PEMROGRAMAN BERORIENTASI OBJEK

LAPORAN INPUT BIODATA MAHASISWA

TUGAS 11

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KELAS : B2

1. **Membuat database beserta tabel**
   Database : mahasiswa
   Table : tabel_mahasiswa

```
create database mahasiswa;
use mahasiswa;
create table tabel_mahasiswa(
nomhs bigint primary key,
nama varchar(30),
jurusan varchar(15),
prodi varchar(20));
```

Field	Type	Null	Key	Default	Extra
nomhs	bigint(20)	NO	PRI	NULL	
nama	varchar(30)	YES		NULL	
jurusan	varchar(15)	YES		NULL	
prodi	varchar(20)	YES		NULL	

2. **Membuat projek pada NetBeans**
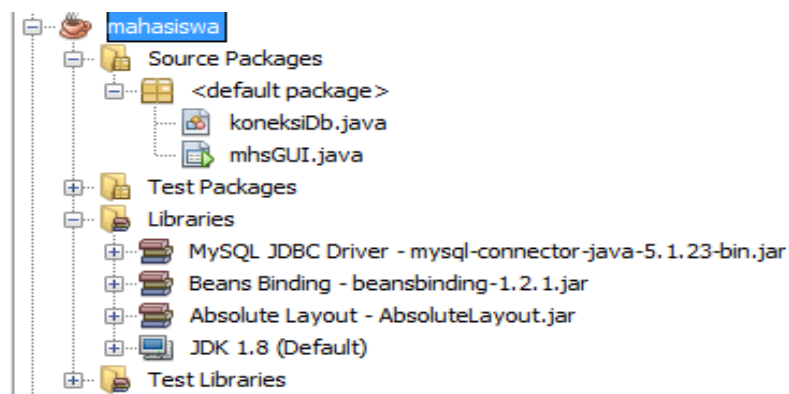
3. **Membuat koneksi database**
   Class : **koneksiDb.java**

```java
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class koneksiDb {
    private static Connection mysqlconfig;
    public static Connection configDB()throws SQLException{
        try {
            String url="jdbc:mysql://localhost:3306/mahasiswa"; //url database
            String user="root"; //user database
            String pass=""; //password database
            DriverManager.registerDriver(new com.mysql.jdbc.Driver());
            mysqlconfig=DriverManager.getConnection(url, user, pass);
        } catch (Exception e) {
            System.err.println("koneksi gagal "+e.getMessage()); //perintah menampilkan
error pada koneksi
        }
        return mysqlconfig;
    }

}
```

4. **Membuat desain form inputan (JFrame)**

5. **Source code form yang sudah dibuat**
   mhsGUI.java

```java
import java.sql.Connection;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;

public class mhsGUI extends javax.swing.JFrame {
    public mhsGUI() {
        initComponents();
        load_table();
        kosong();
    }
    private void load_table(){
        // membuat tampilan model tabel
        DefaultTableModel model = new DefaultTableModel();
        model.addColumn("No");
        model.addColumn("NIM");
        model.addColumn("Nama");
        model.addColumn("Jurusan");
        model.addColumn("Prodi");

        //menampilkan data database kedalam tabel
        try {
            int no=1;
            String sql = "select * from tabel_mahasiswa";
            java.sql.Connection conn=(Connection)koneksiDb.configDB();
            java.sql.Statement stm=conn.createStatement();
            java.sql.ResultSet res=stm.executeQuery(sql);
            while(res.next()){
                model.addRow(new
Object[]{no++,res.getString(1),res.getString(2),res.getString(3),res.getString(4)});
            }
            tab1.setModel(model);
        } catch (Exception e) {
        }
    }
    private void kosong(){
        txtnim.setText(null);
        txtnama.setText(null);
        pro.setSelectedItem(this);
        txtfak.setText(null);
    }

    /**
```

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

        jTextField3 = new javax.swing.JTextField();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        jLabel5 = new javax.swing.JLabel();
        txtnim = new javax.swing.JTextField();
        txtnama = new javax.swing.JTextField();
        txtfak = new javax.swing.JTextField();
        smpn = new javax.swing.JButton();
        re = new javax.swing.JButton();
        jScrollPane1 = new javax.swing.JScrollPane();
        tab1 = new javax.swing.JTable();
        edt = new javax.swing.JButton();
        hps = new javax.swing.JButton();
        pro = new javax.swing.JComboBox<>();

        jTextField3.setText("jTextField1");

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setBackground(new java.awt.Color(44, 82, 240));
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

        jLabel1.setFont(new java.awt.Font("Times New Roman", 1, 18)); // NOI18N
        jLabel1.setText("BIODATA MAHASISWA");
        getContentPane().add(jLabel1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(120, 11, 233, 34));

        jLabel2.setFont(new java.awt.Font("Tempus Sans ITC", 0, 12)); // NOI18N
        jLabel2.setText("NIM");
        getContentPane().add(jLabel2, new
org.netbeans.lib.awtextra.AbsoluteConstraints(48, 53, 41, 31));

        jLabel3.setFont(new java.awt.Font("Tempus Sans ITC", 0, 12)); // NOI18N
        jLabel3.setText("NAMA");
```

