Button demo program

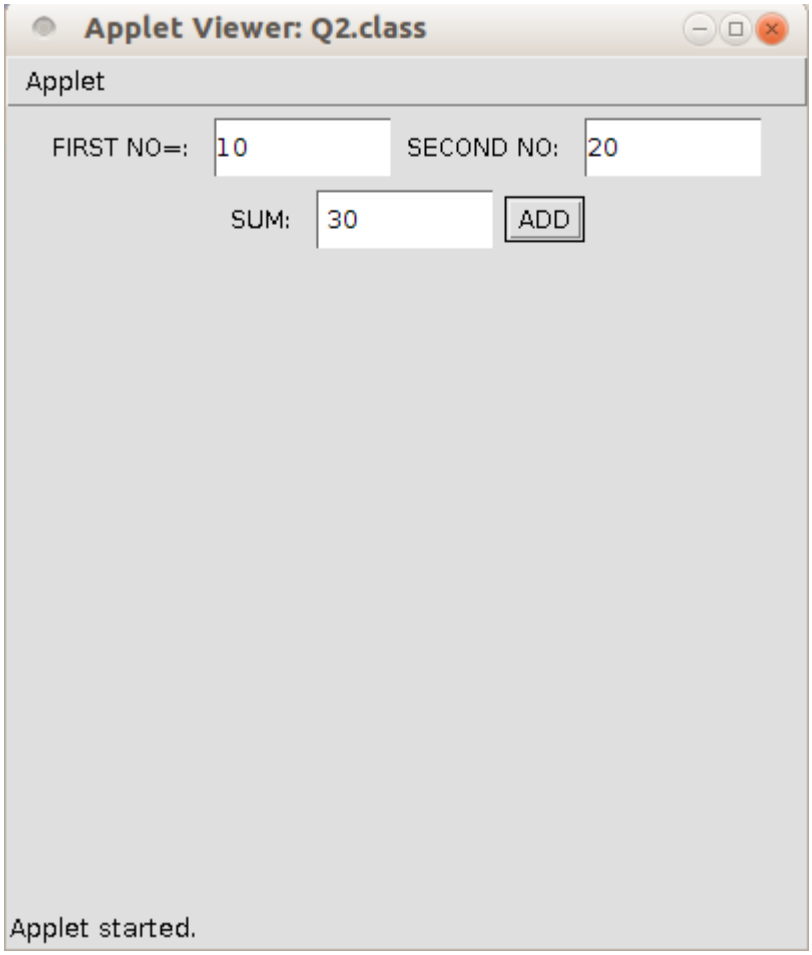
```
import java.awt.*;
import java.awt.event.*;
import java.applet.*;
public class buttondemo extends Applet implements ActionListener
{
   TextField t1 = new TextField(10);
     Button b = new Button("click");
public void init()
   {
      add(t1);
      add(b);
    b.addActionListener(this);
   }
   public void actionPerformed(ActionEvent e)
   {
if (e.getSource() == b)
{
 t1.setText(" welcome");
}
}      }
/*
<html>
      <APPLET CODE="buttondemo.class"  WIDTH=400 HEIGHT=400>
```

```
</APPLET>
  </html>     */
```

addition program

```
import java.awt.*;
import java.awt.event.*;
import java.applet.*;
public class addition extends Applet implements ActionListener
{
   TextField t1 = new TextField(10);
   TextField t2 = new TextField(10);
   TextField t3 = new TextField(10);
   Label l1 = new Label("FIRST NO=:");
   Label l2 = new Label("SECOND NO:");
   Label l3 = new Label("SUM:");
   Button b = new Button("ADD");
   public void init()
   {
      add(l1);
      add(t1);
      add(l2);
      add(t2);
      add(l3);
      add(t3);
      add(b);
      b.addActionListener(this);
   }
```

```
   public void actionPerformed(ActionEvent e)
   {
if (e.getSource() == b)
      {
         int n1 = Integer.parseInt(t1.getText());
         int n2 = Integer.parseInt(t2.getText());
         t3.setText(" " + (n1 + n2));
      }
   }
}
/*
<html>
      <APPLET CODE="addition.class"  WIDTH=400 HEIGHT=400>
 </APPLET>
   </html>     */
```



