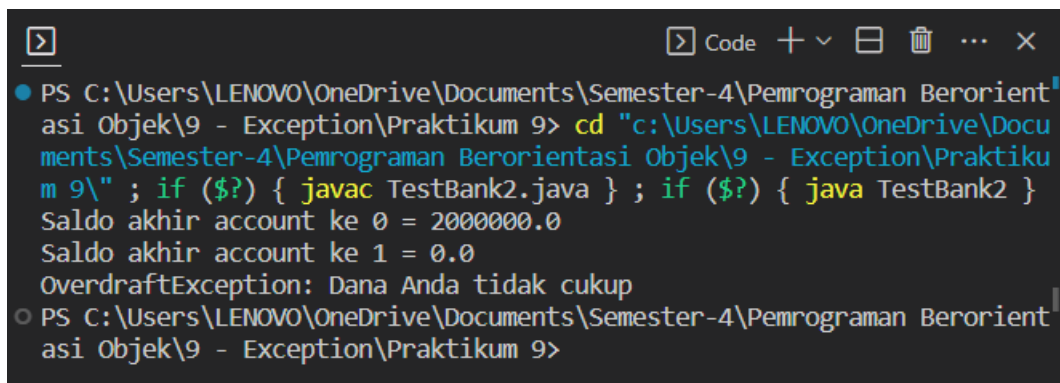# Dokumentasi Praktikum PBO 9

Mata Kuliah   :   PBO - TI - S1

Pertemuan   :   9

NIM   :   A11.2021.13254

Nama   :   Yohanes Dimas Pratama

Contoh Program Exception

Hasil Program:

```
PS C:\Users\LENOVO\OneDrive\Documents\Semester-4\Pemrograman Berorient
asi Objek\9 - Exception\Praktikum 9> cd "c:\Users\LENOVO\OneDrive\Docu
ments\Semester-4\Pemrograman Berorientasi Objek\9 - Exception\Praktiku
m 9\" ; if ($?) { javac TestBank2.java } ; if ($?) { java TestBank2 }
Saldo akhir account ke 0 = 2000000.0
Saldo akhir account ke 1 = 0.0
OverdraftException: Dana Anda tidak cukup
PS C:\Users\LENOVO\OneDrive\Documents\Semester-4\Pemrograman Berorient
asi Objek\9 - Exception\Praktikum 9>
```

Code Program:

*Account.java

```java
public class Account {
    protected double balance;

    protected Account(double initBalance) {
        balance = initBalance;
    }

    public double getBalance() {
        return balance;
    }

    public void deposit(double amt) {
        balance = balance + amt;
    }

    public void withdraw(double amt) throws OverdraftException {
        if (amt <= balance) {
            balance = balance - amt;
        }
```

```
        else {
            throw new OverdraftException("Dana Anda tidak cukup", amt-
balance);
        }
    }
}
```

*TestBank2.java

```
public class TestBank2 {
    public static void main(String[] args) {
        int i;
        Account[] accounts = new Account[100];
        accounts[0] = new Account(2000000);
        accounts[1] = new Account(0);
        for (i = 0; i < 2; i++) {
            double b = accounts[i].getBalance();
            System.out.println("Saldo akhir account ke " + i + " = " + b);
            try {
                accounts[i].withdraw(1000000);
            }
            catch (OverdraftException ode) {
                System.err.println("" + ode);
            }
        }
    }
}
```

*OverdraftException.java

```
public class OverdraftException extends Exception {
    private final double deficit;

    public OverdraftException(String msg, double deficit) {
        super(msg);
        this.deficit = deficit;
    }

    public double getDeficit() {
        return deficit;
    }
}
```

Latihan 1

Hasil Program:

Program Kalkulator Mini

Bilangan Pertama 50

Bilangan Kedua 3

Hasil Hitung 150.0

Code Program:

