

PEMROGRAMAN BERBASIS WEB

(UAS)



Disusun Oleh:

Prames Ray Lopian - 140810210059

PROGRAM STUDI S-1 TEKNIK INFORMATIKA
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS PADJADJARAN
JATINANGOR

2022

1. Source Code:

- Class: Koneksi

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

/**
 *
 * @author prame
 */
import java.sql.Connection;
import java.sql.Statement;
import java.sql.ResultSet;
import java.sql.DriverManager;
import javax.swing.JOptionPane;

public class Koneksi {
    // <editor-fold defaultstate="collapsed" desc="Koneksi v1">
    // private String user ;
    // private String pwd ; //password koneksi database, tidak ada maka kosong
    // private String host ;
    // private String db ; //ganti dan isi dgn nama database
    // private String url;
    // private Statement st = null;
    // private Connection con = null;
    // private ResultSet rs = null;
    //
    // public Koneksi(){
    //     user = "root";
    //     pwd = "";
    //     host = "localhost";
    //     db = "akademik";
    //     url = "jdbc:mysql://localhost/akademik";
    //     try{
    //         Class.forName("com.mysql.jdbc.Driver");
    //     }
    //     catch(ClassNotFoundException e){
    //         JOptionPane.showMessageDialog(null, "Ada kesalahan Driver JDBC
    // " + "tidak berhasil Load");
    //     }
    //     try{
    //         url = "jdbc:mysql://" + host + "/" + db;
    //         con = (Connection) DriverManager.getConnection(url,user,pwd);
    //         JOptionPane.showMessageDialog(null, "Driver Terhubung.");
    //     }
    //     catch (SQLException se){
    //         JOptionPane.showMessageDialog(null, "Perintah salah.");
    //     }
    //     catch(Exception ex){
    //         JOptionPane.showMessageDialog(null, "Driver tidak Terhubung");
    //     }
    // }
    //
    // public ResultSet getData(String SQLString){
    //     try {
    //         st = (Statement) con.createStatement();
    //         rs = st.executeQuery(SQLString);
    //     } catch(Exception e){
    //         JOptionPane.showMessageDialog(null, "Error:" + e.getMessage(),
    // "Communication Error",
    JOptionPane.WARNING_MESSAGE);
    //     }
    //     return rs;
    // }
}
```

```

//
//      public void query(String SQLString){
//          int hsl;
//          try{
//              st = (Statement) con.createStatement();
//              hsl = st.executeUpdate(SQLString);
//          } catch(Exception e){
//              JOptionPane.showMessageDialog(null, "Error:" + e.getMessage(),
//              "Communication Error",
//              JOptionPane.WARNING_MESSAGE);
//          }
//      }
// </editor-fold>
private String dbuser = "root";
private String dbpasswd = "";
private Statement stmt = null;
private Connection con = null;
private ResultSet rs = null;

public Koneksi(){
    try{
        Class.forName("com.mysql.jdbc.Driver");
    }
    catch(Exception e){
        JOptionPane.showMessageDialog(null, "" + e.getMessage(),
        "JDBC Driver Error",
        JOptionPane.WARNING_MESSAGE);
    }

    try{
        con =
(Connection)DriverManager.getConnection("jdbc:mysql://localhost/uas_akademik"
,
        dbuser,
        dbpasswd);

        stmt = (Statement) con.createStatement();
    }
    catch(Exception e){
        JOptionPane.showMessageDialog(null, "" + e.getMessage(),
        "Connection Error",
        JOptionPane.WARNING_MESSAGE);
    }
}

public ResultSet getData(String SQLString){
    try{
        rs = stmt.executeQuery(SQLString);
    }
    catch(Exception e){
        JOptionPane.showMessageDialog(null, "Error:" + e.getMessage(),
        "Communication Error",
        JOptionPane.WARNING_MESSAGE);
    }

    return rs;
}

public void query(String SQLString){
    try{
        stmt.executeUpdate(SQLString);
    }
    catch(Exception e){
        JOptionPane.showMessageDialog(null, "Error:" + e.getMessage(),
        "Communication Error",
        JOptionPane.WARNING_MESSAGE);
    }
}
}

```

- Class: Kuliah

```

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

import java.sql.*;

/**
 *
 * @author prame
 */
public class Kuliah {
    private String kode;
    private String nama;
    private int sks;
    private int semester;

    public Kuliah() {
        this.kode = null;
        this.nama = null;
        this.sks = 0;
        this.semester = 0;
    }

    public String getKode() {
        return kode;
    }

    public void setKode(String kode) {
        this.kode = kode;
    }

    public String getNama() {
        return nama;
    }

    public void setNama(String nama) {
        this.nama = nama;
    }

    public int getSks() {
        return sks;
    }

    public void setSks(int sks) {
        this.sks = sks;
    }

    public int getSemester() {
        return semester;
    }

    public void setSemester(int semester) {
        this.semester = semester;
    }

    public void insertKuliah(){
        Koneksi kon = new Koneksi();
        String s = "INSERT INTO kuliah VALUES('"
        this.kode + "','" +
        this.nama + "','" +
        this.sks + "','" +
        this.semester + " ')" ;

        kon.query(s);
    }
}

```

```

public void updateKuliah(){
    Koneksi kon = new Koneksi();
    String s = "UPDATE kuliah SET kode_kul = '" + this.kode      +
               "' , nama_kul = '" + this.nama      +
               "' , sks = '" + this.sks      +
               "' , semester = '" + this.semester +
               "' WHERE kode_kul = '" + this.kode      + "'";
    kon.query(s);
}

public void deleteKuliah(){
    Koneksi kon = new Koneksi();
    String s = "DELETE FROM kuliah WHERE kode_kul = '"+ this.kode+ "'";
    kon.query(s);
}

public ResultSet getKuliah(){
    ResultSet r = null;
    Koneksi kon = new Koneksi();
    String s = "INSERT INTO kuliah VALUES('"
               + this.kode      + "' , '" +
               + this.nama      + "' , '" +
               + this.sks      + "' , '" +
               + this.semester  + "')";
    kon.query(s);
    return r;
}
}

```

- **Class: Mahasiswa**

```

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

import java.sql.*;

/**
 *
 * @author prame
 */
public class Mahasiswa {
    private String npm;
    private String nama;
    private String jk;
    private String tgl; private String bln; private String thn;
    private String telp;
    private String alamat;

    public Mahasiswa() {
        this.npm = null;
        this.nama = null;
        this.jk = null;
        this.tgl = null;
        this.bln = null;
        this.thn = null;
        this.telp = null;
        this.alamat = null;
    }

    public void setNpm(String npm){
        this.npm = npm;
    }
    public void setNama(String nama){
        this.nama = nama;
    }
    public void setJk(String jk){

```

```

        this.jk = jk;
    }
    public void setTgl(String tgl){
        this.tgl = tgl;
    }
    public void setBln(String bln){
        this.bln = bln;
    }
    public void setThn(String thn){
        this.thn = thn;
    }
    public void setTelp(String telp){
        this.telp = telp;
    }
    public void setAlamat(String alamat){
        this.alamat = alamat;
    }

    public String getNpm(String npm){
        return this.npm;
    }
    public String getNama(String nama){
        return this.nama;
    }
    public String getJk(String jk){
        return this.jk;
    }
    public String getTgl(String tgl){
        return this.tgl;
    }
    public String getBln(){
        return this.bln;
    }
    public String getThn(){
        return this.thn;
    }
    public String getTelp(String telp){
        return this.telp;
    }
    public String getAlamat(String alamat){
        return this.alamat;
    }

    public void insertMahasiswa(){
        Koneksi kon = new Koneksi();
        String s = "INSERT INTO mahasiswa VALUES ('"
            + this.npm + "', '"
            + this.nama + "', '"
            + this.jk + "', '"
            + this.thn + "-" + this.tgl + "-" + this.bln + "', '"
            + this.telp + "', '"
            + this.alamat + "')";

        kon.query(s);
    }

    public void updateMahasiswa(){
        Koneksi kon = new Koneksi();
        String s = "UPDATE mahasiswa SET npm = '" + this.npm + "'
            + ", nama_mhs = '" + this.nama + "'
            + ", jenis_kelamin = '" + this.jk + "'
            + ", tgl_lahir = '" + this.thn + "-" + this.bln + "-" + this.tgl + "'
            + ", no_telp = '" + this.telp + "'
            + ", alamat = '" + this.alamat + "'
            + " WHERE npm = '" + this.npm + "'";

        kon.query(s);
    }
}

```

```

    public void deleteMahasiswa(){
        Koneksi kon = new Koneksi();
        String s = "DELETE FROM mahasiswa WHERE npm = '" + this.npm + "'";
        kon.query(s);
    }

    public ResultSet getMahasiswa(){
        ResultSet r = null;
        Koneksi kon = new Koneksi();
        String s = "INSERT INTO mahasiswa VALUES ('"
            + this.npm + "', '" +
            this.nama + "', '" +
            this.jk + "', '" +
            this.thn + " - " +
            this.bln + " - " + this.tgl + "', '" +
            this.telp + "', '" +
            this.alamat + "')";

        kon.query(s);
        return r;
    }
}

```

- **Class: Nilai**

```

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

import java.sql.ResultSet;

