LAPORAN PRAKTIKUM

BAHASA PEMROGRAMAN 1

(DOSEN PENGAMPU : DEDE HUSEN., M.KOM)

Modul 2

DISUSUN OLEH :

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2024

PRE TEST

1. Tuliskan bentuk umum stuktur program applet java
   Jawab : Struktur umum program Java terdiri dari empat bagian, yaitu: Deklarasi package, Import library, Bagian class, Method main.

PRAKTIKUM

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Applet.java to edit this template
 */

import java.applet.Applet;
import java.awt.*;

/**
 *
 * @author Suci Indah Lestari
 */
public class Applet_M2_P1 extends Applet {

  /**
   * Initialization method that will be called after the applet is loaded into
   * the browser.
   */
  public void init() {
    // TODO start asynchronous download of heavy resources
  }

  public void paint(Graphics g){
    Font f = new Font("Comic Sans MS", Font.BOLD, 20);
    g.setFont(f);
    g.setColor(Color.red);
    int xPusat = this.getSize().width/2;
    int yPusat = this.getSize().height/2;
    String s = "Ayo Belajar Java Applet!!";
```
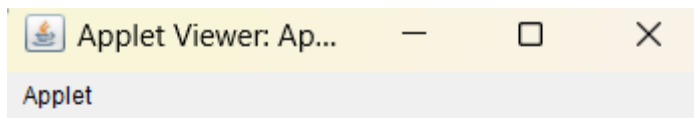
```
        FontMetrics fm = this.getFontMetrics(f);

        int posisiX = xPusat - (fm.stringWidth(s)/2);

        g.drawString("Ayooo Belajar Java Applet", posisiX, yPusat);

    }


    // TODO overwrite start(), stop() and destroy() methods
}
```

Hasil RUN

POSTTES

1. **Buat file applet baru dengan nama BP1_M2_PostTest1_Nama_AppleteMouse**

   Code

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

import java.applet.Applet;
import java.awt.*;
import java.awt.event.*;

public class BP1_M2_POSTES1_Aban_AppleatMouse extends Applet implements
MouseMotionListener {
    public void init()
    {
        addMouseMotionListener(this);
        setBackground(Color.blue);
    }
    public void mouseDragged(MouseEvent me) {
        Graphics g=getGraphics();
        g.setColor(Color.white);
        g.fillOval(me.getX(),me.getY(),10,10);
    }
    public void mouseMoved(MouseEvent me){}
}
```

   Hasil RUN

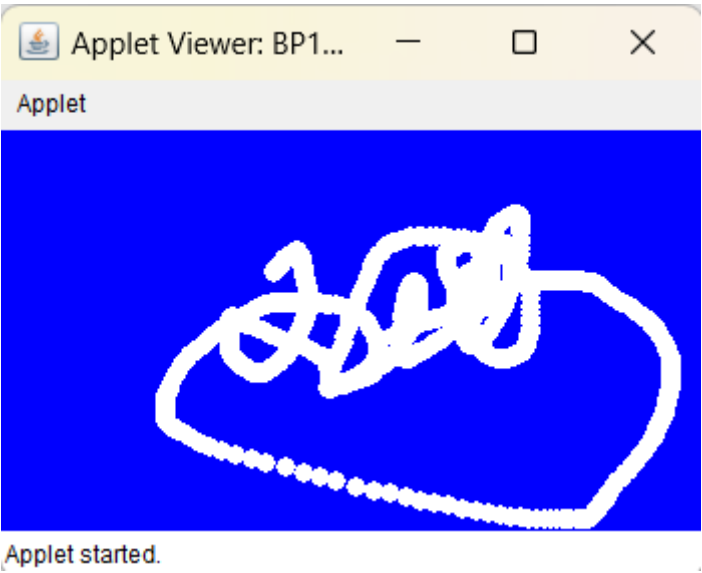2. **Buat file applet baru dengan nama BP1_M2_PostTest2_Nama_Applete3D**

Code

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

import java.applet.Applet;
import java.awt.*;

/**
 *
 * @author Suci Indah Lestari
 */
public class BP1_M2_POSTES2_Aban_Appleat3D extends Applet {

    @Override
    public void paint(Graphics g) {
        // Menggambar kubus sederhana
        g.drawRect(50, 50, 100, 100); // depan
        g.drawRect(80, 80, 100, 100); // belakang

