

PEMROGRAMAN BERORIENTASI OBJEK

(Tugas Java GUI Netbeans Persegi & Koordinat)



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1. Persegi

a. Source Code

i. Class Persegi

```
package Paketku;

/**
 *
 * @author Windows 10
 */

public class Persegi {

    private float panjang;

    private float lebar;

    // constructor 1

    public Persegi(){

        panjang=0;

        lebar=0;

    }

    // constructor 2

    public Persegi(float panjang, float lebar){

        this.panjang=panjang;

        this.lebar=lebar;

    }

    // method Input
```

```
public void setPersegiClass(float pjg, float lbr) {  
  
    panjang=pjg;  
  
    lebar=lbr;  
  
}  
  
public void setPanjang(float pjg){  
  
    panjang=pjg;  
  
}  
  
public void setLebar(float lbr){  
  
    lebar=lbr;  
  
}
```

//Method Output

```
public float getPanjang(){  
  
    return panjang;  
  
}  
  
public float getLebar(){  
  
    return lebar;  
  
}
```

// Method PROSES -----

```
public float hitungLuas(){  
  
    return (panjang*lebar);  
  
}
```

```
}
```

ii. Class GUI

```
/*
```

```
 * 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 PersegiGUI;
```

```
import Paketku.Persegi;
```

```
import javax.swing.JOptionPane;
```

```
/**
```

```
 *
```

```
 * @author Windows 10
```

```
*/
```

```
public class PersegiGUI extends javax.swing.JFrame {
```

```
/**
```

```
 * Creates new form PersegiGUI
```

```
*/

public PersegiGUI() {

    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() {

        jPanel1 = new javax.swing.JPanel();

        jLabel1 = new javax.swing.JLabel();

        panjangField = new javax.swing.JTextField();

        jLabel2 = new javax.swing.JLabel();

        lebarField = new javax.swing.JTextField();

        jLabel3 = new javax.swing.JLabel();

        luasField = new javax.swing.JTextField();

    }

}
```

```
jPanel3 = new javax.swing.JPanel();
```

```
prosesButton = new javax.swing.JButton();
```

```
bersihkanButton = new javax.swing.JButton();
```

```
selesaiButton = new javax.swing.JButton();
```

```
jLabel4 = new javax.swing.JLabel();
```

```
setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
```

```
jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Persegi Panjang"));
```

```
jLabel1.setText("Masukkan Panjang Persegi Panjang : ");
```

```
jLabel2.setText("Masukkan Lebar Persegi Panjang : ");
```

```
jLabel3.setText("Luas Persegi Panjang : ");
```

```
luasField.setEditable(false);
```

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

```

jPanel1.setLayout(jPanel1Layout);

jPanel1Layout.setHorizontalGroup(

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

.addGroup(jPanel1Layout.createSequentialGroup()

.addContainerGap()

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

.addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING, false)

.addComponent(jLabel2,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

.addComponent(jLabel1,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

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

```

```

        .addComponent(panjangField,
javax.swing.GroupLayout.DEFAULT_SIZE, 122,
Short.MAX_VALUE)

        .addComponent(lebarField))

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

    .addGroup(jPanel1Layout.createSequentialGroup())

    .addComponent(jLabel3)

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.REL
ATED)

    .addComponent(luasField,
javax.swing.GroupLayout.PREFERRED_SIZE, 122,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addGap(0, 0, Short.MAX_VALUE))))

);

jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignme
nt.LEADING)

    .addGroup(jPanel1Layout.createSequentialGroup())

    .addGap(11, 11, 11)

    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLay
out.Alignment.BASELINE)

    .addComponent(jLabel1)

```



```

        .addComponent(panjangField,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGap(11, 11, 11)

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

        .addComponent(lebarField,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(jLabel2))

        .addGap(37, 37, 37)

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

        .addComponent(jLabel3,
javax.swing.GroupLayout.PREFERRED_SIZE, 21,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(luasField,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addContainerGap(60, Short.MAX_VALUE))

    );

```

```
jPanel3.setBorder(javax.swing.BorderFactory.createEtchedBorder());
```

```
prosesButton.setMnemonic('P');
```

```
prosesButton.setText("Proses");
```

```
prosesButton.addActionListener(new  
java.awt.event.ActionListener() {
```