/**
 *
 * @author prame
 */
public class Nilai {
    private String npm;
    private String kode;
    private int nilai;

    public Nilai() {
        this.npm = null;
        this.kode = null;
        this.nilai = 0;
    }

    public String getNpm() {
        return npm;
    }

    public void setNpm(String npm) {
        this.npm = npm;
    }

    public String getKode() {
        return kode;
    }

    public void setKode(String kode) {
        this.kode = kode;
    }

    public int getNilai() {
        return nilai;
    }

    public void setNilai(int nilai) {
        this.nilai = nilai;
    }
}

```

```

    }

    public void insertNilai(){
        Koneksi kon = new Koneksi();
        String s = "INSERT INTO nilai_kuliah VALUES('" +
                    this.npm + "','" +
                    this.kode + "','" +
                    this.nilai + "')";

        kon.query(s);
    }

    public void updateNilai(){
        Koneksi kon = new Koneksi();
        String s = "UPDATE nilai_kuliah SET kode_kul = '" + this.kode +
                    "','" + this.npm +
                    "','" + this.nilai +
                    "' WHERE kode_kul = '" + this.kode +
                    "' AND npm = '" + this.npm +
                    "'";

        kon.query(s);
    }

    public void deleteNilai(){
        Koneksi kon = new Koneksi();
        String s = "DELETE FROM nilai_kuliah WHERE kode_kul = '" + this.kode +
                    "' AND npm = '" + this.npm +
                    "'";

        kon.query(s);
    }

    public ResultSet Nilai(){
        ResultSet r = null;
        Koneksi kon = new Koneksi();
        String s = "INSERT INTO nilai_kuliah VALUES('" +
                    this.npm + "','" +
                    this.kode + "','" +
                    this.nilai + "')";

        kon.query(s);
        return r;
    }
}

```

- GUI: Application

```

/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-
 * default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GuiForms/JFrame.java to
 * edit this template
 */
package GUI;

import Class.*;
import java.sql.*;
import java.util.logging.Level;
import java.util.logging.Logger;

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

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

```
jTabbedPane1 = new javax.swing.JTabbedPane();
jPanel1 = new javax.swing.JPanel();
jLabel2 = new javax.swing.JLabel();
jLabel1 = new javax.swing.JLabel();
jPanel2 = new javax.swing.JPanel();
jLabel7 = new javax.swing.JLabel();
nama_input = new javax.swing.JTextField();
jLabel9 = new javax.swing.JLabel();
jScrollPane1 = new javax.swing.JScrollPane();
alamat_input = new javax.swing.JTextArea();
telp_input = new javax.swing.JTextField();
jLabel8 = new javax.swing.JLabel();
jLabel10 = new javax.swing.JLabel();
insertButton_mhs = new javax.swing.JButton();
jLabel4 = new javax.swing.JLabel();
resetButton_mhs = new javax.swing.JButton();
jLabel5 = new javax.swing.JLabel();
jLabel6 = new javax.swing.JLabel();
npm_input = new javax.swing.JTextField();
tgl_input = new javax.swing.JComboBox<>();
bln_input = new javax.swing.JComboBox<>();
thn_input = new javax.swing.JTextField();
priaRadio_input = new javax.swing.JRadioButton();
wanitaRadio_input = new javax.swing.JRadioButton();
jPanel3 = new javax.swing.JPanel();
deleteButton_mhs = new javax.swing.JButton();
jLabel17 = new javax.swing.JLabel();
jLabel18 = new javax.swing.JLabel();
updateButton_mhs = new javax.swing.JButton();
npm_cari = new javax.swing.JTextField();
jLabel19 = new javax.swing.JLabel();
jLabel15 = new javax.swing.JLabel();
searchButton_mhs = new javax.swing.JButton();
npm_hasil = new javax.swing.JTextField();
jLabel11 = new javax.swing.JLabel();
nama_hasil = new javax.swing.JTextField();
jLabel12 = new javax.swing.JLabel();
jScrollPane2 = new javax.swing.JScrollPane();
alamat_hasil = new javax.swing.JTextArea();
jLabel13 = new javax.swing.JLabel();
telp_hasil = new javax.swing.JTextField();
jLabel14 = new javax.swing.JLabel();
tgl_hasil = new javax.swing.JComboBox<>();
jLabel16 = new javax.swing.JLabel();
bln_hasil = new javax.swing.JComboBox<>();
tahun_hasil = new javax.swing.JTextField();
priaRadio_hasil = new javax.swing.JRadioButton();
wanitaRadio_hasil = new javax.swing.JRadioButton();
jPanel6 = new javax.swing.JPanel();
matkul_input = new javax.swing.JTextField();
jLabel21 = new javax.swing.JLabel();
jLabel22 = new javax.swing.JLabel();
jLabel23 = new javax.swing.JLabel();
kode_input = new javax.swing.JTextField();
semester_input = new javax.swing.JTextField();
jLabel24 = new javax.swing.JLabel();
sks_input = new javax.swing.JTextField();
insertButton_kuliah = new javax.swing.JButton();
jLabel26 = new javax.swing.JLabel();
resetButton_kuliah = new javax.swing.JButton();
```

```

jPanel7 = new javax.swing.JPanel();
searchButton_kuliah = new javax.swing.JButton();
kode_hasil = new javax.swing.JTextField();
jLabel28 = new javax.swing.JLabel();
jLabel30 = new javax.swing.JLabel();
updateButton_kuliah = new javax.swing.JButton();
kode_cari = new javax.swing.JTextField();
deleteButton_kuliah = new javax.swing.JButton();
jLabel32 = new javax.swing.JLabel();
jLabel33 = new javax.swing.JLabel();
jLabel25 = new javax.swing.JLabel();
semester_hasil = new javax.swing.JTextField();
jLabel27 = new javax.swing.JLabel();
matkul_hasil = new javax.swing.JTextField();
jLabel29 = new javax.swing.JLabel();
sks_hasil = new javax.swing.JTextField();
jPanel8 = new javax.swing.JPanel();
jLabel31 = new javax.swing.JLabel();
insertButton_nilai = new javax.swing.JButton();
jLabel34 = new javax.swing.JLabel();
jLabel35 = new javax.swing.JLabel();
resetButton_nilai = new javax.swing.JButton();
kode_input_nilai = new javax.swing.JTextField();
jLabel36 = new javax.swing.JLabel();
npm_input_nilai = new javax.swing.JTextField();
nilai_input = new javax.swing.JTextField();
jPanel9 = new javax.swing.JPanel();
nilai_hasil = new javax.swing.JTextField();
nama_hasil_nilai = new javax.swing.JTextField();
searchButton_nilai = new javax.swing.JButton();
npm_hasil_nilai = new javax.swing.JTextField();
jLabel38 = new javax.swing.JLabel();
jLabel39 = new javax.swing.JLabel();
jLabel40 = new javax.swing.JLabel();
jLabel41 = new javax.swing.JLabel();
updateButton_nilai = new javax.swing.JButton();
npm_cari_nilai = new javax.swing.JTextField();
deleteButton_nilai = new javax.swing.JButton();
jLabel43 = new javax.swing.JLabel();
jLabel44 = new javax.swing.JLabel();
jLabel42 = new javax.swing.JLabel();
kode_cari_nilai = new javax.swing.JTextField();
jPanel10 = new javax.swing.JPanel();
jScrollPane3 = new javax.swing.JScrollPane();
table_mahasiswa = new javax.swing.JTable();
jPanel4 = new javax.swing.JPanel();
jScrollPane4 = new javax.swing.JScrollPane();
table_kuliah = new javax.swing.JTable();
jPanel5 = new javax.swing.JPanel();
jScrollPane6 = new javax.swing.JScrollPane();
table_nilai = new javax.swing.JTable();
jPanel12 = new javax.swing.JPanel();
jLabel45 = new javax.swing.JLabel();
jScrollPane5 = new javax.swing.JScrollPane();
olahdata = new javax.swing.JTextArea();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
addWindowListener(new java.awt.event.WindowAdapter() {
    public void windowOpened(java.awt.event.WindowEvent evt) {
        formWindowOpened(evt);
    }
});

jTabbedPane1.setBackground(new java.awt.Color(255, 255, 255));

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

jLabel2.setFont(new java.awt.Font("Segoe UI", 1, 75)); // NOI18N
jLabel2.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

```

```

jLabel2.setText("Welcome To");

jLabel1.setFont(new java.awt.Font("Segoe UI", 1, 75)); // NOI18N
jLabel1.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
jLabel1.setText("C-R-U-D Apps");

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

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(0, 950, Short.MAX_VALUE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGap(29, 29, 29)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addComponent(jLabel2,
javax.swing.GroupLayout.DEFAULT_SIZE, 891, Short.MAX_VALUE)
    .addComponent(jLabel1,
javax.swing.GroupLayout.DEFAULT_SIZE, 891, Short.MAX_VALUE))
        .addGap(30, 30, 30))
    );
jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGap(0, 589, Short.MAX_VALUE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGap(201, 201, 201)
        .addComponent(jLabel2,
javax.swing.GroupLayout.PREFERRED_SIZE, 90,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
        .addComponent(jLabel1,
javax.swing.GroupLayout.PREFERRED_SIZE, 90,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(202, Short.MAX_VALUE))
    );

jTabbedPane1.addTab("Welcome", jPanel1);

jLabel7.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel7.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel7.setText("Alamat :");

jLabel9.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel9.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel9.setText("No. Telepon :");

alamat_input.setColumns(20);
alamat_input.setRows(5);
jScrollPane1.setViewportView(alamat_input);

jLabel8.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel8.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel8.setText("Jenis Kelamin :");

jLabel10.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel10.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel10.setText("Tanggal Lahir :");

