import java.awt.\*;

import java.awt.event.\*;

import javax.swing.\*;

import java.util.\*;

public class JavaCalculator extends JFrame {

private JButton jbtNum1;

private JButton jbtNum2;

private JButton jbtNum3;

private JButton jbtNum4;

private JButton jbtNum5;

private JButton jbtNum6;

private JButton jbtNum7;

private JButton jbtNum8;

private JButton jbtNum9;

private JButton jbtNum0;

private JButton jbtEqual;

private JButton jbtAdd;

private JButton jbtSubtract;

private JButton jbtMultiply;

private JButton jbtDivide;

private JButton jbtSolve;

private JButton jbtClear;

private double TEMP;

private double SolveTEMP;

private JTextField jtfResult;

String display = "";

public JavaCalculator() {

JPanel p1 = new JPanel();

p1.setLayout(new GridLayout(4, 3));

p1.add(jbtNum1 = new JButton("1"));

p1.add(jbtNum2 = new JButton("2"));

p1.add(jbtNum3 = new JButton("3"));

p1.add(jbtNum4 = new JButton("4"));

p1.add(jbtNum5 = new JButton("5"));

p1.add(jbtNum6 = new JButton("6"));

p1.add(jbtNum7 = new JButton("7"));

p1.add(jbtNum8 = new JButton("8"));

p1.add(jbtNum9 = new JButton("9"));

p1.add(jbtNum0 = new JButton("0"));

p1.add(jbtClear = new JButton("C"));

JPanel p2 = new JPanel();

p2.setLayout(new FlowLayout());

p2.add(jtfResult = new JTextField(20));

jtfResult.setHorizontalAlignment(JTextField.RIGHT);

jtfResult.setEditable(false);

JPanel p3 = new JPanel();

p3.setLayout(new GridLayout(5, 1));

p3.add(jbtAdd = new JButton("+"));

p3.add(jbtSubtract = new JButton("-"));

p3.add(jbtMultiply = new JButton("\*"));

p3.add(jbtDivide = new JButton("/"));

p3.add(jbtSolve = new JButton("="));

JPanel p = new JPanel();

p.setLayout(new GridLayout());

p.add(p2, BorderLayout.NORTH);

p.add(p1, BorderLayout.SOUTH);

p.add(p3, BorderLayout.EAST);

add(p);

jbtNum1.addActionListener(new ListenToOne());

jbtNum2.addActionListener(new ListenToTwo());

jbtNum3.addActionListener(new ListenToThree());

jbtNum4.addActionListener(new ListenToFour());

jbtNum5.addActionListener(new ListenToFive());

jbtNum6.addActionListener(new ListenToSix());

jbtNum7.addActionListener(new ListenToSeven());

jbtNum8.addActionListener(new ListenToEight());

jbtNum9.addActionListener(new ListenToNine());

jbtNum0.addActionListener(new ListenToZero());

jbtAdd.addActionListener(new ListenToAdd());

jbtSubtract.addActionListener(new ListenToSubtract());

jbtMultiply.addActionListener(new ListenToMultiply());

jbtDivide.addActionListener(new ListenToDivide());

jbtSolve.addActionListener(new ListenToSolve());

} //JavaCaluclator()

class ListenToOne implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "1");

}

}

class ListenToTwo implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "2");

}

}

class ListenToThree implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "3");

}

}

class ListenToFour implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "4");

}

}

class ListenToFive implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "5");

}

}

class ListenToSix implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "6");

}

}

class ListenToSeven implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "7");

}

}

class ListenToEight implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "8");

}

}

class ListenToNine implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "9");

}

}

class ListenToZero implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "0");

}

}

class ListenToAdd implements ActionListener {

public void actionPerformed(ActionEvent e) {

TEMP = Double.parseDouble(jtfResult.getText());

jtfResult.setText("");

}

}

class ListenToSubtract implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "0");

}

}

class ListenToMultiply implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "0");

}

}

class ListenToDivide implements ActionListener {

public void actionPerformed(ActionEvent e) {

display = jtfResult.getText();

jtfResult.setText(display + "0");

}

}

class ListenToSolve implements ActionListener {

public void actionPerformed(ActionEvent e) {

SolveTEMP = jtfResult.getText();

jtfResult.setText(TEMP + Double.parseDouble(jtfResult);

}

}

public static void main(String[] args) {

// TODO Auto-generated method stub

JavaCalculator calc = new JavaCalculator();

calc.pack();

calc.setLocationRelativeTo(null);

calc.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

calc.setVisible(true);

}

}