PEMROGRAMAN BERBASIS WEB

(GUI Netbeans)

Disusun Oleh:

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PROGRAM STUDI S-1 TEKNIK INFORMATIKA

FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM

UNIVERSITAS PADJADJARAN

JATINANGOR

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1. Modul Materi
    a. Hello GUI
        i. Source Code:

```
/*
 * Click
nbfs://nbhost/SystemFileSystem/Templates/Licenses/licens
e-default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame
.java to edit this template
 */
package gui.javagui;

/**
 *
 * @author prame
 */
public class JavaGUI extends javax.swing.JFrame {

    /**
     * Creates new form HelloGUINetbeans
     */
    public JavaGUI() {
        initComponents();
    }

    /**
     * This method is called from within the constructor
to initialize the form.
     * WARNING: Do NOT modify this code. The content of
this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed"
desc="Generated Code">
    private void initComponents() {

        jPanel4 = new javax.swing.JPanel();
        lblHasil = new javax.swing.JLabel();
        jPanel1 = new javax.swing.JPanel();
        Judul = new javax.swing.JLabel();
        jPanel3 = new javax.swing.JPanel();
        lblNama = new javax.swing.JLabel();
        lblNpm = new javax.swing.JLabel();
        fldNama = new javax.swing.JTextField();
        fldNpm = new javax.swing.JTextField();
        btnBersihkan = new javax.swing.JButton();
        btnTekanSaya = new javax.swing.JButton();
        btnSelesai = new javax.swing.JButton();
```

```java
setDefaultCloseOperation(javax.swing.WindowConstants.EXI
T_ON_CLOSE);


jPanel4.setBorder(javax.swing.BorderFactory.createTitled
Border(null, "Hasil",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.TOP, new
java.awt.Font("Times New Roman", 0, 18))); // NOI18N

        lblHasil.setFont(new java.awt.Font("Times New
Roman", 0, 24)); // NOI18N
        lblHasil.setText(" ");

        javax.swing.GroupLayout jPanel4Layout = new
javax.swing.GroupLayout(jPanel4);
        jPanel4.setLayout(jPanel4Layout);
        jPanel4Layout.setHorizontalGroup(

jPanel4Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel4Layout.createSequentialGroup()
                .addGap(21, 21, 21)
                .addComponent(lblHasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 975,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap(26, Short.MAX_VALUE))
        );
        jPanel4Layout.setVerticalGroup(

jPanel4Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel4Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(lblHasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap(16, Short.MAX_VALUE))
        );


jPanel1.setBorder(javax.swing.BorderFactory.createBevelB
order(javax.swing.border.BevelBorder.RAISED));

        Judul.setFont(new java.awt.Font("Times New
Roman", 1, 48)); // NOI18N
```

```java
        Judul.setText("Hello GUI Netbeans");

        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)
            .addGap(0, 0, Short.MAX_VALUE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(0, 0, Short.MAX_VALUE)
                    .addComponent(Judul)
                    .addGap(0, 0, Short.MAX_VALUE)))
        );
        jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)
            .addGap(0, 76, Short.MAX_VALUE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(0, 10, Short.MAX_VALUE)
                    .addComponent(Judul)
                    .addGap(0, 10, Short.MAX_VALUE)))
        );


jPanel3.setBorder(javax.swing.BorderFactory.createTitled
Border(null, "Input Data",
javax.swing.border.TitledBorder.LEFT,
javax.swing.border.TitledBorder.TOP, new
java.awt.Font("Times New Roman", 0, 18))); // NOI18N

        lblNama.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        lblNama.setText("Nama     :");

        lblNpm.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        lblNpm.setText("NPM      :");
```

```java
        fldNama.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                fldNamaActionPerformed(evt);
            }
        });

        fldNpm.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                fldNpmActionPerformed(evt);
            }
        });

        btnBersihkan.setBackground(new
java.awt.Color(242, 242, 242));
        btnBersihkan.setFont(new java.awt.Font("Times
New Roman", 0, 18)); // NOI18N
        btnBersihkan.setText("Bersihkan");
        btnBersihkan.setToolTipText("");

btnBersihkan.setBorder(javax.swing.BorderFactory.createB
evelBorder(javax.swing.border.BevelBorder.RAISED));
        btnBersihkan.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnBersihkanActionPerformed(evt);
            }
        });

        btnTekanSaya.setBackground(new
java.awt.Color(242, 242, 242));
        btnTekanSaya.setFont(new java.awt.Font("Times
New Roman", 0, 18)); // NOI18N
        btnTekanSaya.setText("Tekan Saya");
        btnTekanSaya.setToolTipText("");

btnTekanSaya.setBorder(javax.swing.BorderFactory.createB
evelBorder(javax.swing.border.BevelBorder.RAISED));
        btnTekanSaya.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnTekanSayaActionPerformed(evt);
            }
        });
```

```java
        btnSelesai.setBackground(new java.awt.Color(242,
242, 242));
        btnSelesai.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        btnSelesai.setText("Selesai");
        btnSelesai.setToolTipText("");

btnSelesai.setBorder(javax.swing.BorderFactory.createBev
elBorder(javax.swing.border.BevelBorder.RAISED));
        btnSelesai.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnSelesaiActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout jPanel3Layout = new
javax.swing.GroupLayout(jPanel3);
        jPanel3.setLayout(jPanel3Layout);
        jPanel3Layout.setHorizontalGroup(

jPanel3Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel3Layout.createSequentialGroup()
                .addGap(36, 36, 36)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING, false)
                    .addComponent(lblNama,
javax.swing.GroupLayout.DEFAULT_SIZE, 90,
Short.MAX_VALUE)
                    .addComponent(lblNpm,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.UNRELATED)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING, false)
                    .addComponent(fldNama,
javax.swing.GroupLayout.DEFAULT_SIZE, 500,
Short.MAX_VALUE)
                    .addComponent(fldNpm))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
```

```java
ent.RELATED, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)
                    .addComponent(btnTekanSaya,
javax.swing.GroupLayout.PREFERRED_SIZE, 200,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(btnSelesai,
javax.swing.GroupLayout.PREFERRED_SIZE, 200,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(btnBersihkan,
javax.swing.GroupLayout.PREFERRED_SIZE, 200,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(55, 55, 55))
        );
        jPanel3Layout.setVerticalGroup(

jPanel3Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel3Layout.createSequentialGroup()

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)

.addGroup(jPanel3Layout.createSequentialGroup()
                        .addGap(50, 50, 50)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.TRAILING)
                            .addComponent(lblNama)
                            .addComponent(fldNama,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)))

.addGroup(jPanel3Layout.createSequentialGroup()
                        .addGap(29, 29, 29)
                        .addComponent(btnTekanSaya,
javax.swing.GroupLayout.PREFERRED_SIZE, 100,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                .addGap(12, 12, 12)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.BASELINE)
                    .addComponent(lblNpm)
                    .addComponent(fldNpm,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(1, 1, 1)
```

```java
                    .addComponent(btnBersihkan,
javax.swing.GroupLayout.PREFERRED_SIZE, 100,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED, 57, Short.MAX_VALUE)
                    .addComponent(btnSelesai,
javax.swing.GroupLayout.PREFERRED_SIZE, 100,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(58, 58, 58))
        );

        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(50, 50, 50)

.addGroup(layout.createParallelGroup(javax.swing.GroupLa
yout.Alignment.LEADING, false)
                    .addComponent(jPanel3,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jPanel4,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                .addContainerGap(32, Short.MAX_VALUE))
        );
        layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(25, 25, 25)
                .addComponent(jPanel1,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(58, 58, 58)
                .addComponent(jPanel3,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```java
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
                .addComponent(jPanel4,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(41, 41, 41))
        );

        pack();
    }// </editor-fold>

    private void
fldNamaActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void
fldNpmActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void
btnBersihkanActionPerformed(java.awt.event.ActionEvent
evt) {
        fldNama.setText("");
        fldNpm.setText("");
        lblHasil.setText("");

        fldNama.requestFocus();      //Agar kursor
kembali ke field nama
    }

    private void
btnTekanSayaActionPerformed(java.awt.event.ActionEvent
evt) {
        lblHasil.setText("Hi, perkenalkan nama saya " +
fldNama.getText() + " dan NPM saya " +
fldNpm.getText());
    }

    private void
btnSelesaiActionPerformed(java.awt.event.ActionEvent
evt) {
        System.exit(0);      //Keluar dari program
    }

    /**
```

```java
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc="
Look and feel setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not
available, stay with the default look and feel.
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/looka
ndfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo
info : javax.swing.UIManager.getInstalledLookAndFeels())
{
                if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName()
);
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(JavaGUI.class.getName
()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(JavaGUI.class.getName
()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(JavaGUI.class.getName
()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch
(javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(JavaGUI.class.getName
()).log(java.util.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new JavaGUI().setVisible(true);
            }
        });
```
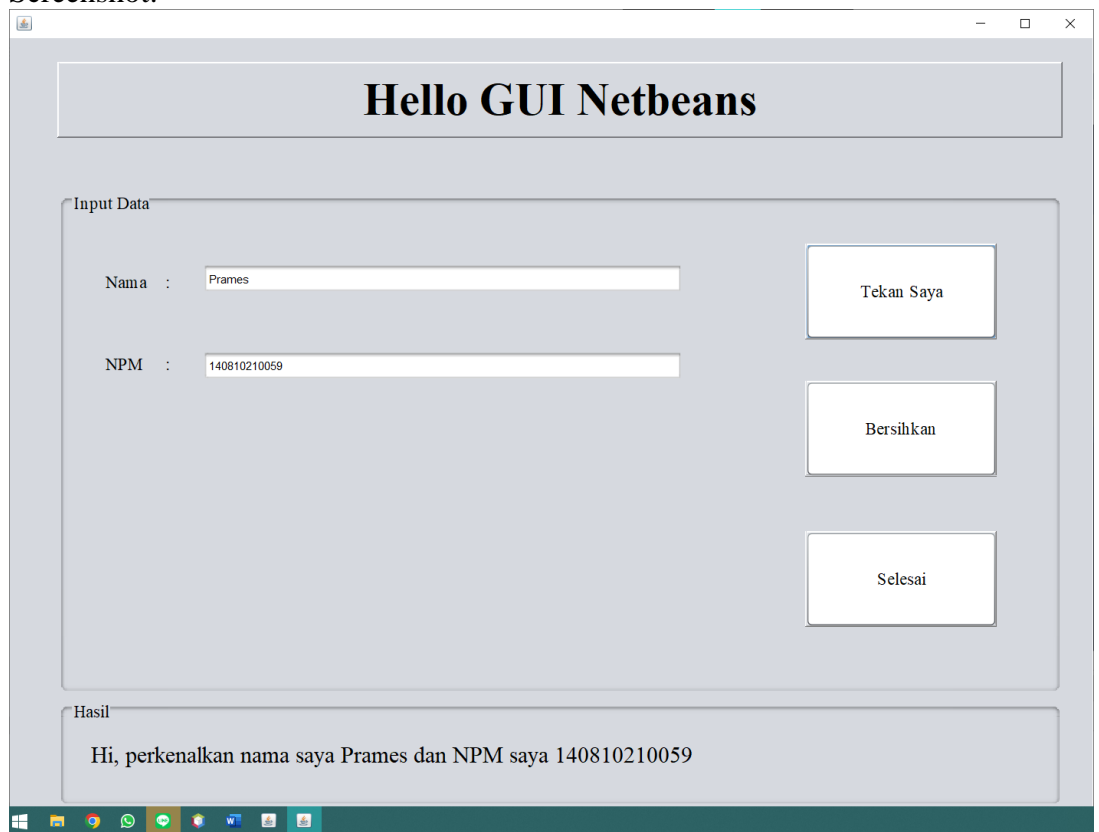
```
        }

        // Variables declaration - do not modify
        private javax.swing.JLabel Judul;
        private javax.swing.JButton btnBersihkan;
        private javax.swing.JButton btnSelesai;
        private javax.swing.JButton btnTekanSaya;
        private javax.swing.JTextField fldNama;
        private javax.swing.JTextField fldNpm;
        private javax.swing.JPanel jPanel1;
        private javax.swing.JPanel jPanel3;
        private javax.swing.JPanel jPanel4;
        private javax.swing.JLabel lblHasil;
        private javax.swing.JLabel lblNama;
        private javax.swing.JLabel lblNpm;
        // End of variables declaration
}
```