```

```

        insertButton_mhs.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
        insertButton_mhs.setText("INSERT");
        insertButton_mhs.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                insertButton_mhsActionPerformed(evt);
            }
        });

        jLabel4.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
        jLabel4.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
        jLabel4.setText("INPUT DATA MAHASISWA");

        resetButton_mhs.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
        resetButton_mhs.setText("RESET");
        resetButton_mhs.addActionListener(new java.awt.event.ActionListener()
{
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                resetButton_mhsActionPerformed(evt);
            }
        });

        jLabel5.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
        jLabel5.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
        jLabel5.setText("NPM :");

        jLabel6.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
        jLabel6.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
        jLabel6.setText("Nama :");

        tgl_input.setModel(new javax.swing.DefaultComboBoxModel<>(new
String[] { "tanggal", "1", "2", "3", "4", "5", "6", "7", "8", "9", "10",
"11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23",
"24", "25", "26", "27", "28", "29", "30", "31" }));

        bln_input.setModel(new javax.swing.DefaultComboBoxModel<>(new
String[] { "bulan", "1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11",
"12" }));

        priaRadio_input.setText("Laki-laki");
        priaRadio_input.addActionListener(new java.awt.event.ActionListener()
{
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                priaRadio_inputActionPerformed(evt);
            }
        });

        wanitaRadio_input.setText("Perempuan");

        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(27, 27, 27)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addComponent(jLabel4,
javax.swing.GroupLayout.PREFERRED_SIZE, 84,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGroup(jPanel2Layout.createSequentialGroup()
        .addGap(38, 38, 38)

```

```

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING, false)
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addComponent(jLabel6,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(nama_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addComponent(jLabel5,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(npm_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(168, 168, 168)
                .addComponent(insertButton_mhs)
                .addGap(18, 18, 18)
                .addComponent(resetButton_mhs))
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addComponent(jLabel8,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(priaRadio_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 98,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(wanitaRadio_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 98,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addComponent(jLabel9,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(telp_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addComponent(jLabel10,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(tgl_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 80,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(bln_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 80,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(thn_input))
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addComponent(jLabel7,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(jScrollPane1,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))))))

```

```

        .addContainerGap(79, Short.MAX_VALUE))
    );
    jPanel2Layout.setVerticalGroup(
jPanel2Layout.createParallelGroup( javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel2Layout.createSequentialGroup()
            .addComponent(jLabel4,
javax.swing.GroupLayout.PREFERRED_SIZE, 90,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(18, 18, 18)

.addGroup( jPanel2Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.LEADING, false)
            .addComponent(npm_input,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE)
            .addComponent(jLabel5,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))

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

.addGroup( jPanel2Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.BASELINE)
            .addComponent(jLabel6,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(nama_input,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))

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

.addGroup( jPanel2Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.BASELINE)
            .addComponent(jLabel8,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup( jPanel2Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.BASELINE)
            .addComponent(priaRadio_input)
            .addComponent(wanitaRadio_input)))

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

.addGroup( jPanel2Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.LEADING)
            .addComponent(jLabel10,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup( jPanel2Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.LEADING, false)
            .addComponent(tgl_input)
            .addComponent(bln_input)
            .addComponent(thn_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)))

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

.addGroup( jPanel2Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.BASELINE)
            .addComponent(jLabel9,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(telp_input,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))
            .addGap(12, 12, 12)

```

```

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addComponent(jLabel7,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jScrollPane1,
javax.swing.GroupLayout.PREFERRED_SIZE, 112,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASELINE)
    .addComponent(insertButton_mhs)
    .addComponent(resetButton_mhs))
    .addGap(111, 111, 111))
);

jTabbedPane1.addTab("Input Mahasiswa", jPanel2);

deleteButton_mhs.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
deleteButton_mhs.setText("DELETE");
deleteButton_mhs.addActionListener(new
java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        deleteButton_mhsActionPerformed(evt);
    }
});

jLabel17.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel17.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel17.setText("NPM :");

jLabel18.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
jLabel18.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
jLabel18.setText("CARI DATA MAHASISWA");

updateButton_mhs.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
updateButton_mhs.setText("UPDATE");
updateButton_mhs.addActionListener(new
java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        updateButton_mhsActionPerformed(evt);
    }
});

jLabel19.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel19.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel19.setText("NPM :");

jLabel15.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
jLabel15.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
jLabel15.setText("HASIL PENCARIAN :");

searchButton_mhs.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
searchButton_mhs.setText("SEARCH");
searchButton_mhs.addActionListener(new
java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        searchButton_mhsActionPerformed(evt);
    }
});

npm_hasil.setEditable(false);

jLabel11.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N

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```

jLabel11.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel11.setText("Alamat :");

jLabel12.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel12.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel12.setText("No. Telepon :");

alamat_hasil.setColumns(20);
alamat_hasil.setRows(5);
jScrollPane2.setViewportView(alamat_hasil);

jLabel13.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel13.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel13.setText("Nama :");

jLabel14.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel14.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel14.setText("Jenis Kelamin :");

tgl_hasil.setModel(new javax.swing.DefaultComboBoxModel<(new
String[] { "tanggal", "1", "2", "3", "4", "5", "6", "7", "8", "9", "10",
"11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23",
"24", "25", "26", "27", "28", "29", "30", "31" }));

jLabel16.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
jLabel16.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
jLabel16.setText("Tanggal Lahir :");

bln_hasil.setModel(new javax.swing.DefaultComboBoxModel<(new
String[] { "bulan", "1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11",
"12" }));

priaRadio_hasil.setText("Laki-laki");
priaRadio_hasil.addActionListener(new java.awt.event.ActionListener()
{
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        priaRadio_hasilActionPerformed(evt);
    }
});

wanitaRadio_hasil.setText("Perempuan");
wanitaRadio_hasil.addActionListener(new
java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        wanitaRadio_hasilActionPerformed(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(33, 33, 33)

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addComponent(jLabel18,
javax.swing.GroupLayout.PREFERRED_SIZE, 844,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jLabel15,
javax.swing.GroupLayout.PREFERRED_SIZE, 844,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGroup(jPanel3Layout.createSequentialGroup()
        .addGap(38, 38, 38)

```



```

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
                .addGroup(jPanel3Layout.createSequentialGroup()
                    .addComponent(jLabel19,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(18, 18, 18)
                    .addComponent(npm_cari,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(18, 18, 18)
                    .addComponent(searchButton_mhs))
                .addGroup(jPanel3Layout.createSequentialGroup()
                    .addComponent(jLabel17,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(18, 18, 18)
                    .addComponent(npm_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))

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

.addGroup(jPanel3Layout.createSequentialGroup()
                .addComponent(jLabel13,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(nama_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGroup(jPanel3Layout.createSequentialGroup()
                .addComponent(jLabel14,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(priaRadio_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 98,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(wanitaRadio_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 98,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGroup(jPanel3Layout.createSequentialGroup()
                .addComponent(jLabel12,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(telp_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGroup(jPanel3Layout.createSequentialGroup()
                .addComponent(jLabel16,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(tgl_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 80,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

```

```

                                .addComponent(bln_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 80,
javax.swing.GroupLayout.PREFERRED_SIZE)

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

        .addGroup( jPanel3Layout.createSequentialGroup( )
                                .addComponent( jLabel11,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                .addGap(18, 18, 18)

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

        .addGroup( jPanel3Layout.createSequentialGroup( )
                                .addComponent(updateButton_mhs)
                                .addGap(18, 18, 18)
                                .addComponent(deleteButton_mhs))
                                .addComponent(jScrollPane2,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))))))
                                .addContainerGap(73, Short.MAX_VALUE))
        );
        jPanel3Layout.setVerticalGroup(

jPanel3Layout.createParallelGroup( javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup( jPanel3Layout.createSequentialGroup( )
        .addComponent( jLabel18)

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

        .addGroup( jPanel3Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
        .LEADING)
                .addComponent(searchButton_mhs)
                .addComponent( jLabel19,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(npm_cari,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)
                .addComponent( jLabel15)

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

        .addGroup( jPanel3Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
        .LEADING, false)
                .addComponent(npm_hasil)
                .addComponent( jLabel17,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))

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

        .addGroup( jPanel3Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
        .BASELINE)
                .addComponent( jLabel13,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(nama_hasil,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))

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

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

```

```

        .addComponent(jLabel14,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASILINE)
            .addComponent(priaRadio_hasil)
            .addComponent(wanitaRadio_hasil)))

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

        .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
            .addComponent(jLabel16,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING, false)
            .addComponent(tgl_hasil)
            .addComponent(bln_hasil)
            .addComponent(tahun_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)))

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

        .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASILINE)
            .addComponent(jLabel12,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(telp_hasil,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))
            .addGap(12, 12, 12)

        .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
            .addComponent(jLabel11,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jScrollPane2,
javax.swing.GroupLayout.PREFERRED_SIZE, 50,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)

        .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASILINE)
            .addComponent(updateButton_mhs)
            .addComponent(deleteButton_mhs))
            .addGap(81, 81, 81))
    );

    jTabbedPane1.addTab("Edit Mahasiswa", jPanel3);

    jLabel21.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel21.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel21.setText("Semester :");

    jLabel22.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel22.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel22.setText("Kode Kuliah :");

    jLabel23.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel23.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel23.setText("Nama Mata Kuliah :");

    jLabel24.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel24.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);

