**CALCULATOR\_APPLICATION**

**JAVA USING SWING \_GUI**

package com.Calulator\_Application;

import java.awt.Color;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import javax.swing.JButton;

import javax.swing.JFrame;

import javax.swing.JPanel;

import javax.swing.JTextField;

import javax.swing.UIManager;

import javax.swing.UnsupportedLookAndFeelException;

public class CalculatorApplication extends JFrame implements ActionListener{

private static final long *serialVersionUID* = 7118229469858186588L;

static JFrame *frame*;

static JTextField *textField*;

String first, second, operator;

CalculatorApplication(){

first = second = operator = "";

}

public static void main(String[] args) throws UnsupportedLookAndFeelException {

*frame* = new JFrame("cal");

UIManager.*setLookAndFeel*(UIManager.*getLookAndFeel*());

CalculatorApplication calApp = new CalculatorApplication();

*textField* = new JTextField(16);

*textField*.setEditable(false);

JButton

btn0, btn1, btn2, btn3, btn4, btn5, btn6, btn7, btn8, btn9,

btnAdd, btnSub, btnDiv, btnMul, btnDot, btnclr, btnEq;

btn0 = new JButton("0");

btn1 = new JButton("1");

btn2 = new JButton("2");

btn3 = new JButton("3");

btn4 = new JButton("4");

btn5 = new JButton("5");

btn6 = new JButton("6");

btn7 = new JButton("7");

btn8 = new JButton("8");

btn9 = new JButton("9");

btnEq = new JButton("=");

btnAdd = new JButton("+");

btnSub = new JButton("-");

btnMul = new JButton("\*");

btnDiv = new JButton("/");

btnclr = new JButton("C");

btnDot = new JButton(".");

btnAdd.addActionListener(calApp);

btnSub.addActionListener(calApp);

btnMul.addActionListener(calApp);

btnDiv.addActionListener(calApp);

btn9.addActionListener(calApp);

btn8.addActionListener(calApp);

btn7.addActionListener(calApp);

btn6.addActionListener(calApp);

btn5.addActionListener(calApp);

btn4.addActionListener(calApp);

btn3.addActionListener(calApp);

btn2.addActionListener(calApp);

btn1.addActionListener(calApp);

btn0.addActionListener(calApp);

btnclr.addActionListener(calApp);

btnDot.addActionListener(calApp);

btnEq.addActionListener(calApp);

JPanel panel = new JPanel();

panel.add(*textField*);

panel.add(btn7);

panel.add(btn8);

panel.add(btn9);

panel.add(btnDiv);

panel.add(btn4);

panel.add(btn5);

panel.add(btn6);

panel.add(btnMul);

panel.add(btn1);

panel.add(btn2);

panel.add(btn3);

panel.add(btnSub);

panel.add(btnDot);

panel.add(btnclr);

panel.add(btn0);

panel.add(btnAdd);

panel.add(btnEq);

panel.setBackground(Color.*ORANGE*);

*frame*.add(panel);

*frame*.setSize(200, 220);

*frame*.~~show~~();

}

@Override

public void actionPerformed(ActionEvent e) {

String action = e.getActionCommand();

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

if(action.equals(".") && first.contains(".")) {

}

else if(!operator.equals("")) {

second = second + action;

}

else

first = first + action;

*textField*.setText(first + operator + second);

}

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

operator = second = "";

first = "";

*textField*.setText(first + operator + second);

}

else if (action.charAt(0) == '=' && !first.equalsIgnoreCase("") && !second.equalsIgnoreCase("")) {

double result;

if(operator.equals("+"))

result = (Double.*parseDouble*(first) + Double.*parseDouble*(second));

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

result = (Double.*parseDouble*(first) - Double.*parseDouble*(second));

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

result = (Double.*parseDouble*(first) / Double.*parseDouble*(second));

else

result = (Double.*parseDouble*(first) \* Double.*parseDouble*(second));

*textField*.setText(first + operator + second + "=" + result);

first = Double.*toString*(result);

operator = second = "";

}

else {

if(operator.equals("") || second.equals(""))

operator = action;

else {

double result;

if(operator.equals("+"))

result = (Double.*parseDouble*(first) + Double.*parseDouble*(second));

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

result = (Double.*parseDouble*(first) - Double.*parseDouble*(second));

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

result = (Double.*parseDouble*(first) / Double.*parseDouble*(second));

else

result = (Double.*parseDouble*(first) \* Double.*parseDouble*(second));

first = Double.*toString*(result);

operator = action;

second = "";

}

if(first.equals("")) {

first = operator = second = "";

}else if(second.equals("") && operator.equals("=")) {

operator = "";

}

*textField*.setText(first + operator + second);

}

}

}