    ii. Screenshot:

  b. Selection
     i. Source Code:

```
/*
```

```
 * Click
nbfs://nbhost/SystemFileSystem/Templates/Licenses/licens
e-default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame
.java to edit this template
 */
package gui.javagui2;

/**
 *
 * @author prame
 */
public class JavaGUI2 extends javax.swing.JFrame {

    /**
     * Creates new form JavaGUI2
     */
    public JavaGUI2() {
        initComponents();
    }

    /**
     * This method is called from within the constructor
to initialize the form.
     * WARNING: Do NOT modify this code. The content of
this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed"
desc="Generated Code">
    private void initComponents() {

        buttonGroup1 = new javax.swing.ButtonGroup();
        jPanel2 = new javax.swing.JPanel();
        lblProdi = new javax.swing.JLabel();
        lblAngkatan = new javax.swing.JLabel();
        lblNoUrut = new javax.swing.JLabel();
        fldProdi = new javax.swing.JComboBox<>();
        rb2019 = new javax.swing.JRadioButton();
        rb2020 = new javax.swing.JRadioButton();
        rb2021 = new javax.swing.JRadioButton();
        rb2022 = new javax.swing.JRadioButton();
        fldNoUrut = new javax.swing.JTextField();
        btnProses = new javax.swing.JButton();
        jPanel4 = new javax.swing.JPanel();
        lblHasilNPM = new javax.swing.JLabel();
        lblOutputNPM = new javax.swing.JLabel();
        btnSelesai = new javax.swing.JButton();
```

```java
        lblJudul = new javax.swing.JLabel();


setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);


jPanel2.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0)));

        lblProdi.setFont(new java.awt.Font("Times New Roman", 0, 18)); // NOI18N
        lblProdi.setText("Prodi              :");
        lblProdi.setPreferredSize(new java.awt.Dimension(100, 20));

        lblAngkatan.setFont(new java.awt.Font("Times New Roman", 0, 18)); // NOI18N
        lblAngkatan.setText("Angkatan      :");
        lblAngkatan.setPreferredSize(new java.awt.Dimension(100, 20));

        lblNoUrut.setFont(new java.awt.Font("Times New Roman", 0, 18)); // NOI18N
        lblNoUrut.setText("No Urut        :");
        lblNoUrut.setPreferredSize(new java.awt.Dimension(100, 20));

        fldProdi.setFont(new java.awt.Font("Times New Roman", 0, 18)); // NOI18N
        fldProdi.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Matematika", "Kimia", "Fisika", "Biologi", "Statistika", "Geofisika", "Teknik Informatika", "Teknik Elektro", "Aktuaria", "Teknologi Industri Kimia" }));
        fldProdi.setToolTipText("");
        fldProdi.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                fldProdiActionPerformed(evt);
            }
        });

        rb2019.setFont(new java.awt.Font("Times New Roman", 0, 18)); // NOI18N
        rb2019.setText("2019");
        rb2019.addActionListener(new java.awt.event.ActionListener() {
```

```java
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                rb2019ActionPerformed(evt);
            }
        });

        rb2020.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        rb2020.setText("2020");
        rb2020.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                rb2020ActionPerformed(evt);
            }
        });

        rb2021.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        rb2021.setText("2021");
        rb2021.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                rb2021ActionPerformed(evt);
            }
        });

        rb2022.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        rb2022.setText("2022");
        rb2022.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                rb2022ActionPerformed(evt);
            }
        });

        fldNoUrut.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N

        btnProses.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        btnProses.setText("Proses");
        btnProses.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnProsesActionPerformed(evt);
```

```java
                }
        });

        javax.swing.GroupLayout jPanel2Layout = new
javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(21, 21, 21)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)

.addGroup(jPanel2Layout.createSequentialGroup()
                                .addComponent(lblProdi,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                .addGap(31, 31, 31)
                                .addComponent(fldProdi,
javax.swing.GroupLayout.PREFERRED_SIZE, 251,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGroup(jPanel2Layout.createSequentialGroup()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)
                                        .addComponent(lblAngkatan,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                        .addComponent(lblNoUrut,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                                .addGap(31, 31, 31)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)
                                        .addComponent(fldNoUrut,
javax.swing.GroupLayout.PREFERRED_SIZE, 71,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                        .addComponent(rb2019,
javax.swing.GroupLayout.PREFERRED_SIZE, 98,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```java
                                    .addComponent(rb2020,
javax.swing.GroupLayout.PREFERRED_SIZE, 98,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                    .addComponent(rb2021,
javax.swing.GroupLayout.PREFERRED_SIZE, 98,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                    .addComponent(rb2022,
javax.swing.GroupLayout.PREFERRED_SIZE, 98,
javax.swing.GroupLayout.PREFERRED_SIZE))))
                    .addContainerGap(59, Short.MAX_VALUE))

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()

.addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
                    .addComponent(btnProses)
                    .addGap(28, 28, 28))
        );
        jPanel2Layout.setVerticalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel2Layout.createSequentialGroup()
                    .addGap(55, 55, 55)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.TRAILING)
                        .addComponent(lblProdi,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(fldProdi,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(51, 51, 51)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.BASELINE)
                        .addComponent(lblAngkatan,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(rb2019))
                    .addGap(18, 18, 18)
                    .addComponent(rb2020)
                    .addGap(18, 18, 18)
                    .addComponent(rb2021)
```

```java
                    .addGap(18, 18, 18)
                    .addComponent(rb2022)
                    .addGap(60, 60, 60)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.TRAILING)
                        .addComponent(lblNoUrut,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(fldNoUrut,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED, 96, Short.MAX_VALUE)
                    .addComponent(btnProses)
                    .addGap(22, 22, 22))
        );


jPanel4.setBorder(javax.swing.BorderFactory.createLineBo
rder(new java.awt.Color(0, 0, 0)));

        lblHasilNPM.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        lblHasilNPM.setText("Hasil NPM anda adalah: ");

        lblOutputNPM.setFont(new java.awt.Font("Times
New Roman", 0, 18)); // NOI18N
        lblOutputNPM.setText(" ");

        btnSelesai.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        btnSelesai.setText("Selesai");
        btnSelesai.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnSelesaiActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout jPanel4Layout = new
javax.swing.GroupLayout(jPanel4);
        jPanel4.setLayout(jPanel4Layout);
        jPanel4Layout.setHorizontalGroup(
```

```java
jPanel4Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel4Layout.createSequentialGroup()
                .addGap(50, 50, 50)

.addGroup(jPanel4Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.TRAILING)
                    .addComponent(btnSelesai)

.addGroup(jPanel4Layout.createSequentialGroup()
                            .addComponent(lblHasilNPM,
javax.swing.GroupLayout.PREFERRED_SIZE, 202,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED)
                            .addComponent(lblOutputNPM,
javax.swing.GroupLayout.PREFERRED_SIZE, 202,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                .addContainerGap(28, Short.MAX_VALUE))
        );
        jPanel4Layout.setVerticalGroup(

jPanel4Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel4Layout.createSequentialGroup()
                .addGap(50, 50, 50)

.addGroup(jPanel4Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.BASELINE)
                    .addComponent(lblHasilNPM)
                    .addComponent(lblOutputNPM))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
                .addComponent(btnSelesai)
                .addGap(24, 24, 24))
        );

        lblJudul.setFont(new java.awt.Font("Times New
Roman", 0, 48)); // NOI18N
        lblJudul.setText("Proses Pembentukan NPM");

        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
```

```
        layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(43, 43, 43)
                .addComponent(jPanel2,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED, 40, Short.MAX_VALUE)
                .addComponent(jPanel4,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(43, 43, 43))

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()

.addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
                .addComponent(lblJudul)
                .addGap(280, 280, 280))
        );
        layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(49, 49, 49)
                .addComponent(lblJudul)
                .addGap(75, 75, 75)

.addGroup(layout.createParallelGroup(javax.swing.GroupLa
yout.Alignment.LEADING, false)
                    .addComponent(jPanel2,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jPanel4,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                .addContainerGap(14, Short.MAX_VALUE))
        );

        pack();
    }// </editor-fold>
```

```java
    private void
fldProdiActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
    }

    private void
rb2019ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void
rb2020ActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
    }

    private void
rb2021ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void
rb2022ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void
btnProsesActionPerformed(java.awt.event.ActionEvent evt)
{
        String prodi = null;
        String angkatan= null;

        //Conditional Statement untuk pilihan prodi
melalui ComboBox
        if (fldProdi.getSelectedIndex() == 0) {
            prodi = "01";
        }
        else if (fldProdi.getSelectedIndex() == 1) {
            prodi = "02";
        }
        else if (fldProdi.getSelectedIndex() == 2) {
            prodi = "03";
        }
        else if (fldProdi.getSelectedIndex() == 3) {
            prodi = "04";
        }
        else if (fldProdi.getSelectedIndex() == 4) {
            prodi = "06";
        }
```

```java
        else if (fldProdi.getSelectedIndex() == 5) {
            prodi = "07";
        }
        else if (fldProdi.getSelectedIndex() == 6) {
            prodi = "08";
        }
        else if (fldProdi.getSelectedIndex() == 7) {
            prodi = "09";
        }
        else if (fldProdi.getSelectedIndex() == 8) {
            prodi = "10";
        }
        else if (fldProdi.getSelectedIndex() == 9) {
            prodi = "11";
        }

        //Conditional Statement untuk pilihan angkatan
melalui Radio Button
        if (rb2019.isSelected()){
            angkatan = "19";
        }
        else if (rb2020.isSelected()){
            angkatan = "20";
        }
        else if (rb2021.isSelected()){
            angkatan = "21";
        }
        else if (rb2022.isSelected()){
            angkatan = "22";
        }
        lblOutputNPM.setText("14" + prodi + "10"+
angkatan + fldNoUrut.getText());
    }

    private void
btnSelesaiActionPerformed(java.awt.event.ActionEvent
evt) {
        System.exit(0);
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc="
Look and feel setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not
available, stay with the default look and feel.
```

```java
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/looka
ndfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo
info : javax.swing.UIManager.getInstalledLookAndFeels())
{
                if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName()
);
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(JavaGUI2.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(JavaGUI2.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(JavaGUI2.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch
(javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(JavaGUI2.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new JavaGUI2().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton btnProses;
    private javax.swing.JButton btnSelesai;
    private javax.swing.ButtonGroup buttonGroup1;
    private javax.swing.JTextField fldNoUrut;
    private javax.swing.JComboBox<String> fldProdi;
    private javax.swing.JPanel jPanel2;
```

```
        private javax.swing.JPanel jPanel3;
        private javax.swing.JPanel jPanel4;
        private javax.swing.JLabel lblAngkatan;
        private javax.swing.JLabel lblHasilNPM;
        private javax.swing.JLabel lblJudul;
        private javax.swing.JLabel lblNoUrut;
        private javax.swing.JLabel lblOutputNPM;
        private javax.swing.JLabel lblProdi;
        private javax.swing.JRadioButton rb2019;
        private javax.swing.JRadioButton rb2020;
        private javax.swing.JRadioButton rb2021;
        private javax.swing.JRadioButton rb2022;
        // End of variables declaration
}
```

