Program 6 & 9:

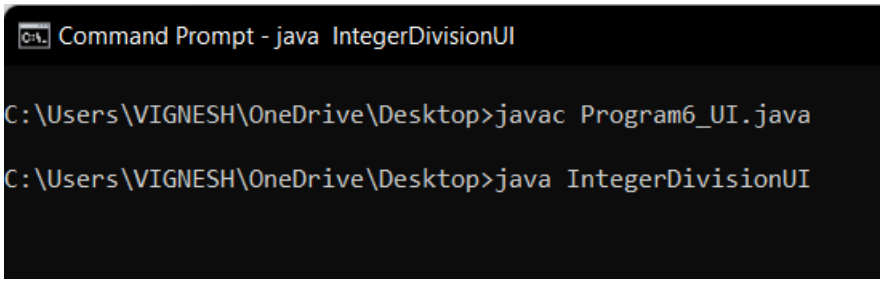
Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num2 were not an integer, the program would throw a NumberFormatException. If Num2 were Zero, the program would throw an Arithmetic Exception Display the exception in a message dialog box.

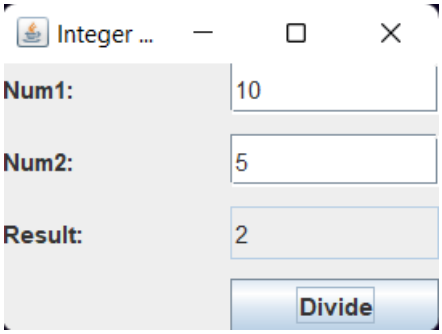
```
import javax.swing.*;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

 class IntegerDivisionUI {
    private JFrame frame;
    private JTextField num1Field;
    private JTextField num2Field;
    private JTextField resultField;
    private JButton divideButton;

    public IntegerDivisionUI() {
        initUI();
    }

    private void initUI() {
        frame = new JFrame("Integer Division");
        frame.setLayout(new GridLayout(4, 2, 10, 10));
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        JLabel num1Label = new JLabel("Num1:");
        JLabel num2Label = new JLabel("Num2:");
        JLabel resultLabel = new JLabel("Result:");
```

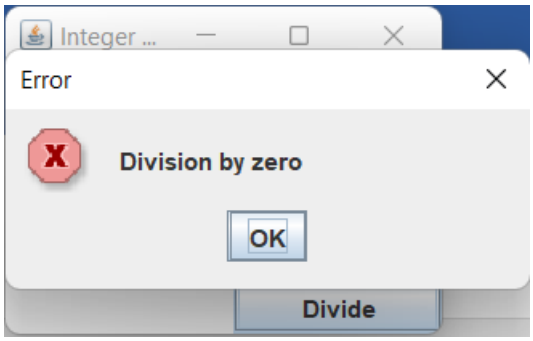
```
        num1Field = new JTextField(10);
        num2Field = new JTextField(10);
        resultField = new JTextField(10);
        resultField.setEditable(false);

        divideButton = new JButton("Divide");
        divideButton.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                try {
                    int num1 = Integer.parseInt(num1Field.getText());
                    int num2 = Integer.parseInt(num2Field.getText());

                    if (num2 == 0) {
                        throw new ArithmeticException("Division by zero");
                    }

                    int result = num1 / num2;
                    resultField.setText(String.valueOf(result));
                } catch (NumberFormatException ex) {
                    JOptionPane.showMessageDialog(frame, "Invalid input: not an integer", "Error",
JOptionPane.ERROR_MESSAGE);
                } catch (ArithmeticException ex) {
                    JOptionPane.showMessageDialog(frame, ex.getMessage(), "Error",
JOptionPane.ERROR_MESSAGE);
                }
            }
        });

        frame.add(num1Label);
```

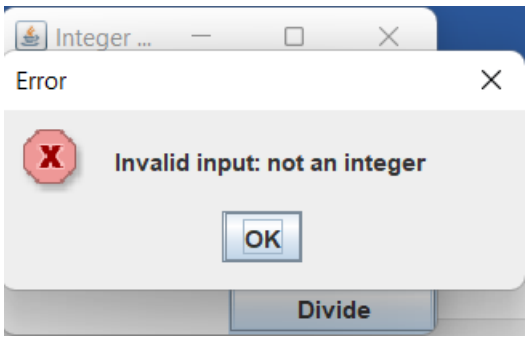
```
        frame.add(num1Field);
        frame.add(num2Label);
        frame.add(num2Field);
        frame.add(resultLabel);
        frame.add(resultField);
        frame.add(new JLabel());
        frame.add(divideButton);

        frame.pack();
        frame.setVisible(true);
    }

    public static void main(String[] args) {
        SwingUtilities.invokeLater(new Runnable() {
            @Override
            public void run() {
                new IntegerDivisionUI();
            }
        });
    }
}
```

OUTPUT:


Command Prompt - java IntegerDivisionUI
C:\Users\VIGNESH\OneDrive\Desktop>javac Program6_UI.java
C:\Users\VIGNESH\OneDrive\Desktop>java IntegerDivisionUI


Integer ...
Num1:
10
Num2:
5
Result:
2
Divide


Integer ...
Error
Division by zero
OK
Divide


Integer ...
Error
Invalid input: not an integer
OK
Divide