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

```
        prosesButtonActionPerformed(evt);
```

```
    }
```

```
});
```

```
bersihkanButton.setMnemonic('B');
```

```
bersihkanButton.setText("Bersihkan");
```

```
bersihkanButton.addActionListener(new  
java.awt.event.ActionListener() {
```

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

```
        bersihkanButtonActionPerformed(evt);
```

```
    }
```

```
});
```

```
selesaiButton.setMnemonic('S');
```

```
selesaiButton.setText("Selesai");
```

```

        selesaiButton.addActionListener(new
java.awt.event.ActionListener() {

        public void actionPerformed(java.awt.event.ActionEvent evt) {

            selesaiButtonActionPerformed(evt);

        }

    });

```

```

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

```

```

        jPanel3.setLayout(jPanel3Layout);

```

```

        jPanel3Layout.setHorizontalGroup(

```

```

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

```

```

.addGroup(jPanel3Layout.createSequentialGroup()

```

```

.addGap(19, 19, 19)

```

```

.addComponent(prosesButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)

```

```

.addGap(18, 18, 18)

```

```

.addComponent(bersihkanButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)

```

```

.addGap(18, 18, 18)

```

```

        .addComponent(selesaiButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addContainerGap(24, Short.MAX_VALUE))

    );

    JPanel3Layout.setVerticalGroup(

JPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignme
nt.LEADING)

        .addGroup(JPanel3Layout.createSequentialGroup())

        .addContainerGap()

        .addGroup(JPanel3Layout.createParallelGroup(javax.swing.GroupLay
out.Alignment.BASELINE)

        .addComponent(prosesButton)

        .addComponent(bersihkanButton)

        .addComponent(selesaiButton))

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

    );

    JLabel4.setText("Copyright : Amir , Prames , Andre , Ibrahim
Dafi");

```

```

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

        getContentPane().setLayout(layout);

        layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEA
DING)

        .addGroup(layout.createSequentialGroup()

        .addContainerGap()

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alig
nment.LEADING, false)

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

        .addComponent(jPanel3,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

        .addContainerGap(16, Short.MAX_VALUE))

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

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

        .addComponent(jLabel4,
javax.swing.GroupLayout.PREFERRED_SIZE, 256,
javax.swing.GroupLayout.PREFERRED_SIZE)

```

```
        .addContainerGap())

    );

    layout.setVerticalGroup(

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

        .addGroup(layout.createSequentialGroup()

            .addGap(20, 20, 20)

            .addComponent(jPanel1,
                javax.swing.GroupLayout.PREFERRED_SIZE,
                javax.swing.GroupLayout.DEFAULT_SIZE,
                javax.swing.GroupLayout.PREFERRED_SIZE)

            .addGap(18, 18, 18)

            .addComponent(jPanel3,
                javax.swing.GroupLayout.PREFERRED_SIZE,
                javax.swing.GroupLayout.DEFAULT_SIZE,
                javax.swing.GroupLayout.PREFERRED_SIZE)

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

            .addComponent(jLabel4)

            .addContainerGap(12, Short.MAX_VALUE))

    );

    pack();

} // </editor-fold>
```

```

private void prosesHitungLuas(){

    float panjang,lebar,luas; // variable lokal

    Persegi objPersegi=new Persegi(); // buat sebuah objek

    try{

        // konversi dari isian textField

        panjang=Float.parseFloat(panjangField.getText());

        lebar=Float.parseFloat(lebarField.getText());

        objPersegi.setPanjang(panjang); // input kirim ke class

        objPersegi.setLebar(lebar);

        luas=objPersegi.hitungLuas(); // Proses

        luasField.setText(String.valueOf(luas)); //tampilkan ke GUI

    }

    catch(Throwable t) {

        JOptionPane.showMessageDialog(null,"Nilai bukan numerik, " +
        "silahkan diperbaiki untuk bisa diproses");

    }

}

private void bersihField(){

    panjangField.setText("");

    lebarField.setText("");

```

```
        luasField.setText("");  
    }
```

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

```
    private void  
    bersihkanButtonActionPerformed(java.awt.event.ActionEvent evt) {  
  
        // TODO add your handling code here:  
  
        bersihField();  
  
        panjangField.requestFocus();  
    }
```

