LAPORAN TUGAS PRAKTIKUM

ALGORITMA PEMROGRAMAN PEKAN DELAPAN

disusun Oleh:

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A. Kode Program

```
package pekan8_2411532015;

import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.SwingConstants;
import javax.swing.JTextField;
import javax.swing.JComboBox;
import javax.swing.JButton;
import javax.swing.DefaultComboBoxModel;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class TugasPekan8_2411532015 extends JFrame {

	private static final long serialVersionUID = 1L;
	private JPanel contentPane;
	private JTextField txtHasil;
	private JTextField txtBil2;
	private JTextField txtBil1;

	private void pesanPeringatan(String pesan) {
		JOptionPane.showMessageDialog(this, pesan, "Peringatan",
JOptionPane.WARNING_MESSAGE);
	}
```

```
	private void pesanError(String pesan) {
		JOptionPane.showMessageDialog(this, pesan, "Kesalahan",
JOptionPane.ERROR_MESSAGE);
	}

	/**
	 * Launch the application.
	 */

	/**
	 * Launch the application.
	 */
	public static void main(String[] args) {
		EventQueue.invokeLater(new Runnable() {
			public void run() {
				try {
					TugasPekan8_2411532015 frame = new
TugasPekan8_2411532015();
					frame.setVisible(true);
				} catch (Exception e) {
					e.printStackTrace();
				}
			}
		});
	}

	/**
	 * Create the frame.
	 */
	public TugasPekan8_2411532015() {
		setTitle("Operator Relasional");
```