```java
        getContentPane().add(jLabel3, new
org.netbeans.lib.awtextra.AbsoluteConstraints(48, 95, 41, 31));

        jLabel4.setFont(new java.awt.Font("Tempus Sans ITC", 0, 12)); // NOI18N
        jLabel4.setText("FAKULTAS");
        getContentPane().add(jLabel4, new
org.netbeans.lib.awtextra.AbsoluteConstraints(48, 137, 65, 31));

        jLabel5.setFont(new java.awt.Font("Tempus Sans ITC", 0, 12)); // NOI18N
        jLabel5.setText("PRODI");
        getContentPane().add(jLabel5, new
org.netbeans.lib.awtextra.AbsoluteConstraints(48, 179, 50, 31));
        getContentPane().add(txtnim, new
org.netbeans.lib.awtextra.AbsoluteConstraints(172, 53, 213, 31));

        txtnama.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                txtnamaActionPerformed(evt);
            }
        });
        getContentPane().add(txtnama, new
org.netbeans.lib.awtextra.AbsoluteConstraints(172, 95, 213, 31));
        getContentPane().add(txtfak, new
org.netbeans.lib.awtextra.AbsoluteConstraints(172, 137, 213, 31));

        smpn.setText("SIMPAN");
        smpn.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                smpnActionPerformed(evt);
            }
        });
        getContentPane().add(smpn, new
org.netbeans.lib.awtextra.AbsoluteConstraints(231, 216, -1, 33));

        re.setText("REFRESH");
        re.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                reActionPerformed(evt);
            }
        });
        getContentPane().add(re, new org.netbeans.lib.awtextra.AbsoluteConstraints(308,
216, -1, 33));

        tab1.setModel(new javax.swing.table.DefaultTableModel(
```

```
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));
tab1.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        tab1MouseClicked(evt);
    }
});
jScrollPane1.setViewportView(tab1);

getContentPane().add(jScrollPane1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(48, 260, 337, 93));

edt.setText("EDIT");
edt.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        edtActionPerformed(evt);
    }
});
getContentPane().add(edt, new org.netbeans.lib.awtextra.AbsoluteConstraints(253,
359, -1, 33));

hps.setText("HAPUS");
hps.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        hpsActionPerformed(evt);
    }
});
getContentPane().add(hps, new org.netbeans.lib.awtextra.AbsoluteConstraints(314,
359, -1, 33));

pro.setFont(new java.awt.Font("Tahoma", 0, 12)); // NOI18N
pro.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Teknik
Informatika", "Sistem Informasi" }));
pro.setName(""); // NOI18N
pro.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```java
                proActionPerformed(evt);
            }
        });
        getContentPane().add(pro, new org.netbeans.lib.awtextra.AbsoluteConstraints(172,
179, 213, 31));

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

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

    private void smpnActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        try {
            String sql = "INSERT INTO tabel_mahasiswa VALUES
('"+txtnim.getText()+"','"+txtnama.getText()+"','"+txtfak.getText()+"','"+pro.getSelectedIt
em()+"')";
            java.sql.Connection conn=(Connection)koneksiDb.configDB();
            java.sql.PreparedStatement pst=conn.prepareStatement(sql);
            pst.execute();
            JOptionPane.showMessageDialog(null, "Penyimpanan Data Berhasil");
        } catch (Exception e) {
            JOptionPane.showMessageDialog(this, e.getMessage());
        }
        load_table();
        kosong();
    }

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

    private void tab1MouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        // menampilkan data kedalam form pengisian:
        int baris = tab1.rowAtPoint(evt.getPoint());
        String nomhs =tab1.getValueAt(baris, 1).toString();
        txtnim.setText(nomhs);
        String nama = tab1.getValueAt(baris,2).toString();
        txtnama.setText(nama);
        String jurusan = tab1.getValueAt(baris,2).toString();
        txtfak.setText(jurusan);
```

```java
        String prodi = tab1.getValueAt(baris, 3).toString();
        pro.setSelectedItem(prodi);
    }


    private void edtActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        // Edit Data
        try {
            String sql ="UPDATE tabel_mahasiswa SET nama = '"+txtnim.getText()+"',
nama = '"+txtnama.getText()+"', jurusan = '"+txtfak.getText()+"', prodi =
'"+pro.getSelectedItem()+"' WHERE nomhs = '"+txtnim.getText()+"'";
            java.sql.Connection conn=(Connection)koneksiDb.configDB();
            java.sql.PreparedStatement pst=conn.prepareStatement(sql);
            pst.execute();
            JOptionPane.showMessageDialog(null, "data berhasil di edit");
        } catch (Exception e) {
            JOptionPane.showMessageDialog(null, "Perubahan Data
Gagal"+e.getMessage());
        }
        load_table();
        kosong();
    }


