Java Swing | Oddiy kalkulyator

Java Swing - bu Java uchun GUI (grafik foydalanuvchi interfeysi) vidjet asboblar to'plami. Java Swing Oracle Java asoslari sinflarining bir qismidir. Java Swing - bu Java Dasturlariga foydalanuvchi grafik interfeysi elementlarini taqdim etish uchun API. Swing Java AWT (Abstract Window Toolkit) ga qaraganda kuchliroq va moslashuvchan komponentlarni taqdim etish uchun yaratilgan.

Ushbu maqolada biz Java Swing komponentlaridan faqat +, -, /, \* operatsiyalari bilan oddiy kalkulyator yaratish uchun foydalanamiz.

qo'llaniladigan usullar:

1. qo'shish (c komponenti): konteynerga komponent qo'shadi.
2. addActionListenerListener(ActionListener d): belgilangan komponent uchun actionListener qo'shing
3. setBackground(Color c): ko'rsatilgan konteynerning fon rangini o'rnatadi
4. setSize(int a, int b): konteyner hajmini belgilangan o'lchamlarga o'rnatadi.
5. setText(String s): yorliq matnini s ga o'rnatadi.
6. getText(): yorliq matnini qaytaradi.

Java burilish elementlaridan foydalangan holda oddiy +, -, /, \* bilan oddiy kalkulyator yaratish uchun Java dasturi.

// Java program to create a simple calculator

// with basic +, -, /, \* using java swing elements

import java.awt.event.\*;

import javax.swing.\*;

import java.awt.\*;

class calculator extends JFrame implements ActionListener {

// create a frame

static JFrame f;

// create a textfield

static JTextField l;

// store operator and operands

String s0, s1, s2;

// default constructor

calculator()

{

s0 = s1 = s2 = "";

}

// main function

public static void main(String args[])

{

// create a frame

f = new JFrame("calculator");

try {

// set look and feel

UIManager.setLookAndFeel(UIManager.getSystemLookAndFeelClassName());

}

catch (Exception e) {

System.err.println(e.getMessage());

}

// create a object of class

calculator c = new calculator();

// create a textfield

l = new JTextField(16);

// set the textfield to non editable

l.setEditable(false);

// create number buttons and some operators

JButton b0, b1, b2, b3, b4, b5, b6, b7, b8, b9, ba, bs, bd, bm, be, beq, beq1;

// create number buttons

b0 = new JButton("0");

b1 = new JButton("1");

b2 = new JButton("2");

b3 = new JButton("3");

b4 = new JButton("4");

b5 = new JButton("5");

b6 = new JButton("6");

b7 = new JButton("7");

b8 = new JButton("8");

b9 = new JButton("9");

// equals button

beq1 = new JButton("=");

// create operator buttons

ba = new JButton("+");

bs = new JButton("-");

bd = new JButton("/");

bm = new JButton("\*");

beq = new JButton("C");

// create . button

be = new JButton(".");

// create a panel

JPanel p = new JPanel();

// add action listeners

bm.addActionListener(c);

bd.addActionListener(c);

bs.addActionListener(c);

ba.addActionListener(c);

b9.addActionListener(c);

b8.addActionListener(c);

b7.addActionListener(c);

b6.addActionListener(c);

b5.addActionListener(c);

b4.addActionListener(c);

b3.addActionListener(c);

b2.addActionListener(c);

b1.addActionListener(c);

b0.addActionListener(c);

be.addActionListener(c);

beq.addActionListener(c);

beq1.addActionListener(c);

// add elements to panel

p.add(l);

p.add(ba);

p.add(b1);

p.add(b2);

p.add(b3);

p.add(bs);

p.add(b4);

p.add(b5);

p.add(b6);

p.add(bm);

p.add(b7);

p.add(b8);

p.add(b9);

p.add(bd);

p.add(be);

p.add(b0);

p.add(beq);

p.add(beq1);

// set Background of panel

p.setBackground(Color.blue);

// add panel to frame

f.add(p);

f.setSize(200, 220);

f.show();

}

public void actionPerformed(ActionEvent e)

{

String s = e.getActionCommand();

// if the value is a number

if ((s.charAt(0) >= '0' && s.charAt(0) <= '9') || s.charAt(0) == '.') {

// if operand is present then add to second no

if (!s1.equals(""))

s2 = s2 + s;

else

s0 = s0 + s;

// set the value of text

l.setText(s0 + s1 + s2);

}

else if (s.charAt(0) == 'C') {

// clear the one letter

s0 = s1 = s2 = "";

// set the value of text

l.setText(s0 + s1 + s2);

}

else if (s.charAt(0) == '=') {

double te;

// store the value in 1st

if (s1.equals("+"))

te = (Double.parseDouble(s0) + Double.parseDouble(s2));

else if (s1.equals("-"))

te = (Double.parseDouble(s0) - Double.parseDouble(s2));

else if (s1.equals("/"))

te = (Double.parseDouble(s0) / Double.parseDouble(s2));

else

te = (Double.parseDouble(s0) \* Double.parseDouble(s2));

// set the value of text

l.setText(s0 + s1 + s2 + "=" + te);

// convert it to string

s0 = Double.toString(te);

s1 = s2 = "";

}

else {

// if there was no operand

if (s1.equals("") || s2.equals(""))

s1 = s;

// else evaluate

else {

double te;

// store the value in 1st

if (s1.equals("+"))

te = (Double.parseDouble(s0) + Double.parseDouble(s2));

else if (s1.equals("-"))

te = (Double.parseDouble(s0) - Double.parseDouble(s2));

else if (s1.equals("/"))

te = (Double.parseDouble(s0) / Double.parseDouble(s2));

else

te = (Double.parseDouble(s0) \* Double.parseDouble(s2));

// convert it to string

s0 = Double.toString(te);

// place the operator

s1 = s;

// make the operand blank

s2 = "";

}

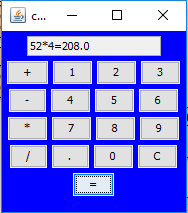
// set the value of text

l.setText(s0 + s1 + s2);

}

}

}



https://www.geeksforgeeks.org/java-swing-simple-calculator/