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

    * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.ht
ml

    */

    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(PersegiGUI.class.getName()).log(j
ava.util.logging.Level.SEVERE, null, ex);

    } catch (InstantiationException ex) {

```

```
java.util.logging.Logger.getLogger(PersegiGUI.class.getName()).log(j  
ava.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (IllegalAccessException ex) {
```

```
java.util.logging.Logger.getLogger(PersegiGUI.class.getName()).log(j  
ava.util.logging.Level.SEVERE, null, ex);
```

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

```
java.util.logging.Logger.getLogger(PersegiGUI.class.getName()).log(j  
ava.util.logging.Level.SEVERE, null, ex);
```

```
    }
```

```
//</editor-fold>
```

```
/* Create and display the form */
```

```
java.awt.EventQueue.invokeLater(new Runnable() {
```

```
    public void run() {
```

```
        new PersegiGUI().setVisible(true);
```

```
    }
```

```
});
```

```
}
```

```
// Variables declaration - do not modify
```

```
private javax.swing.JButton bersihkanButton;
```

```
private javax.swing.JLabel jLabel1;
```

```
private javax.swing.JLabel jLabel2;  
  
private javax.swing.JLabel jLabel3;  
  
private javax.swing.JLabel jLabel4;  
  
private javax.swing.JPanel jPanel1;  
  
private javax.swing.JPanel jPanel3;  
  
private javax.swing.JTextField lebarField;  
  
private javax.swing.JTextField luasField;  
  
private javax.swing.JTextField panjangField;  
  
private javax.swing.JButton prosesButton;  
  
private javax.swing.JButton selesaiButton;  
  
// End of variables declaration  
  
}
```

b. Tampilan Output

Persegi Panjang

Masukkan Panjang Persegi Panjang : 10

Masukkan Lebar Persegi Panjang : 10

Luas Persegi Panjang : 100.0

Proses Bersihkan Selesai

Copyright : Amir , Prames , Andre , Ibrahim Dafi

2. Koordinat

a. Source code

i. Class Koordinat

```
package paketKu;
```

```
/**
```

```
*
```

```
* @author Windows 10
```

```
*/
```

```
public class Koordinat {
```

```
// Atribut -----
```

```
    private float absis;
```

```
    private float ordinat;
```

```
// Constructor -----
```

```
    public Koordinat(){
```

```
    absis=0;

    ordinat=0;

}
```

```
public Koordinat(float absis, float ordinat){

    this.absis=absis;

    this.ordinat=ordinat;

}
```

// Method Input -----

```
public void setKoordinat(float pAbsis, float pOrdinat){

    absis=pAbsis;

    ordinat=pOrdinat;

}
```

```
public void setAbsis(float pAbsis){

    absis=pAbsis;

}
```

```
public void setOrdinat(float pOrdinat){

    ordinat=pOrdinat;

}
```

// Method Output -----

```
public float getAbsis(){

    return absis;

}
```

```

public float getOrdinat(){

    return ordinat;

}

```

// Method Proses -----

```

public void titikTengah(Koordinat P1, Koordinat P2 ){

    absis=(P1.absis + P2.absis)/2;

    ordinat=(P1.ordinat + P2.ordinat)/2;

}

```

```

public void cerminX(Koordinat P1){

    absis=P1.absis;

    ordinat=-(P1.ordinat);

}

```

```

public Koordinat titikTengah2(Koordinat P ){

    Koordinat pHasil=new Koordinat();

    pHasil.absis=(P.absis + absis)/2;

    pHasil.ordinat=(P.ordinat + ordinat)/2;

    return pHasil;

}

```

```

}

```

ii. Class GUI

```

/*

* 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 KoordinatGUI;

import paketKu.Koordinat;

import javax.swing.JOptionPane;