*Form_KalkulatorMIni.java

```
/*
 * 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 kalkulator.mini;

/**
 *
 * @author LENOVO
 */
public class Form_KalkulatorMini extends javax.swing.JFrame {

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

        panel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        input1 = new javax.swing.JTextField();
        input2 = new javax.swing.JTextField();
        jLabel4 = new javax.swing.JLabel();
        hasil = new javax.swing.JTextField();
        tambah = new javax.swing.JButton();
        kurang = new javax.swing.JButton();
        bagi = new javax.swing.JButton();
        kali = new javax.swing.JButton();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        panel1.setBackground(new java.awt.Color(255, 255, 255));

        jLabel1.setFont(new java.awt.Font("Dialog", 3, 36)); // NOI18N
        jLabel1.setForeground(java.awt.Color.green);
        jLabel1.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
```

```java
jLabel1.setText("Program Kalkulator Mini");


jLabel2.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

jLabel2.setForeground(java.awt.Color.red);

jLabel2.setText("Bilangan Pertama");


jLabel3.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

jLabel3.setForeground(java.awt.Color.red);

jLabel3.setText("Bilangan Kedua");


input1.setBackground(new java.awt.Color(255, 255, 255));

input1.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

input1.setForeground(java.awt.Color.red);

input1.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));


input2.setBackground(new java.awt.Color(255, 255, 255));

input2.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

input2.setForeground(java.awt.Color.red);

input2.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));


jLabel4.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

jLabel4.setForeground(java.awt.Color.red);

jLabel4.setText("Hasil Hitung");


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

hasil.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

hasil.setForeground(java.awt.Color.red);

hasil.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));


tambah.setBackground(java.awt.Color.cyan);

tambah.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
```

```java
tambah.setForeground(new java.awt.Color(255, 255, 255));

tambah.setIcon(new javax.swing.ImageIcon(getClass().getResource("/asset/tambah.png"))); // NOI18N

tambah.setBorder(javax.swing.BorderFactory.createCompoundBorder());

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

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

        tambahActionPerformed(evt);

    }

});


kurang.setBackground(java.awt.Color.cyan);

kurang.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

kurang.setForeground(new java.awt.Color(255, 255, 255));

kurang.setIcon(new javax.swing.ImageIcon(getClass().getResource("/asset/kurang.png"))); // NOI18N

kurang.setBorder(javax.swing.BorderFactory.createCompoundBorder());

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

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

        kurangActionPerformed(evt);

    }

});


bagi.setBackground(java.awt.Color.cyan);

bagi.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

bagi.setForeground(new java.awt.Color(255, 255, 255));

bagi.setIcon(new javax.swing.ImageIcon(getClass().getResource("/asset/bagi.png"))); // NOI18N

bagi.setBorder(javax.swing.BorderFactory.createCompoundBorder());

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

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

        bagiActionPerformed(evt);

    }

});
```

```java
    kali.setBackground(java.awt.Color.cyan);

    kali.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

    kali.setForeground(new java.awt.Color(255, 255, 255));

    kali.setIcon(new javax.swing.ImageIcon(getClass().getResource("/asset/kali.png"))); // NOI18N

    kali.setBorder(javax.swing.BorderFactory.createCompoundBorder());

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

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

            kaliActionPerformed(evt);

        }

    });


    javax.swing.GroupLayout panel1Layout = new javax.swing.GroupLayout(panel1);

    panel1.setLayout(panel1Layout);

    panel1Layout.setHorizontalGroup(

        panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(panel1Layout.createSequentialGroup()

            .addContainerGap()

.addGroup(panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

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

                .addGroup(panel1Layout.createSequentialGroup()

                    .addGap(0, 0, Short.MAX_VALUE)

                    .addComponent(tambah)

                    .addGap(18, 18, 18)

                    .addComponent(kurang)

                    .addGap(18, 18, 18)

                    .addComponent(kali)

                    .addGap(18, 18, 18)

                    .addComponent(bagi))

                .addGroup(panel1Layout.createSequentialGroup()
```

```
        .addGroup(panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(panel1Layout.createSequentialGroup()
                .addComponent(jLabel2)
                .addGap(18, 18, 18)
                .addComponent(input1, javax.swing.GroupLayout.PREFERRED_SIZE, 249,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGroup(panel1Layout.createSequentialGroup()
                .addComponent(jLabel3)
                .addGap(38, 38, 38)
                .addComponent(input2, javax.swing.GroupLayout.PREFERRED_SIZE, 249,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGroup(panel1Layout.createSequentialGroup()
                .addComponent(jLabel4)
                .addGap(77, 77, 77)
                .addComponent(hasil, javax.swing.GroupLayout.PREFERRED_SIZE, 249,
javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addGap(0, 0, Short.MAX_VALUE)))
        .addContainerGap())
    );
    panel1Layout.setVerticalGroup(
        panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(panel1Layout.createSequentialGroup()
            .addContainerGap()
            .addComponent(jLabel1)
            .addGap(18, 18, 18)

.addGroup(panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
            .addComponent(jLabel2)
            .addComponent(input1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)
```

```java
            .addGroup(panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(input2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jLabel3))
            .addGap(18, 18, 18)


            .addGroup(panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                .addComponent(hasil, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jLabel4))
            .addGap(18, 18, 18)


            .addGroup(panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(tambah)
                .addComponent(kurang)
                .addComponent(bagi)
                .addComponent(kali))
            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, 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(panel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(panel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        );
```

```java
    pack();

}// </editor-fold>



private void tambahActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    double hitung1, hitung2, hasil;

    String bilangan1 = input1.getText();

    String bilangan2 = input2.getText();

    hitung1 = Double.parseDouble(this.input1.getText());

    hitung2 = Double.parseDouble(this.input2.getText());

    hasil = hitung1 + hitung2;

    this.hasil.setText("" + hasil);

}


private void kurangActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    double hitung1, hitung2, hasil;

    String bilangan1 = input1.getText();

    String bilangan2 = input2.getText();

    hitung1 = Double.parseDouble(this.input1.getText());

    hitung2 = Double.parseDouble(this.input2.getText());

    hasil = hitung1 - hitung2;

    this.hasil.setText("" + hasil);

}


private void kaliActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    double hitung1, hitung2, hasil;

    String bilangan1 = input1.getText();
```

```java
        String bilangan2 = input2.getText();

        hitung1 = Double.parseDouble(this.input1.getText());

        hitung2 = Double.parseDouble(this.input2.getText());

        hasil = hitung1 * hitung2;

        this.hasil.setText("" + hasil);

    }


    private void bagiActionPerformed(java.awt.event.ActionEvent evt) {

        // TODO add your handling code here:

        double hitung1, hitung2, hasil;

        String bilangan1 = input1.getText();

        String bilangan2 = input2.getText();

        hitung1 = Double.parseDouble(this.input1.getText());

        hitung2 = Double.parseDouble(this.input2.getText());

        hasil = hitung1 / hitung2;

        this.hasil.setText("" + hasil);

    }


    /**

     * @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 (doubleroduced 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())) {
```