ii. Screenshot:

c. Looping
   i. Source Code:

```
/*
 * Click
nbfs://nbhost/SystemFileSystem/Templates/Licenses/licens
e-default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame
.java to edit this template
 */
package gui.javagui3;
```

```java
/**
 *
 * @author prame
 */
public class JavaGUI3 extends javax.swing.JFrame {

    /**
     * Creates new form JavaGUI3
     */
    public JavaGUI3() {
        initComponents();
    }

    /**
     * This method is called from within the constructor
to initialize the form.
     * WARNING: Do NOT modify this code. The content of
this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed"
desc="Generated Code">
    private void initComponents() {

        lblinput = new javax.swing.JLabel();
        fldInput = new javax.swing.JTextField();
        jScrollPane1 = new javax.swing.JScrollPane();
        tahasil = new javax.swing.JTextArea();
        btnTekanSaya = new javax.swing.JButton();
        btnSelesai = new javax.swing.JButton();


setDefaultCloseOperation(javax.swing.WindowConstants.EXI
T_ON_CLOSE);

        lblinput.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        lblinput.setText("Masukkan Angka          :");

        fldInput.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        fldInput.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                fldInputActionPerformed(evt);
            }
        });
```

```java
        tahasil.setColumns(20);
        tahasil.setRows(5);
        jScrollPane1.setViewportView(tahasil);

        btnTekanSaya.setFont(new java.awt.Font("Times
New Roman", 0, 18)); // NOI18N
        btnTekanSaya.setText("Tekan Saya");
        btnTekanSaya.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnTekanSayaActionPerformed(evt);
            }
        });

        btnSelesai.setFont(new java.awt.Font("Times New
Roman", 0, 18)); // NOI18N
        btnSelesai.setText("Selesai");
        btnSelesai.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnSelesaiActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(67, 67, 67)

.addGroup(layout.createParallelGroup(javax.swing.GroupLa
yout.Alignment.TRAILING)

.addGroup(layout.createSequentialGroup()
                        .addComponent(jScrollPane1,
javax.swing.GroupLayout.PREFERRED_SIZE, 948,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))

.addGroup(layout.createSequentialGroup()
```

```java
.addGroup(layout.createParallelGroup(javax.swing.GroupLa
yout.Alignment.TRAILING, false)
                                .addComponent(btnSelesai,
javax.swing.GroupLayout.PREFERRED_SIZE, 114,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup(layout.createSequentialGroup()
                                .addComponent(lblinput)
                                .addGap(18, 18, 18)
                                .addComponent(fldInput,
javax.swing.GroupLayout.PREFERRED_SIZE, 133,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                .addGap(521, 521, 521)

.addComponent(btnTekanSaya)))
                        .addGap(42, 42, 42))))
        );
        layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(64, 64, 64)

.addGroup(layout.createParallelGroup(javax.swing.GroupLa
yout.Alignment.BASELINE)
                    .addComponent(lblinput)
                    .addComponent(fldInput,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(btnTekanSaya))
                .addGap(18, 18, 18)
                .addComponent(jScrollPane1,
javax.swing.GroupLayout.PREFERRED_SIZE, 496,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(btnSelesai)
                .addContainerGap(68, Short.MAX_VALUE))
        );

        pack();
    }// </editor-fold>

    private void
fldInputActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
    }
```

```java
    private void
btnTekanSayaActionPerformed(java.awt.event.ActionEvent
evt) {
        int angka =
Integer.parseInt(fldInput.getText());
        for (int i=1; i<=angka ;i++){
            tahasil.append(String.valueOf(i)+"\n");
        }
        cetakBintang(angka);
    }

    private void
btnSelesaiActionPerformed(java.awt.event.ActionEvent
evt) {
        System.exit(0);
    }

    private void cetakBintang(int angka) {
        tahasil.append("\nPencetakan Bintang\n");
        for (int i=  1; i <= angka; i++) {
            tahasil.append(String.valueOf(i) + ". ");

            for (int j = 1; j <= i; j++) {
                tahasil.append("* ");
            }

        tahasil.append("\n");
        }
}
    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc="
Look and feel setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not
available, stay with the default look and feel.
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/looka
ndfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo
info : javax.swing.UIManager.getInstalledLookAndFeels())
{
                if ("Nimbus".equals(info.getName())) {
```
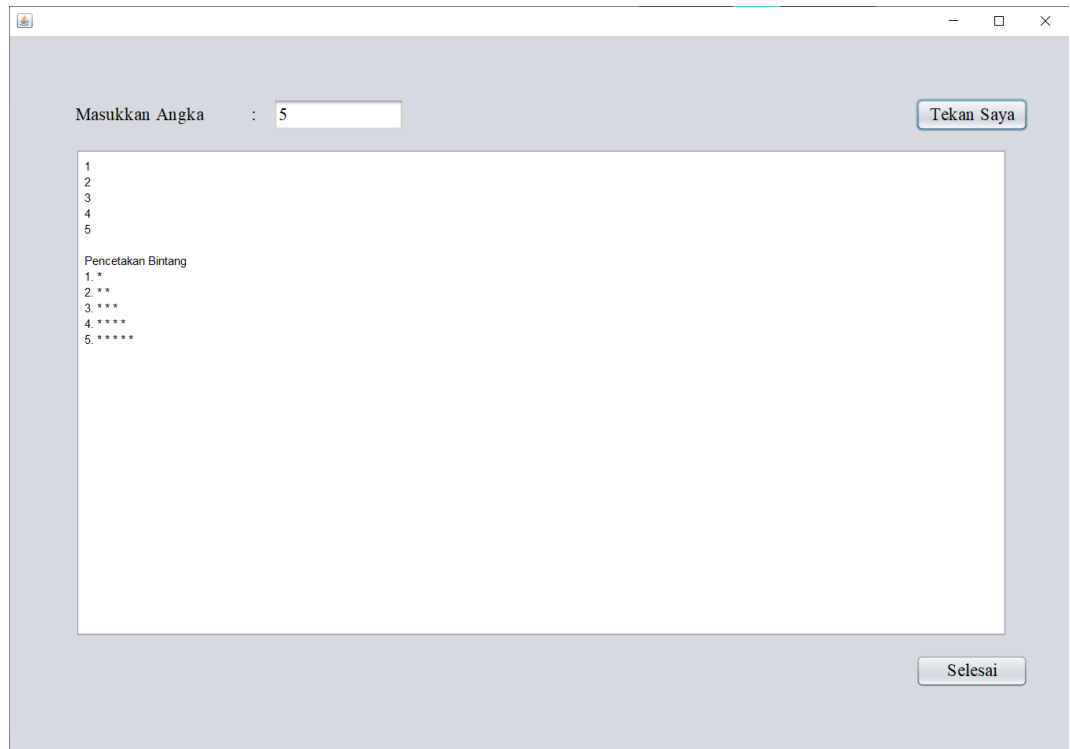
```
javax.swing.UIManager.setLookAndFeel(info.getClassName()
);
                        break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(JavaGUI3.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(JavaGUI3.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(JavaGUI3.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch
(javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(JavaGUI3.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new JavaGUI3().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton btnSelesai;
    private javax.swing.JButton btnTekanSaya;
    private javax.swing.JTextField fldInput;
    private javax.swing.JScrollPane jScrollPane1;
    private javax.swing.JLabel lblinput;
    private javax.swing.JTextArea tahasil;
    // End of variables declaration
}
```

