TUGAS PRAKTIKUM
ALGORITMA DAN PEMROGRAMAN
TUGAS PEKAN 8
OPERATOR ASSIGNMENT GUI

Disusun oleh:

Ghinada Fathanawafa Algma
2511533008

Kelas B Informatika

Dosen Pengampu:
Dr. Wahyudi S.T. M.T

Asisten Praktikum:
Rahmad Dwirizki Olders

DEPARTEMEN INFORMATIKA
FAKULTAS TEKNOLOGI INFORMASI
UNIVERSITAS ANDALAS
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1. **Pseudocode**

Judul

Operator Assignment GUI

Deklarasi

String txtBil1, txtBil2

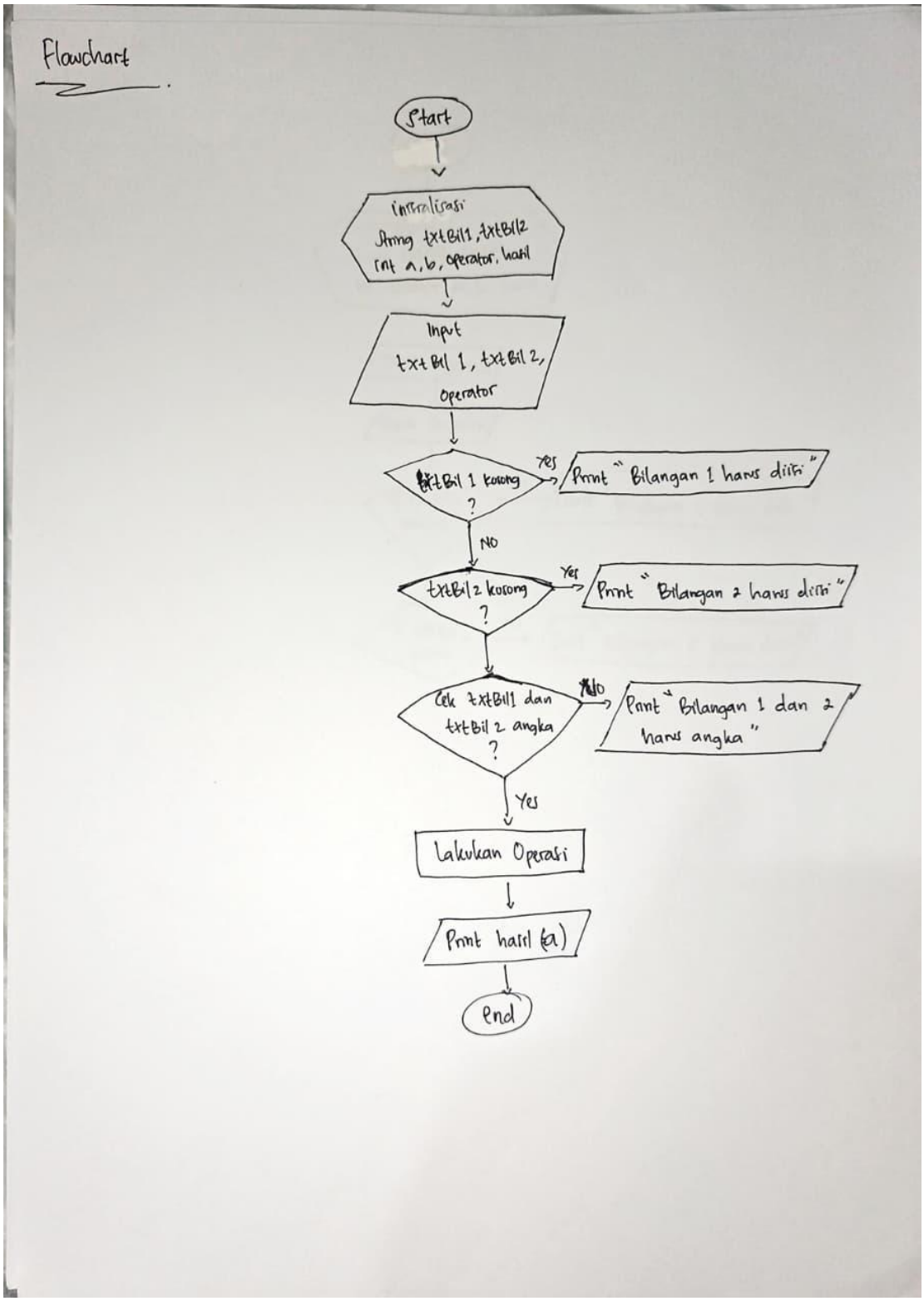
Int a, b, operator, hasil

Algoritma

1. Read txtBil1
2. Read txtBil2
3. If txtBil1 is empty then
4. Print “Bilangan 1 harus diisi”
5. Stop
6. Endif
7. If txtBil2 is empty then
8. Print “Bilangan 2 harus diisi”
9. Stop
10. Endif
11. Try
12. a = convert txtBil1 to integer
13. b = convert txtBil2 to integer
14. Catch error
15. Print “Bilangan 1 dan Bilangan 2 harus angka”
16. Stop
17. Endtry
18. Read operator (index)
19. 0 = “+=”
20. 1 = “-=”
21. 2 = “*=”
22. 3 = “/=”

```
23. 4 = “%=”
24. Switch operator
25.   Case 0:
26.       a = a+b
27.   Case 1:
28.       a = a-b
29.   Case 2:
30.       a = a*b
31.   Case 3:
32.       a = a/b
33.   Case 4:
34.       a = a%b
35. End switch
36. Print hasil = a
37. end
```

2. Flowchart


Flowchart
Start
Inisialisasi
String txtBil1, txtBil2
int a, b, operator, hasil
Input
txtBil 1, txtBil 2,
operator
