

9. Write a program that creates a user interface to perform Integer divisions. The user enters two numbers in the text fields, Num 1 & Num 2. The division of Num 1 & Num 2 is displayed in the Result field when the divide Button is clicked. If Num 1 or Num 2 were not an Integer the program would throw a NumberFormatException. If Num 2 were Zero, the program would throw an Arithmetic Exception. Display the Exception in a Dialog box.

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

public class DivisionMain1 extends JFrame
    implements ActionListener {

    TextField num1, num2;
    Button dResult;
    Label outResult;

    public DivisionMain1() {
        setLayout(new FlowLayout());

        dResult = new Button("Result");
        Label number1 = new Label("Number 1");
        Label number2 = new Label("Number 2");
        num1 = new TextField(5);
        num2 = new TextField(5);
        outResult = new Label("Result:");

        add(number1);
        add(num1);
        add(number2);
        add(num2);
```

add (dResult);

add (outResult);

dResult.addActionListener (this);

addWindowListener (new WindowAdapter() {
public void windowClosing (WindowEvent we

{
system.exit(0);
}

});

setTitle ("Integer Division");

setSize (400, 200);

setVisible (true);

{

public void actionPerformed (ActionEvent ae) {

try {

if (ae.getSource () == dResult) {

int n1 = Integer.parseInt (num1.getText());

int n2 = Integer.parseInt (num2.getText());

if (n2 == 0) {

throw new ArithmeticException ("cannot divide by zero");

}

int result = n1 / n2;

outResult.setText ("Result : " + result);

}

} catch (NumberFormatException e) {

JOptionPane.showMessageDialog (this,
"Please enter valid integers!", "Number Format
Exception", JOptionPane.ERROR_MESSAGE);

} catch (ArithmeticException e) {

JOptionPane.showMessageDialog (this, e.getMessage(),
"Arithmetic Exception", JOptionPane.
ERROR_MESSAGE);

3.
public static void main (String [] args) {
 new DivisionMain();
}

o/p:

Entering valid integers and clicking "RESULT"
display the result in the Result label.

Invalid inputs (non-integer values or division
by zero) show appropriate error message in
a dialog box.