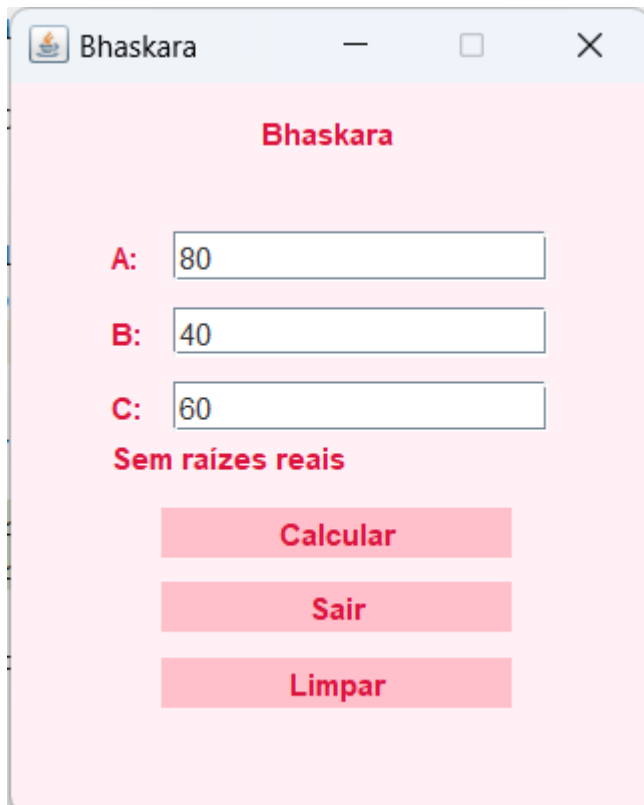


Nome: Mariana dos Santos Moreira

Bhaskara:



The screenshot shows a window titled "Bhaskara" with a light pink background. At the top, the title bar contains the window icon, the text "Bhaskara", and standard window controls (minimize, maximize, close). Below the title bar, the word "Bhaskara" is displayed in red. There are three input fields labeled "A:", "B:", and "C:" in red. The values entered are 80, 40, and 60 respectively. Below the inputs, the text "Sem raízes reais" is shown in red. At the bottom, there are three red buttons labeled "Calcular", "Sair", and "Limpar" in red.

Bhaskara

A: 80

B: 40

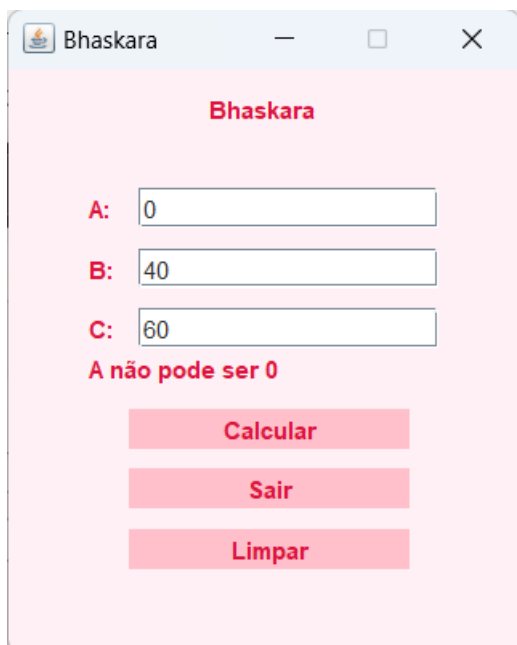
C: 60

Sem raízes reais

Calcular

Sair

Limpar



The screenshot shows the same "Bhaskara" window. The input field for "A:" now contains the value 0, while "B:" remains 40 and "C:" remains 60. The text "A não pode ser 0" is displayed in red below the inputs. The buttons "Calcular", "Sair", and "Limpar" remain at the bottom.