/**

*

* @author Windows 10

*/

public class KoordinatGUI extends javax.swing.JFrame {


/**

* Creates new form KoordinatGUI

*/

public KoordinatGUI() {

    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() {  
  
    jPanel1 = new javax.swing.JPanel();  
  
    jLabel1 = new javax.swing.JLabel();  
  
    jPanel2 = new javax.swing.JPanel();  
  
    absis1Field = new javax.swing.JTextField();  
  
    jLabel2 = new javax.swing.JLabel();  
  
    ordinat1Field = new javax.swing.JTextField();  
  
    jLabel3 = new javax.swing.JLabel();  
  
    jLabel4 = new javax.swing.JLabel();  
  
    koordinat1Label = new javax.swing.JLabel();  
  
    jPanel3 = new javax.swing.JPanel();  
  
    absis2Field = new javax.swing.JTextField();  

```



```
jLabel5 = new javax.swing.JLabel();

ordinat2Field = new javax.swing.JTextField();

jLabel6 = new javax.swing.JLabel();

jLabel7 = new javax.swing.JLabel();

koordinat2Label = new javax.swing.JLabel();

jPanel4 = new javax.swing.JPanel();

jLabel8 = new javax.swing.JLabel();

tengahField = new javax.swing.JTextField();

prosesButton = new javax.swing.JToggleButton();

ulangButton = new javax.swing.JButton();

selesaiButton = new javax.swing.JButton();

jLabel9 = new javax.swing.JLabel();
```

```
setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_
CLOSE);
```

```
jPanel1.setBorder(javax.swing.BorderFactory.createBevelBorder(javax
.swing.border.BevelBorder.RAISED));
```

```
jLabel1.setFont(new java.awt.Font("Segoe UI", 0, 18)); //
NOI18N
```

```
jLabel1.setText("Perhitungan Koordinat Kartesian");
```

```

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

        jPanel1.setLayout(jPanel1Layout);

        jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignme
nt.LEADING)

            .addGroup(jPanel1Layout.createSequentialGroup()

                .addGap(131, 131, 131)

                .addComponent(jLabel1)

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

        );

        jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignme
nt.LEADING)

            .addGroup(jPanel1Layout.createSequentialGroup()

                .addGap(14, 14, 14)

                .addComponent(jLabel1)

                .addContainerGap(14, Short.MAX_VALUE))

        );

```

```
jPanel2.setBorder(javax.swing.BorderFactory.createTitledBorder("Koo  
rdinat 1"));
```

```
absis1Field.addActionListener(new  
java.awt.event.ActionListener() {  
  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
  
        absis1FieldActionPerformed(evt);  
  
    }  
  
});
```

```
jLabel2.setText("Absis :");
```

```
ordinat1Field.addActionListener(new  
java.awt.event.ActionListener() {  
  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
  
        ordinat1FieldActionPerformed(evt);  
  
    }  
  
});
```

```
jLabel3.setText("Ordinat :");
```

```
jLabel4.setText("Koordinat :");
```

```

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

        jPanel2.setLayout(jPanel2Layout);

        jPanel2Layout.setHorizontalGroup(

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

            .addGroup(jPanel2Layout.createSequentialGroup()

                .addGap(18, 18, 18)

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

                    .addGroup(jPanel2Layout.createSequentialGroup()

                        .addComponent(jLabel2)

                        .addGap(18, 18, 18)

                        .addComponent(jLabel3))

                    .addGroup(jPanel2Layout.createSequentialGroup()

                        .addComponent(ordinal1Field)

                        .addGap(18, 18, 18)

                        .addComponent(absis1Field)))

                .addContainerGap(18, Short.MAX_VALUE))

            .addGroup(jPanel2Layout.createSequentialGroup()

```

```

        .addComponent(jLabel4,
javax.swing.GroupLayout.PREFERRED_SIZE, 64,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UN
RELATED)

        .addComponent(koordinat1Label,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)))

.addContainerGap())

);

jPanel2Layout.setVerticalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignme
nt.LEADING)

.addGroup(jPanel2Layout.createSequentialGroup())

.addContainerGap()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLay
out.Alignment.BASELINE)

.addComponent(absis1Field,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addComponent(jLabel2))

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLay
out.Alignment.LEADING, false)

```

```

        .addGroup(jPanel2Layout.createSequentialGroup())

        .addGap(12, 12, 12)

        .addComponent(jLabel3))

        .addGroup(jPanel2Layout.createSequentialGroup())

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.REL
ATED)

        .addComponent(ordinat1Field)))

        .addGap(33, 33, 33)

        .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLay
out.Alignment.BASELINE)