```

```

        jLabel24.setText("SKS :");

        insertButton_kuliah.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
        insertButton_kuliah.setText("INSERT");
        insertButton_kuliah.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                insertButton_kuliahActionPerformed(evt);
            }
        });

        jLabel26.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
        jLabel26.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
        jLabel26.setText("INPUT DATA MATA KULIAH");

        resetButton_kuliah.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
        resetButton_kuliah.setText("RESET");
        resetButton_kuliah.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                resetButton_kuliahActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout jPanel6Layout = new
javax.swing.GroupLayout(jPanel6);
        jPanel6.setLayout(jPanel6Layout);
        jPanel6Layout.setHorizontalGroup(

jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel6Layout.createSequentialGroup()
        .addGap(27, 27, 27)

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addComponent(jLabel26,
javax.swing.GroupLayout.PREFERRED_SIZE, 844,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGroup(jPanel6Layout.createSequentialGroup()
        .addGap(38, 38, 38)

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addGroup(jPanel6Layout.createSequentialGroup()
        .addGap(18, 18, 18)
        .addComponent(matkul_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGroup(jPanel6Layout.createSequentialGroup()
        .addGap(18, 18, 18)
        .addComponent(kode_input,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGroup(jPanel6Layout.createSequentialGroup()
        .addGap(168, 168, 168)
        .addComponent(insertButton_kuliah)
        .addGap(18, 18, 18)
        .addComponent(resetButton_kuliah))
    .addGroup(jPanel6Layout.createSequentialGroup()

```

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                .addComponent(jLabel24,
javafx.swing.GroupLayout.PREFERRED_SIZE, 150,
javafx.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(sks_input,
javafx.swing.GroupLayout.PREFERRED_SIZE, 250,
javafx.swing.GroupLayout.PREFERRED_SIZE))
                .addGroup(jPanel6Layout.createSequentialGroup())
                .addComponent(jLabel21,
javafx.swing.GroupLayout.PREFERRED_SIZE, 150,
javafx.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(semester_input,
javafx.swing.GroupLayout.PREFERRED_SIZE, 250,
javafx.swing.GroupLayout.PREFERRED_SIZE))))
                .addContainerGap(79, Short.MAX_VALUE))
        );
        jPanel6Layout.setVerticalGroup(

jPanel6Layout.createParallelGroup(javafx.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel6Layout.createSequentialGroup())
                .addComponent(jLabel26,
javafx.swing.GroupLayout.PREFERRED_SIZE, 90,
javafx.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)

.addGroup(jPanel6Layout.createParallelGroup(javafx.swing.GroupLayout.Alignment
.LEADING, false)
                .addComponent(kode_input,
javafx.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE)
                .addComponent(jLabel22,
javafx.swing.GroupLayout.DEFAULT_SIZE, javafx.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))

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

.addGroup(jPanel6Layout.createParallelGroup(javafx.swing.GroupLayout.Alignment
.BASELINE)
                .addComponent(jLabel23,
javafx.swing.GroupLayout.PREFERRED_SIZE, 30,
javafx.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(matkul_input,
javafx.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))

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

.addGroup(jPanel6Layout.createParallelGroup(javafx.swing.GroupLayout.Alignment
.BASELINE)
                .addComponent(jLabel24,
javafx.swing.GroupLayout.PREFERRED_SIZE, 30,
javafx.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(sks_input,
javafx.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))

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

.addGroup(jPanel6Layout.createParallelGroup(javafx.swing.GroupLayout.Alignment
.BASELINE)
                .addComponent(jLabel21,
javafx.swing.GroupLayout.PREFERRED_SIZE, 30,
javafx.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(semester_input,
javafx.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))
                .addGap(18, 18, 18)

.addGroup(jPanel6Layout.createParallelGroup(javafx.swing.GroupLayout.Alignment
.BASELINE)
                .addComponent(insertButton_kuliah)
                .addComponent(resetButton_kuliah))

```

```

        .addGap(277, 277, 277))
    );

    jTabbedPane1.addTab("Input Kuliah", jPanel6);

    searchButton_kuliah.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
    searchButton_kuliah.setText("SEARCH");
    searchButton_kuliah.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            searchButton_kuliahActionPerformed(evt);
        }
    });

    kode_hasil.setEditable(false);

    jLabel28.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel28.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel28.setText("Kode Kuliah :");

    jLabel30.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
    jLabel30.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
    jLabel30.setText("CARI DATA MATA KULIAH");

    updateButton_kuliah.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
    updateButton_kuliah.setText("UPDATE");
    updateButton_kuliah.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            updateButton_kuliahActionPerformed(evt);
        }
    });

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

    deleteButton_kuliah.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
    deleteButton_kuliah.setText("DELETE");
    deleteButton_kuliah.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            deleteButton_kuliahActionPerformed(evt);
        }
    });

    jLabel32.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel32.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel32.setText("Kode Kuliah :");

    jLabel33.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
    jLabel33.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
    jLabel33.setText("HASIL PENCARIAN :");

    jLabel25.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel25.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel25.setText("Nama Mata Kuliah :");

    jLabel27.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel27.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel27.setText("SKS :");

    jLabel29.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel29.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);

```

```

        jLabel29.setText("Semester :");

        javax.swing.GroupLayout jPanel7Layout = new
javax.swing.GroupLayout(jPanel7);
        jPanel7.setLayout(jPanel7Layout);
        jPanel7Layout.setHorizontalGroup(

jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel7Layout.createSequentialGroup()
        .addGap(33, 33, 33)

.addGroup(jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addComponent(jLabel30,
javax.swing.GroupLayout.PREFERRED_SIZE, 844,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jLabel33,
javax.swing.GroupLayout.PREFERRED_SIZE, 844,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGroup(jPanel7Layout.createSequentialGroup()
        .addGap(38, 38, 38)

.addGroup(jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addGroup(jPanel7Layout.createSequentialGroup()
        .addComponent(jLabel32,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(kode_cari,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(searchButton_kuliah))
    .addGroup(jPanel7Layout.createSequentialGroup()
        .addComponent(jLabel28,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(kode_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(jPanel7Layout.createSequentialGroup()
        .addGap(168, 168, 168)
        .addComponent(updateButton_kuliah)
        .addGap(18, 18, 18)
        .addComponent(deleteButton_kuliah))
    .addGroup(jPanel7Layout.createSequentialGroup()
        .addComponent(jLabel25,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(matkul_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(jPanel7Layout.createSequentialGroup()
        .addComponent(jLabel27,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(sks_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(jPanel7Layout.createSequentialGroup()
        .addComponent(jLabel29,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)

```

```

                .addComponent(semester_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))))
                .addContainerGap(73, Short.MAX_VALUE))
        );
        jPanel7Layout.setVerticalGroup(

jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel7Layout.createSequentialGroup()
                        .addComponent(jLabel30)

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

.addGroup(jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
                .addComponent(searchButton_kuliah)
                .addComponent(jLabel32,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(kode_cari,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)
                .addComponent(jLabel33)

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

.addGroup(jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING, false)
                .addComponent(kode_hasil)
                .addComponent(jLabel28,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))

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

.addGroup(jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASELINE)
                .addComponent(jLabel25,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(matkul_hasil,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))

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

.addGroup(jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASELINE)
                .addComponent(jLabel27,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(sks_hasil,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))

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

.addGroup(jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASELINE)
                .addComponent(jLabel29,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(semester_hasil,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))
                .addGap(18, 18, 18)

.addGroup(jPanel7Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.BASELINE)
                .addComponent(updateButton_kuliah)

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        .addComponent(deleteButton_kuliah))
        .addGap(185, 185, 185))
    );

    jTabbedPane1.addTab("Edit Kuliah", jPanel7);

    jLabel31.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel31.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel31.setText("Kode Kuliah :");

    insertButton_nilai.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
    insertButton_nilai.setText("INSERT");
    insertButton_nilai.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            insertButton_nilaiActionPerformed(evt);
        }
    });

    jLabel34.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
    jLabel34.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
    jLabel34.setText("INPUT NILAI");

    jLabel35.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel35.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel35.setText("NPM :");

    resetButton_nilai.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
    resetButton_nilai.setText("RESET");
    resetButton_nilai.addActionListener(new
java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            resetButton_nilaiActionPerformed(evt);
        }
    });

    jLabel36.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jLabel36.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
    jLabel36.setText("Nilai :");

    javax.swing.GroupLayout jPanel8Layout = new
javax.swing.GroupLayout(jPanel8);
    jPanel8.setLayout(jPanel8Layout);
    jPanel8Layout.setHorizontalGroup(

        jPanel8Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel8Layout.createSequentialGroup()
                .addGap(27, 27, 27)

                .addGroup(jPanel8Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jLabel34,
javax.swing.GroupLayout.PREFERRED_SIZE, 844,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGroup(jPanel8Layout.createSequentialGroup()
                        .addComponent(npm_input_nilai,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(18, 18, 18)
                        .addComponent(jLabel35,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(38, 38, 38)
                    )
                )
            )
    );

```