        // Menghubungkan titik-titik antara dua kotak untuk membuat efek 3D
        g.drawLine(50, 50, 80, 80);
        g.drawLine(150, 50, 180, 80);
        g.drawLine(50, 150, 80, 180);
        g.drawLine(150, 150, 180, 180);
    }
}
```
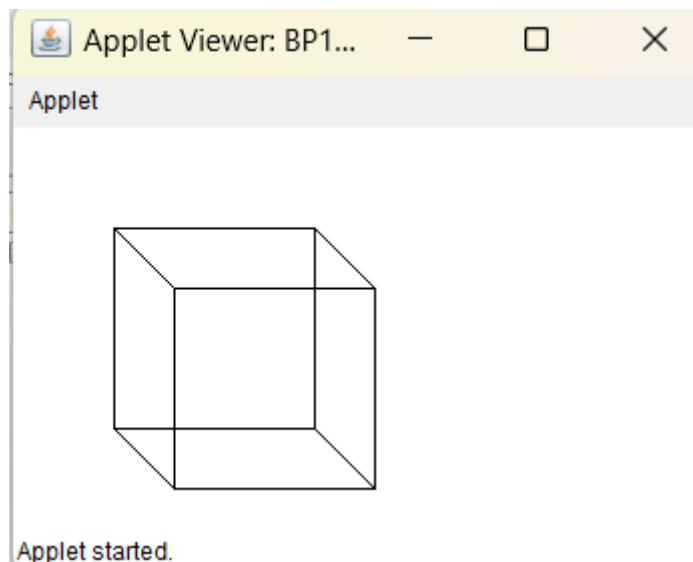
Hasil RUN

Tugas

1. **Buat file applet baru dengan nama BP1_M2_Tugas1_Nama_AppletePerhitungan**

   Perhitungan Aritmatika yang terdiri dari (Penjumlahan, Pengurangan, Perkalian, Pembagian)

Code

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

import java.applet.Applet;
import java.awt.*;
import java.awt.event.*;

public class BP1_M2_Tugas1_Aban_AppletePerhitungan extends Applet implements
ActionListener {
    TextField num1, num2, result;
    Button add, subtract, multiply, divide;

    public void init() {
        setLayout(new FlowLayout());

        Label label1 = new Label("Angka 1:");
        num1 = new TextField(10);
        Label label2 = new Label("Angka 2:");
        num2 = new TextField(10);

        add(label1);
        add(num1);
        add(label2);
        add(num2);

        add = new Button("+");
        subtract = new Button("-");
        multiply = new Button("*");
        divide = new Button("/");

        add(add);
        add(subtract);
        add(multiply);
        add(divide);

        add.addActionListener(this);
        subtract.addActionListener(this);
        multiply.addActionListener(this);
        divide.addActionListener(this);

        result = new TextField(15);
```

```java
        result.setEditable(false);
        add(new Label("Hasil:"));
        add(result);
    }

    public void actionPerformed(ActionEvent e) {
        try {
            double number1 = Double.parseDouble(num1.getText());
            double number2 = Double.parseDouble(num2.getText());
            double hasil = 0.0;

            if (e.getSource() == add) {
                hasil = number1 + number2;
            } else if (e.getSource() == subtract) {
                hasil = number1 - number2;
            } else if (e.getSource() == multiply) {
                hasil = number1 * number2;
            } else if (e.getSource() == divide) {
                if (number2 != 0) {
                    hasil = number1 / number2;
                } else {
                    result.setText("Error: Pembagi nol!");
                    return;
                }
            }
            result.setText(String.valueOf(hasil));
        } catch (NumberFormatException ex) {
            result.setText("Masukkan angka yang valid!");
        }
    }
}
```
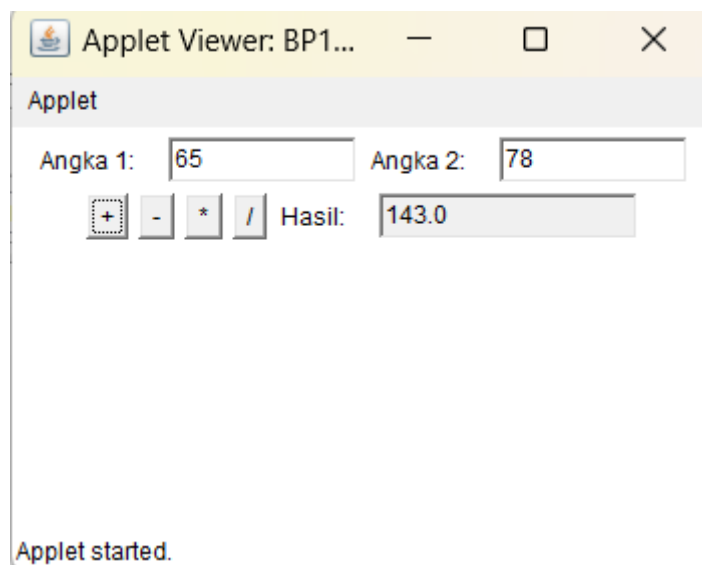
Hasil RUN

2. **Buat file applet baru dengan nama BP1_M2_Tugas2_Nama_AppleteAnimasi**
   Buat dengan kreasi anda

