InB = "+b);
            anslab.setText("In Ans = "+ans);
        }
        catch(NumberFormatException e){
            alab.setText("");
            blab.setText("");
            anslab.setText("");
            err.setText("Enter only
                         Integers!");
        catch(ArithmeticException e){
            alab.setText("");
            blab.setText("");
```

```
            ans lab.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();
        }
    });
    System.out.println("Sharlidhar B M \n
                        1BM22CS257");
}
}
```

SetSize(w,h) :- Method that resizes the component so that it as width w, height h.

SetLayout( ) ; method allows you to set the layout of the container, often a JPanel, to say FlowLayout. BorderLayout, etc.

addActionListner( ); event handlers to implement /to define what should be done when an user perform certain operation.

addWindowListner( ); overriding only the methods of interest

SetDefaultCloseOperation: sets the operation that will happen by default when the user initiates a "close" on this fram

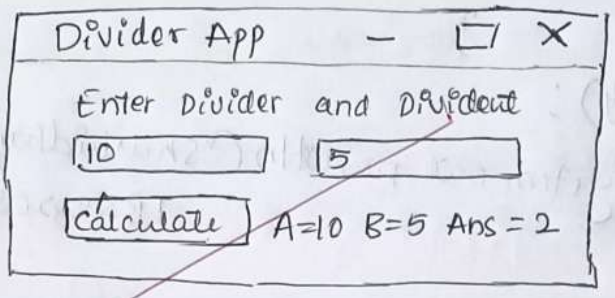
JFrame class: A type of container which inherits the java.awt.Frame class. JFrame acts like the main window where components like labels buttons are added to create GUI

JLabel class: A display Area for a short text string or an image or both.

ActionListner: It is the listener interface for receiving action events.

Swing Utilities: A collection of utility methods for swing

Output:



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