txtBil 1 kosong ?
Yes
Print " Bilangan 1 harus diisi"
NO
txtBil 2 kosong ?
Yes
Print " Bilangan 2 harus diisi"
Cek txtBil1 dan txtBil 2 angka ?
No
Print " Bilangan 1 dan 2 harus angka "
Yes
Lakukan Operasi
Print hasil (a)
End

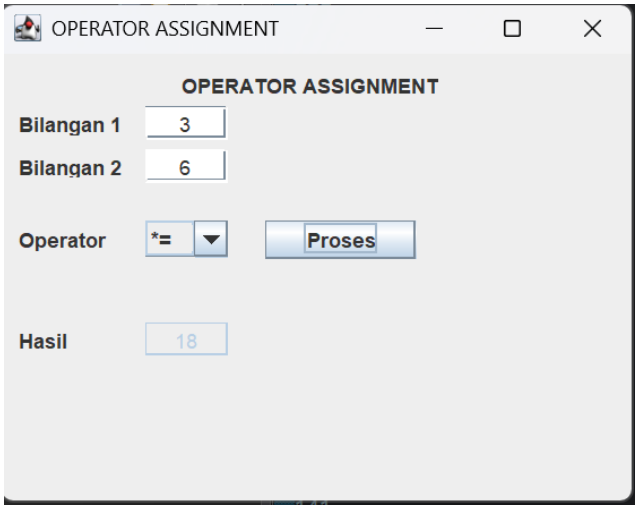
3. Kode Program

```java
package pekan8_2511533008;

import java.awt.EventQueue;

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

public class OperatorAssignment_2511533008 extends JFrame {

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

    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.
     */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    OperatorAssignment_2511533008 frame = new OperatorAssignment_2511533008();
                    frame.setVisible(true);
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }

    /**
     * Create the frame.
     */
    public OperatorAssignment_2511533008() {
        setTitle("OPERATOR ASSIGNMENT");
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setBounds(100, 100, 386, 300);
        contentPane = new JPanel();
        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
        setContentPane(contentPane);
        contentPane.setLayout(null);

        JLabel lblNewLabel_1 = new JLabel("Bilangan 1");
        lblNewLabel_1.setBounds(10, 34, 65, 14);
        contentPane.add(lblNewLabel_1);