Bhaskara

A: 0

B: 40

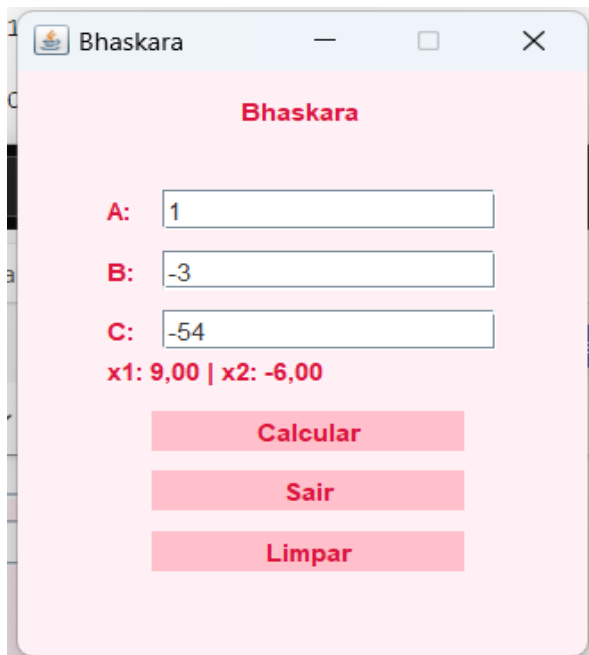
C: 60

A não pode ser 0

Calcular

Sair

Limpar



```
1 package com.mycompany.bhaskaracalculadora;
2 import javax.swing.*;
3 import java.awt.*;
4 import java.awt.event.ActionEvent;
5 import java.awt.event.ActionListener;
6 import javax.swing.border.EmptyBorder;
7
8 public class Bhaskaracalculadora {
9     public static void main(String[] args) {
10         JFrame frame = new JFrame("Bhaskara");
11         frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
12         frame.setSize(270, 330);
13         frame.setLayout(null);
14
15         JLabel titulo = new JLabel("Bhaskara");
16         JLabel labelA = new JLabel("A:");
17         JTextField fieldA = new JTextField();
18         JLabel labelB = new JLabel("B:");
19         JTextField fieldB = new JTextField();
20         JLabel labelC = new JLabel("C:");
21         JTextField fieldC = new JTextField();
22         JButton calcular = new JButton("Calcular");
23         JButton sair = new JButton("Sair");
24         JButton limpar = new JButton("Limpar");
25         JLabel resultado = new JLabel("");
26
27         calcular = new JButton("Calcular");
28         calcular.setBorder(new EmptyBorder(0, 0, 0, 0));
29         calcular.setFocusPainted(false);
30         sair = new JButton("Sair");
31         sair.setBorder(new EmptyBorder(0, 0, 0, 0));
32         sair.setFocusPainted(false);
33         limpar = new JButton("Limpar");
34         limpar.setBorder(new EmptyBorder(0, 0, 0, 0));
35         limpar.setFocusPainted(false);
```

```

37 titulo.setBounds(100, 10, 100, 20);
38 labelA.setBounds(40, 60, 50, 20);
39 fieldA.setBounds(65, 60, 150, 20);
40 labelB.setBounds(40, 90, 50, 20);
41 fieldB.setBounds(65, 90, 150, 20);
42 labelC.setBounds(40, 120, 50, 20);
43 fieldC.setBounds(65, 120, 150, 20);
44 resultado.setBounds(40, 140, 150, 20);
45 calcular.setBounds(60, 170, 140, 20);
46 sair.setBounds(60, 200, 140, 20);
47 limpar.setBounds(60, 230, 140, 20);
48
49
50 JLabel[] rotulos = {titulo, labelA, labelB, labelC, resultado};
51 for (JLabel rotulo : rotulos) {
52     rotulo.setForeground(new Color(220, 20, 60));
53 }
54 JButton[] botoes = {calcular, sair, limpar};
55 for (JButton botao : botoes) {
56     botao.setBackground(new Color(255, 192, 203));
57     botao.setForeground(new Color(220, 20, 60));
58 }
59 frame.getContentPane().setBackground(new Color(255, 240, 245));
60
61 frame.add(titulo);
62 frame.add(labelA);
63 frame.add(fieldA);
64 frame.add(labelB);
65 frame.add(fieldB);
66 frame.add(labelC);
67 frame.add(fieldC);
68 frame.add(calcular);
69 frame.add(sair);
70 frame.add(limpar);
71 frame.add(resultado);