ii. Screenshot:

d. Event
   i. Source Code:

```
/*
 * Click
nbfs://nbhost/SystemFileSystem/Templates/Licenses/licens
e-default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame
.java to edit this template
 */
package gui.javagui4;

import javax.swing.JOptionPane;

/**
 *
 * @author prame
 */
public class JavaGUI4 extends javax.swing.JFrame {

    /**
     * Creates new form JavaGUI4
     */
    public JavaGUI4() {
        initComponents();
    }
```

```java
    /**
     * This method is called from within the constructor
to initialize the form.
     * WARNING: Do NOT modify this code. The content of
this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed"
desc="Generated Code">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jPanel2 = new javax.swing.JPanel();
        btnProses = new javax.swing.JButton();
        btnBersihkan = new javax.swing.JButton();
        lblNamaFile = new javax.swing.JLabel();
        btnSelesai = new javax.swing.JButton();
        lblJudul = new javax.swing.JLabel();
        lblSubJudul = new javax.swing.JLabel();
        pnlInput = new javax.swing.JPanel();
        lblPanjang = new javax.swing.JLabel();
        lblLebar = new javax.swing.JLabel();
        lblLuasPersegiPanjang = new
javax.swing.JLabel();
        fldPanjang = new javax.swing.JTextField();
        fldLebar = new javax.swing.JTextField();
        fldLuasPersegiPanjang = new
javax.swing.JTextField();


setDefaultCloseOperation(javax.swing.WindowConstants.EXI
T_ON_CLOSE);

        jPanel1.setBackground(new java.awt.Color(255,
204, 51));

        jPanel2.setBackground(new java.awt.Color(255,
255, 255));

        btnProses.setBackground(new java.awt.Color(255,
204, 51));
        btnProses.setFont(new java.awt.Font("Hack", 0,
18)); // NOI18N
        btnProses.setText("PROSES");
        btnProses.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnProsesActionPerformed(evt);
```

```java
            }
        });
        btnProses.addKeyListener(new
java.awt.event.KeyAdapter() {
            public void
keyPressed(java.awt.event.KeyEvent evt) {
                btnProsesKeyPressed(evt);
            }
        });

        btnBersihkan.setBackground(new
java.awt.Color(255, 204, 51));
        btnBersihkan.setFont(new java.awt.Font("Hack",
0, 18)); // NOI18N
        btnBersihkan.setText("BERSIHKAN");
        btnBersihkan.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnBersihkanActionPerformed(evt);
            }
        });
        btnBersihkan.addKeyListener(new
java.awt.event.KeyAdapter() {
            public void
keyPressed(java.awt.event.KeyEvent evt) {
                btnBersihkanKeyPressed(evt);
            }
        });

        lblNamaFile.setFont(new java.awt.Font("Hack", 0,
8)); // NOI18N

lblNamaFile.setHorizontalAlignment(javax.swing.SwingCons
tants.CENTER);
        lblNamaFile.setText("LuasPersegiPanjang.java");

        btnSelesai.setBackground(new java.awt.Color(255,
204, 51));
        btnSelesai.setFont(new java.awt.Font("Hack", 0,
18)); // NOI18N
        btnSelesai.setText("SELESAI");
        btnSelesai.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                btnSelesaiActionPerformed(evt);
            }
        });
```

```java
        btnSelesai.addKeyListener(new
java.awt.event.KeyAdapter() {
            public void
keyPressed(java.awt.event.KeyEvent evt) {
                btnSelesaiKeyPressed(evt);
            }
        });

        javax.swing.GroupLayout jPanel2Layout = new
javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel2Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(lblNamaFile,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addContainerGap())

.addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(32, 32, 32)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)
                    .addComponent(btnSelesai,
javax.swing.GroupLayout.PREFERRED_SIZE, 221,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(btnBersihkan,
javax.swing.GroupLayout.PREFERRED_SIZE, 221,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(btnProses,
javax.swing.GroupLayout.PREFERRED_SIZE, 221,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addContainerGap(47, Short.MAX_VALUE))
        );
        jPanel2Layout.setVerticalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(189, 189, 189)
                .addComponent(btnProses)
                .addGap(18, 18, 18)
                .addComponent(btnBersihkan)
```

```java
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
                .addComponent(btnSelesai)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.UNRELATED)
                .addComponent(lblNamaFile)
                .addContainerGap())
        );

        lblJudul.setFont(new java.awt.Font("Hack", 1,
36)); // NOI18N

lblJudul.setHorizontalAlignment(javax.swing.SwingConstan
ts.CENTER);
        lblJudul.setText("PROGRAM PENCARI LUAS");

lblJudul.setHorizontalTextPosition(javax.swing.SwingCons
tants.CENTER);

        lblSubJudul.setFont(new java.awt.Font("Hack", 0,
18)); // NOI18N

lblSubJudul.setHorizontalAlignment(javax.swing.SwingCons
tants.CENTER);
        lblSubJudul.setText("PERSEGI PANJANG");

lblSubJudul.setHorizontalTextPosition(javax.swing.SwingC
onstants.CENTER);

        pnlInput.setBackground(new java.awt.Color(255,
204, 51));

pnlInput.setBorder(javax.swing.BorderFactory.createTitle
dBorder(javax.swing.BorderFactory.createTitledBorder(jav
ax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0))), "Input",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new
java.awt.Font("Hack", 0, 18))); // NOI18N

        lblPanjang.setFont(new java.awt.Font("Hack", 0,
14)); // NOI18N
        lblPanjang.setText("Panjang                 :");

        lblLebar.setFont(new java.awt.Font("Hack", 0,
14)); // NOI18N
        lblLebar.setText("Lebar                   :");
```

```java
        lblLuasPersegiPanjang.setFont(new
java.awt.Font("Hack", 0, 14)); // NOI18N
        lblLuasPersegiPanjang.setText("Luas Persegi
Panjang   :");

        fldPanjang.setFont(new java.awt.Font("Hack", 0,
14)); // NOI18N
        fldPanjang.addFocusListener(new
java.awt.event.FocusAdapter() {
            public void
focusLost(java.awt.event.FocusEvent evt) {
                fldPanjangFocusLost(evt);
            }
        });
        fldPanjang.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {
                fldPanjangActionPerformed(evt);
            }
        });
        fldPanjang.addKeyListener(new
java.awt.event.KeyAdapter() {
            public void
keyPressed(java.awt.event.KeyEvent evt) {
                fldPanjangKeyPressed(evt);
            }
        });

        fldLebar.setFont(new java.awt.Font("Hack", 0,
14)); // NOI18N
        fldLebar.addFocusListener(new
java.awt.event.FocusAdapter() {
            public void
focusLost(java.awt.event.FocusEvent evt) {
                fldLebarFocusLost(evt);
            }
        });
        fldLebar.addKeyListener(new
java.awt.event.KeyAdapter() {
            public void
keyPressed(java.awt.event.KeyEvent evt) {
                fldLebarKeyPressed(evt);
            }
        });

        fldLuasPersegiPanjang.setEditable(false);
        fldLuasPersegiPanjang.setFont(new
java.awt.Font("Hack", 0, 14)); // NOI18N
```

```java
        fldLuasPersegiPanjang.addActionListener(new
java.awt.event.ActionListener() {
            public void
actionPerformed(java.awt.event.ActionEvent evt) {

fldLuasPersegiPanjangActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout pnlInputLayout = new
javax.swing.GroupLayout(pnlInput);
        pnlInput.setLayout(pnlInputLayout);
        pnlInputLayout.setHorizontalGroup(

pnlInputLayout.createParallelGroup(javax.swing.GroupLayo
ut.Alignment.LEADING)

.addGroup(pnlInputLayout.createSequentialGroup()
                .addGap(28, 28, 28)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing
.GroupLayout.Alignment.LEADING)

.addGroup(pnlInputLayout.createSequentialGroup()

.addGroup(pnlInputLayout.createParallelGroup(javax.swing
.GroupLayout.Alignment.LEADING, false)

.addComponent(lblLuasPersegiPanjang,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                                .addComponent(lblLebar,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                                .addGap(18, 18, 18)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing
.GroupLayout.Alignment.LEADING)
                                .addComponent(fldLebar,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addComponent(fldLuasPersegiPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)))

.addGroup(pnlInputLayout.createSequentialGroup()
                                .addComponent(lblPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 212,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
                            .addGap(18, 18, 18)
                            .addComponent(fldPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                    .addContainerGap(130, Short.MAX_VALUE))
        );
        pnlInputLayout.setVerticalGroup(

pnlInputLayout.createParallelGroup(javax.swing.GroupLayo
ut.Alignment.LEADING)

.addGroup(pnlInputLayout.createSequentialGroup()
                .addGap(40, 40, 40)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing
.GroupLayout.Alignment.BASELINE)
                        .addComponent(lblPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(fldPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(49, 49, 49)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing
.GroupLayout.Alignment.BASELINE)
                        .addComponent(lblLebar,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(fldLebar,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED, 111, Short.MAX_VALUE)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing
.GroupLayout.Alignment.BASELINE)
                        .addComponent(lblLuasPersegiPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(fldLuasPersegiPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(43, 43, 43))
        );
```

```java
        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(jPanel2,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(38, 38, 38)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.
GroupLayout.Alignment.LEADING)
                            .addComponent(lblJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 702,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(lblSubJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 702,
javax.swing.GroupLayout.PREFERRED_SIZE)))

.addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(20, 20, 20)
                        .addComponent(pnlInput,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                .addGap(0, 16, Short.MAX_VALUE))
        );
        jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayou
t.Alignment.LEADING)
            .addComponent(jPanel2,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

.addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(29, 29, 29)
```

```java
                .addComponent(lblJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacem
ent.RELATED)
                .addComponent(lblSubJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(pnlInput,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap(211, Short.MAX_VALUE))
        );

        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
            .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
        layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
            .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );

        pack();
    }// </editor-fold>

    private void
btnProsesActionPerformed(java.awt.event.ActionEvent evt)
{
        prosesHitungLuas();
    }

    private void
btnProsesKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode()== 0x0A){
            prosesHitungLuas();
```

```java
        }
    }

    private void
btnBersihkanActionPerformed(java.awt.event.ActionEvent
evt) {
        fldPanjang.setText("");
        fldLebar.setText("");
        fldLuasPersegiPanjang.setText("");

        fldPanjang.requestFocus();
    }

    private void
btnBersihkanKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode()== 0x0A){
            fldPanjang.setText("");
            fldLebar.setText("");
            fldLuasPersegiPanjang.setText("");

            fldPanjang.requestFocus();
        }
    }

    private void
fldPanjangFocusLost(java.awt.event.FocusEvent evt) {
        float pjg;
        try{
            pjg =
Float.parseFloat(fldPanjang.getText());
        }
        catch(Throwable t){
            JOptionPane.showMessageDialog(null, "Nilai
non numerik, " + "silahkan dilengkapi", "Ada
Kesalahan",1);
            fldPanjang.requestFocus();
        }
    }

    private void
fldPanjangActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
    }

    private void
fldPanjangKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            fldLebar.requestFocus();
        }
```

```java
    }

    private void
fldLebarFocusLost(java.awt.event.FocusEvent evt) {
        float lbr;
        try{
            lbr = Float.parseFloat(fldLebar.getText());
        }
        catch(Throwable t){
            JOptionPane.showMessageDialog(null, "Nilai
non numerik, " + "silahkan dilengkapi", "Ada
Kesalahan",1);
            fldLebar.requestFocus();
        }
    }

    private void
fldLebarKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            btnProses.requestFocus();
        }
    }

    private void
fldLuasPersegiPanjangActionPerformed(java.awt.event.Acti
onEvent evt) {
        // TODO add your handling code here:
    }

    private void
btnSelesaiActionPerformed(java.awt.event.ActionEvent
evt) {
        System.exit(0);
    }

    private void
btnSelesaiKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            System.exit(0);
        }
    }

    private float hitungLuas(float panjang, float lebar)
{
        return (panjang*lebar);
    }

    private void prosesHitungLuas() {
        float panjang, lebar, luas;
        try{
```

```java
            panjang =
Float.parseFloat(fldPanjang.getText());
            lebar    =
Float.parseFloat(fldLebar.getText());
            luas     = hitungLuas(panjang,lebar);

fldLuasPersegiPanjang.setText(String.valueOf(luas));
        } catch(Throwable t) {
            JOptionPane.showMessageDialog(null,"Nilai
bukan numerik, " + "silahkan diperbaiki untuk bisa
diproses");
        }
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc="
Look and feel setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not
available, stay with the default look and feel.
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/looka
ndfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo
info : javax.swing.UIManager.getInstalledLookAndFeels())
{
                if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName()
);
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(JavaGUI4.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(JavaGUI4.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(JavaGUI4.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
        } catch
(javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(JavaGUI4.class.getNam
e()).log(java.util.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new JavaGUI4().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton btnBersihkan;
    private javax.swing.JButton btnProses;
    private javax.swing.JButton btnSelesai;
    private javax.swing.JTextField fldLebar;
    private javax.swing.JTextField
fldLuasPersegiPanjang;
    private javax.swing.JTextField fldPanjang;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JPanel jPanel2;
    private javax.swing.JLabel lblJudul;
    private javax.swing.JLabel lblLebar;
    private javax.swing.JLabel lblLuasPersegiPanjang;
    private javax.swing.JLabel lblNamaFile;
    private javax.swing.JLabel lblPanjang;
    private javax.swing.JLabel lblSubJudul;
    private javax.swing.JPanel pnlInput;
    // End of variables declaration
}
```