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

                    break;

                }

            }

        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(Form_KalkulatorMini.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);

        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(Form_KalkulatorMini.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);

        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(Form_KalkulatorMini.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);

        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(Form_KalkulatorMini.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);

        }
        //</editor-fold>


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


    // Variables declaration - do not modify
    private javax.swing.JButton bagi;

    private javax.swing.JTextField hasil;
```

```java
    private javax.swing.JTextField input1;

    private javax.swing.JTextField input2;

    private javax.swing.JLabel jLabel1;

    private javax.swing.JLabel jLabel2;

    private javax.swing.JLabel jLabel3;

    private javax.swing.JLabel jLabel4;

    private javax.swing.JButton kali;

    private javax.swing.JButton kurang;

    private javax.swing.JPanel panel1;

    private javax.swing.JButton tambah;

    // End of variables declaration

}
```

Latihan 2

Hasil Program:

Program Nilai Mahasiswa

NIM	A11.2021.13254
Nama	Dimas Pratama
Nilai Tugas	95 20% 19.0
Nilai UTS	85 35% 29.75
Nilai UAS	90 45% 40.5

Nilai Akhir	89.25
Nilai Huruf	A
Predikat	Sangat Baik

Tabel Nilai Mahasiswa

NIM	Nama	Nilai Tugas	Nilai UTS	Nilai UAS	Nilai Akhir	Nilai Huruf	Predikat
A11.2021.132...	Dimas Prata...	19.0	29.75	40.5	89.25	A	Sangat Baik

Code Program:

*Form_Nilai.java

