//calculator program

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import javax.swing.JTextField;

public class Calculator implements ActionListener{

JFrame frame;

JTextField textfield;

JButton[] numberButtons = new JButton[10];

JButton[] functionButtons = new JButton[8];

JButton addButton, subButton, mulButton, divButton;

JButton decButton, equButton, delButton, clrButton, negButton;

JPanel panel;

Font myFont = new Font("Digital-7", Font.BOLD, 32);

double num1=0, num2=0, result=0;

char operator;

Calculator(){

frame= new JFrame("Calculator");

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

frame.setSize(420, 550);

frame.setLayout(null);

textfield = new JTextField();

textfield.setBounds(50,25, 300, 50);

textfield.setFont(myFont);

textfield.setEditable(false);

addButton = new JButton("+");

subButton = new JButton("-");

mulButton = new JButton("\*");

divButton = new JButton("/");

decButton = new JButton(".");

equButton = new JButton("=");

delButton = new JButton("Delete");

clrButton = new JButton("Clear");

negButton = new JButton("(-)");

functionButtons[0] = addButton;

functionButtons[1] = subButton;

functionButtons[2] = mulButton;

functionButtons[3] = divButton;

functionButtons[4] = decButton;

functionButtons[5] = equButton;

functionButtons[6] = delButton;

functionButtons[7] = clrButton;

functionButtons[8] = negButton;

for(int i=0;i<9;i++) {

functionButtons[i].addActionListener(this);

functionButtons[i].setFont(myFont);

functionButtons[i].setFocusable(false);

}

for(int i=0;i<10;i++) {

numberButtons[i] = new JButton(String.valueOf(i));

numberButtons[i].addActionListener(this);

numberButtons[i].setFont(myFont);

numberButtons[i].setFocusable(false);

}

negButton.setBounds(50 ,430, 100, 50);

delButton.setBounds(150, 430, 100, 50);

clrButton.setBounds(250, 430, 145, 50);

panel = new JPanel();

panel.setBounds(50, 100, 300, 300);

panel.setLayout(new GridLayout(4,4,10,10));

panel.setBackground(Color.GRAY);

panel.add(numberButtons[1]);

panel.add(numberButtons[2]);

panel.add(numberButtons[3]);

panel.add(addButton);

panel.add(numberButtons[4]);

panel.add(numberButtons[5]);

panel.add(numberButtons[6]);

panel.add(subButton);

panel.add(numberButtons[7]);

panel.add(numberButtons[8]);

panel.add(numberButtons[9]);

panel.add(mulButton);

panel.add(decButton);

panel.add(numberButtons[0]);

panel.add(equButton);

panel.add(divButton);

frame.add(panel);

frame.add(negButton);

frame.add(delButton);

frame.add(clrButton);

frame.add(textfield);

frame.setVisible(true);

}

public static void main(String[] args) {

Calculator calc = new Calculator();

}

public void actionPerformed(ActionEvent e){

for(int i=0;i<10;i++){

if(e.getSource() == numberButtons[i]) {

textfield.setText(textfield.getText().concat(String.valueOf(i)));

}

}

if(e.getSource() == decButton) {

textfield.setText(textfield.getText().concat("."));

}

if(e.getSource() == addButton) {

num1 = Double.parseDouble(textfield.getText());

operator = '+';

textfield.setText("");

}

if(e.getSource() == subButton) {

num1 = Double.parseDouble(textfield.getText());

operator = '-';

textfield.setText("");

}

if(e.getSource() == mulButton) {

num1 = Double.parseDouble(textfield.getText());

operator = '\*';

textfield.setText("");

}

if(e.getSource() == divButton) {

num1 = Double.parseDouble(textfield.getText());

operator = '/';

textfield.setText("");

}

if(e.getSource()==equButton) {

num2 = Double.parseDouble(textfield.getText());

switch(operator)

{

case'+':

result=num1+num2;

break;

case'-':

result=num1-num2;

break;

case'\*':

result=num1\*num2;

break;

case'/':

result=num1/num2;

break;

}

textfield.setText(String.valueOf(result));

num1=result;

}

if(e.getSource()==clrButton) {

textfield.setText("");

}

if(e.getSource()==delButton) {

String string = textfield.getText();

textfield.setText("");

for(int i=0;i<string.length()-1;i++ ){

textfield.setText(textfield.getText()+string.charAt(i));

}

}

if(e.getSource() == negButton) {

double temp = Double.parseDouble(textfield.getText());

temp \*=-1;

textfield.setText(String.valueOf(temp));

}

}

}