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10) 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 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 ArithmeticException. Display the exception in a message dialog box.

```
import java.awt.*;
import java.awt.event.*;
public class DivisionMain extends Frame
  implements ActionListener
{
   TextField num1, num2;
   Button dResult;
   Label outResult;
   String out = " ";
   double resultNum;
   int flag = 0;
   public DivisionMain()
   {
      setLayout (new FlowLayout());
      dResult = new Button ("RESULT");
      Label number1 = new Label ("Number1: ", Label.RIGHT);
      Label number2 = new Label ("Number 2: ", Label.RIGHT);
      num1 = new TextField (5);
      num2 = new TextField (5);
      outResult = new Label ("Result: ", Label.RIGHT);
      add (number1);
      add (num1);
      add (number2); add (dResult);
```

```
add(outResult);
num1.addActionListener(this);
num2.addActionListener(this);
dResult.addActionListener(this);
addWindowListner(new WindowAdapter()
{   public void WindowClosing(WindowEvent we)
    { System.exit(0); }
});
}
public void actionPerformed(ActionEvent ae)
{ int n1,n2;
  try
  {   if(ae.getSource()==dResult)
      { n1=Integer.parseInt(num1.getText());
        n2=Integer.parseInt(num2.getText());
        if(n2==0)
          throw new ArithmeticException();
        out=n1+" "+n2;
        resultNum=n1/n2;
        out+=String.valueOf(resultNum);
        repaint();
      }
  } catch(NumberFormatException e1)
    {flag=1;
     out="Number Format Exception!"+e1;
     repaint();
  } catch(ArithmeticException e2)
    {flag=1; out="Divide by 0 Exception!"+e2;
     repaint();
    }
}
public void paint(Graphics g)
{   if(flg==0)
      g.drawString(out,outResult.getX()+
outResult.getWidth(),outResult.getY()+outResult.getHeight()-8);
```

use
g.drawString(out, 100, 200);
flag=0;
}
public static void main(String[] args)
{
DivisionMain1 dm = new DivisionMain1();
dm.getSize(new Dimension(800, 400));
dm.setTitle("Division of Integers");
dm.setVisible(true);
}
}

Output :-

Number1 : 10 Number2 : 5 RESULT

Result : 2.0

classmate
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ActionListener

*ActionListener – In Java AWT, ActionListener is an interface used to handle action events generated by user interactions with graphical components like buttons.

*addWindowListener() – WindowListener is an interface used to handle events related to a window, such as opening, closing and deactivating a window. addWindowListener() method is used to register a WindowListener with a window object to listen for these events.

*setLayout() – method allows you to set the layout of the container.

*Button – Button is basically a control component with a label that generates an event when pushed.

*repaint() – is an asynchronous method of applet class.

*setSize() sets the size of the Dimension Object of applet class.

*setTitle() – function defines the title to appear at the top of sketch window.

*setVisible() – method makes frame appears on the screen.

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