ii. Screenshot:

2. Tugas
   a. Form1:
      i. Source Code:

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit
this template
 */
package gui.tugasluas;

/**
 *
 * @author prame
 */
public class TugasLuas extends javax.swing.JFrame {

    /**
     * Creates new form TugasLuas
     */
    public TugasLuas() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to
initialize the form.
     * WARNING: Do NOT modify this code. The content of this method
is always
     * regenerated by the Form Editor.
```

```java
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jPanel2 = new javax.swing.JPanel();
        lblNamaFile = new javax.swing.JLabel();
        lblJudul = new javax.swing.JLabel();
        lblOpsi = new javax.swing.JLabel();
        btnPersegiPanjang = new javax.swing.JButton();
        btnSegitiga = new javax.swing.JButton();


setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jPanel1.setBackground(new java.awt.Color(255, 204, 51));

        jPanel2.setBackground(new java.awt.Color(255, 255, 255));

        lblNamaFile.setFont(new java.awt.Font("Hack", 0, 8)); //
NOI18N

lblNamaFile.setHorizontalAlignment(javax.swing.SwingConstants.CENTER)
;
        lblNamaFile.setText("TugasLuas.java");

        javax.swing.GroupLayout jPanel2Layout = new
javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(lblNamaFile,
javax.swing.GroupLayout.DEFAULT_SIZE, 288, Short.MAX_VALUE)
                .addContainerGap())
        );
        jPanel2Layout.setVerticalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()

.addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
                .addComponent(lblNamaFile)
                .addContainerGap())
        );

        lblJudul.setFont(new java.awt.Font("Hack", 1, 36)); // NOI18N

lblJudul.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
        lblJudul.setText("PROGRAM PENCARI LUAS");

lblJudul.setHorizontalTextPosition(javax.swing.SwingConstants.CENTER)
;
```

```java
        lblOpsi.setFont(new java.awt.Font("Hack", 0, 18)); // NOI18N
        lblOpsi.setText("Opsi:");

        btnPersegiPanjang.setFont(new java.awt.Font("Hack", 0, 24));
// NOI18N
        btnPersegiPanjang.setText("PERSEGI PANJANG");
        btnPersegiPanjang.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                btnPersegiPanjangActionPerformed(evt);
            }
        });
        btnPersegiPanjang.addKeyListener(new
java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                btnPersegiPanjangKeyPressed(evt);
            }
        });

        btnSegitiga.setFont(new java.awt.Font("Hack", 0, 24)); //
NOI18N
        btnSegitiga.setText("SEGITIGA");
        btnSegitiga.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                btnSegitigaActionPerformed(evt);
            }
        });
        btnSegitiga.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                btnSegitigaKeyPressed(evt);
            }
        });

        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(jPanel2,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(38, 38, 38)
                        .addComponent(lblOpsi,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                    .addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
```

```java
                .addGroup(jPanel1Layout.createSequentialGroup()
                                    .addGap(38, 38, 38)
                                    .addComponent(lblJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 702,
javax.swing.GroupLayout.PREFERRED_SIZE))

                .addGroup(jPanel1Layout.createSequentialGroup()
                                    .addGap(63, 63, 63)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                                        .addComponent(btnSegitiga,
javax.swing.GroupLayout.PREFERRED_SIZE, 637,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                        .addComponent(btnPersegiPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 637,
javax.swing.GroupLayout.PREFERRED_SIZE))))
                            .addGap(0, 40, Short.MAX_VALUE))))
            );
        jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addComponent(jPanel2,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(29, 29, 29)
                .addComponent(lblJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(124, 124, 124)
                .addComponent(lblOpsi)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED
)
                .addComponent(btnPersegiPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 81,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(btnSegitiga,
javax.swing.GroupLayout.PREFERRED_SIZE, 81,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap(308, Short.MAX_VALUE))
            );

        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
            );
        layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```java
                .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );

        pack();
    }// </editor-fold>

    private void
btnSegitigaActionPerformed(java.awt.event.ActionEvent evt) {
        LuasSegitiga obj = new LuasSegitiga();
        obj.setVisible(true);
        dispose();
    }

    private void
btnPersegiPanjangActionPerformed(java.awt.event.ActionEvent evt) {
        LuasPersegiPanjang obj = new LuasPersegiPanjang();
        obj.setVisible(true);
        dispose();
    }

    private void btnPersegiPanjangKeyPressed(java.awt.event.KeyEvent
evt) {
        if (evt.getKeyCode()== 0x0A){
            LuasPersegiPanjang obj = new LuasPersegiPanjang();
            obj.setVisible(true);
            dispose();
        }
    }

    private void btnSegitigaKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode()== 0x0A){
            LuasSegitiga obj = new LuasSegitiga();
            obj.setVisible(true);
            dispose();
        }
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel
setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not available, stay
with the default look and feel.
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.h
tml
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
```

```
            } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(TugasLuas.class.getName()).log(jav
a.util.logging.Level.SEVERE, null, ex);
            } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(TugasLuas.class.getName()).log(jav
a.util.logging.Level.SEVERE, null, ex);
            } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(TugasLuas.class.getName()).log(jav
a.util.logging.Level.SEVERE, null, ex);
            } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(TugasLuas.class.getName()).log(jav
a.util.logging.Level.SEVERE, null, ex);
            }
            //</editor-fold>

            /* Create and display the form */
            java.awt.EventQueue.invokeLater(new Runnable() {
                public void run() {
                    new TugasLuas().setVisible(true);
                }
            });
        }