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


    private void hpsActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
         // fungsi hapus data
        try {
            String sql ="delete from tabel_mahasiswa where nomhs='"+txtnim.getText()+"'";
            java.sql.Connection conn=(Connection)koneksiDb.configDB();
            java.sql.PreparedStatement pst=conn.prepareStatement(sql);
            pst.execute();
            JOptionPane.showMessageDialog(this, "berhasil di hapus");
        } catch (Exception e) {
            JOptionPane.showMessageDialog(this, e.getMessage());
        }
        load_table();
        kosong();
    }
```

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

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

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

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

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

```java
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton edt;
    private javax.swing.JButton hps;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JLabel jLabel5;
    private javax.swing.JScrollPane jScrollPane1;
    private javax.swing.JTextField jTextField3;
    private javax.swing.JComboBox<String> pro;
    private javax.swing.JButton re;
    private javax.swing.JButton smpn;
    private javax.swing.JTable tab1;
    private javax.swing.JTextField txtfak;
    private javax.swing.JTextField txtnama;
    private javax.swing.JTextField txtnim;
    // End of variables declaration
}
```

Run program

1. Penginputan

Kita menginput biodata yang diminta lalu klik **simpan** >> **ok**, setelah tombol **ok** diklik maka data otomatis muncul pada table dibagian bawa. Dan data yang diinput juga otomatis muncul dalam system database.

2. **Tombol "REFRESH"**

Untuk memulai kembali inputan yang sudah diketik, di guunkan jika pada saat pengetikan terdapat kesalahan dan ingin mengulang penginputan dari awal.

3. **Mengedit/mengupdate data yang sudah diinput**

Untuk mengedit klik salah satu data yang ada pada yang ingin diedit >> klik **EDIT** pada bagian bawah >> data akan muncul pada form >> edit data >> klik **SIMPAN** >> klik **OK** Data tersebut juga kan terupdate pada system database.

4. Menghapus data

Klik salah satu data yang ingin dihapus pada table di bagian bawa >> klik **HAPUS** >> klik **OK.** Maka data tersebut akan terhapus pada table dan pada system database.
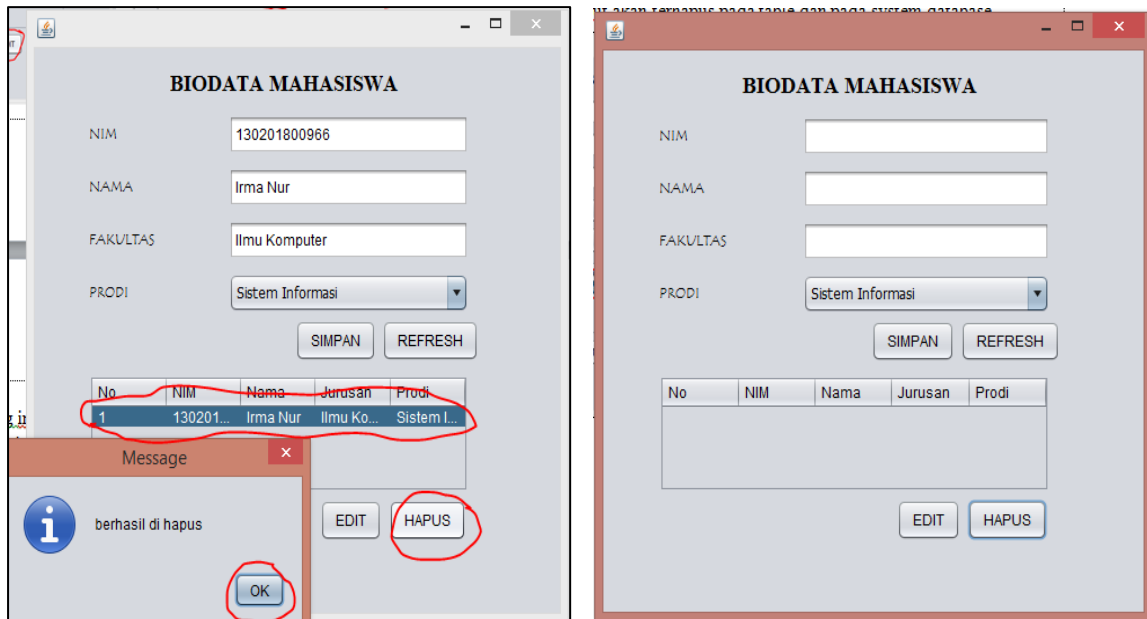
	nomhs	nama	jurusan	prodi
✳	NULL	NULL	NULL	NULL

*note : field jurusan pada table_mahasiswa seharusnya adalah fakultas, mohon maaf karena ada kesalahan dalam pengetikan dan tidak sempat untuk diperbaiki