TUGAS PRAKTIKUM

ALGORITMA DAN PEMROGRAMAN

TUGAS PRAKTIKUM PEKAN 8

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1. Kode Program

```
1   package pekan8_2511531018;
2
3   import java.awt.EventQueue;
4
5   import javax.swing.JFrame;
6   import javax.swing.JPanel;
7   import javax.swing.border.EmptyBorder;
8   import javax.swing.JLabel;
9   import javax.swing.JOptionPane;
10  import javax.swing.JTextField;
11  import javax.swing.JComboBox;
12  import javax.swing.JButton;
13  import javax.swing.SwingConstants;
14  import javax.swing.DefaultComboBoxModel;
15  import java.awt.event.ActionListener;
16  import java.awt.event.ActionEvent;
17
18  public class OperatorAssignmentGUI_2511531018 extends JFrame {
19
20      private static final long serialVersionUID = 1L;
21      private JPanel contentPane;
22      private JTextField txtBil1;
23      private JTextField txtBil2;
24      private JTextField txtHasil;
25
26      private void pesanPeringatan(String pesan) {
27          JOptionPane.showMessageDialog(this, pesan, "Peringatan", JOptionPane.WARNING_MESSAGE);
28      }
29      private void pesanError(String pesan) {
30          JOptionPane.showMessageDialog(this, pesan, "Kesalahan", JOptionPane.ERROR_MESSAGE);
31      }
```

```
36      public static void main(String[] args) {
37          EventQueue.invokeLater(new Runnable() {
38              public void run() {
39                  try {
40                      OperatorAssignmentGUI_2511531018 frame = new OperatorAssignmentGUI_2511531018();
41                      frame.setVisible(true);
42                  } catch (Exception e) {
43                      e.printStackTrace();
44                  }
45              }
46          });
47      }
48
49      /**
50       * Create the frame.
51       */
52      public OperatorAssignmentGUI_2511531018() {
53          setTitle("Operator Assignment");
54          setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
55          setBounds(100, 100, 450, 300);
56          contentPane = new JPanel();
57          contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
58          setContentPane(contentPane);
59          contentPane.setLayout(null);
60
61          JLabel lblNewLabel = new JLabel("Operasi Assignment");
62          lblNewLabel.setHorizontalAlignment(SwingConstants.CENTER);
63          lblNewLabel.setBounds(131, 23, 141, 14);
64          contentPane.add(lblNewLabel);
65
66          JLabel lblNewLabel_1 = new JLabel("Bilangan 1");
67          lblNewLabel_1.setBounds(29, 74, 63, 14);
68          contentPane.add(lblNewLabel_1);
```

```
69
70          JLabel lblNewLabel_1_1 = new JLabel("Bilangan 2");
71          lblNewLabel_1_1.setBounds(29, 110, 63, 14);
72          contentPane.add(lblNewLabel_1_1);
73
74          JLabel lblNewLabel_1_1_1 = new JLabel("Operator");
75          lblNewLabel_1_1_1.setBounds(29, 152, 63, 14);
76          contentPane.add(lblNewLabel_1_1_1);
77
78          JLabel lblNewLabel_1_1_2 = new JLabel("Hasil");
79          lblNewLabel_1_1_2.setBounds(29, 203, 63, 14);
80          contentPane.add(lblNewLabel_1_1_2);
81
82          txtBil1 = new JTextField();
83          txtBil1.setHorizontalAlignment(SwingConstants.CENTER);
84          txtBil1.setBounds(102, 71, 63, 20);
85          contentPane.add(txtBil1);
86          txtBil1.setColumns(10);
87
88          txtBil2 = new JTextField();
89          txtBil2.setHorizontalAlignment(SwingConstants.CENTER);
90          txtBil2.setColumns(10);