    // Variables declaration - do not modify
    private javax.swing.JButton btnPersegiPanjang;
    private javax.swing.JButton btnSegitiga;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JPanel jPanel2;
    private javax.swing.JLabel lblJudul;
    private javax.swing.JLabel lblNamaFile;
    private javax.swing.JLabel lblOpsi;
    // End of variables declaration
}
```
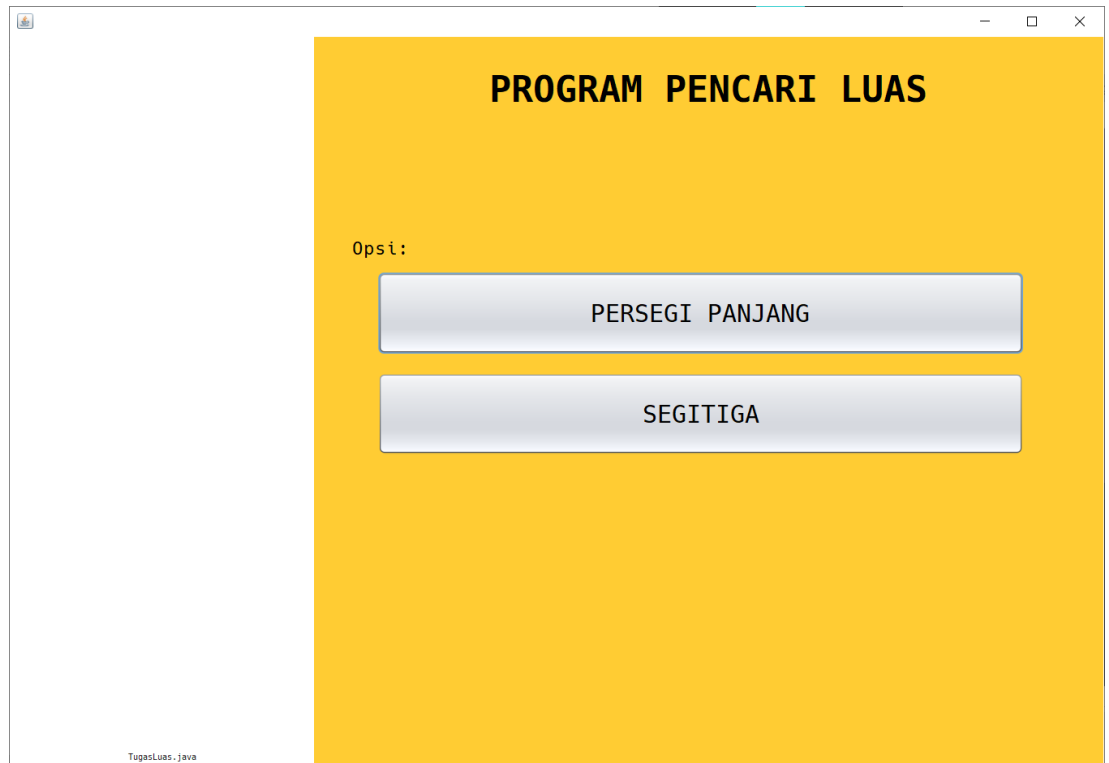
ii. Screenshot:

b. Form2:

i. Source Code:

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit
this template
 */
package gui.tugasluas;

import javax.swing.JOptionPane;

/**
 *
 * @author prame
 */
public class LuasPersegiPanjang extends javax.swing.JFrame {

    /**
     * Creates new form LuasPersegiPanjang
     */
    public LuasPersegiPanjang() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to
initialize the form.
     * WARNING: Do NOT modify this code. The content of this method
is always
     * regenerated by the Form Editor.
```

```java
 */
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

    jPanel1 = new javax.swing.JPanel();
    jPanel2 = new javax.swing.JPanel();
    btnProses = new javax.swing.JButton();
    btnBersihkan = new javax.swing.JButton();
    btnBeranda = new javax.swing.JButton();
    lblNamaFile = new javax.swing.JLabel();
    btnSelesai = new javax.swing.JButton();
    lblJudul = new javax.swing.JLabel();
    lblSubJudul = new javax.swing.JLabel();
    pnlInput = new javax.swing.JPanel();
    lblPanjang = new javax.swing.JLabel();
    lblLebar = new javax.swing.JLabel();
    lblLuasPersegiPanjang = new javax.swing.JLabel();
    fldPanjang = new javax.swing.JTextField();
    fldLebar = new javax.swing.JTextField();
    fldLuasPersegiPanjang = new javax.swing.JTextField();


    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

    jPanel1.setBackground(new java.awt.Color(255, 204, 51));

    jPanel2.setBackground(new java.awt.Color(255, 255, 255));

    btnProses.setBackground(new java.awt.Color(255, 204, 51));
    btnProses.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N
    btnProses.setText("PROSES");
    btnProses.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent
evt) {
            btnProsesActionPerformed(evt);
        }
    });
    btnProses.addKeyListener(new java.awt.event.KeyAdapter() {
        public void keyPressed(java.awt.event.KeyEvent evt) {
            btnProsesKeyPressed(evt);
        }
    });

    btnBersihkan.setBackground(new java.awt.Color(255, 204, 51));
    btnBersihkan.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N
    btnBersihkan.setText("BERSIHKAN");
    btnBersihkan.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent
evt) {
            btnBersihkanActionPerformed(evt);
        }
    });
    btnBersihkan.addKeyListener(new java.awt.event.KeyAdapter() {
        public void keyPressed(java.awt.event.KeyEvent evt) {
            btnBersihkanKeyPressed(evt);
        }
```

```java
        });

        btnBeranda.setBackground(new java.awt.Color(255, 204, 51));
        btnBeranda.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N
        btnBeranda.setText("BERANDA");
        btnBeranda.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                btnBerandaActionPerformed(evt);
            }
        });
        btnBeranda.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                btnBerandaKeyPressed(evt);
            }
        });

        lblNamaFile.setFont(new java.awt.Font("Hack", 0, 8)); //
NOI18N

lblNamaFile.setHorizontalAlignment(javax.swing.SwingConstants.CENTER)
;
        lblNamaFile.setText("LuasPersegiPanjang.java");

        btnSelesai.setBackground(new java.awt.Color(255, 204, 51));
        btnSelesai.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N
        btnSelesai.setText("SELESAI");
        btnSelesai.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                btnSelesaiActionPerformed(evt);
            }
        });
        btnSelesai.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                btnSelesaiKeyPressed(evt);
            }
        });

        javax.swing.GroupLayout jPanel2Layout = new
javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(lblNamaFile,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addContainerGap())
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(32, 32, 32)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING, false)
```

```java
                        .addComponent(btnBeranda,
javax.swing.GroupLayout.DEFAULT_SIZE, 221, Short.MAX_VALUE)
                        .addComponent(btnBersihkan,
javax.swing.GroupLayout.DEFAULT_SIZE, 221, Short.MAX_VALUE)
                        .addComponent(btnProses,
javax.swing.GroupLayout.DEFAULT_SIZE, 221, Short.MAX_VALUE)
                        .addComponent(btnSelesai,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                    .addContainerGap(47, Short.MAX_VALUE))
            );
        jPanel2Layout.setVerticalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(48, 48, 48)
                .addComponent(btnBeranda)
                .addGap(112, 112, 112)
                .addComponent(btnProses)
                .addGap(18, 18, 18)
                .addComponent(btnBersihkan)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(btnSelesai)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED
)
                .addComponent(lblNamaFile)
                .addContainerGap())
        );

        lblJudul.setFont(new java.awt.Font("Hack", 1, 36)); // NOI18N

lblJudul.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
        lblJudul.setText("PROGRAM PENCARI LUAS");

lblJudul.setHorizontalTextPosition(javax.swing.SwingConstants.CENTER)
;

        lblSubJudul.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N

lblSubJudul.setHorizontalAlignment(javax.swing.SwingConstants.CENTER)
;
        lblSubJudul.setText("PERSEGI PANJANG");

lblSubJudul.setHorizontalTextPosition(javax.swing.SwingConstants.CENT
ER);

        pnlInput.setBackground(new java.awt.Color(255, 204, 51));

pnlInput.setBorder(javax.swing.BorderFactory.createTitledBorder(javax
.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.cre
ateLineBorder(new java.awt.Color(0, 0, 0))), "Input",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new
java.awt.Font("Hack", 0, 18))); // NOI18N
```

```java
        lblPanjang.setFont(new java.awt.Font("Hack", 0, 14)); //
NOI18N
        lblPanjang.setText("Panjang                :");

        lblLebar.setFont(new java.awt.Font("Hack", 0, 14)); // NOI18N
        lblLebar.setText("Lebar                  :");

        lblLuasPersegiPanjang.setFont(new java.awt.Font("Hack", 0,
14)); // NOI18N
        lblLuasPersegiPanjang.setText("Luas Persegi Panjang   :");

        fldPanjang.setFont(new java.awt.Font("Hack", 0, 14)); //
NOI18N
        fldPanjang.addFocusListener(new java.awt.event.FocusAdapter()
{
            public void focusLost(java.awt.event.FocusEvent evt) {
                fldPanjangFocusLost(evt);
            }
        });
        fldPanjang.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                fldPanjangActionPerformed(evt);
            }
        });
        fldPanjang.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                fldPanjangKeyPressed(evt);
            }
        });

        fldLebar.setFont(new java.awt.Font("Hack", 0, 14)); // NOI18N
        fldLebar.addFocusListener(new java.awt.event.FocusAdapter() {
            public void focusLost(java.awt.event.FocusEvent evt) {
                fldLebarFocusLost(evt);
            }
        });
        fldLebar.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                fldLebarKeyPressed(evt);
            }
        });

        fldLuasPersegiPanjang.setEditable(false);
        fldLuasPersegiPanjang.setFont(new java.awt.Font("Hack", 0,
14)); // NOI18N
        fldLuasPersegiPanjang.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                fldLuasPersegiPanjangActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout pnlInputLayout = new
javax.swing.GroupLayout(pnlInput);
        pnlInput.setLayout(pnlInputLayout);
        pnlInputLayout.setHorizontalGroup(
```

```java
pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)
            .addGroup(pnlInputLayout.createSequentialGroup()
                .addGap(28, 28, 28)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.LEADING)
                    .addGroup(pnlInputLayout.createSequentialGroup()

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.LEADING, false)
                            .addComponent(lblLuasPersegiPanjang,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                            .addComponent(lblLebar,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                        .addGap(18, 18, 18)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.LEADING)
                            .addComponent(fldLebar,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(fldLuasPersegiPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                    .addGroup(pnlInputLayout.createSequentialGroup()
                        .addComponent(lblPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 212,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(18, 18, 18)
                        .addComponent(fldPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                .addContainerGap(130, Short.MAX_VALUE))
        );
        pnlInputLayout.setVerticalGroup(

pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)
            .addGroup(pnlInputLayout.createSequentialGroup()
                .addGap(40, 40, 40)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.BASELINE)
                    .addComponent(lblPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(fldPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(49, 49, 49)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.BASELINE)
                    .addComponent(lblLebar,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```java
                    .addComponent(fldLebar,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
111, Short.MAX_VALUE)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.BASELINE)
                    .addComponent(lblLuasPersegiPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(fldLuasPersegiPanjang,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(43, 43, 43))
        );

        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(jPanel2,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(38, 38, 38)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                            .addComponent(lblJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 702,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(lblSubJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 702,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(20, 20, 20)
                        .addComponent(pnlInput,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                .addGap(0, 16, Short.MAX_VALUE))
        );
        jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addComponent(jPanel2,
javax.swing.GroupLayout.Alignment.TRAILING,
```

```java
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(29, 29, 29)
                .addComponent(lblJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(lblSubJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(pnlInput,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap(211, Short.MAX_VALUE))
        );

        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
        layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );

        pack();
    }// </editor-fold>

    private void btnProsesActionPerformed(java.awt.event.ActionEvent
evt) {
        prosesHitungLuas();
    }

    private void
btnBersihkanActionPerformed(java.awt.event.ActionEvent evt) {
        fldPanjang.setText("");
        fldLebar.setText("");

        fldPanjang.requestFocus();
    }

    private void btnBerandaActionPerformed(java.awt.event.ActionEvent
evt) {
        TugasLuas obj = new TugasLuas();
        obj.setVisible(true);
        dispose();
    }
```

```java
    private void
fldLuasPersegiPanjangActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
    }

    private void fldPanjangActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
    }

    private void fldPanjangKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            fldLebar.requestFocus();
        }
    }

    private void fldPanjangFocusLost(java.awt.event.FocusEvent evt) {
        float pjg;
        try{
            pjg = Float.parseFloat(fldPanjang.getText());
        }
        catch(Throwable t){
            JOptionPane.showMessageDialog(null, "Nilai non numerik, "
+ "silahkan dilengkapi", "Ada Kesalahan",1);
            fldPanjang.requestFocus();
        }

    }

    private void fldLebarFocusLost(java.awt.event.FocusEvent evt) {
        float lbr;
        try{
            lbr = Float.parseFloat(fldLebar.getText());
        }
        catch(Throwable t){
            JOptionPane.showMessageDialog(null, "Nilai non numerik, "
+ "silahkan dilengkapi", "Ada Kesalahan",1);
            fldLebar.requestFocus();
        }
    }

    private void fldLebarKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            btnProses.requestFocus();
        }
    }

    private void btnProsesKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode()== 0x0A){
            prosesHitungLuas();
        }
    }

    private void btnBersihkanKeyPressed(java.awt.event.KeyEvent evt)
{
        if (evt.getKeyCode()== 0x0A){
            fldPanjang.setText("");
            fldLebar.setText("");

            fldPanjang.requestFocus();
```

```java
            }
        }

    private void btnBerandaKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            TugasLuas obj = new TugasLuas();
            obj.setVisible(true);
            dispose();
        }
    }

    private void btnSelesaiActionPerformed(java.awt.event.ActionEvent
evt) {
        System.exit(0);
    }

    private void btnSelesaiKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
             System.exit(0);
        }
    }

    private float hitungLuas(float panjang, float lebar) {
        return (panjang*lebar);
    }

    private void prosesHitungLuas() {
        float panjang, lebar, luas;
        try{
            panjang = Float.parseFloat(fldPanjang.getText());
            lebar   = Float.parseFloat(fldLebar.getText());
            luas    = hitungLuas(panjang,lebar);
            fldLuasPersegiPanjang.setText(String.valueOf(luas));
        } catch(Throwable t) {
            JOptionPane.showMessageDialog(null,"Nilai bukan numerik,
" + "silahkan diperbaiki untuk bisa diproses");
        }
    }


    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel
setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not available, stay
with the default look and feel.
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.h
tml
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
```

```
                        }
                    }
                } catch (ClassNotFoundException ex) {

        java.util.logging.Logger.getLogger(LuasPersegiPanjang.class.getName()
        ).log(java.util.logging.Level.SEVERE, null, ex);
                } catch (InstantiationException ex) {

        java.util.logging.Logger.getLogger(LuasPersegiPanjang.class.getName()
        ).log(java.util.logging.Level.SEVERE, null, ex);
                } catch (IllegalAccessException ex) {

        java.util.logging.Logger.getLogger(LuasPersegiPanjang.class.getName()
        ).log(java.util.logging.Level.SEVERE, null, ex);
                } catch (javax.swing.UnsupportedLookAndFeelException ex) {

        java.util.logging.Logger.getLogger(LuasPersegiPanjang.class.getName()
        ).log(java.util.logging.Level.SEVERE, null, ex);
                }
                //</editor-fold>

                /* Create and display the form */
                java.awt.EventQueue.invokeLater(new Runnable() {
                    public void run() {
                        new LuasPersegiPanjang().setVisible(true);
                    }
                });
            }

        // Variables declaration - do not modify
        private javax.swing.JButton btnBeranda;
        private javax.swing.JButton btnBersihkan;
        private javax.swing.JButton btnProses;
        private javax.swing.JButton btnSelesai;
        private javax.swing.JTextField fldLebar;
        private javax.swing.JTextField fldLuasPersegiPanjang;
        private javax.swing.JTextField fldPanjang;
        private javax.swing.JPanel jPanel1;
        private javax.swing.JPanel jPanel2;
        private javax.swing.JLabel lblJudul;
        private javax.swing.JLabel lblLebar;
        private javax.swing.JLabel lblLuasPersegiPanjang;
        private javax.swing.JLabel lblNamaFile;
        private javax.swing.JLabel lblPanjang;
        private javax.swing.JLabel lblSubJudul;
        private javax.swing.JPanel pnlInput;
        // End of variables declaration
    }
```

