**Ecuación de Segundo Grado (Método General)**

import java.awt.GridLayout;  
import javax.swing.JButton;  
import javax.swing.JFrame;  
import javax.swing.JLabel;  
import javax.swing.JTextField;  
  
public class Ecuacion2do extends JFrame {  
 private static final long serialVersionUID = 1L;  
 Double A;  
 Double B;  
 Double C;  
 JLabel lblA,lblB,lblC,lblx1,lblx2,lblvA,lblvB,lblvC,lblvDet;  
 JTextField txtA,txtB,txtC;  
 JButton btnAceptar, btnCancelar;  
   
 public Ecuacion2do( ) {  
 setTitle("Solucion");  
 setSize(250,200);  
 setDefaultCloseOperation(EXIT\_ON\_CLOSE);  
 setLocationRelativeTo(null);  
 dibujarIntefaz( ); }  
   
 public void dibujarIntefaz( ) {  
 getContentPane( ).setLayout(new GridLayout(7,2));  
   
 lblA = new JLabel("Valor de A");  
 getContentPane( ).add(lblA);  
   
 txtA = new JTextField();  
 getContentPane( ).add(txtA);   
   
 lblB = new JLabel("Valor de B");  
 getContentPane( ).add(lblB);  
   
 txtB = new JTextField( );  
 getContentPane( ).add(txtB);  
   
 lblC = new JLabel("Valor de C");  
 getContentPane( ).add(lblC);  
   
 txtC = new JTextField();  
 getContentPane( ).add(txtC);  
 lblx1 = new JLabel("x1 = ");  
 getContentPane( ).add(lblx1);  
 lblx2 = new JLabel("x2 = ");  
 getContentPane( ).add(lblx2);  
   
 lblvA = new JLabel("vA");  
 getContentPane( ).add(lblvA);  
   
 lblvB = new JLabel("vB");  
 getContentPane( ).add(lblvB);  
   
 lblvC = new JLabel("vC");  
 getContentPane( ).add(lblvC);  
   
 lblvDet = new JLabel("vDet");  
 getContentPane( ).add(lblvDet);  
   
 btnAceptar = new JButton("Resolver");  
 getContentPane( ).add(btnAceptar);  
   
 btnCancelar = new JButton("Cancelar");  
 getContentPane( ).add(btnCancelar);  
   
 btnCancelar.addActionListener(new java.awt.event.ActionListener( ) {   
 public void actionPerformed(java.awt.event.ActionEvent e) {  
 System.exit(0); } });  
   
 btnAceptar.addActionListener(new java.awt.event.ActionListener( ) {   
 public void actionPerformed(java.awt.event.ActionEvent e) {  
 String msj=" ";  
   
 if(txtA.getText().isEmpty( ) ) {  
 msj +="Falta el valor de A\n"; }  
   
 if(txtB.getText().isEmpty( ) ) {  
 msj +="Falta el valor de B\n"; }   
   
 if(txtC.getText().isEmpty( ) ) {  
 msj +="Falta el valor de C\n"; }  
   
 A = Double.parseDouble(txtA.getText( ) );  
 B = Double.parseDouble(txtB.getText( ) );  
 C = Double.parseDouble(txtC.getText( ) );  
   
 lblvA.setText("A = " + txtA.getText( ) );  
 lblvB.setText("B = " +txtB.getText( ) );  
 lblvC.setText("C = " +txtC.getText( ) );  
 lblvDet.setText("Det = " + determinante( ) );  
 if (msj.isEmpty( )) {  
   
 A = Double.parseDouble(txtA.getText( ) );  
 B = Double.parseDouble(txtB.getText( ) );  
 C = Double.parseDouble(txtC.getText( ) );  
 Double miSol[ ] = Solucion( );  
   
 if (miSol[0] == 100.0) {  
 lblx1.setText("Sin solucion");  
 lblx2.setText("Sin solucion"); }

else {  
 lblx1.setText("X1 = " + miSol[0].toString( ) );  
 lblx2.setText("X2 = " + miSol[1].toString( ) ); } }

else {  
 javax.swing.JOptionPane.showMessageDialog(null, msj); } } });  
 }  
 public Double determinante( ) {  
 return (B \* B - 4 \* A \* C); }  
 public Double[ ] Solucion()  {  
 Double Sol[ ] = new Double[2];

if (determinante( ) == 0) {  
 Sol[0] = -B/2\*A;  
 Sol[1] = Sol[0]; }  
   
 if (determinante() > 0) {  
  
 Sol[0] = (-B + Math.sqrt(determinante( ) ) );  
 Sol[0] = Sol[0]/(2\*A);   
 Sol[1] = (-B - Math.sqrt(determinante( ) ) );  
 Sol[1] = Sol[1]/(2\*A); }  
   
 if (determinante() < 0) {  
 Sol[0] = 100.0;  
 Sol[1] = Sol[0]; }   
 return Sol; }  
   
 public static void main(String args[ ]) {  
 new Ecuacion2do( ).setVisible(true); } }