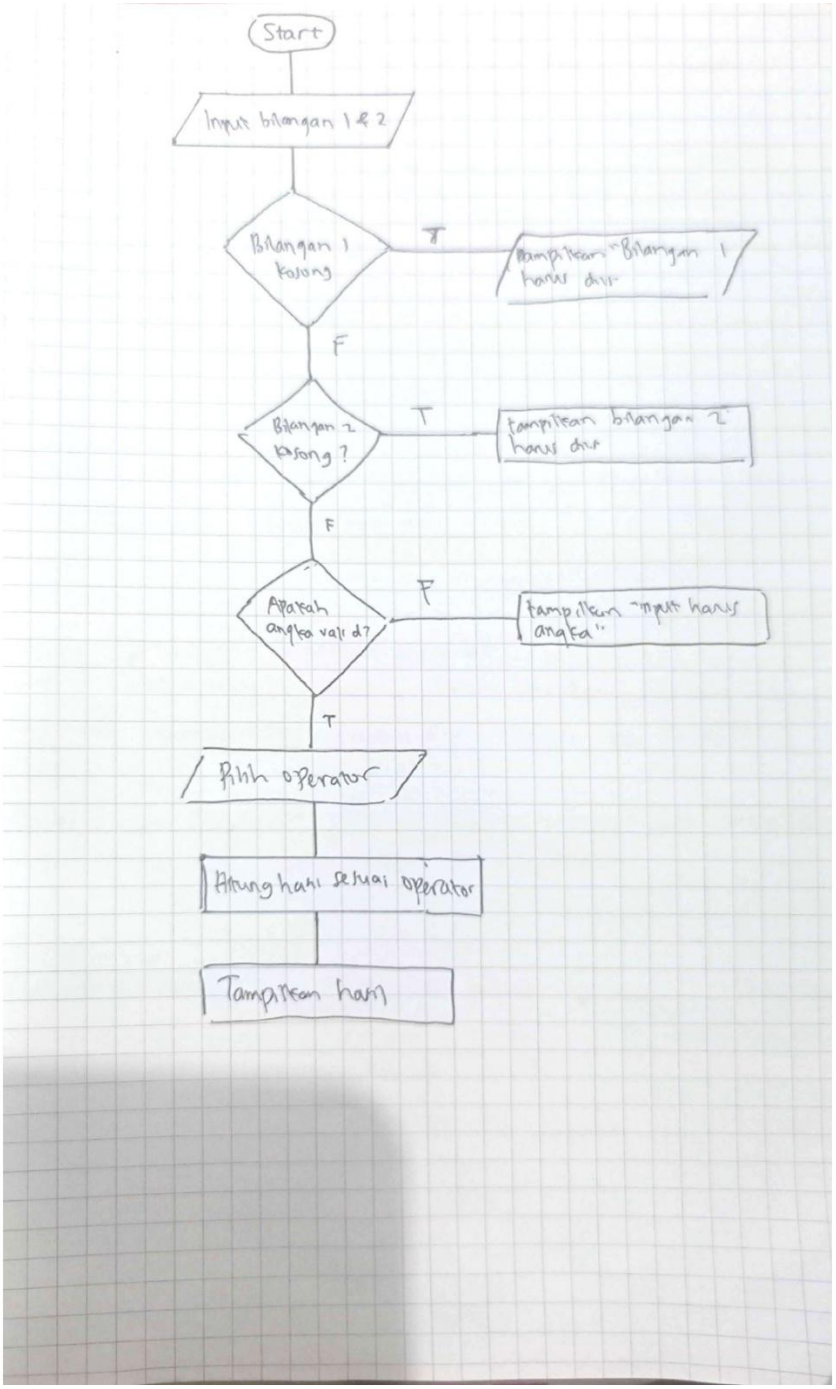
```
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setBounds(100, 100, 344, 237);
contentPane = new JPanel();
contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
setContentPane(contentPane);
contentPane.setLayout(null);

JLabel lblNewLabel = new JLabel("Operator Relasional");
lblNewLabel.setHorizontalAlignment(SwingConstants.CENTER);
lblNewLabel.setBounds(78, 11, 182, 14);
contentPane.add(lblNewLabel);

JLabel lblNewLabel_1_2 = new JLabel("Bilangan 1");
lblNewLabel_1_2.setBounds(28, 36, 84, 17);
contentPane.add(lblNewLabel_1_2);

JLabel lblNewLabel_1_1_1 = new JLabel("Bilangan 2");
lblNewLabel_1_1_1.setBounds(28, 67, 84, 17);
contentPane.add(lblNewLabel_1_1_1);

JLabel lblNewLabel_1_2_1 = new JLabel("Operator");
lblNewLabel_1_2_1.setBounds(30, 106, 84, 14);
contentPane.add(lblNewLabel_1_2_1);

JLabel lblNewLabel_1_3 = new JLabel("Hasil");
lblNewLabel_1_3.setHorizontalAlignment(SwingConstants.LEFT);
lblNewLabel_1_3.setBounds(36, 153, 44, 14);
contentPane.add(lblNewLabel_1_3);

txtHasil = new JTextField();
txtHasil.setHorizontalAlignment(SwingConstants.CENTER);
```

```
                txtHasil.setEditable(false);
                txtHasil.setColumns(10);
                txtHasil.setBounds(137, 149, 84, 20);
                contentPane.add(txtHasil);

                JComboBox cbOperator = new JComboBox();
                cbOperator.setModel(new DefaultComboBoxModel(new String[] {">",
"<", ">=", "<=", "==", "!="}));
                cbOperator.setBounds(134, 102, 84, 22);
                contentPane.add(cbOperator);

                txtBil2 = new JTextField();
                txtBil2.setHorizontalAlignment(SwingConstants.CENTER);
                txtBil2.setColumns(10);
                txtBil2.setBounds(134, 64, 84, 20);
                contentPane.add(txtBil2);

                txtBil1 = new JTextField();
                txtBil1.setHorizontalAlignment(SwingConstants.CENTER);
                txtBil1.setColumns(10);
                txtBil1.setBounds(134, 33, 84, 20);
                contentPane.add(txtBil1);

                JButton btnCek = new JButton("Cek");
                btnCek.addActionListener(new ActionListener() {
                        public void actionPerformed(ActionEvent e) {
                                if (txtBil1.getText().trim().isEmpty()) {
            pesanPeringatan("Bilangan 1 harus diisi");
            return;
        }
        if (txtBil2.getText().trim().isEmpty()) {
```

```
    pesanPeringatan("Bilangan 2 harus diisi");
    return;
}

try {
    int a = Integer.parseInt(txtBil1.getText());
    int b = Integer.parseInt(txtBil2.getText());
    int c = cbOperator.getSelectedIndex();
    boolean hasil = false;


    if (c==0) {
                                        hasil = a > b;
                                    }
                                    if (c==1) {
                                        hasil = a < b;
                                    }
                                    if (c==2) {
                                        hasil = a >= b;
                                    }
                                    if (c==3) {
                                        hasil = a <= b;
                                    }
                                    if (c==4) {
                                        hasil = a == b;
                                    }
                                    if (c==5) {
                                        hasil = a != b;
                                    }

                                    txtHasil.setText(String.valueOf(hasil));
```

```
            } catch (NumberFormatException ex) {
                pesanError("Input harus berupa angka");
            }
                        }


                });
                btnCek.setBounds(246, 103, 78, 22);
                contentPane.add(btnCek);

        }
}
```