```java
/*
 * 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 nilai;

/**
 *
 * @author LENOVO
 */
public class Form_Nilai extends javax.swing.JFrame {

    /**
     * Creates new form Form_Nilai
     */
    public Form_Nilai() {
        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() {
```

```java
jPanel1 = new javax.swing.JPanel();

jLabel1 = new javax.swing.JLabel();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jLabel4 = new javax.swing.JLabel();

jLabel5 = new javax.swing.JLabel();

jLabel6 = new javax.swing.JLabel();

jLabel7 = new javax.swing.JLabel();

jLabel8 = new javax.swing.JLabel();

jLabel9 = new javax.swing.JLabel();

tugas = new javax.swing.JTextField();

jLabel10 = new javax.swing.JLabel();

hasil_tugas = new javax.swing.JTextField();

uts = new javax.swing.JTextField();

jLabel11 = new javax.swing.JLabel();

hasil_uts = new javax.swing.JTextField();

uas = new javax.swing.JTextField();

jLabel12 = new javax.swing.JLabel();

hasil_uas = new javax.swing.JTextField();

nim = new javax.swing.JTextField();

nama = new javax.swing.JTextField();

nilai_akhir = new javax.swing.JTextField();

nilai_huruf = new javax.swing.JTextField();

predikat = new javax.swing.JTextField();

jScrollPane1 = new javax.swing.JScrollPane();

tabel_nilai = new javax.swing.JTable();

save = new javax.swing.JButton();

jLabel13 = new javax.swing.JLabel();


setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

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

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

jLabel1.setFont(new java.awt.Font("Dialog", 3, 36)); // NOI18N
jLabel1.setForeground(java.awt.Color.green);
jLabel1.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
jLabel1.setText("Program Nilai Mahasiswa");

jLabel2.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
jLabel2.setForeground(java.awt.Color.red);
jLabel2.setText("NIM");

jLabel3.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
jLabel3.setForeground(java.awt.Color.red);
jLabel3.setText("Nama");

jLabel4.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
jLabel4.setForeground(java.awt.Color.red);
jLabel4.setText("Nilai Tugas");

jLabel5.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
jLabel5.setForeground(java.awt.Color.red);
jLabel5.setText("Nilai UTS");

jLabel6.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
jLabel6.setForeground(java.awt.Color.red);
jLabel6.setText("Nilai UAS");

jLabel7.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
jLabel7.setForeground(java.awt.Color.red);
jLabel7.setText("Nilai Akhir");
```

```java
jLabel8.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

jLabel8.setForeground(java.awt.Color.red);

jLabel8.setText("Nilai Huruf");


jLabel9.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

jLabel9.setForeground(java.awt.Color.red);

jLabel9.setText("Predikat");


tugas.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

tugas.setForeground(java.awt.Color.red);

tugas.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));


jLabel10.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

jLabel10.setForeground(java.awt.Color.red);

jLabel10.setText("20%");


hasil_tugas.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

hasil_tugas.setForeground(java.awt.Color.red);

hasil_tugas.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));


uts.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

uts.setForeground(java.awt.Color.red);

uts.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));


jLabel11.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

jLabel11.setForeground(java.awt.Color.red);

jLabel11.setText("35%");


hasil_uts.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

hasil_uts.setForeground(java.awt.Color.red);
```

```java
hasil_uts.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));

uas.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
uas.setForeground(java.awt.Color.red);
uas.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));

jLabel12.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
jLabel12.setForeground(java.awt.Color.red);
jLabel12.setText("45%");

hasil_uas.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
hasil_uas.setForeground(java.awt.Color.red);
hasil_uas.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));

nim.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
nim.setForeground(java.awt.Color.red);
nim.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));

nama.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
nama.setForeground(java.awt.Color.red);
nama.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));

nilai_akhir.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N
nilai_akhir.setForeground(java.awt.Color.red);
nilai_akhir.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));
nilai_akhir.addActionListener(new java.awt.event.ActionListener() {
  public void actionPerformed(java.awt.event.ActionEvent evt) {
    nilai_akhirActionPerformed(evt);
  }
});
```