        .addComponent(jLabel4)

        .addComponent(koordinat1Label))

        .addContainerGap(27, Short.MAX_VALUE))

    );

```

```

jPanel3.setBorder(javax.swing.BorderFactory.createTitledBorder("Koo
rdinat 2"));

```

```

        absis2Field.addActionListener(new
java.awt.event.ActionListener() {

        public void actionPerformed(java.awt.event.ActionEvent evt) {

        absis2FieldActionPerformed(evt);

```

```
}  
});
```

```
jLabel5.setText("Absis :");
```

```
ordinat2Field.addActionListener(new  
java.awt.event.ActionListener() {  
  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
  
        ordinat2FieldActionPerformed(evt);  
  
    }  
});
```

```
jLabel6.setText("Ordinat :");
```

```
jLabel7.setText("Koordinat :");
```

```
javax.swing.GroupLayout jPanel3Layout = new  
javax.swing.GroupLayout(jPanel3);
```

```
jPanel3.setLayout(jPanel3Layout);
```

```
jPanel3Layout.setHorizontalGroup(
```

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

```
.addGroup(jPanel3Layout.createSequentialGroup()
```

```
.addContainerGap()
```

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

```
.addGroup(jPanel3Layout.createSequentialGroup()
```

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

```
.addComponent(jLabel5)
```

```
.addComponent(jLabel6))
```

```
.addGap(18, 18, 18)
```

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

```
.addComponent(ordinat2Field,  
javax.swing.GroupLayout.DEFAULT_SIZE, 166,  
Short.MAX_VALUE)
```

```
.addComponent(absis2Field)))
```

```
.addGroup(jPanel3Layout.createSequentialGroup()
```

```
.addComponent(jLabel7)
```

```
.addGap(18, 18, 18)
```

```
.addComponent(koordinat2Label,  
javax.swing.GroupLayout.DEFAULT_SIZE,  
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)))
```

```
.addContainerGap())
```

```
);
```



```
jPanel3Layout.setVerticalGroup(
```

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

```
.addGroup(jPanel3Layout.createSequentialGroup())
```

```
.addContainerGap()
```

```
.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

```
.addComponent(absis2Field,  
javax.swing.GroupLayout.PREFERRED_SIZE,  
javax.swing.GroupLayout.DEFAULT_SIZE,  
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
.addComponent(jLabel5))
```

```
.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
```

```
.addGroup(jPanel3Layout.createSequentialGroup())
```

```
.addGap(12, 12, 12)
```

```
.addComponent(jLabel6))
```

```
.addGroup(jPanel3Layout.createSequentialGroup())
```

```
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
```

```
.addComponent(ordinat2Field)))
```

```
.addGap(33, 33, 33)
```

```
.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

```
.addComponent(jLabel7)
```

```
.addComponent(koordinat2Label))
```

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

```
);
```

```
jPanel4.setBorder(javax.swing.BorderFactory.createTitledBorder("Has  
il"));
```

```
jLabel8.setText("Koordinat Titik Tengah :");
```

```
tengahField.setEditable(false);
```

```
tengahField.addActionListener(new  
java.awt.event.ActionListener() {
```

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

```
tengahFieldActionPerformed(evt);
```

```
}
```

```
});
```

```

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

        jPanel4.setLayout(jPanel4Layout);

        jPanel4Layout.setHorizontalGroup(

jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addGroup(jPanel4Layout.createSequentialGroup()

                .addGap(15, 15, 15)

                .addComponent(jLabel8)

                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

                .addComponent(tengahField,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addGap(221, 221, 221)

            );

        jPanel4Layout.setVerticalGroup(

jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addGroup(jPanel4Layout.createSequentialGroup()

                .addGap(21, 21, 21)

```

```
.addGroup(jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

```
.addComponent(jLabel8)
```

```
.addComponent(tengahField,  
javax.swing.GroupLayout.PREFERRED_SIZE,  
javax.swing.GroupLayout.DEFAULT_SIZE,  
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
.addContainerGap(20, Short.MAX_VALUE))
```

```
);
```

```
prosesButton.setMnemonic('P');
```

```
prosesButton.setText("Proses Titik Tengah");
```

```
prosesButton.addActionListener(new  
java.awt.event.ActionListener() {
```