   Code

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
import java.applet.Applet;
import java.awt.*;

public class BP1_M2_Tugas2_Aban_AppleteAnimasi extends Applet implements Runnable
{
    int x = 0; // Posisi awal lingkaran
    int y = 50; // Posisi vertikal lingkaran
    Thread animasiThread;

    public void init() {
        setBackground(Color.green);
        animasiThread = new Thread(this);
        animasiThread.start();
    }

    public void paint(Graphics g) {
        g.setColor(Color.yellow);
        g.fillOval(x, y, 100, 100); // Gambar lingkaran
    }

    public void run() {
        while (true) {
            x += 20; // Gerakkan lingkaran ke kanan
            if (x > getWidth()) {
                x = 0; // Kembali ke awal ketika mencapai batas kanan
            }
            repaint();
            try {
                Thread.sleep(10); // Kecepatan animasi
            } catch (InterruptedException e) {
                e.printStackTrace();
            }
        }
    }
}
```
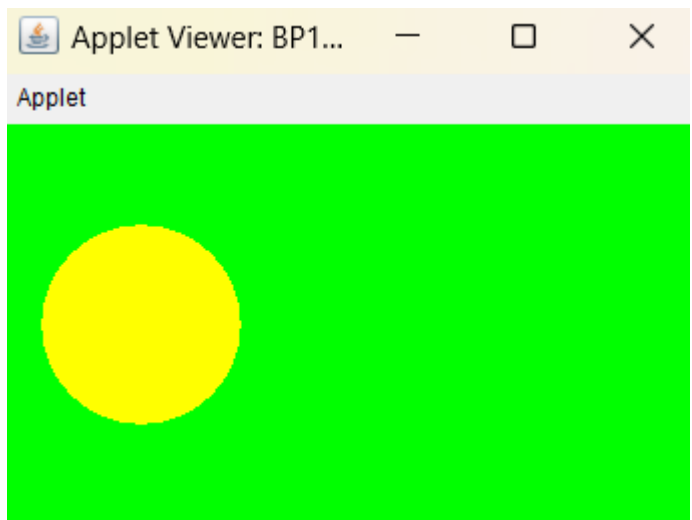
Hasil RUN ———————————➤

Praktek yang di ajarkan oleh pak dede

Code nya

```java
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 * @author Suci Indah Lestari
 */
public class Tugasdaripakdede extends javax.swing.JFrame {

    /**
     * Creates new form Tugasdaripakdede
     */
    public Tugasdaripakdede() {
        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() {

        jLabel1 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        Bill1 = new javax.swing.JTextField();
        Bill2 = new javax.swing.JTextField();
        ButtonTambah = new javax.swing.JButton();
        ButtonKurang = new javax.swing.JButton();
        ButtonKali = new javax.swing.JButton();
        ButtonBagi = new javax.swing.JButton();
        jButton5 = new javax.swing.JButton();
        Hasil = new javax.swing.JTextField();
        jLabel4 = new javax.swing.JLabel();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jLabel1.setText("Hasil");

        jLabel3.setText("Bilangan 1");

        jLabel2.setText("Bilangan 2");

        ButtonTambah.setBackground(new java.awt.Color(0, 204, 255));
        ButtonTambah.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
```

```java
    ButtonTambah.setText("+");
    ButtonTambah.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            ButtonTambahMouseClicked(evt);
        }
    });

    ButtonKurang.setBackground(new java.awt.Color(0, 204, 255));
    ButtonKurang.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
    ButtonKurang.setText("-");
    ButtonKurang.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            ButtonKurangMouseClicked(evt);
        }
    });

    ButtonKali.setBackground(new java.awt.Color(0, 204, 255));
    ButtonKali.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
    ButtonKali.setText("X");
    ButtonKali.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            ButtonKaliMouseClicked(evt);
        }
    });

    ButtonBagi.setBackground(new java.awt.Color(0, 204, 255));
    ButtonBagi.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
    ButtonBagi.setText(":");
    ButtonBagi.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            ButtonBagiMouseClicked(evt);
        }
    });

    jButton5.setBackground(new java.awt.Color(0, 255, 255));
    jButton5.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
    jButton5.setText("Clear");
    jButton5.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseEntered(java.awt.event.MouseEvent evt) {
            jButton5MouseEntered(evt);
        }
    });

    jLabel4.setText("Kalkulator Sederhana");

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(58, 58, 58)
```

```
                .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE, 102,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(56, 56, 56)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(Bill1, javax.swing.GroupLayout.PREFERRED_SIZE, 154,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(Bill2, javax.swing.GroupLayout.PREFERRED_SIZE, 154,
javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addGroup(layout.createSequentialGroup()

