

Q) Implement On Click Method of JButton & Frame class.

```

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("Number 1:", 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(num2);
        add(dResult);
        add(outResult);

        num1.addActionListener(this);
        num2.addActionListener(this);
        dResult.addActionListener(this);
        addWindowListener(new WindowAdapter()
        {
            public void windowClosing(WindowEvent we)
            {
                system.exit(0);
            }
        });
    }
}

```

```

    }

    public void actionPerformed(ActionEvent ae)
    {
        int
        double n1, n2;
        try
        {
            if (ae.getSource() == dResult)
            {
                n1 = Integer.parseInt(num1.getText());
                n2 = Integer.parseInt(num2.getText());
                if (n2 == 0)
                    throw new ArithmeticException();
                resultNum = n1 / (double) n2;
                out = String.valueOf(resultNum);
                repaint();
            }
        }
        catch (NumberFormatException e1)
        {
            flag = 1;
            out = "Number Format Exception! " + e1;
            repaint();
        }
        catch (ArithmeticException e2)
        {
            flag = 2;
            out = "Divide by 0 Exception! " + e2;
            repaint();
        }
    }

    public void paint(Graphics g)
    {
        if (flag == 0)
            g.drawString(out, outResult.getX() + outResult.getWidth(),
                        outResult.getY() + outResult.getHeight() - 8);
        else
            g.drawString(out, 100, 200);
        flag = 0;
    }
}

```

```
public static void main (String [] args) {  
      
    DivisionMain dm = new DivisionMain();  
    dm.setSize(new Dimension(800,400));  
    dm.setTitle ("Division of Integers");  
    dm.setVisible (true);  
}  
}  
}
```

After 10-15 min the window will appear

Dividing 1000 by 100
Result is 10.0 which is correct
but it is not integer

For polynomial division method

1. All numbers are converted into polynomials
2. Then dividing with constant denominator 1000

1000 into 1000, 800 into 800

1 - 0.010

as per division 1000/1000 = 1
0.010/1000 = 0

(a) dividend & divisor both are 1000

1000 - 1000

1000 - 1000 = 0
so result is 1000/1000 = 1

the result is 1000/1000 = 1

so result is 1