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

```
        prosesButtonActionPerformed(evt);
```

```
    }
```

```
});
```

```
ulangButton.setText("Ulang");
```

```
ulangButton.addActionListener(new  
java.awt.event.ActionListener() {
```

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

```
        ulangButtonActionPerformed(evt);
```

```
}
```

```
});
```

```
selesaiButton.setText("Selesai");
```

```
selesaiButton.addActionListener(new  
java.awt.event.ActionListener() {
```

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

```
        selesaiButtonActionPerformed(evt);
```

```
    }
```

```
});
```

```
jLabel9.setText("Copyright : Amir , Prames , Andre , Ibrahim  
Dafi");
```

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

```
getContentPane().setLayout(layout);
```

```
layout.setHorizontalGroup(
```

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

```
.addGroup(layout.createSequentialGroup()
```

```
.addGap(10, 10, 10)
```

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

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

```
    .addGroup(layout.createSequentialGroup()
```

```
        .addComponent(prosesButton,  
            javax.swing.GroupLayout.PREFERRED_SIZE, 162,  
            javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
        .addGap(36, 36, 36)
```

```
        .addComponent(ulangButton,  
            javax.swing.GroupLayout.PREFERRED_SIZE, 134,  
            javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
        .addGap(18, 18, 18)
```

```
        .addComponent(selesaiButton,  
            javax.swing.GroupLayout.DEFAULT_SIZE,  
            javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
```

```
    .addGroup(layout.createSequentialGroup()
```

```
        .addComponent(jPanel4,  
            javax.swing.GroupLayout.PREFERRED_SIZE,  
            javax.swing.GroupLayout.DEFAULT_SIZE,  
            javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
        .addGap(0, 0, Short.MAX_VALUE))
```

```
    .addGroup(layout.createSequentialGroup()
```

```
        .addComponent(jPanel2,  
            javax.swing.GroupLayout.DEFAULT_SIZE,  
            javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
```

```
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UN  
RELATED)
```

```
.addComponent(jPanel3,  
javax.swing.GroupLayout.PREFERRED_SIZE,  
javax.swing.GroupLayout.DEFAULT_SIZE,  
javax.swing.GroupLayout.PREFERRED_SIZE))
```

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

```
.addGap(0, 0, Short.MAX_VALUE)
```

```
.addComponent(jLabel9,  
javax.swing.GroupLayout.PREFERRED_SIZE, 256,  
javax.swing.GroupLayout.PREFERRED_SIZE)))
```

```
.addContainerGap())
```

```
);
```

```
layout.setVerticalGroup(
```

```
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEA  
DING)
```

```
.addGroup(layout.createSequentialGroup())
```

```
.addContainerGap()
```

```
.addComponent(jPanel1,  
javax.swing.GroupLayout.PREFERRED_SIZE,  
javax.swing.GroupLayout.DEFAULT_SIZE,  
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
```

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

```
    .addComponent(jPanel2,  
        javax.swing.GroupLayout.DEFAULT_SIZE,  
        javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
```

```
    .addComponent(jPanel3,  
        javax.swing.GroupLayout.DEFAULT_SIZE,  
        javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
```

```
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
```

```
    .addComponent(jPanel4,  
        javax.swing.GroupLayout.PREFERRED_SIZE,  
        javax.swing.GroupLayout.DEFAULT_SIZE,  
        javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
.addGap(18, 18, 18)
```

```
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

```
    .addComponent(prosesButton)
```

```
    .addComponent(ulangButton)
```

```
    .addComponent(selesaiButton))
```



```
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
```

```
.addComponent(jLabel9)
```

```
.addContainerGap(12, Short.MAX_VALUE))
```

```
);
```

```
pack();
```

```
}// </editor-fold>
```

```
private void prosesTitikTengah(){
```

```
float absis1,absis2,ordinat1,ordinat2;
```

```
Koordinat titik1 = new Koordinat();
```

```
Koordinat titik2 = new Koordinat();
```

```
Koordinat tengah = new Koordinat();
```

```
try{
```

```
absis1=Float.parseFloat(absis1Field.getText());
```

```
ordinat1=Float.parseFloat(ordinat1Field.getText());
```

```
absis2=Float.parseFloat(absis2Field.getText());
```

```
ordinat2=Float.parseFloat(ordinat2Field.getText());
```

```
titik1.setKoordinat(absis1,ordinat1);
```

```
titik2.setKoordinat(absis2,ordinat2);
```

```
tengah.titikTengah(titik1,titik2);
```

```

koordinat1Label.setText(" ( "+absis1+" , "+ordinat1+" ) ");

