

LAB - (9)

(20/2/24)

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

```
class UserInterface {
```

```
    UserInterface() {
```

```
        // create JFrame container  
        JFrame jfrm = new JFrame("Divider App");
```

```
        jfrm.setSize(275, 150);
```

```
        jfrm.setLayout(new FlowLayout());
```

```
        // to terminate on close
```

```
        jfrm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
        // text label
```

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

```
        // add text field for both numbers
```

```
        JTextField ajt = new JTextField(8);
```

```
        JTextField bjt = new JTextField(8);
```

```
        // calc button
```

```
        JButton button = new JButton("calculate");
```

```
        // labels
```

```
        JLabel err = new JLabel();
```

```
        JLabel aLab = new JLabel();
```

```
        JLabel bLab = new JLabel();
```

```
        JLabel onLab = new JLabel();
```

```
        // add in order
```

```
        jfrm.add(err); // to display error message
```

```
        jfrm.add(jlab);
```

```
        jfrm.add(ajt);
```



```

jfbtm.add(bjtb);
jfbtm.add(button);
jfbtm.add(alab);
jfbtm.add(blabb);
jfbtm.add(anslab);

```

```

ActionListener calculateListener = new ActionListener() {
    public void actionPerformed(ActionEvent evt) {

```

```

        try {
            int a = Integer.parseInt(ajtb.getText());
            int b = Integer.parseInt(bjtb.getText());
            if (b == 0) {
                throw new ArithmeticException();

```

```

            }
            int ans = a / b;

```

```

            alab.setText("\n A = " + a);

```

```

            blabb.setText("\n B = " + b);

```

```

            ansLab.setText("\n Ans = " + ans);

```

```

            err.setText(""); // Clear any prev errors

```

```

        } catch (NumberFormatException e) {
            displayErrorMessage("Enter only integers!");

```

```

        } catch (ArithmeticException e) {

```

```

            displayErrorMessage("B should be nonzero");

```

```

        }

```

```

    }
    private void displayErrorMessage(String message) {

```

```

        alab.setText("");

```

```

        blabb.setText("");

```

```

        ansLab.setText("");

```

```

        err.setText(message);

```

```

    }
}

```



```
button.addActionListener(new ActionListener() {
```

```
//display frame  
jfrm.setVisible(true);
```

```
}  
public static void main (String args[]) {  
    //create frame on event displaying thread
```

```
    SwingUtilities.invokeLater(new Runnable() {
```

```
        public void run() {
```

```
            new UserInterface();
```

```
        }  
    });
```

Output:

Enter the divider and dividend

6

Calculate

A = 6

B = 3

Ans = 2

### Functions Used:

JFrame: It is a top level container in Java Swing that represents a window with a title bar, border and optional menubar.

setSize: It is used to set size of the frame


setLayout: This line sets the layout manager for the frame to FlowLayout, which arranges components from left to right in a row like manner.

add: This line adds the error label to the frame

setText: This line sets the text of the 'A' label to display the value of 'A'.

setVisible: This line makes the frame visible

invokeLater: This line schedules a job for the event-dispatching thread to create and show the GUI

 20.12.24