```

                .addGroup(jPanel8Layout.createSequentialGroup()
                    .addComponent(jLabel31,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 150,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(18, 18, 18)
                    .addComponent(kode_input_nilai,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 250,
                        javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGroup(jPanel8Layout.createSequentialGroup()
                    .addGap(168, 168, 168)
                    .addComponent(insertButton_nilai)
                    .addGap(18, 18, 18)
                    .addComponent(resetButton_nilai))
                .addGroup(jPanel8Layout.createSequentialGroup()
                    .addComponent(jLabel36,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 150,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(18, 18, 18)
                    .addComponent(nilai_input,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 250,
                        javax.swing.GroupLayout.PREFERRED_SIZE))))
            .addContainerGap(79, Short.MAX_VALUE))
        );
        jPanel8Layout.setVerticalGroup(
            jPanel8Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel8Layout.createSequentialGroup()
                    .addComponent(jLabel34,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 90,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(18, 18, 18)

                .addGroup(jPanel8Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                    .addComponent(kode_input_nilai,
                        javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE)
                    .addComponent(jLabel31,
                        javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
                        Short.MAX_VALUE))

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

                .addGroup(jPanel8Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel35,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 30,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(npm_input_nilai,
                        javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))

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

                .addGroup(jPanel8Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel36,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 30,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(nilai_input,
                        javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))
                    .addGap(18, 18, 18)

                .addGroup(jPanel8Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(insertButton_nilai)
                    .addComponent(resetButton_nilai))
                    .addGap(320, 320, 320))
        );
        jTabbedPane1.addTab("Input Nilai", jPanel8);

```

```

        searchButton_nilai.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
        searchButton_nilai.setText("SEARCH");
        searchButton_nilai.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                searchButton_nilaiActionPerformed(evt);
            }
        });

        npm_hasil_nilai.setEditable(false);

        jLabel38.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
        jLabel38.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
        jLabel38.setText("Nama :");

        jLabel39.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
        jLabel39.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
        jLabel39.setText("NPM :");

        jLabel40.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
        jLabel40.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
        jLabel40.setText("Nilai :");

        jLabel41.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
        jLabel41.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
        jLabel41.setText("CARI DATA NILAI");

        updateButton_nilai.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
        updateButton_nilai.setText("UPDATE");
        updateButton_nilai.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                updateButton_nilaiActionPerformed(evt);
            }
        });

        deleteButton_nilai.setFont(new java.awt.Font("Segoe UI", 0, 14)); //
NOI18N
        deleteButton_nilai.setText("DELETE");
        deleteButton_nilai.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                deleteButton_nilaiActionPerformed(evt);
            }
        });

        jLabel43.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
        jLabel43.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
        jLabel43.setText("NPM :");

        jLabel44.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
        jLabel44.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
        jLabel44.setText("HASIL PENCARIAN :");

        jLabel42.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
        jLabel42.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
        jLabel42.setText("Kode Kuliah :");

        javax.swing.GroupLayout jPanel9Layout = new
javax.swing.GroupLayout(jPanel9);
        jPanel9.setLayout(jPanel9Layout);
        jPanel9Layout.setHorizontalGroup(

jPanel9Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addGap(33, 33, 33)

```

```

.addGroup(jPanel9Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addComponent(jLabel44,
javax.swing.GroupLayout.PREFERRED_SIZE, 844,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jLabel41,
javax.swing.GroupLayout.PREFERRED_SIZE, 844,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addGap(38, 38, 38)

.addGroup(jPanel9Layout.createParallelGroup(javax.swing.GroupLayout.Alignment
.LEADING)
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addComponent(jLabel39,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(npm_hasil_nilai,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addComponent(jLabel38,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(nama_hasil_nilai,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addComponent(jLabel40,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(nilai_hasil,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addGap(168, 168, 168)
        .addComponent(updateButton_nilai)
        .addGap(18, 18, 18)
        .addComponent(deleteButton_nilai))
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addComponent(jLabel43,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(npm_cari_nilai,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addComponent(jLabel42,
javax.swing.GroupLayout.PREFERRED_SIZE, 150,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(kode_cari_nilai,
javax.swing.GroupLayout.PREFERRED_SIZE, 250,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(searchButton_nilai))))
    .addContainerGap(73, Short.MAX_VALUE))
);
jPanel9Layout.setVerticalGroup(

jPanel9Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel9Layout.createSequentialGroup()
        .addComponent(jLabel41)

```

```

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

.addGroup( jPanel9Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.LEADING)
    .addComponent( jLabel43,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent( npm_cari_nilai,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))

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

.addGroup( jPanel9Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.BASELINE)
    .addComponent( jLabel42,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent( kode_cari_nilai,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE)
    .addComponent( searchButton_nilai))
    .addGap(18, 18, 18)
    .addComponent( jLabel44)

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

.addGroup( jPanel9Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.LEADING, false)
    .addComponent( npm_hasil_nilai)
    .addComponent( jLabel39,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))

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

.addGroup( jPanel9Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.BASELINE)
    .addComponent( jLabel38,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent( nama_hasil_nilai,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))

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

.addGroup( jPanel9Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.BASELINE)
    .addComponent( jLabel40,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent( nilai_hasil,
javax.swing.GroupLayout.DEFAULT_SIZE, 30, Short.MAX_VALUE))
    .addGap(18, 18, 18)

.addGroup( jPanel9Layout.createParallelGroup( javax.swing.GroupLayout.Alignment
.BASELINE)
    .addComponent( updateButton_nilai)
    .addComponent( deleteButton_nilai))
    .addGap(185, 185, 185))
);

jTabbedPane1.addTab("Edit Nilai", jPanel9);

table_mahasiswa.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null, null, null},
        {null, null, null, null, null, null},
    }

```

[illegible]

```

        {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, 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, 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},
        {null, null, null, null, null, null},
        {null, null, null, null, null, null},
        {null, null, null, null, null, null}
    },
    new String [] {
        "NPM", "Nama", "Jenis Kelamin", "Tgl Lahir", "No. Telp",
"Alamat"
    }
) {
    boolean[] canEdit = new boolean [] {
        false, false, false, false, false, false
    };

    public boolean isCellEditable(int rowIndex, int columnIndex) {
        return canEdit [columnIndex];
    }
});
jScrollPane3.setViewportViewView(table_mahasiswa);

javax.swing.GroupLayout jPanel10Layout = new
javax.swing.GroupLayout(jPanel10);
jPanel10.setLayout(jPanel10Layout);
jPanel10Layout.setHorizontalGroup(
jPanel10Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel10Layout.createSequentialGroup()
        .addContainerGap( )
        .addComponent(jScrollPane3,
javax.swing.GroupLayout.DEFAULT_SIZE, 938, Short.MAX_VALUE)
        .addContainerGap( ))
    );
jPanel10Layout.setVerticalGroup(
jPanel10Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel10Layout.createSequentialGroup()
        .addContainerGap( )
        .addComponent(jScrollPane3,
javax.swing.GroupLayout.DEFAULT_SIZE, 577, Short.MAX_VALUE)
        .addContainerGap( ))
    );

jTabbedPane1.addTab("Data Mahasiswa", jPanel10);
```

[illegible]


```
        {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},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
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        {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 [] {
        "Kode Matkul", "Nama Matkul", "SKS", "Semester"
    }
) {
    boolean[] canEdit = new boolean [] {
        false, false, false, false
    };

    public boolean isCellEditable(int rowIndex, int columnIndex) {
        return canEdit [columnIndex];
    }
});
jScrollPane4.setViewportView(table_kuliah);

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(0)
            .addComponent(jScrollPane4,
                javax.swing.GroupLayout.DEFAULT_SIZE, 938, Short.MAX_VALUE)
            .addContainerGap())
);
jPanel4Layout.setVerticalGroup(
    jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel4Layout.createSequentialGroup()
            .addGap(0)
            .addComponent(jScrollPane4,
                javax.swing.GroupLayout.DEFAULT_SIZE, 577, Short.MAX_VALUE)
            .addContainerGap())
);
```

[illegible]

```

        {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},
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        {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 [] {
        "NPM", "Kode Matkul", "Nilai"
    }
) {
    boolean[] canEdit = new boolean [] {
        false, false, false
    };

    public boolean isCellEditable(int rowIndex, int columnIndex) {
        return canEdit [columnIndex];
    }
});
jScrollPane6.setViewportViewView(table_nilai);

javax.swing.GroupLayout jPanel5Layout = new
javax.swing.GroupLayout(jPanel5);
jPanel5.setLayout(jPanel5Layout);
jPanel5Layout.setHorizontalGroup(
jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel5Layout.createSequentialGroup()
        .add(ContainerGap())
        .addComponent(jScrollPane6,
            javax.swing.GroupLayout.DEFAULT_SIZE, 938, Short.MAX_VALUE)
        .add(ContainerGap()))
);
jPanel5Layout.setVerticalGroup(
jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel5Layout.createSequentialGroup()
        .add(ContainerGap())

```