koordinat2Label.setText(" ( "+absis2+" , "+ordinat2+" ) ");

tengahField.setText("( "+String.valueOf(tengah.getAbsis())
+" , "+ String.valueOf(tengah.getOrdinat())+" )");

}

catch(Throwable t) {

OptionPane.showMessageDialog(null,"Nilai bukan numerik, "
+ "silahkan diperbaiki untuk bisa diproses");

}

}

private void ulang(){

absis1Field.setText("");

koordinat1Label.setText("");

koordinat2Label.setText("");

ordinat1Field.setText("");

absis2Field.setText("");

ordinat2Field.setText("");

tengahField.setText("");

absis1Field.requestFocus();

}

```

```
private void  
absis1FieldActionPerformed(java.awt.event.ActionEvent evt) {  
  
    // TODO add your handling code here:  
  
}
```

```
private void  
ordinat1FieldActionPerformed(java.awt.event.ActionEvent evt) {  
  
    // TODO add your handling code here:  
  
}
```

```
private void  
absis2FieldActionPerformed(java.awt.event.ActionEvent evt) {  
  
    // TODO add your handling code here:  
  
}
```

```
private void  
ordinat2FieldActionPerformed(java.awt.event.ActionEvent evt) {  
  
    // TODO add your handling code here:  
  
}
```

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

```
private void
selesaiButtonActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    System.exit(0);

}
```

```
private void
prosesButtonActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    prosesTitikTengah();

}
```

```
private void
ulangButtonActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    ulang();

}
```

```
/**
```

```
 * @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.ht
ml

*/

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(KoordinatGUI.class.getName()).lo
g(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

    java.util.logging.Logger.getLogger(KoordinatGUI.class.getName()).lo
g(java.util.logging.Level.SEVERE, null, ex);

} catch (IllegalAccessException ex) {

```

```
java.util.logging.Logger.getLogger(KoordinatGUI.class.getName()).log(
    java.util.logging.Level.SEVERE, null, ex);
```

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

```
java.util.logging.Logger.getLogger(KoordinatGUI.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 KoordinatGUI().setVisible(true);
```

```
    }
```

```
});
```

```
}
```

```
// Variables declaration - do not modify
```

```
private javax.swing.JTextField absis1Field;
```

```
private javax.swing.JTextField absis2Field;
```

```
private javax.swing.JLabel jLabel1;
```

```
private javax.swing.JLabel jLabel2;
```

```
private javax.swing.JLabel jLabel3;
```

```
private javax.swing.JLabel jLabel4;

private javax.swing.JLabel jLabel5;

private javax.swing.JLabel jLabel6;

private javax.swing.JLabel jLabel7;

private javax.swing.JLabel jLabel8;

private javax.swing.JLabel jLabel9;

private javax.swing.JPanel jPanel1;

private javax.swing.JPanel jPanel2;

private javax.swing.JPanel jPanel3;

private javax.swing.JPanel jPanel4;

private javax.swing.JLabel koordinat1Label;

private javax.swing.JLabel koordinat2Label;

private javax.swing.JTextField ordinat1Field;

private javax.swing.JTextField ordinat2Field;

private javax.swing.JToggleButton prosesButton;

private javax.swing.JButton selesaiButton;


private javax.swing.JTextField tengahField;

private javax.swing.JButton ulangButton;

// End of variables declaration

}
```

b. Tampilan Output

— □ ×

Perhitungan Koordinat Kartesian

Koordinat 1

Absis :

Ordinat :

Koordinat : (4.0 , 3.0)

Koordinat 2

Absis :

Ordinat :

Koordinat : (1.0 , 2.0)

Hasil

Koordinat Titik Tengah :

Proses Titik Tengah

Ulang

Selesai

Copyright : Amir , Prames , Andre , Ibrahim Dafi