```

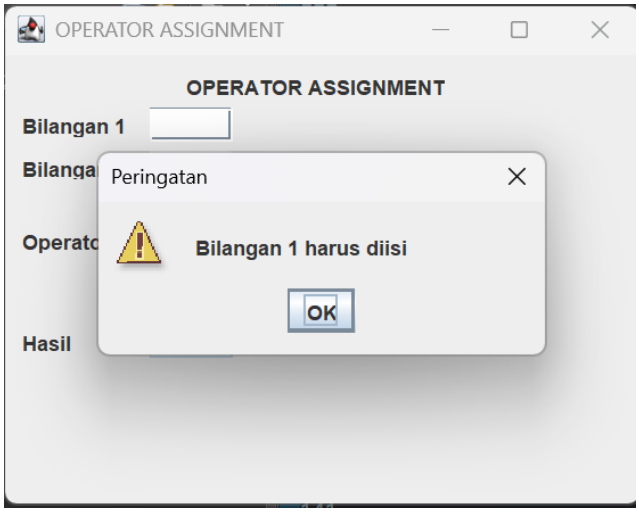
```
66
67          JLabel lblNewLabel = new JLabel("OPERATOR ASSIGNMENT");
68          lblNewLabel.setBounds(105, 11, 153, 14);
69          lblNewLabel.setHorizontalAlignment(SwingConstants.CENTER);
70          contentPane.add(lblNewLabel);
71
72          JLabel lblNewLabel_2 = new JLabel("Bilangan 2");
73          lblNewLabel_2.setBounds(10, 59, 65, 14);
74          contentPane.add(lblNewLabel_2);
75
76          JLabel lblNewLabel_3 = new JLabel("Operator");
77          lblNewLabel_3.setBounds(10, 102, 65, 14);
78          contentPane.add(lblNewLabel_3);
79
80          JLabel lblNewLabel_4 = new JLabel("Hasil");
81          lblNewLabel_4.setBounds(10, 161, 49, 14);
82          contentPane.add(lblNewLabel_4);
83
84          txtBil1 = new JTextField();
85          txtBil1.setHorizontalAlignment(SwingConstants.CENTER);
86          txtBil1.setBounds(85, 31, 49, 20);
87          contentPane.add(txtBil1);
88          txtBil1.setColumns(10);
89
90          txtBil2 = new JTextField();
91          txtBil2.setHorizontalAlignment(SwingConstants.CENTER);
92          txtBil2.setBounds(85, 56, 49, 20);
93          contentPane.add(txtBil2);
94          txtBil2.setColumns(10);
95
96          JComboBox cbOperator = new JComboBox();
97          cbOperator.setModel(new DefaultComboBoxModel(new String[] {"+=", "-=", "*=", "/=", "%="}));
98          cbOperator.setBounds(85, 98, 49, 22);
99          contentPane.add(cbOperator);
100
101         txtHasil = new JTextField();
102         txtHasil.setHorizontalAlignment(SwingConstants.CENTER);
103         txtHasil.setEnabled(false);
104         txtHasil.setEditable(false);
105         txtHasil.setBounds(85, 158, 49, 20);
106         contentPane.add(txtHasil);
107         txtHasil.setColumns(10);
108
109         JButton btnNewButton = new JButton("Proses");
110         btnNewButton.addActionListener(new ActionListener() {
111             int hasil;
112             public void actionPerformed(ActionEvent e) {
113                 if(txtBil1.getText().trim().isEmpty()) {
114                     pesanPeringatan("Bilangan 1 harus diisi");
115                 } else if (txtBil2.getText().trim().isEmpty()) {
116                     pesanPeringatan("Bilangan 2 harus diisi");
117                 } else {
118                     try {
119                         int a = Integer.parseInt(txtBil1.getText());
120                         int b = Integer.parseInt(txtBil2.getText());
121                         int c = cbOperator.getSelectedIndex();
122                         if (c==0) {
123                             a += b;
124                             hasil = a;
125                         }
126                         if (c==1) {
127                             a -= b;
128                             hasil = a;
129                         }
130                         if (c==2) {
131                             a *= b;
132                             hasil = a;
133                         }
134                         if (c==3) {
135                             a /= b;
136                             hasil = a;
137                         }
138                         if (c==4) {
139                             a %= b;
140                             hasil = a;
141                         }
142                     } catch (NumberFormatException ex) {
143                         pesanError("Bilangan 1 dan Bilangan 2 harus angka");
144                     }
145                 }
146
147                 txtHasil.setText(String.valueOf(hasil));
148             }
149         });
150         btnNewButton.setBounds(156, 98, 89, 23);
151         contentPane.add(btnNewButton);
152
153     }
154 }
155
```

4. Output Program

4.1 Output Berhasil



4.2 Output jika ada salah satu bilangan yang kosong



4.3 Output jika bilangan bukan berisi angka