```

```

74      calcular.addActionListener(new ActionListener() {
75          @Override
76          public void actionPerformed(ActionEvent e) {
77              try {
78                  double a = Double.parseDouble(fieldA.getText().trim());
79                  double b = Double.parseDouble(fieldB.getText().trim());
80                  double c = Double.parseDouble(fieldC.getText().trim());
81
82                  if (a == 0) {
83                      resultado.setText("A não pode ser 0");
84                      return;
85                  }
86
87                  double delta = b * b - 4 * a * c;
88                  if (delta < 0) {
89                      resultado.setText("Sem raízes reais");
90                  } else {
91                      double x1 = (-b + Math.sqrt(delta)) / (2 * a);
92                      double x2 = (-b - Math.sqrt(delta)) / (2 * a);
93                      resultado.setText("x1: " + String.format("%.2f", x1) + " | ");
94                  }
95              } catch (NumberFormatException ex) {
96                  resultado.setText("Entrada inválida");
97              }
98          });
99
100      sair.addActionListener(new ActionListener() {
101          @Override
102          public void actionPerformed(ActionEvent e) {
103              System.exit(0);
104          }
105      });
106
107      limpar.addActionListener(new ActionListener() {
108          @Override
109          public void actionPerformed(ActionEvent e) {
110              label1.setText(null);

```

```

100      sair.addActionListener(new ActionListener() {
101          @Override
102          public void actionPerformed(ActionEvent e) {
103              System.exit(0);
104          }
105      });
106      limpar.addActionListener(new ActionListener() {
107          @Override
108          public void actionPerformed(ActionEvent e) {
109              labelA.setText(null);
110              labelB.setText(null);
111              labelC.setText(null);
112              labelA.requestFocus();
113          }
114      });
115
116      frame.setVisible(true);
117      frame.setResizable(false);
118      frame.setVisible(true);
119      frame.setLocationRelativeTo(null);
120  }
121

```

Pitágoras:

Pitágoras

Cateto 1:

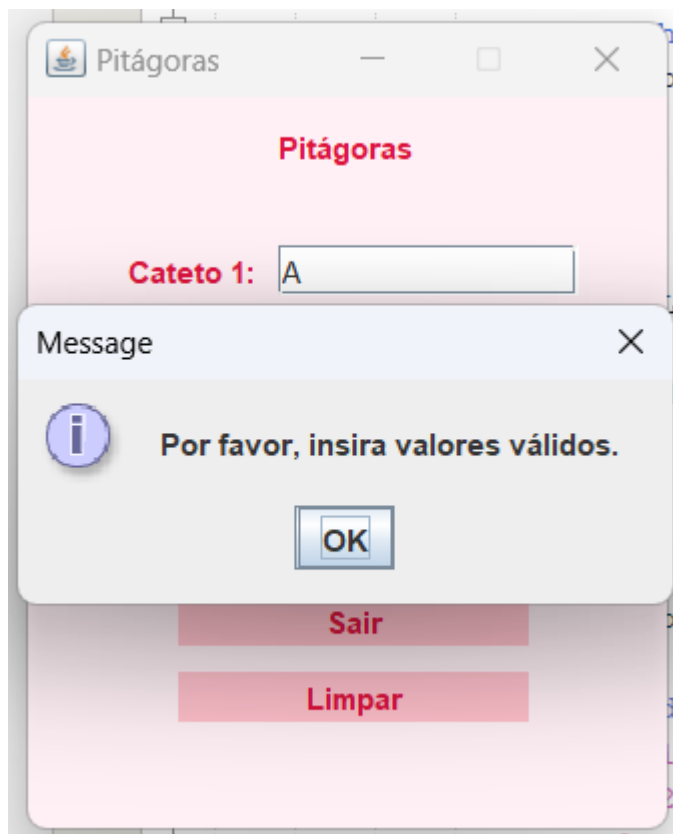
Cateto 2:

