1BM19CS008
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15/12/20 Week 12 Lab program 10

Q) WAP that creates a user interface to perform integer divisions. The user enters two numbers in the text field, Num1 Num2, The division is displayed in Result field when divide is clicked. if not integer then NumberFormatException. If Num2 is zero then throw Arithmetic Exception display error in message dialog box

A)
```
import java.awt.*;
import java.awt.event.*;
public class divide_awt extends Frame implements
{                                          ActionListener
  TextField num1, num2, result;
  int msg;
  String msg1 = "";
  Button divide;
  public divide_awt()
{
  setLayout(new FlowLayout());
  Label num1x = new Label ("Num1:", Label.RIGHT);
  Label num2x = new Label ("Num2:", Label.RIGHT);
  Label resultx = new Label("Result:", Label.RIGHT);
  Button b = new Button ("divide");

  num1 = new TextField(8);
  num2 = new TextField(8);
  result = new TextField(8);
```

```
add(num1x);
add(num1);
add(num2x);
add(num2);
divide = (Button) add(b);
add(result);
add(result);
num1.addActionListener(this);
num2.addActionListener(this);
divide.addActionListener(this);
addWindowListener(new WindowAdapter()
{ public void windowClosing(WindowEvent we)
  { System.exit(0);
  }
});
}

public void actionPerformed(ActionEvent ae)
{ if (ae.getSource() == divide)
  { double a = Double.parseDouble(num1.getText());
    double b = Double.parseDouble(num2.getText());
    if (a%1 == 0) || (b%1 != 0))
    { try
      { throw new NumberFormatException();
      }catch (NumberException e)
      { msg1 = "Entered number is not an integer"+e;
        SampleDialog d = new SampleDialog(this, "Dialog");
        d.setVisible(true);
      }
    }
    else if (b==0)
    { try { throw new ArithmeticException();
      } catch (ArithmeticException e)
      { msg1 = "number 2 is zero "+e;
        SampleDialog
      }
    }else {
        msg = (int) a/(int)b;
        String c = " " + msg;
        result.setText(c);
      }
      repaint();
}
public void paint(Graphics g)
{ g.drawString("Exception: " +msg1, 20, 50);
}
public static void main(String[] args)
{ divide_awt aa = new divide_awt();
  aa.setSize(new Dimension(380, 180));
  aa.setTitle("divide_awt");
  aa.setVisible(true);
}}
```

at the beginning:

```
class SampleDialog extends Dialog implements ActionListener
{ divide_awt bld;
SampleDialog (Frame parent, String title)
{ super (parent, title, false);
bld = (divide_awt) parent;
setLayout (new FlowLayout());
setSize (300,200);
add (new Label(bld.msg1));
Button b;
add (b=new button("OK"));
b.addActionListener (this);
}
public void actionPerformed (ActionEvent ae)
{ dispose();
}
}
```

actionperformed in divide_awt class

```
public void actionPerformed (ActionEvent ae)
{ if(ae.getSource () == divide)
  {
    try { msg = Integer.parseInt(num1.getText()) / Integer.parseInt
                                                  (num2.getText());
          String c = "" + msg;
          result.setText (c);
          msg1 = "";
} catch (NumberFormatException e)
  {
    msg1 = "Entered number is not an integer "+e ;
    SampleDialog d = new SampleDialog (this, "Dialog");
    d.setVisible (true);
  }
 Catch ( ArithmeticException e)
  {
    msg1 = "number 2 is zero"+e} ;
    SampleDialog d = new SampleDialog (this, "Dialog");
    d.setVisible (true);
  }
}
```