91          txtBil2.setBounds(102, 107, 63, 20);
92          contentPane.add(txtBil2);
93
94          txtHasil = new JTextField();
95          txtHasil.setHorizontalAlignment(SwingConstants.CENTER);
96          txtHasil.setEditable(false);
97          txtHasil.setEnabled(false);
98          txtHasil.setColumns(10);
99          txtHasil.setBounds(102, 200, 63, 20);
100         contentPane.add(txtHasil);
101
102         JComboBox cbOperator = new JComboBox();
103         cbOperator.setModel(new DefaultComboBoxModel(new String[] {"+=", "-=", "*=", "/=", "%="}));
104         cbOperator.setBounds(102, 148, 54, 22);
105         contentPane.add(cbOperator);
```
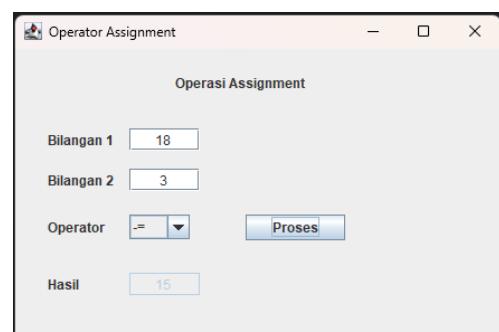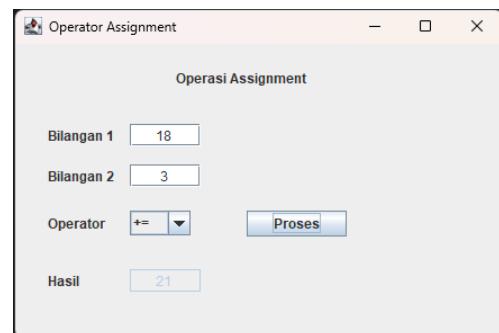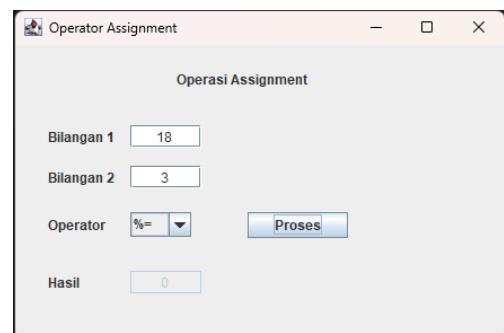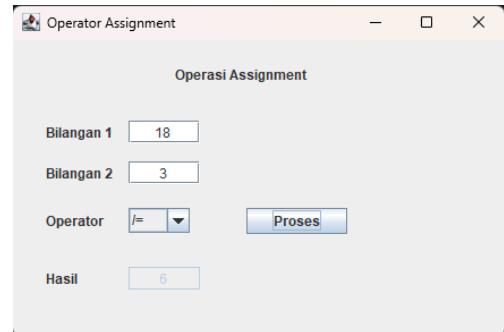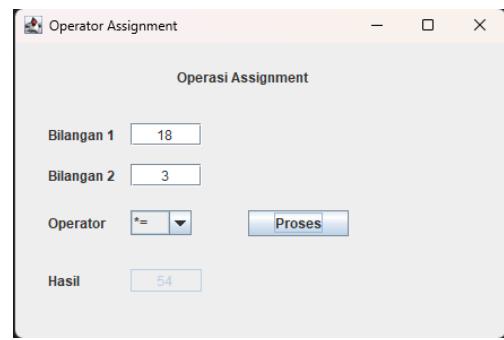
```
107        JButton btnNewButton = new JButton("Proses");
108        btnNewButton.addActionListener(new ActionListener() {
109            int hasil;
110            public void actionPerformed(ActionEvent e) {
111                if(txtBil1.getText().trim().isEmpty()) {
112                    pesanPeringatan("Bilangan 1 harus diisi");
113                } else if (txtBil2.getText().trim().isEmpty()) {
114                    pesanPeringatan("Bilangan 2 harus diisi");
115                } else {
116                    try {
117                        int a = Integer.parseInt(txtBil1.getText());
118                        int b = Integer.parseInt(txtBil2.getText());
119                        int c = cbOperator.getSelectedIndex(); //operator
```

```
120                        if (c==0) {
121                            a += b;
122                            hasil = a;
123                        }
124                        if (c==1) {
125                            a -= b;
126                            hasil = a;
127                        }
128                        if (c==2) {
129                            a *= b;
130                            hasil = a;
131                        }
132                        if (c==3) {
133                            a /= b;
134                            hasil = a;
135                        }
136                        if (c==4) {
137                            a %= b;
138                            hasil = a;
139                        }
140                    } catch (NumberFormatException ex) {
141                        pesanError("Bilangan 1 dan Bilangan 2 harus angka");
142                    }
143                }
144
145                txtHasil.setText(String.valueOf(hasil));
146            }
147        });
148        btnNewButton.setBounds(206, 148, 89, 23);
149        contentPane.add(btnNewButton);
```
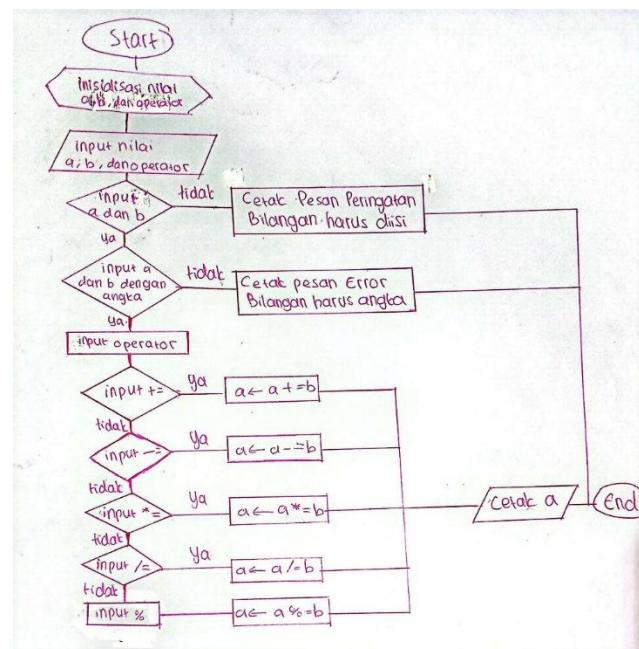
2. Output

3. Flowchart

4. Pseudocode

Judul
Operator Assignment
Deklarasi
Pesan peringatan, pesan error => STRING
Hasil => INTEGER
Pseudocode
READ a
INPUT a
READ b
INPUT b
READ Operator
IF a == " " OR b == " " THEN
PRINT "Bilangan 1 harus diisi" OR "Bilangan 2 harus diisi"
STOP
END IF
IF a bukan angka OR b bukan angka THEN
PRINT "Bilangan 1 dan Bilangan 2 harus angka"
STOP
END IF
IF operator == "+=" THEN
Hasil ← a + b
ELSE IF operator == "-=" THEN
Hasil ← a – b
ELSE IF operator == "*=" THEN
HASIL ← a * b
ELSE IF operator == "/=" THEN

```
        Hasil ← a / b
    ELSE IF operator == "%="
        Hasil ← a % b
        STOP
    END IF


PRINT "hasil = " + hasil


END
```