```

        .addComponent(jScrollPane6,
javafx.swing.GroupLayout.DEFAULT_SIZE, 577, Short.MAX_VALUE)
        .addContainerGap( ))
    );

    jTabbedPane1.addTab("Data Nilai", jPanel5);

    jLabel45.setFont(new java.awt.Font("Segoe UI", 1, 48)); // NOI18N
    jLabel45.setHorizontalAlignment(javafx.swing.SwingConstants.LEFT);
    jLabel45.setText("OLAH DATA");

    olahdata.setColumns(20);
    olahdata.setFont(new java.awt.Font("Hack", 0, 12)); // NOI18N
    olahdata.setRows(5);
    jScrollPane5.setViewportView(olahdata);

    javafx.swing.GroupLayout jPanel12Layout = new
javafx.swing.GroupLayout(jPanel12);
    jPanel12.setLayout(jPanel12Layout);
    jPanel12Layout.setHorizontalGroup(

jPanel12Layout.createParallelGroup(javafx.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel12Layout.createSequentialGroup( )
            .addGap(40, 40, 40)
            .addComponent(jLabel45,
javafx.swing.GroupLayout.PREFERRED_SIZE, 844,
javafx.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap(66, Short.MAX_VALUE))
        .addGroup(jPanel12Layout.createSequentialGroup( )
            .addContainerGap( )
            .addComponent(jScrollPane5)
            .addContainerGap( ))
    );
    jPanel12Layout.setVerticalGroup(

jPanel12Layout.createParallelGroup(javafx.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel12Layout.createSequentialGroup( )
            .addComponent(jLabel45)

.addPreferredGap(javafx.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(jScrollPane5,
javafx.swing.GroupLayout.DEFAULT_SIZE, 513, Short.MAX_VALUE)
            .addContainerGap( ))
    );

    jTabbedPane1.addTab("TextArea", jPanel12);

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

layout.createParallelGroup(javafx.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jTabbedPane1)
    );
    layout.setVerticalGroup(

layout.createParallelGroup(javafx.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jTabbedPane1)
    );

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

private String hurufMutu(int nilai) {
    String mutu = "x";
    if (nilai > 80){
        mutu = "A";
    }else if(nilai <= 80 && nilai > 68){

```

```

        mutu = "B";
    }else if(nilai <= 68 && nilai > 55){
        mutu = "C";
    }else if(nilai <= 55 && nilai > 45){
        mutu = "D";
    }else if(nilai <= 45) {
        mutu = "E";
    }

    return mutu;
}

private String kelulusan(int nilai) {
    String status = "X";
    if (nilai >= 55){
        status = "Lulus";
    }else {
        status = "Tidak Lulus";
    }

    return status;
}

private String olahData() throws SQLException {
    Koneksi kon = new Koneksi();
    ResultSet rs = null;

    rs = kon.getData("SELECT * FROM nilai_kuliah n JOIN mahasiswa m ON
(n.npm=m.npm) JOIN kuliah k ON (n.kode_kul=k.kode_kul)");

    int no = 1;
    String word = "";
    word += String.format("\t\t\t[DAFTAR NILAI MATA KULIAH STRUKTUR DATA
(Kode MK: TI_001)]\n\n");
    word +=
String.format("=====\n");
    word += String.format("No\tNPM\tNama\tNilai\tHM\tKeterangan\n");
    word +=
String.format("=====\n");

    while(rs.next()){
        word += String.format(no + "\t" + rs.getString("npm") + "\t" +
rs.getString("nama_mhs") + "\t" + rs.getString("nilai") + "\t" +
hurufMutu(Integer.parseInt(rs.getString("nilai")))) + "\t" +
kelulusan(Integer.parseInt(rs.getString("nilai")))) + "\n");
    }

    return word;
}

private void showDataMahasiswa(){
    Koneksi kon = new Koneksi();
    ResultSet rs = null;
    int i = 0;
    try{
        rs = kon.getData("SELECT * FROM mahasiswa");
        while(rs.next()){
            table_mahasiswa.setValueAt(rs.getString("npm"), i, 0) ;
            table_mahasiswa.setValueAt(rs.getString("nama_mhs"),i, 1) ;
            table_mahasiswa.setValueAt(rs.getString("jenis_kelamin") , i,
2);

            table_mahasiswa.setValueAt(rs.getString("tgl_lahir"),i, 3);
            table_mahasiswa.setValueAt(rs.getString("no_telp"),i, 4);
            table_mahasiswa.setValueAt(rs.getString("alamat"),i, 5);
            i++;
        }
    }
}

```

```

        catch(Exception e){
            javax.swing.JOptionPane.showMessageDialog(null,
"Error:"+e.getMessage());
        }
    }

    private void showDataKuliah() {
        Koneksi kon = new Koneksi();
        ResultSet rs = null;
        int i = 0;
        try{
            rs = kon.getData("SELECT * FROM kuliah");
            while(rs.next()){
                table_kuliah.setValueAt(rs.getString("kode_kul"), i, 0) ;
                table_kuliah.setValueAt(rs.getString("nama_kul"),i, 1) ;
                table_kuliah.setValueAt(rs.getString("sks") , i, 2);
                table_kuliah.setValueAt(rs.getString("semester"),i, 3);
                i++;
            }
        }
        catch(Exception e){
            javax.swing.JOptionPane.showMessageDialog(null,
"Error:"+e.getMessage());
        }
    }

    private void showDataNilai() {
        Koneksi kon = new Koneksi();
        ResultSet rs = null;
        int i = 0;

        try{
            rs = kon.getData("SELECT * FROM nilai_kuliah");
            while(rs.next()){
                table_nilai.setValueAt(rs.getString("npm"), i, 0) ;
                table_nilai.setValueAt(rs.getString("kode_kul"),i, 1) ;
                table_nilai.setValueAt(rs.getString("nilai") , i, 2);
                i++;
            }
        }
        catch(Exception e){
            javax.swing.JOptionPane.showMessageDialog(null,
"Error:"+e.getMessage());
        }
    }

    private void formWindowOpened(java.awt.event.WindowEvent evt) {
        this.showDataMahasiswa();
        this.showDataKuliah();
        this.showDataNilai();
        try {
            olahdata.setText(this.olahData());
        } catch (SQLException e) {
            javax.swing.JOptionPane.showMessageDialog(null,
"Error:"+e.getMessage());
        }
    }

    private void deleteButton_nilaiActionPerformed(java.awt.event.ActionEvent
evt) {
        Nilai nilai = new Nilai();

        nilai.setNpm(npm_cari_nilai.getText());
        nilai.setKode(kode_cari_nilai.getText());

        nilai.deleteNilai();

        javax.swing.JOptionPane.showMessageDialog(null,"Delete Success");
    }

```

```

        npm_hasil_nilai.setText(null);
        nama_hasil_nilai.setText(null);
        nilai_hasil.setText(null);
        this.showDataNilai();
    }

    private void updateButton_nilaiActionPerformed(java.awt.event.ActionEvent
    evt) {
        Nilai nilai = new Nilai();

        nilai.setKode(kode_cari_nilai.getText());
        nilai.setNpm(npm_cari_nilai.getText());
        nilai.setNilai(Integer.parseInt(nilai_hasil.getText()));

        nilai.updateNilai();

        javax.swing.JOptionPane.showMessageDialog(null, "Update Success");
        this.showDataNilai();
    }

    private void searchButton_nilaiActionPerformed(java.awt.event.ActionEvent
    evt) {
        Koneksi kon = new Koneksi();
        ResultSet rs = null;
        try{
            rs = kon.getData("SELECT * FROM nilai_kuliah n JOIN mahasiswa m
            ON (n.npm=m.npm) JOIN kuliah k ON (n.kode_kul=k.kode_kul) WHERE n.kode_kul
            ='"+kode_cari_nilai.getText()+"' AND n.npm =
            '"+npm_cari_nilai.getText()+"'");
            while(rs.next()){
                npm_hasil_nilai.setText(rs.getString("npm"));
                nama_hasil_nilai.setText(rs.getString("nama_mhs"));
                nilai_hasil.setText(rs.getString("nilai"));

                javax.swing.JOptionPane.showMessageDialog(null, "Search
                Success");

                updateButton_mhs.setEnabled(true);
                deleteButton_mhs.setEnabled(true);
            }
            rs.close();
        }
        catch(Exception e){
            javax.swing.JOptionPane.showMessageDialog(null,
            "Error:"+e.getMessage());
        }
    }

    private void resetButton_nilaiActionPerformed(java.awt.event.ActionEvent
    evt) {
        kode_input.setText(null);
        nama_input.setText(null);
        sks_input.setText(null);
        semester_input.setText(null);
    }

    private void insertButton_nilaiActionPerformed(java.awt.event.ActionEvent
    evt) {
        Nilai nilai = new Nilai();

        nilai.setKode(kode_input_nilai.getText());
        nilai.setNpm(npm_input_nilai.getText());
        nilai.setNilai(Integer.parseInt(nilai_input.getText()));

        nilai.insertNilai();

        javax.swing.JOptionPane.showMessageDialog(null, "Insert Success");
        this.showDataNilai();
        kode_input.setText(null);
    }

```

```

        nama_input.setText(null);
        sks_input.setText(null);
        semester_input.setText(null);
        this.showDataNilai();
    }

    private void
deleteButton_kuliahActionPerformed(java.awt.event.ActionEvent evt) {
    Kuliah matkul = new Kuliah();

    matkul.setKode(kode_hasil.getText());

    matkul.deleteKuliah();

    javax.swing.JOptionPane.showMessageDialog(null, "Delete Success");

    kode_hasil.setText(null);
    matkul_hasil.setText(null);
    sks_hasil.setText(null);
    semester_hasil.setText(null);
    this.showDataKuliah();
}