```java
nilai_huruf.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

nilai_huruf.setForeground(java.awt.Color.red);

nilai_huruf.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));


predikat.setFont(new java.awt.Font("Dialog", 0, 24)); // NOI18N

predikat.setForeground(java.awt.Color.red);

predikat.setBorder(new javax.swing.border.LineBorder(java.awt.Color.red, 3, true));


tabel_nilai.setForeground(java.awt.Color.magenta);

tabel_nilai.setModel(new javax.swing.table.DefaultTableModel(

    new Object [][] {

        {null, null, null, null, null, null, null, null},

        {null, null, null, null, null, null, null, null},

        {null, null, null, null, null, null, null, null},

        {null, null, null, null, null, null, null, null},

        {null, null, null, null, null, null, null, null}

    },

    new String [] {

        "NIM", "Nama", "Nilai Tugas", "Nilai UTS", "Nilai UAS", "Nilai Akhir", "Nilai Huruf",
"Predikat"

    }

));

jScrollPane1.setViewportView(tabel_nilai);


save.setBackground(java.awt.Color.cyan);

save.setIcon(new javax.swing.ImageIcon(getClass().getResource("/asset/save.png"))); // NOI18N

save.setBorder(javax.swing.BorderFactory.createCompoundBorder());

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

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

        saveActionPerformed(evt);

    }
```

```
            });


        jLabel13.setFont(new java.awt.Font("Dialog", 3, 36)); // NOI18N

        jLabel13.setForeground(java.awt.Color.green);

        jLabel13.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

        jLabel13.setText("Tabel Nilai Mahasiswa");


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

        jPanel1.setLayout(jPanel1Layout);

        jPanel1Layout.setHorizontalGroup(

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

            .addGap(0, 736, Short.MAX_VALUE)

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

                .addGroup(jPanel1Layout.createSequentialGroup()

                    .addContainerGap()


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

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

                        .addComponent(jScrollPane1)

                        .addComponent(jLabel13, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()

                            .addGap(0, 0, Short.MAX_VALUE)

                            .addComponent(save))

                        .addGroup(jPanel1Layout.createSequentialGroup()


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

                                .addComponent(jLabel4)

                                .addComponent(jLabel5)

                                .addComponent(jLabel6)
```

```java
                    .addComponent(jLabel3)

                    .addComponent(jLabel2)

                    .addComponent(jLabel7)

                    .addComponent(jLabel8)

                    .addComponent(jLabel9))

                .addGap(18, 18, 18)


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

                    .addComponent(predikat)

                    .addComponent(nilai_huruf)

                    .addComponent(nilai_akhir)

                    .addGroup(jPanel1Layout.createSequentialGroup()


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

                        .addComponent(nim, javax.swing.GroupLayout.Alignment.LEADING)

                        .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel1Layout.createSequentialGroup()

                            .addComponent(uas, javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)

                            .addGap(18, 18, 18)

                            .addComponent(jLabel12)

                            .addGap(18, 18, 18)

                            .addComponent(hasil_uas, javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))

                        .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel1Layout.createSequentialGroup()

                            .addComponent(uts, javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)

                            .addGap(18, 18, 18)

                            .addComponent(jLabel11)

                            .addGap(18, 18, 18)

                            .addComponent(hasil_uts, javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```java
                        .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel1Layout.createSequentialGroup()

                            .addComponent(tugas, javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)

                            .addGap(18, 18, 18)

                            .addComponent(jLabel10)

                            .addGap(18, 18, 18)

                            .addComponent(hasil_tugas, javax.swing.GroupLayout.PREFERRED_SIZE,
250, javax.swing.GroupLayout.PREFERRED_SIZE))

                            .addComponent(nama, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.PREFERRED_SIZE, 585, javax.swing.GroupLayout.PREFERRED_SIZE))

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

                .addContainerGap()))

    );
    jPanel1Layout.setVerticalGroup(

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

        .addGap(0, 785, Short.MAX_VALUE)

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

            .addGroup(jPanel1Layout.createSequentialGroup()

            .addGap(13, 13, 13)

            .addComponent(jLabel1)

            .addGap(18, 18, 18)


