

Answer on Question #53264 - Programming, Java | JSP | JSF

How to write a program for calculator in java without using swing?

Solution.

//In the console using Scanner:

```
import java.util.Scanner;//imports scanners

public class Calc {

    public static void main(String[] args) {
        boolean go = true;      //sets up loop

        while(go)//creates loop to top
        {
            System.out.println("Hello this is my calculator!");
            System.out.println("To add, type a, to subtract, type s.");
            System.out.println("To multiply, type m, to divide, type d.");

            Scanner scan = new Scanner(System.in);//sets up scanners
            Scanner scan1 = new Scanner(System.in);

            String action = scan.nextLine();//tells comp. to take user input

            if("a".equals(action))//addition
            {
                System.out.println("Now type in the first number you would like to
add.");
                int add1 = scan.nextInt();
                System.out.println("Now type the second number.");
                int add2 = scan.nextInt();
                int add3 = add1 + add2;
                System.out.println(add1 + " added to " + add2 + " equals " + add3 +
"!");
            }
            if("s".equals(action))//subtraction
            {
                System.out.println("Now type in the first number you would like to
subtract.");
                int sub1 = scan.nextInt();
                System.out.println("Now type the second number.");
                int sub2 = scan.nextInt();
                int sub3 = sub1 - sub2;
                System.out.println(sub1 + " subtracted by " + sub2 + " equals " +
sub3 + "!");
            }
            if("m".equals(action))//multiplication
            {
                System.out.println("Now type in the first number you would like to
multiply.");
                int mul1 = scan.nextInt();
                System.out.println("Now type the second number.");
                int mul2 = scan.nextInt();
                int mul3 = mul1 * mul2;
            }
        }
    }
}
```

```
System.out.println(mul1 + " multiplied bye " + mul2 + " equals " +
mul3 + "!");
}
if("d".equals(action))/division
{
    System.out.println("Now type in the first number you would like to
divide.");
    int div1 = scan.nextInt();
    System.out.println("Now type the second number.");
    int div2 = scan.nextInt();
    int div3 = div1 / div2;
    System.out.println(div1 + " divided bye " + div2 + " equals " + div3
+ "!");
}
}

System.out.println("Would you like to start over? (yes,no)");
String startOver = scan1.nextLine();

if("no".equals(startOver))
{
    go = false;
    System.out.println("Bye");
}
}
}
```

//Using AWT:

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

public class SimpleCalculator implements ActionListener
{
    // containers
    private Frame f;
    private Panel p1, p2, p3, p4;

    // components
    private Label l1, l2, l3;
    private TextField tf1, tf2, tf3;
    private Button bAdd, bSub, bMul, bDiv, bClear;

    public SimpleCalculator()
    {
        f = new Frame("Calculator");

        p1 = new Panel();
        p2 = new Panel();
        p3 = new Panel();
        p4 = new Panel();

        l1 = new Label("First: ");
        l2 = new Label("Second: ");
        l3 = new Label("Result: ");

        tf1 = new TextField(15);
        tf2 = new TextField(15);
        tf3 = new TextField(15);

        bAdd = new Button("+");
        bSub = new Button("-");
        bMul = new Button("*");
        bDiv = new Button("/");
        bClear = new Button("Clear");
    }

    public void actionPerformed(ActionEvent e)
    {
        if (e.getSource() == bAdd)
        {
            tf3.setText(tf1.getText() + tf2.getText());
        }
        else if (e.getSource() == bSub)
        {
            tf3.setText(tf1.getText() - tf2.getText());
        }
        else if (e.getSource() == bMul)
        {
            tf3.setText(tf1.getText() * tf2.getText());
        }
        else if (e.getSource() == bDiv)
        {
            tf3.setText(tf1.getText() / tf2.getText());
        }
        else if (e.getSource() == bClear)
        {
            tf3.setText("");
        }
    }
}
```

```

        bSub = new Button("-");
        bMul = new Button("*");
        bDiv = new Button("/");
        bClear = new Button("C");
    }
    public void launchFrame()
    {
        // use default layout manager of the Panel (FlowLayout)
        p1.add(l1);
        p1.add(tf1);

        p2.add(l2);
        p2.add(tf2);

        p3.add(l3);
        p3.add(tf3);

        p4.add(bAdd);
        p4.add(bSub);
        p4.add(bMul);
        p4.add(bDiv);
        p4.add(bClear);

        // change the layout manager of the Frame,
        // use GridLayout(4, 1)
        f.setLayout(new GridLayout(4, 1));

        f.add(p1);
        f.add(p2);
        f.add(p3);
        f.add(p4);

        f.pack();
        f.setVisible(true);

        // register event handlers
        bAdd.addActionListener(this);
        bSub.addActionListener(this);
        bMul.addActionListener(this);
        bDiv.addActionListener(this);
        bClear.addActionListener(this);

        f.addWindowListener(new MyCloseButtonHandler());
    }
    // override the actionPerformed method
    public void actionPerformed(ActionEvent ae)
    {
        Object source = ae.getSource();
        double num1, num2, result = 0.0;

        if (tf1.getText() != null && tf2.getText() != null)
        {
            num1 = Double.parseDouble(tf1.getText());
            num2 = Double.parseDouble(tf2.getText());

            if (source == bAdd)
                result = num1 + num2;
            else if (source == bSub)
                result = num1 - num2;
            else if (source == bMul)
                result = num1 * num2;
            else if (source == bDiv)
                result = num1 / num2;
            else if (source == bClear)
            {
                tf1.setText("0.0");
                tf2.setText("0.0");
            }
        }
    }
}

```

```
        tf3.setText("0.0");
    }
    else {}
    // tf3.setText(new Double(result).toString());
    tf3.setText("'" + result);
}
}
private class MyCloseButtonHandler extends WindowAdapter
{
    public void windowClosing(WindowEvent we)
    {
        System.exit(0);
    }
}
public static void main(String args[])
{
    SimpleCalculator sc = new SimpleCalculator();
    sc.launchFrame();
}
}
```