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

    private void
updateButton_kuliahActionPerformed(java.awt.event.ActionEvent evt) {
    Kuliah matkul = new Kuliah();

    matkul.setKode(kode_hasil.getText());
    matkul.setNama(matkul_hasil.getText());
    matkul.setSks(Integer.parseInt(sks_hasil.getText()));
    matkul.setSemester(Integer.parseInt(semester_hasil.getText()));

    matkul.updateKuliah();

    javax.swing.JOptionPane.showMessageDialog(null, "Update Success");
    this.showDataKuliah();
}

    private void
searchButton_kuliahActionPerformed(java.awt.event.ActionEvent evt) {
    Koneksi kon = new Koneksi();
    ResultSet rs = null;
    try{
        rs = kon.getData("SELECT * FROM kuliah WHERE kode_kul
        =" + kode_cari.getText() + "'");

        while(rs.next()){
            kode_hasil.setText(rs.getString("kode_kul"));
            matkul_hasil.setText(rs.getString("nama_kul"));
            sks_hasil.setText(rs.getString("sks"));
            semester_hasil.setText(rs.getString("semester"));

            javax.swing.JOptionPane.showMessageDialog(null, "Search
Success");

            kode_cari.setText(null);
            updateButton_mhs.setEnabled(true);
            deleteButton_mhs.setEnabled(true);
        }
        rs.close();
    }
    catch(Exception e){
        javax.swing.JOptionPane.showMessageDialog(null,
        "Error:" + e.getMessage());
    }
}

```



```

    }

    private void resetButton_kuliahActionPerformed(java.awt.event.ActionEvent
    evt) {
        kode_input.setText(null);
        matkul_input.setText(null);
        sks_input.setText(null);
        semester_input.setText(null);
    }

    private void
    insertButton_kuliahActionPerformed(java.awt.event.ActionEvent evt) {
        Kuliah matkul = new Kuliah();

        matkul.setKode(kode_input.getText());
        matkul.setNama(matkul_input.getText());
        matkul.setSks(Integer.parseInt(sks_input.getText()));
        matkul.setSemester(Integer.parseInt(semester_input.getText()));

        matkul.insertKuliah();

        javax.swing.JOptionPane.showMessageDialog(null, "Insert Success");
        this.showDataKuliah();
        kode_input.setText(null);
        nama_input.setText(null);
        sks_input.setText(null);
        semester_input.setText(null);
        this.showDataKuliah();
    }

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

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

    private void searchButton_mhsActionPerformed(java.awt.event.ActionEvent
    evt) {
        Koneksi kon = new Koneksi();
        ResultSet rs = null;
        String thn, bln, tgl;
        try{
            rs = kon.getData("SELECT * FROM mahasiswa WHERE npm
            =" + npm_cari.getText() + "'");
            while(rs.next()){
                npm_hasil.setText(rs.getString("npm"));
                nama_hasil.setText(rs.getString("nama_mhs"));

                if("Laki-Laki".equals(rs.getString("jenis_kelamin"))) {
                    priaRadio_hasil.setSelected(true);
                } else {
                    wanitaRadio_hasil.setSelected(true);
                }

                String[] tglLahir = rs.getString("tgl_lahir").split("-", 3);
                thn = tglLahir[0];
                bln = tglLahir[1];
                tgl = tglLahir[2];

                tgl_hasil.setSelectedIndex(Integer.parseInt(tgl));
                bln_hasil.setSelectedIndex(Integer.parseInt(bln));
                tahun_hasil.setText(thn);
                telp_hasil.setText(rs.getString("no_telp"));
                alamat_hasil.setText(rs.getString("alamat"));
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }

```

```

        javax.swing.JOptionPane.showMessageDialog(null, "Search
Success");

        npm_cari.setText(null);
        updateButton_mhs.setEnabled(true);
        deleteButton_mhs.setEnabled(true);
    }
    rs.close();
}
catch(Exception e){
    javax.swing.JOptionPane.showMessageDialog(null,
"Error:"+e.getMessage());
}
}

private void updateButton_mhsActionPerformed(java.awt.event.ActionEvent
evt) {
    Mahasiswa mhs = new Mahasiswa();

    mhs.setNpm(npm_hasil.getText());
    mhs.setNama(nama_hasil.getText());

    if (priaRadio_hasil.isSelected()) {
        mhs.setJk("Laki-Laki");
    }else {
        mhs.setJk("Perempuan");
    }

    mhs.setTgl("" + tgl_hasil.getSelectedItem());
    mhs.setBln("" + bln_hasil.getSelectedItem());
    mhs.setThn(tahun_hasil.getText());
    mhs.setTelp(telp_hasil.getText());
    mhs.setTelp(telp_hasil.getText());
    mhs.setAlamat(alamat_hasil.getText());

    mhs.updateMahasiswa();

    javax.swing.JOptionPane.showMessageDialog(null, "Update Success");
    this.showDataMahasiswa();
}

private void deleteButton_mhsActionPerformed(java.awt.event.ActionEvent
evt) {
    Mahasiswa mhs = new Mahasiswa();

    mhs.setNpm(npm_hasil.getText());

    mhs.deleteMahasiswa();

    javax.swing.JOptionPane.showMessageDialog(null,"Delete Success");
    npm_hasil.setText(null);
    nama_hasil.setText(null);
    priaRadio_input.setSelected(false);
    wanitaRadio_input.setSelected(false);
    tgl_hasil.setSelectedItem(0);
    bln_hasil.setSelectedItem(0);
    tahun_hasil.setText(null);
    telp_hasil.setText(null);
    alamat_hasil.setText(null);
    this.showDataMahasiswa();
}

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

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

```

```

        npm_input.setText(null);
        nama_input.setText(null);
        alamat_input.setText(null);
        priaRadio_input.setSelected(false);
        wanitaRadio_input.setSelected(false);
        tgl_input.setSelectedIndex(0);
        bln_input.setSelectedIndex(0);
        thn_input.setText(null);
        telp_input.setText(null);
        alamat_input.setText(null);
    }

    private void insertButton_mhsActionPerformed(java.awt.event.ActionEvent
    evt) {
        Mahasiswa mhs = new Mahasiswa();
        mhs.setNpm(npm_input.getText());
        mhs.setNama(nama_input.getText());

        if (priaRadio_input.isSelected()) {
            mhs.setJk("Laki-Laki");
        } else if (wanitaRadio_input.isSelected()) {
            mhs.setJk("Perempuan");
        }

        mhs.setTgl("" + tgl_input.getSelectedItem());
        mhs.setBln("" + bln_input.getSelectedItem());
        mhs.setThn(thn_input.getText());
        mhs.setTelp(telp_input.getText());
        mhs.setAlamat(alamat_input.getText());

        mhs.insertMahasiswa();

        javax.swing.JOptionPane.showMessageDialog(null, "Insert Success");

        this.showDataMahasiswa();

        npm_input.setText(null);
        nama_input.setText(null);
        alamat_input.setText(null);
        priaRadio_input.setSelected(false);
        wanitaRadio_input.setSelected(false);
        tgl_input.setSelectedIndex(0);
        bln_input.setSelectedIndex(0);
        thn_input.setText(null);
        telp_input.setText(null);
        alamat_input.setText(null);
    }