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout.createSequentialGroup()
                  .addGap(48, 48, 48)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                    .addComponent(ButtonKali,
javax.swing.GroupLayout.PREFERRED_SIZE, 95, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(ButtonTambah,
javax.swing.GroupLayout.PREFERRED_SIZE, 95,
javax.swing.GroupLayout.PREFERRED_SIZE))
                  .addGap(41, 41, 41))
                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                  .addContainerGap()
                  .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE,
132, javax.swing.GroupLayout.PREFERRED_SIZE)

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

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

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(ButtonKurang,
javax.swing.GroupLayout.PREFERRED_SIZE, 95, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(ButtonBagi,
javax.swing.GroupLayout.PREFERRED_SIZE, 95,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 36,
Short.MAX_VALUE)
                  .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE,
109, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGroup(layout.createSequentialGroup()
                  .addComponent(Hasil, javax.swing.GroupLayout.PREFERRED_SIZE, 207,
javax.swing.GroupLayout.PREFERRED_SIZE)
                  .addGap(0, 0, Short.MAX_VALUE)))))
          .addContainerGap())

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
          .addGap(60, 60, 60)
```

```java
                .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED_SIZE, 108,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addContainerGap(268, Short.MAX_VALUE)))

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(144, 144, 144)
                .addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED_SIZE, 132,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addContainerGap(160, Short.MAX_VALUE)))
        );
        layout.setVerticalGroup(
          layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
          .addGroup(layout.createSequentialGroup()
            .addGap(84, 84, 84)
            .addComponent(Bill1, javax.swing.GroupLayout.PREFERRED_SIZE, 42,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
            .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE, 26,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(Bill2, javax.swing.GroupLayout.PREFERRED_SIZE, 42,
javax.swing.GroupLayout.PREFERRED_SIZE))

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(41, 41, 41)

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(ButtonTambah,
javax.swing.GroupLayout.PREFERRED_SIZE, 61, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(ButtonKurang, javax.swing.GroupLayout.PREFERRED_SIZE,
61, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(28, 28, 28)

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(ButtonKali, javax.swing.GroupLayout.PREFERRED_SIZE, 61,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(ButtonBagi, javax.swing.GroupLayout.PREFERRED_SIZE,
61, javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addGroup(layout.createSequentialGroup()
                .addGap(71, 71, 71)
                .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE, 88,
javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addGap(48, 48, 48)

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
            .addComponent(Hasil, javax.swing.GroupLayout.PREFERRED_SIZE, 49,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addContainerGap(70, Short.MAX_VALUE))
```

```java
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout.createSequentialGroup()
                    .addGap(84, 84, 84)
                    .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addContainerGap(430, Short.MAX_VALUE)))

            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout.createSequentialGroup()
                    .addGap(23, 23, 23)
                    .addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addContainerGap(491, Short.MAX_VALUE)))
        );

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

    private void ButtonTambahMouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        double num1 = Double.parseDouble(Bill1.getText());
        double num2 = Double.parseDouble(Bill2.getText());
        double hasilPenjumlahan = num1 + num2;
        Hasil.setText(String.valueOf(hasilPenjumlahan));

    }

    private void ButtonKurangMouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        double num1 = Double.parseDouble(Bill1.getText());
        double num2 = Double.parseDouble(Bill2.getText());
        double hasilPengurangan = num1 - num2;
        Hasil.setText(String.valueOf(hasilPengurangan));
    }

    private void ButtonKaliMouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        double num1 = Double.parseDouble(Bill1.getText());
        double num2 = Double.parseDouble(Bill2.getText());
        double hasilPerkalian = num1 * num2;
        Hasil.setText(String.valueOf(hasilPerkalian));
    }

    private void ButtonBagiMouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        float num1 = Float.parseFloat(Bill1.getText());
        float num2 = Float.parseFloat(Bill2.getText());
        float hasilPembagian = num1 / num2;
        Hasil.setText(String.valueOf(hasilPembagian));
    }

    private void jButton5MouseEntered(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
```

```java
        Bill1.setText("");
        Bill2.setText("");
        Hasil.setText("");

    }

    /**
     * @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.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(Tugasdaripakdede.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

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

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

java.util.logging.Logger.getLogger(Tugasdaripakdede.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 Tugasdaripakdede().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JTextField Bill1;
```

```
        private javax.swing.JTextField Bill2;
        private javax.swing.JButton ButtonBagi;
        private javax.swing.JButton ButtonKali;
        private javax.swing.JButton ButtonKurang;
        private javax.swing.JButton ButtonTambah;
        private javax.swing.JTextField Hasil;
        private javax.swing.JButton jButton5;
        private javax.swing.JLabel jLabel1;
        private javax.swing.JLabel jLabel2;
        private javax.swing.JLabel jLabel3;
        private javax.swing.JLabel jLabel4;
        // End of variables declaration
}
```

Hasil RUN