ii. Screenshot:

c. Form3:

    i. Source Code:

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
default.txt to change this license
 * Click
nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit
this template
 */
package gui.tugasluas;

import javax.swing.JOptionPane;

/**
 *
 * @author prame
 */
public class LuasSegitiga extends javax.swing.JFrame {

    /**
     * Creates new form LuasSegitiga
     */
    public LuasSegitiga() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to
initialize the form.
     * WARNING: Do NOT modify this code. The content of this method
is always
     * regenerated by the Form Editor.
```

```java
 */
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

    jPanel1 = new javax.swing.JPanel();
    jPanel2 = new javax.swing.JPanel();
    btnProses = new javax.swing.JButton();
    btnBersihkan = new javax.swing.JButton();
    btnBeranda = new javax.swing.JButton();
    lblNamaFile = new javax.swing.JLabel();
    btnSelesai = new javax.swing.JButton();
    lblJudul = new javax.swing.JLabel();
    lblSubJudul = new javax.swing.JLabel();
    pnlInput = new javax.swing.JPanel();
    lblAlas = new javax.swing.JLabel();
    lblTinggi = new javax.swing.JLabel();
    lblLuasSegitiga = new javax.swing.JLabel();
    fldAlas = new javax.swing.JTextField();
    fldTinggi = new javax.swing.JTextField();
    fldLuasSegitiga = new javax.swing.JTextField();


setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

    jPanel1.setBackground(new java.awt.Color(255, 204, 51));

    jPanel2.setBackground(new java.awt.Color(255, 255, 255));

    btnProses.setBackground(new java.awt.Color(255, 204, 51));
    btnProses.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N
    btnProses.setText("PROSES");
    btnProses.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent
evt) {
            btnProsesActionPerformed(evt);
        }
    });
    btnProses.addKeyListener(new java.awt.event.KeyAdapter() {
        public void keyPressed(java.awt.event.KeyEvent evt) {
            btnProsesKeyPressed(evt);
        }
    });

    btnBersihkan.setBackground(new java.awt.Color(255, 204, 51));
    btnBersihkan.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N
    btnBersihkan.setText("BERSIHKAN");
    btnBersihkan.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent
evt) {
            btnBersihkanActionPerformed(evt);
        }
    });
    btnBersihkan.addKeyListener(new java.awt.event.KeyAdapter() {
        public void keyPressed(java.awt.event.KeyEvent evt) {
            btnBersihkanKeyPressed(evt);
        }
```

```java
        });

        btnBeranda.setBackground(new java.awt.Color(255, 204, 51));
        btnBeranda.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N
        btnBeranda.setText("BERANDA");
        btnBeranda.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                btnBerandaActionPerformed(evt);
            }
        });
        btnBeranda.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                btnBerandaKeyPressed(evt);
            }
        });

        lblNamaFile.setFont(new java.awt.Font("Hack", 0, 8)); //
NOI18N

lblNamaFile.setHorizontalAlignment(javax.swing.SwingConstants.CENTER)
;
        lblNamaFile.setText("LuasSegitiga.java");

        btnSelesai.setBackground(new java.awt.Color(255, 204, 51));
        btnSelesai.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N
        btnSelesai.setText("SELESAI");
        btnSelesai.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                btnSelesaiActionPerformed(evt);
            }
        });
        btnSelesai.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                btnSelesaiKeyPressed(evt);
            }
        });

        javax.swing.GroupLayout jPanel2Layout = new
javax.swing.GroupLayout(jPanel2);
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(jPanel2Layout.createSequentialGroup()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(jPanel2Layout.createSequentialGroup()
                        .addContainerGap()
                        .addComponent(lblNamaFile,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                    .addGroup(jPanel2Layout.createSequentialGroup()
                        .addGap(32, 32, 32)
```

