

20/2/24

Lab program 9

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

```
class UserInterface {  
    UserInterface() {
```

```
        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 dividend");
```

```
        JTextField ajtf = new JTextField(8);  
        JTextField bjtf = new JTextField(8);
```

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

```
        JLabel ea = new JLabel();  
        JLabel alab = new JLabel();  
        JLabel blab = new JLabel();  
        JLabel anslab = new JLabel();
```

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



```

ActionListener calculateListener = 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("In A = " + a);
            bLab.setText("In B = " + b);
            ansLab.setText("In Ans = " + ans);
            ekr.setText("");

```

```

        } catch (NumberFormatException e) {

```

```

            displayErrorMessage("Enter Only Integers!");

```

```

        } catch (ArithmeticException e) {

```

```

            displayErrorMessage("B should be non-zero!");
        }
    }

```

```

}

```

```

private void displayErrorMessage(String message) {

```

```

    aLab.setText("");

```

```

    bLab.setText("");

```

```

    ansLab.setText("");

```

```

    ekr.setText(message);

```

```

}

```

```

};

```

```

button.addActionListener(calculateListener);

```

```

jfrm.setVisible(true);

```

```

}

```



```

public static void main(String args[]) {
    SwingUtilities.invokeLater(new Runnable() {
        public void run() {
            new UseInterface();
        }
    });
}

```

o/p

Divides App - ☐ x
 Enter the divider and dividend:

 A=6 B=3 Ans=2

Functions

JFrame: It is a top-level container in JavaSwing that represents a window with a title bar, border and optional menu bar. It serves as the main container for building GUIs in Swing based application.

setSize: It is used to set size of the frame. It takes height and width as its parameters.

setLayout: It is used to set the layout manager for the JFrame. The layout manager is responsible for arranging the components that are added to the JFrame.

setDefaultCloseOperation: It is used to set the default close operation for the JFrame.

JLabel: It is a class, which is used to create a label component.

JTextField: It is used to create a text field component, where the user can enter and edit a single line of text.

add(): This method is used to add components to the JFrame. This method takes a single parameter, which is the component that should be added to the JFrame.

addActionListener(): This method is used to add an action listener to a component. It is an GUI component that listens for action event.

setText(): This method can be used to set the text of any label component and to change the text of label component dynamically.

[Signature]