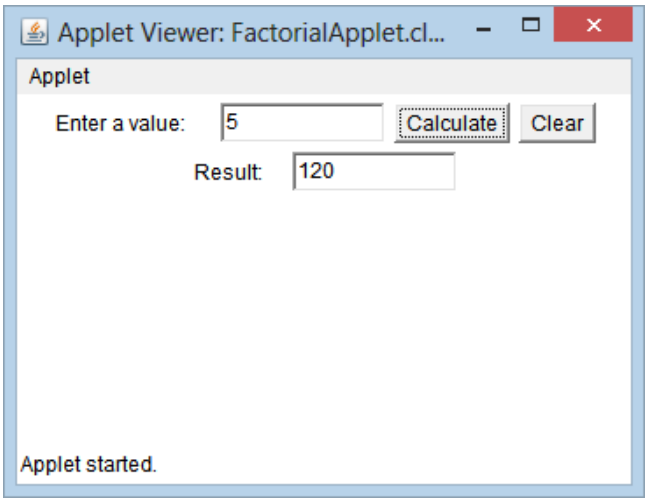
factorial:

```
import java.applet.*;
import java.awt.event.*;
import java.awt.*;

public class FactorialApplet extends Applet implements ActionListener
{
  Label l1,l2;
  TextField t1,t2;
  Button b1,b2;
  public void init()
  {
     l1=new Label("Enter a value: ");
     l2=new Label("Result:");
```

```
    t1=new TextField(10);
    t2=new TextField(10);
    b1=new Button("Calculate");
    b2=new Button("Clear");
    add(l1);
    add(t1);
    add(b1);
    add(b2);
    add(l2);
    add(t2);
    b1.addActionListener(this);
    b2.addActionListener(this);
}
public void actionPerformed(ActionEvent ae)
{
    int n=Integer.parseInt(t1.getText());
    int fact=1;
    if(ae.getSource()==b1)
    {
        if(n==0||n==1)
        {
            fact=1;
        t2.setText(String.valueOf(fact));
        }
        else
        {
        for(int i=1;i<=n;i++)
            fact=fact*i;
        }
   t2.setText(String.valueOf(fact));
    }
    else if(ae.getSource()==b2)
    {
        t1.setText("");
        t2.setText("");
    }
```

```
  }
}
/*<applet code="Factorial.class" width=500 height=500>
</applet> */
```

Output



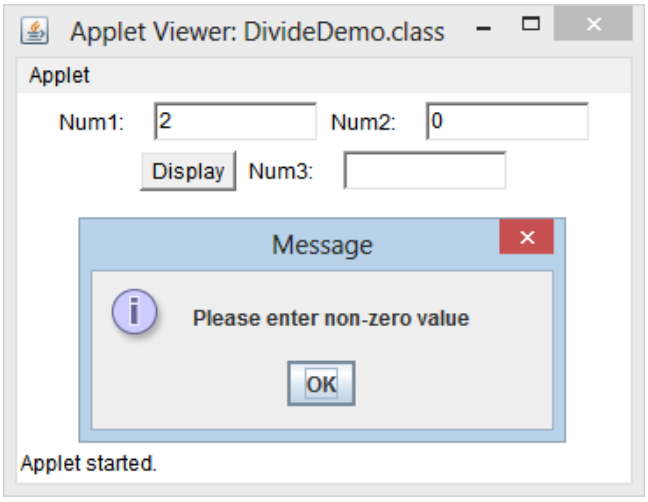
divide by zero exception program

```
import java.applet.*;
import java.awt.*;
import java.awt.event.*;
/* <applet code="DivideDemo" width=500 height=500> </applet? */

public class DivideDemo extends Applet implements ActionListener,TextListener
```

```
{
Label l1,l2,l3;
TextField t1,t2,t3;
Button b1;
int x,y;
float res=0;
public void init()
{
   l1=new Label("Num1:");
   l2=new Label("Num2:");
   l3=new Label("Num3:");
   t1=new TextField(10);
   t2=new TextField(10);
   t3=new TextField(10);
   b1=new Button("Display");
   add(l1);
   add(t1);
   add(l2);
   add(t2);
   add(b1);
   add(l3);
   add(t3);
   b1.addActionListener(this);
   t1.addTextListener(this);
   t2.addTextListener(this);
}
  public void actionPerformed(ActionEvent ae)
  {
     try
     {
        int x=Integer.parseInt(t1.getText());
        int y=Integer.parseInt(t2.getText());
        if(ae.getSource()==b1)
          res=x/y;
     }
     catch(NumberFormatException nfe)
```

```
      {
         javax.swing.JOptionPane.showMessageDialog(this, "Please enter Integer
value");
      }
      catch(ArithmeticException afe)
      {
         javax.swing.JOptionPane.showMessageDialog(this,"Please enter non-zero
value");
      }
      t3.setText(String.valueOf(res));
   }
   public void textValueChanged(TextEvent te)
   {
      if(!t1.getText().equals("")&&(!t2.getText().equals("")))
      {
         b1.setEnabled(true);
       }
      else
         b1.setEnabled(false);

   }
}
```

Output



```
import java.applet.*;
import java.awt.*;
import java.awt.event.*;

public class Signals extends Applet implements ItemListener
{
        String msg="";
        Checkbox  stop,ready,go;
        CheckboxGroup cbg;
        public void init()
```

```
{
        cbg = new CheckboxGroup();
        stop = new Checkbox("Stop", cbg, false);
        ready = new Checkbox("Ready", cbg, false);
        go= new Checkbox("Go", cbg, false);
        add(stop);
        add(ready);
        add(go);
        stop.addItemListener(this);
        ready.addItemListener(this);
        go.addItemListener(this);

}

public void itemStateChanged(ItemEvent ie)
{
        repaint();
}

public void paint(Graphics g)
{
       msg=cbg.getSelectedCheckbox().getLabel();
        g.drawOval(165,40,50,50);
        g.drawOval(165,100,50,50);
        g.drawOval(165,160,50,50);

        if(msg.equals("Stop"))
        {
                g.setColor(Color.red);
                g.fillOval(165,40,50,50);
        }
        else if(msg.equals("Ready"))
        {
                g.setColor(Color.yellow);
                g.fillOval(165,100,50,50);
        }
        else
```

```
                {
                        g.setColor(Color.green);
                        g.fillOval(165,160,50,50);
                }

        }
}
/*<applet code="signals.class" width=400 height=250></applet>*/
```

Output: