import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.util.ArrayList;

import java.util.List;

public class Calculadora implements ActionListener{

JFrame frame;

JTextField textfield;

JButton[] botNrs = new JButton[10];

JButton[] botOpr = new JButton[10];

JButton botAdi, botSubt, botMult, botDiv, botEle;

JButton botDec, botIgual, botApag, botLimp, botRest;

JPanel panel;

Font fonte = new Font("Ink Free",Font.BOLD,30);

double num1=0, num2=0, resultado=0;

char operador;

Calculadora() {

frame = new JFrame("Calculadora");

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

frame.setSize(420, 550);

frame.setLayout(null);

textfield = new JTextField();

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

textfield.setFont(fonte);

textfield.setEditable(false);

botAdi = new JButton("+");

botSubt = new JButton("-");

botMult = new JButton("\*");

botDiv = new JButton("/");

botEle = new JButton("^");

botRest = new JButton("%");

botIgual = new JButton("=");

botDec = new JButton(".");

botApag = new JButton("apagar");

botLimp = new JButton("limpar");

botOpr[0] = botAdi;

botOpr[1] = botSubt;

botOpr[2] = botMult;

botOpr[3] = botDiv;

botOpr[4] = botIgual;

botOpr[5] = botDec;

botOpr[6] = botLimp;

botOpr[7] = botApag;

botOpr[8] = botEle;

botOpr[9] = botRest;

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

botOpr[i].addActionListener(this);

botOpr[i].setFont(fonte);

botOpr[i].setFocusable(false);

}

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

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

botNrs[i].addActionListener(this);

botNrs[i].setFont(fonte);

botNrs[i].setFocusable(false);

}

botApag.setBounds(50,430,145,50);

botLimp.setBounds(205,430,145,50);

panel = new JPanel();

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

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

panel.setBackground(Color.LIGHT\_GRAY);

panel.add(botNrs[1]);

panel.add(botNrs[2]);

panel.add(botNrs[3]);

panel.add(botMult);

panel.add(botSubt);

panel.add(botNrs[4]);

panel.add(botNrs[5]);

panel.add(botNrs[6]);

panel.add(botAdi);

panel.add(botIgual);

panel.add(botNrs[7]);

panel.add(botNrs[8]);

panel.add(botNrs[9]);

panel.add(botEle);

panel.add(botDiv);

panel.add(botDec);

panel.add(botRest);

panel.add(botNrs[0]);

frame.add(panel);

frame.add(botApag);

frame.add(botLimp);

frame.add(textfield);

frame.setVisible(true);

}

public static void main(String[] args) {

Calculadora calc = new Calculadora();

}

@Override

public void actionPerformed(ActionEvent e) {

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

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

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

}

}

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

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

}

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

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

operador = '+';

textfield.setText("");

}

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

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

operador = '-';

textfield.setText("");

}

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

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

operador = '\*';

textfield.setText("");

}

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

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

operador = '/';

textfield.setText("");

}

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

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

operador = '^';

textfield.setText("");

}

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

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

operador = '%';

textfield.setText("");

}

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

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

switch(operador){

case'+':

resultado=num1+num2;

break;

case'-':

resultado=num1-num2;

break;

case'\*':

resultado=num1\*num2;

break;

case'/':

resultado=num1/num2;

break;

case'^':

resultado=Math.pow(num1, num2);

break;

case'%':

resultado=num1%num2;

break;

default:

break;

}

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

}

List<Calculos> list = new ArrayList<Calculos>();

Calculos cal = new Calculos(num1,operador,num2,resultado);

list.add(cal);

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

textfield.setText("");

}

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

String string = textfield.getText();

textfield.setText("");

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

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

}