B. FlowChart


Start
Input bilangan 1 & 2
Bilangan 1 kosong
T
Tampilkan "Bilangan 1 harus diisi
F
Bilangan 2 kosong ?
T
tampilkan bilangan 2 harus diisi
F
Apakah angka valid?
F
tampilkan "input harus angka"
T
Pilih operator
Hitung hasil sesuai operator
Tampilkan hasil

C. PseudoCode

START

Tunggu tombol "Cek" ditekan

Ambil nilai teks dari txtBil1
Jika txtBil1 kosong:
  Tampilkan peringatan "Bilangan 1 harus diisi"
  STOP

Ambil nilai teks dari txtBil2
Jika txtBil2 kosong:
  Tampilkan peringatan "Bilangan 2 harus diisi"
  STOP

Coba konversi txtBil1 dan txtBil2 menjadi integer:
  Jika gagal:
    Tampilkan pesan error "Input harus berupa angka"
    STOP

Ambil operator yang dipilih dari comboBox (index c)

Deklarasikan variabel boolean hasil

Jika c = 0 → operator ">"
  hasil = A1 > A2
Jika c = 1 → operator "<"
  hasil = A1 < A2
Jika c = 2 → operator ">="
  hasil = A1 >= A2

Jika c = 3 → operator "<="

hasil = A1 <= A2

Jika c = 4 → operator "=="

hasil = A1 == A2

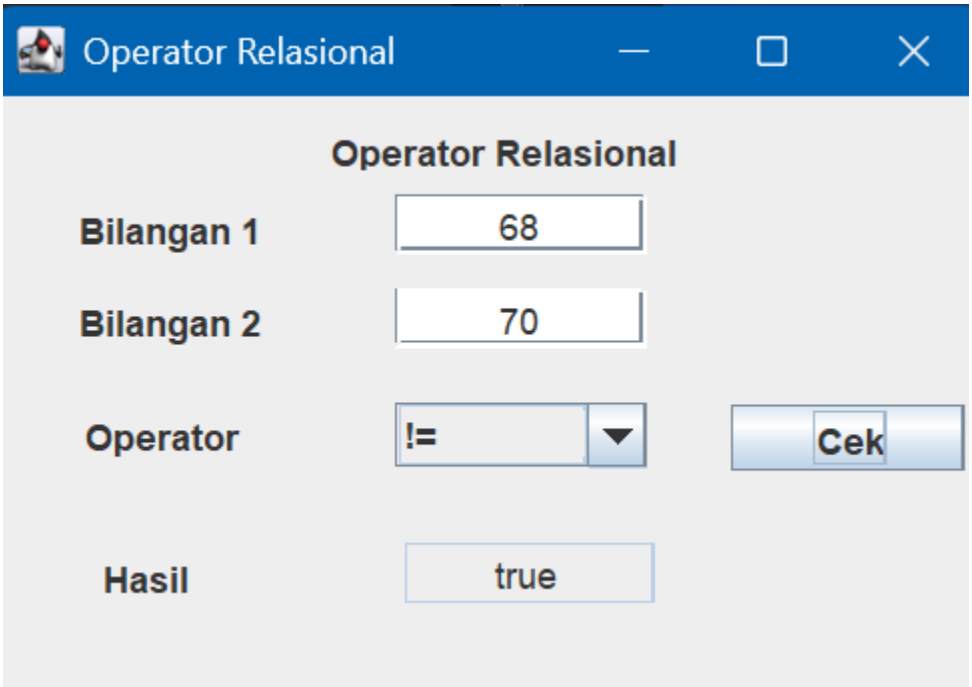
Jika c = 5 → operator "!="

