

// User Interface to perform integer divisions

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

class UserInterface
UserInterface()
{
    JFrame frm= new JFrame("DivideApp");
    frm.setSize(275,150);
    frm.setLayout(new FlowLayout());
    frm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    JLabel jl1= new JLabel("Enter the divisor & dividend");
    JTextField a1tf= new JTextField();
    JTextField b1tf= new JTextField();
    JButton button= new JButton("Calculate");
    JLabel er= new JLabel();
    JLabel alab= new JLabel();
    JLabel blab= new JLabel();
    JLabel ansblab= new JLabel();

    frm.add(er);
    frm.add(jl1);
    frm.add(a1tf);
    frm.add(b1tf);
    frm.add(button);
    frm.add(alab);
    frm.add(blab);
    frm.add(ansblab);
```

```
ActionListeners calculateListener = new ActionListener() {
    public void actionPerformed(ActionEvent evt) {
        try {
            int a = Integer.parseInt(tf1.getText());
            int b = Integer.parseInt(tf2.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);
            err.setText("");
        } catch (NumberFormatException e) {
            displayErrorMessage("Enter Only Integers!");
        } catch (ArithmaticException e) {
            displayErrorMessage("B should be non-zero");
        }
    }
}
```

```
private void displayErrorMessage(String message) {
    alab.setText(" ");
    blab.setText(" ");
    anslab.setText(" ");
    err.setText(message);
}
```

```
button.addActionListener(calculateListener)
```

```
frm.setVisible(true);
```

```

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

```

Output:

Divide A/B	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Enter the divider & dividend : <input type="text" value="24"/> / <input type="text" value="4"/>			
<input type="button" value="calculate"/> A=24 B=4 Ans=6			

Functions:

→ JFrame is used to create a graphical user interface for a simple division app

→ getSize() method is used to set the size of the JFrame

→ setLayout() method 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() - method is used to set the default close operation for the JFrame

→ JLabel class is used to create a label component which is a graphical user interface component that displays text or an image.

- JTextField class is used to create a first field component which is a GUI that allows user to enter and edit a single line of text.
- addFrame is used to add components to the JFrame. The add() method is called on Frame object from
- addActionListener() is used to add an action listener to a component. An action listener is a GUI component that listens for action events.
- setText() is used to set the text of any label component.