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

                .addComponent(jLabel2)

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

                .addGap(18, 18, 18)


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

                .addComponent(jLabel3)

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

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

```
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
        .addComponent(jLabel4)
        .addComponent(tugas, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel10)
        .addComponent(hasil_tugas, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(18, 18, 18)


.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
        .addComponent(jLabel5)
        .addComponent(uts, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel11)
        .addComponent(hasil_uts, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(18, 18, 18)


.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
        .addComponent(jLabel6)
        .addComponent(uas, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel12)
        .addComponent(hasil_uas, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(18, 18, 18)
        .addComponent(save)
        .addGap(18, 18, 18)


.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
        .addGroup(jPanel1Layout.createSequentialGroup()


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

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

                    .addComponent(jLabel7))

                .addGap(18, 18, 18)


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

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

                    .addComponent(jLabel8))

                .addGap(18, 18, 18)

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

                .addComponent(jLabel9))

            .addGap(18, 18, 18)

            .addComponent(jLabel13)

            .addGap(18, 18, 18)

            .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 115,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addContainerGap(13, 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.Alignment.TRAILING,
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)

    );
```

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


private void saveActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    String textnim = nim.getText();
    String textnama = nama.getText();


    String texttugas = tugas.getText();
    String textuts = uts.getText();
    String textuas = uas.getText();


    float tugas = Integer.parseInt(texttugas);
    float uts = Integer.parseInt(textuts);
    float uas = Integer.parseInt(textuas);


    float ntugas, nuts, nuas, nakhir;
    ntugas = tugas * 20 / 100;
    nuts = uts * 35 / 100;
    nuas = uas * 45 / 100;
    nakhir = ntugas + nuts + nuas;


    hasil_tugas.setText("" + ntugas);
    hasil_uts.setText("" + nuts);
    hasil_uas.setText("" + nuas);
    nilai_akhir.setText("" + nakhir);


//      nilai_huruf
    if(nakhir>=85){
        nilai_huruf.setText("A");
```

```java
        predikat.setText("Sangat Baik");
      }else if(nakhir<85 && nakhir>=75){
        nilai_huruf.setText("B");
        predikat.setText("Cukup Baik");
      }else if(nakhir<75 && nakhir>=65){
        nilai_huruf.setText("C");
        predikat.setText("Cukup");
      }else if(nakhir<65 && nakhir>=50){
        nilai_huruf.setText("D");
        predikat.setText("Cukup Jelek");
      }else{
        nilai_huruf.setText("E");
        predikat.setText("Sangat Jelek");
      }


//      table
      tabel_nilai.setValueAt(textnim, 0, 0);
      tabel_nilai.setValueAt(textnama, 0, 1);
      tabel_nilai.setValueAt(hasil_tugas.getText(), 0, 2);
      tabel_nilai.setValueAt(hasil_uts.getText(), 0, 3);
      tabel_nilai.setValueAt(hasil_uas.getText(), 0, 4);
      tabel_nilai.setValueAt(nilai_akhir.getText(), 0, 5);
      tabel_nilai.setValueAt(nilai_huruf.getText(), 0, 6);
      tabel_nilai.setValueAt(predikat.getText(), 0, 7);
    }

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

    /**
```

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

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

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

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

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

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

        public void run() {

            new Form_Nilai().setVisible(true);

        }

    });

}


// Variables declaration - do not modify

private javax.swing.JTextField hasil_tugas;

private javax.swing.JTextField hasil_uas;

private javax.swing.JTextField hasil_uts;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel10;

private javax.swing.JLabel jLabel11;

private javax.swing.JLabel jLabel12;

private javax.swing.JLabel jLabel13;

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.JScrollPane jScrollPane1;

private javax.swing.JTextField nama;

private javax.swing.JTextField nilai_akhir;

private javax.swing.JTextField nilai_huruf;
```

```java
    private javax.swing.JTextField nim;

    private javax.swing.JTextField predikat;

    private javax.swing.JButton save;

    private javax.swing.JTable tabel_nilai;

    private javax.swing.JTextField tugas;

    private javax.swing.JTextField uas;

    private javax.swing.JTextField uts;

    // End of variables declaration
}
```