```java
                    .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING, false)
                                .addComponent(btnBeranda,
javax.swing.GroupLayout.DEFAULT_SIZE, 221, Short.MAX_VALUE)
                                .addComponent(btnBersihkan,
javax.swing.GroupLayout.DEFAULT_SIZE, 221, Short.MAX_VALUE)
                                .addComponent(btnProses,
javax.swing.GroupLayout.DEFAULT_SIZE, 221, Short.MAX_VALUE)
                                .addComponent(btnSelesai,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                            .addGap(0, 41, Short.MAX_VALUE)))
                    .addContainerGap())
            );
        jPanel2Layout.setVerticalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(48, 48, 48)
                .addComponent(btnBeranda)
                .addGap(112, 112, 112)
                .addComponent(btnProses)
                .addGap(18, 18, 18)
                .addComponent(btnBersihkan)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(btnSelesai)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED
)
                .addComponent(lblNamaFile)
                .addContainerGap())
        );

        lblJudul.setFont(new java.awt.Font("Hack", 1, 36)); // NOI18N

lblJudul.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
        lblJudul.setText("PROGRAM PENCARI LUAS");

lblJudul.setHorizontalTextPosition(javax.swing.SwingConstants.CENTER)
;

        lblSubJudul.setFont(new java.awt.Font("Hack", 0, 18)); //
NOI18N

lblSubJudul.setHorizontalAlignment(javax.swing.SwingConstants.CENTER)
;
        lblSubJudul.setText("SEGITIGA");

lblSubJudul.setHorizontalTextPosition(javax.swing.SwingConstants.CENT
ER);

        pnlInput.setBackground(new java.awt.Color(255, 204, 51));

pnlInput.setBorder(javax.swing.BorderFactory.createTitledBorder(javax
.swing.BorderFactory.createTitledBorder(javax.swing.BorderFactory.cre
ateLineBorder(new java.awt.Color(0, 0, 0))), "Input",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
```

```java
        javax.swing.border.TitledBorder.DEFAULT_POSITION, new
java.awt.Font("Hack", 0, 18))); // NOI18N

        lblAlas.setFont(new java.awt.Font("Hack", 0, 14)); // NOI18N
        lblAlas.setText("Alas                    :");

        lblTinggi.setFont(new java.awt.Font("Hack", 0, 14)); //
NOI18N
        lblTinggi.setText("Tinggi                  :");

        lblLuasSegitiga.setFont(new java.awt.Font("Hack", 0, 14)); //
NOI18N
        lblLuasSegitiga.setText("Luas Segitiga           :");

        fldAlas.setFont(new java.awt.Font("Hack", 0, 14)); // NOI18N
        fldAlas.addFocusListener(new java.awt.event.FocusAdapter() {
            public void focusLost(java.awt.event.FocusEvent evt) {
                fldAlasFocusLost(evt);
            }
        });
        fldAlas.addActionListener(new java.awt.event.ActionListener()
{
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                fldAlasActionPerformed(evt);
            }
        });
        fldAlas.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                fldAlasKeyPressed(evt);
            }
        });

        fldTinggi.setFont(new java.awt.Font("Hack", 0, 14)); //
NOI18N
        fldTinggi.addFocusListener(new java.awt.event.FocusAdapter()
{
            public void focusLost(java.awt.event.FocusEvent evt) {
                fldTinggiFocusLost(evt);
            }
        });
        fldTinggi.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                fldTinggiKeyPressed(evt);
            }
        });

        fldLuasSegitiga.setEditable(false);
        fldLuasSegitiga.setFont(new java.awt.Font("Hack", 0, 14)); //
NOI18N

        javax.swing.GroupLayout pnlInputLayout = new
javax.swing.GroupLayout(pnlInput);
        pnlInput.setLayout(pnlInputLayout);
        pnlInputLayout.setHorizontalGroup(

pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)
            .addGroup(pnlInputLayout.createSequentialGroup()
                .addGap(28, 28, 28)
```

```
            .addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.LEADING)
                            .addGroup(pnlInputLayout.createSequentialGroup()

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.LEADING, false)
                                    .addComponent(lblLuasSegitiga,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                                    .addComponent(lblTinggi,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
                            .addGap(18, 18, 18)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.LEADING)
                                    .addComponent(fldTinggi,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                    .addComponent(fldLuasSegitiga,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                        .addGroup(pnlInputLayout.createSequentialGroup()
                            .addComponent(lblAlas,
javax.swing.GroupLayout.PREFERRED_SIZE, 212,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addGap(18, 18, 18)
                            .addComponent(fldAlas,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                    .addContainerGap(130, Short.MAX_VALUE))
        );
        pnlInputLayout.setVerticalGroup(

pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.
LEADING)
            .addGroup(pnlInputLayout.createSequentialGroup()
                .addGap(40, 40, 40)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.BASELINE)
                    .addComponent(lblAlas,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(fldAlas,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(49, 49, 49)

.addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.BASELINE)
                    .addComponent(lblTinggi,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(fldTinggi,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
111, Short.MAX_VALUE)

                .addGroup(pnlInputLayout.createParallelGroup(javax.swing.GroupLayout.
Alignment.BASELINE)
                        .addComponent(lblLuasSegitiga,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(fldLuasSegitiga,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(43, 43, 43))
        );

        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(jPanel2,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                        .addGroup(jPanel1Layout.createSequentialGroup()
                            .addGap(38, 38, 38)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                                .addComponent(lblJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 702,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                .addComponent(lblSubJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 702,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                        .addGroup(jPanel1Layout.createSequentialGroup()
                            .addGap(20, 20, 20)
                            .addComponent(pnlInput,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                    .addGap(0, 16, Short.MAX_VALUE))
        );
        jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
            .addComponent(jPanel2,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(29, 29, 29)
```

```java
                .addComponent(lblJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(lblSubJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(pnlInput,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap(211, Short.MAX_VALUE))
        );

        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
        layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );

        pack();
    }// </editor-fold>

    private void btnProsesActionPerformed(java.awt.event.ActionEvent
evt) {
        prosesHitungLuas();
    }

    private void
btnBersihkanActionPerformed(java.awt.event.ActionEvent evt) {
        fldAlas.setText("");
        fldTinggi.setText("");

        fldAlas.requestFocus();
    }

    private void btnBerandaActionPerformed(java.awt.event.ActionEvent
evt) {
        TugasLuas obj = new TugasLuas();
        obj.setVisible(true);
        dispose();
    }

    private void fldAlasActionPerformed(java.awt.event.ActionEvent
evt) {
        // TODO add your handling code here:
    }
```

```java
    private void fldAlasKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            fldTinggi.requestFocus();
        }
    }

    private void fldAlasFocusLost(java.awt.event.FocusEvent evt) {
        float alas;
        try{
            alas = Float.parseFloat(fldAlas.getText());
        }
        catch(Throwable t){
            JOptionPane.showMessageDialog(null, "Nilai non numerik, "
+ "silahkan dilengkapi", "Ada Kesalahan",1);
            fldAlas.requestFocus();
        }
    }

    private void fldTinggiFocusLost(java.awt.event.FocusEvent evt) {
        float tinggi;
        try{
            tinggi = Float.parseFloat(fldTinggi.getText());
        }
        catch(Throwable t){
            JOptionPane.showMessageDialog(null, "Nilai non numerik, "
+ "silahkan dilengkapi", "Ada Kesalahan",1);
            fldTinggi.requestFocus();
        }
    }

    private void fldTinggiKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            btnProses.requestFocus();
        }
    }

    private void btnProsesKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            prosesHitungLuas();
        }
    }

    private void btnBersihkanKeyPressed(java.awt.event.KeyEvent evt)
{
        if (evt.getKeyCode() == 0x0A ){
            fldAlas.setText("");
            fldTinggi.setText("");

            fldAlas.requestFocus();
        }
    }

    private void btnBerandaKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            TugasLuas obj = new TugasLuas();
            obj.setVisible(true);
            dispose();
        }
    }
```

```java
    private void btnSelesaiActionPerformed(java.awt.event.ActionEvent
evt) {
        System.exit(0);
    }

    private void btnSelesaiKeyPressed(java.awt.event.KeyEvent evt) {
        if (evt.getKeyCode() == 0x0A ){
            System.exit(0);
        }
    }

    private float hitungLuas(float alas, float tinggi) {
        return (alas*tinggi)/2;
    }

    private void prosesHitungLuas() {
        float alas, tinggi, luas;
        try{
            alas    = Float.parseFloat(fldAlas.getText());
            tinggi  = Float.parseFloat(fldTinggi.getText());
            luas    = hitungLuas(alas,tinggi);
            fldLuasSegitiga.setText(String.valueOf(luas));
        } catch(Throwable t) {
            JOptionPane.showMessageDialog(null,"Nilai bukan numerik,
" + "silahkan diperbaiki untuk bisa diproses");
        }
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel
setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not available, stay
with the default look and feel.
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.h
tml
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(LuasSegitiga.class.getName()).log(
java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(LuasSegitiga.class.getName()).log(
java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
```

```
        java.util.logging.Logger.getLogger(LuasSegitiga.class.getName()).log(
java.util.logging.Level.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

        java.util.logging.Logger.getLogger(LuasSegitiga.class.getName()).log(
java.util.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new LuasSegitiga().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton btnBeranda;
    private javax.swing.JButton btnBersihkan;
    private javax.swing.JButton btnProses;
    private javax.swing.JButton btnSelesai;
    private javax.swing.JTextField fldAlas;
    private javax.swing.JTextField fldLuasSegitiga;
    private javax.swing.JTextField fldTinggi;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JPanel jPanel2;
    private javax.swing.JLabel lblAlas;
    private javax.swing.JLabel lblJudul;
    private javax.swing.JLabel lblLuasSegitiga;
    private javax.swing.JLabel lblNamaFile;
    private javax.swing.JLabel lblSubJudul;
    private javax.swing.JLabel lblTinggi;
    private javax.swing.JPanel pnlInput;
    // End of variables declaration
}
```

ii. Screenshot:

PROGRAM PENCARI LUAS

SEGITIGA

BERANDA

PROSES

BERSIHKAN

SELESAI

LuasSegitiga.java

Input

Alas   : 10

Tinggi   : 10

Luas Segitiga   : 50.0