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

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

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

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

// Variables declaration - do not modify
private javax.swing.JTextArea alamat_hasil;
private javax.swing.JTextArea alamat_input;
private javax.swing.JComboBox<String> bln_hasil;
private javax.swing.JComboBox<String> bln_input;
private javax.swing.JButton deleteButton_kuliah;
private javax.swing.JButton deleteButton_mhs;
private javax.swing.JButton deleteButton_nilai;
private javax.swing.JButton insertButton_kuliah;
private javax.swing.JButton insertButton_mhs;
private javax.swing.JButton insertButton_nilai;
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 jLabel14;
private javax.swing.JLabel jLabel15;
private javax.swing.JLabel jLabel16;
private javax.swing.JLabel jLabel17;
private javax.swing.JLabel jLabel18;
private javax.swing.JLabel jLabel19;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel21;
private javax.swing.JLabel jLabel22;
private javax.swing.JLabel jLabel23;
private javax.swing.JLabel jLabel24;
private javax.swing.JLabel jLabel25;
private javax.swing.JLabel jLabel26;
private javax.swing.JLabel jLabel27;
private javax.swing.JLabel jLabel28;
private javax.swing.JLabel jLabel29;
private javax.swing.JLabel jLabel30;
private javax.swing.JLabel jLabel31;
private javax.swing.JLabel jLabel32;
private javax.swing.JLabel jLabel33;
private javax.swing.JLabel jLabel34;
private javax.swing.JLabel jLabel35;
private javax.swing.JLabel jLabel36;
private javax.swing.JLabel jLabel38;
private javax.swing.JLabel jLabel39;
private javax.swing.JLabel jLabel4;

```

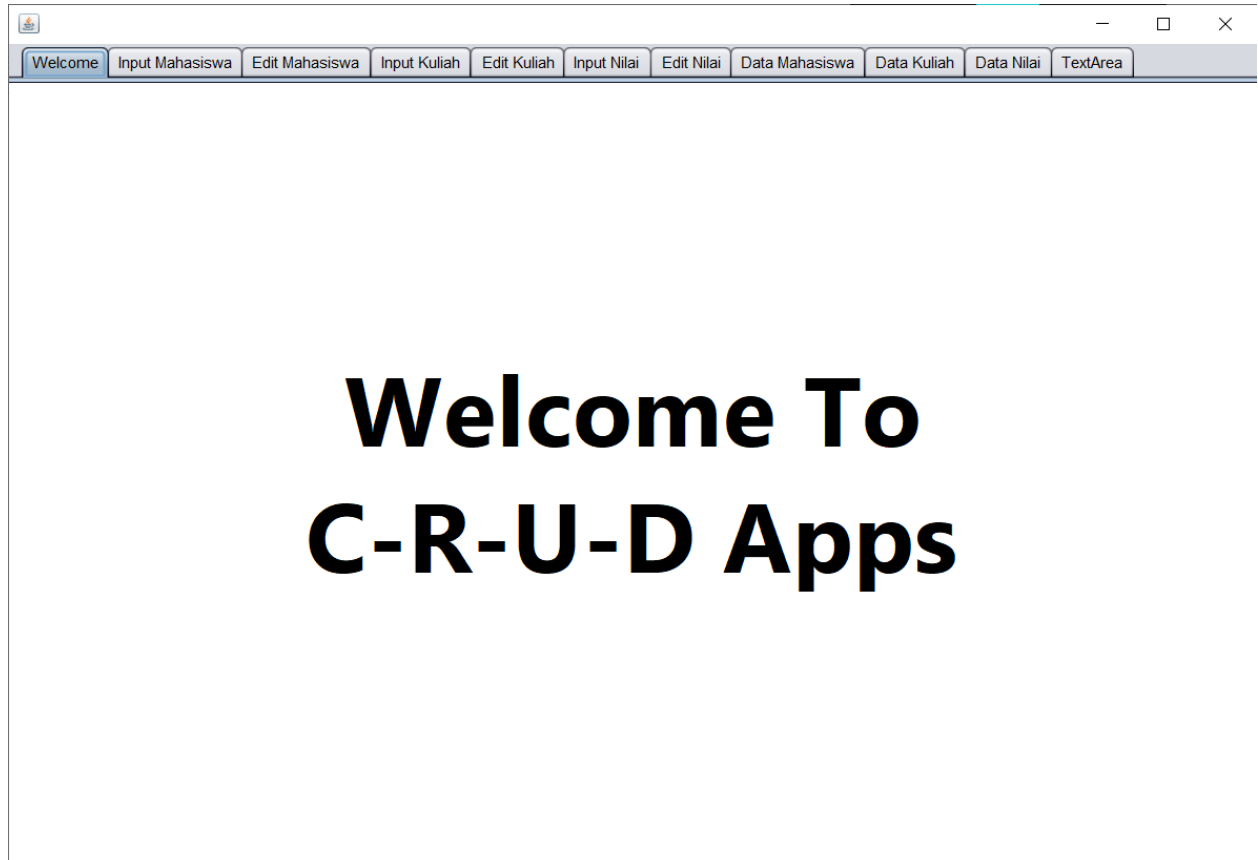
```

private javax.swing.JLabel jLabel40;
private javax.swing.JLabel jLabel41;
private javax.swing.JLabel jLabel42;
private javax.swing.JLabel jLabel43;
private javax.swing.JLabel jLabel44;
private javax.swing.JLabel jLabel45;
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 jPanel10;
private javax.swing.JPanel jPanel12;
private javax.swing.JPanel jPanel2;
private javax.swing.JPanel jPanel3;
private javax.swing.JPanel jPanel4;
private javax.swing.JPanel jPanel5;
private javax.swing.JPanel jPanel6;
private javax.swing.JPanel jPanel7;
private javax.swing.JPanel jPanel8;
private javax.swing.JPanel jPanel9;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JScrollPane jScrollPane2;
private javax.swing.JScrollPane jScrollPane3;
private javax.swing.JScrollPane jScrollPane4;
private javax.swing.JScrollPane jScrollPane5;
private javax.swing.JScrollPane jScrollPane6;
private javax.swing.JTabbedPane jTabbedPane1;
private javax.swing.JTextField kode_cari;
private javax.swing.JTextField kode_cari_nilai;
private javax.swing.JTextField kode_hasil;
private javax.swing.JTextField kode_input;
private javax.swing.JTextField kode_input_nilai;
private javax.swing.JTextField matkul_hasil;
private javax.swing.JTextField matkul_input;
private javax.swing.JTextField nama_hasil;
private javax.swing.JTextField nama_hasil_nilai;
private javax.swing.JTextField nama_input;
private javax.swing.JTextField nilai_hasil;
private javax.swing.JTextField nilai_input;
private javax.swing.JTextField npm_cari;
private javax.swing.JTextField npm_cari_nilai;
private javax.swing.JTextField npm_hasil;
private javax.swing.JTextField npm_hasil_nilai;
private javax.swing.JTextField npm_input;
private javax.swing.JTextField npm_input_nilai;
private javax.swing.JTextArea olahdata;
private javax.swing.JRadioButton priaRadio;
private javax.swing.JRadioButton priaRadio1;
private javax.swing.JRadioButton priaRadio_hasil;
private javax.swing.JRadioButton priaRadio_input;
private javax.swing.JButton resetButton_kuliah;
private javax.swing.JButton resetButton_mhs;
private javax.swing.JButton resetButton_nilai;
private javax.swing.JButton searchButton_kuliah;
private javax.swing.JButton searchButton_mhs;
private javax.swing.JButton searchButton_nilai;
private javax.swing.JTextField semester_hasil;
private javax.swing.JTextField semester_input;
private javax.swing.JTextField sks_hasil;
private javax.swing.JTextField sks_input;
private javax.swing.JTable table_kuliah;
private javax.swing.JTable table_mahasiswa;
private javax.swing.JTable table_nilai;
private javax.swing.JTextField tahun_hasil;
private javax.swing.JTextField telp_hasil;
private javax.swing.JTextField telp_input;
private javax.swing.JComboBox<String> tgl_hasil;

```

```
private javax.swing.JComboBox<String> tgl_input;  
private javax.swing.JTextField thn_input;  
private javax.swing.JButton updateButton_kuliah;  
private javax.swing.JButton updateButton_mhs;  
private javax.swing.JButton updateButton_nilai;  
private javax.swing.JRadioButton wanitaRadio_hasil;  
private javax.swing.JRadioButton wanitaRadio_input;  
// End of variables declaration  
}
```

2. Screenshot:



WelcomeInput MahasiswaEdit MahasiswaInput KuliahEdit KuliahInput NilaiEdit NilaiData MahasiswaData KuliahData NilaiTextArea

INPUT DATA MAHASISWA

NPM :

Nama :

Jenis Kelamin : ☐ Laki-laki ☐ Perempuan

Tanggal Lahir :

tanggal

bulan

No. Telepon :

Alamat :

INSERT

RESET

WelcomeInput MahasiswaEdit MahasiswaInput KuliahEdit KuliahInput NilaiEdit NilaiData MahasiswaData KuliahData NilaiTextArea

CARI DATA MAHASISWA

NPM :

SEARCH

HASIL PENCARIAN :

NPM :

Nama :

Jenis Kelamin : ☐ Laki-laki ☐ Perempuan

Tanggal Lahir :

tanggal

bulan

No. Telepon :

Alamat :

UPDATE

DELETE

—

□

×

WelcomeInput MahasiswaEdit MahasiswaInput KuliahEdit KuliahInput NilaiEdit NilaiData MahasiswaData KuliahData NilaiTextArea

INPUT DATA MATA KULIAH

Kode Kuliah :

Nama Mata Kuliah :

SKS :

Semester :

INSERT

RESET

—

□

×

WelcomeInput MahasiswaEdit MahasiswaInput KuliahEdit KuliahInput NilaiEdit NilaiData MahasiswaData KuliahData NilaiTextArea

CARI DATA MATA KULIAH

Kode Kuliah :

SEARCH

HASIL PENCARIAN :

Kode Kuliah :

Nama Mata Kuliah :

SKS :

Semester :

UPDATE

DELETE

—

□

×

WelcomeInput MahasiswaEdit MahasiswaInput KuliahEdit KuliahInput NilaiEdit NilaiData MahasiswaData KuliahData NilaiTextArea

INPUT NILAI

Kode Kuliah :

NPM :

Nilai :

INSERT

RESET

—□×

WelcomeInput MahasiswaEdit MahasiswaInput KuliahEdit KuliahInput NilaiEdit NilaiData MahasiswaData KuliahData NilaiTextArea

CARI DATA NILAI

NPM :

Kode Kuliah :

SEARCH

HASIL PENCARIAN :

NPM :

Nama :

Nilai :

UPDATE

DELETE

[illegible]

[illegible]

[illegible]

—

□

×

WelcomeInput MahasiswaEdit MahasiswaInput KuliahEdit KuliahInput NilaiEdit NilaiData MahasiswaData KuliahData NilaiTextArea

OLAH DATA

[DAFTAR NILAI MATA KULIAH STRUKTUR DATA (Kode MK: TI_001)]

=====

NoNPMNamaNilaiHMKeterangan

=====