Hipotenusa: 10,82

Calcular

Sair

Limpar



```
package com.mycompany.pitagorascalculadora;

import java.awt.Color;
import javax.swing.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.border.EmptyBorder;

public class Pitagorascalculadora extends JFrame {

    private JTextField cateto1F, cateto2F;
    private JButton calcular, sair, limpar;
    private JLabel titulo, cateto1L, cateto2L, resultadoL;

    public Pitagorascalculadora() {
        setTitle("Pitágoras");
        setLayout(null);

        titulo = new JLabel("Pitágoras");
        cateto1L = new JLabel("Cateto 1:");
        cateto1F = new JTextField();
        cateto2L = new JLabel("Cateto 2:");
        cateto2F = new JTextField();
        resultadoL = new JLabel("Resultado: ");
        calcular = new JButton("Calcular");
        sair = new JButton("Sair");
        limpar = new JButton("Limpar");
        calcular.setBorder(new EmptyBorder(0, 0, 0, 0));
        calcular.setFocusPainted(false);
        sair.setBorder(new EmptyBorder(0, 0, 0, 0));
        sair.setFocusPainted(false);
        limpar.setBorder(new EmptyBorder(0, 0, 0, 0));
        limpar.setFocusPainted(false);

        titulo.setBounds(100, 10, 100, 20);
        cateto1L.setBounds(40, 60, 50, 20);
```

```

cateto1F.setBounds(100, 60, 120, 20);
cateto2L.setBounds(40, 90, 50, 20);
cateto2F.setBounds(100, 90, 120, 20);
resultadoL.setBounds(40, 120, 180, 20);
calcular.setBounds(60, 170, 140, 20);
sair.setBounds(60, 200, 140, 20);
limpar.setBounds(60, 230, 140, 20);

JLabel[] rotulos = {titulo, cateto1L, cateto2L, resultadoL};
for (JLabel rotulo : rotulos) {
    rotulo.setForeground(new Color(220,20,60));
}
JButton[] botoes = {calcular, sair, limpar};
for (JButton botao : botoes) {
    botao.setBackground(new Color (255,192,203));
    botao.setForeground(new Color(220,20,60));
}

add(titulo);
add(cateto1L);
add(cateto1F);
add(cateto2L);
add(cateto2F);
add(resultadoL);
add(calcular);
add(sair);
add(limpar);

calcular.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        try {
            double cateto1 = Double.parseDouble(cateto1F.getText());
            double cateto2 = Double.parseDouble(cateto2F.getText());
            double hipotenusa = Math.sqrt(Math.pow(cateto1, 2) + Math.pow(cateto2, 2));
            resultadoL.setText("Hipotenusa: " + String.format("%.2f", hipotenusa));
        }
    }
});

```



```

        } catch (NumberFormatException ex) {
            JOptionPane.showMessageDialog(null, "Por favor, insira valores válidos.");
        }
    }
});

sair.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        System.exit(0);
    }
});

limpar.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        cateto1F.setText("");
        cateto2F.setText("");
        resultadoL.setText("Resultado: ");
        cateto1F.requestFocus();
    }
});

getContentPane().setBackground(new Color(255,240,245));
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setSize(270, 330);
setVisible(true);
setLocationRelativeTo(null);
setResizable(false);
}

public static void main(String[] args) {
    new Pitagorascalculadora();
}
}

```