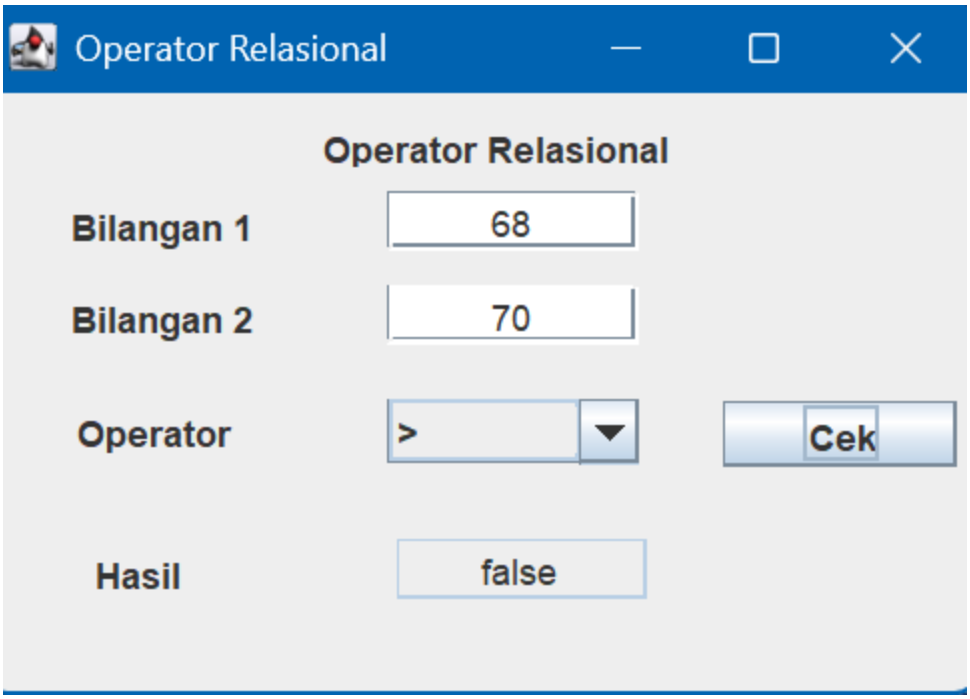
hasil = A1 != A2

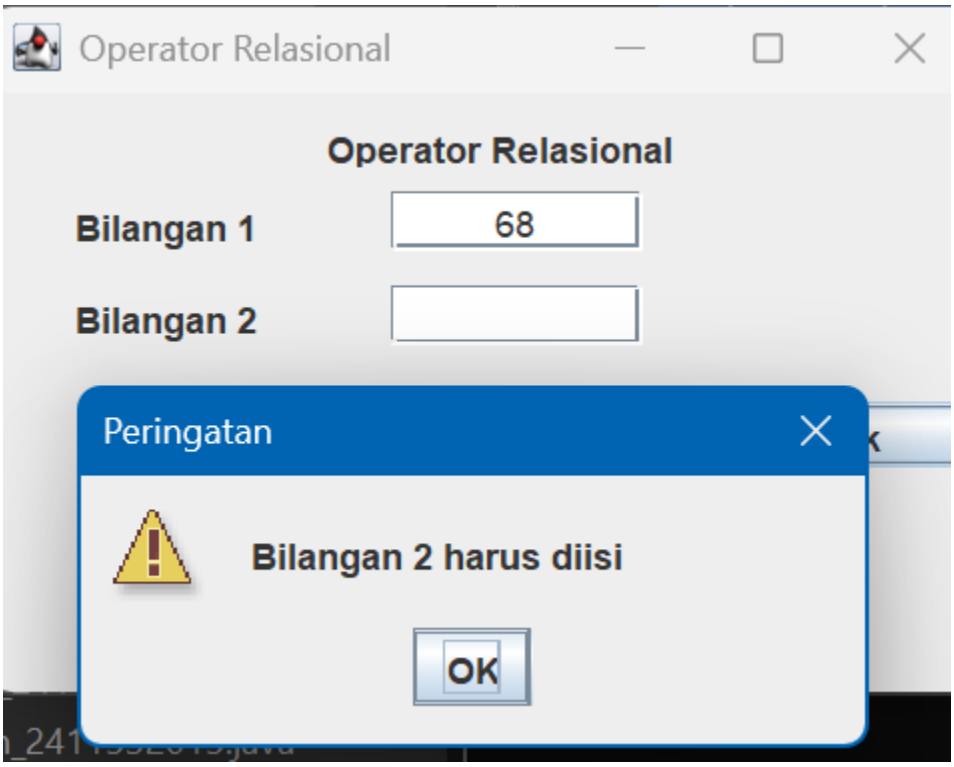
Tampilkan hasil pada txtHasil

END

D. Output




Operator Relasional
Operator Relasional
Bilangan 1
68
Bilangan 2
70
Operator
>
Cek
Hasil
false


Operator Relasional
Operator Relasional
Bilangan 1
68
Bilangan 2
Peringatan
Bilangan 2 harus diisi
OK