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KELAS   : B2

TUGAS 11

PEMROGRAMAN BERORIENTASI OBJEK

PEMBUATAN FORM DATA MAHASISWA

1. Buat database dan table
   Database : mahasiswa
   Table   : tabel_mahasiswa

Server: 127.0.0.1 » Basis data: mahasiswa » Tabel: tabel_mahasiswa

| Jelajahi | Struktur | SQL | Cari | Tambahkan | Ekspor | Impor | Hak Akses | Operasi | Pelacakan | Trigger |

#	Nama	Jenis	Penyortiran	Atribut	Kosong	Bawaan	Ekstra	Tindakan
1	nim	varchar(15)	latin1_swedish_ci		Tidak	Tidak ada		Ubah ⊖ Hapus Kunci Utama Unik Indeks Spasial Teks penuh Distinct values
2	nama	varchar(30)	latin1_swedish_ci		Tidak	Tidak ada		Ubah ⊖ Hapus Kunci Utama Unik Indeks Spasial Teks penuh Distinct values
3	jurusan	varchar(20)	latin1_swedish_ci		Tidak	Tidak ada		Ubah ⊖ Hapus Kunci Utama Unik Indeks Spasial Teks penuh Distinct values
4	email	varchar(30)	latin1_swedish_ci		Tidak	Tidak ada		Ubah ⊖ Hapus Kunci Utama Unik Indeks Spasial Teks penuh Distinct values

Pilih Semua   Dengan pilihan: Jelajahi Ubah Hapus Kunci Utama Unik Indeks

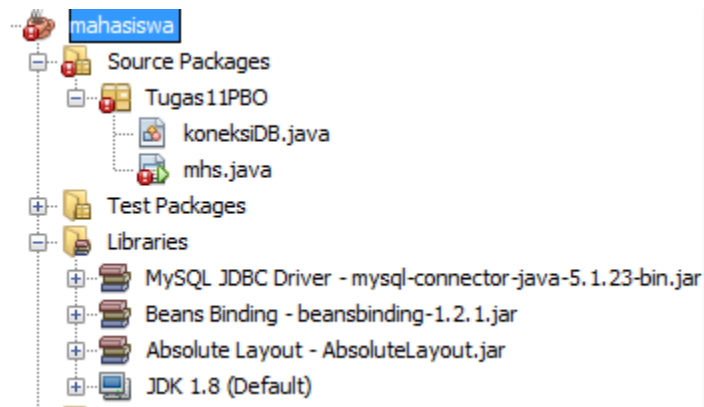Tampilan cetak   Tampilan relasi   Usulkan struktur tabel   Lacak tabel   Move columns

2. Program menghubungkan dengan database
   ```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 (SQLException e) {
    System.err.println("koneksi gagal "+e.getMessage()); //perintah menampilkan error pada
   koneksi
    }
    return mysqlconfig;
    }
   ```
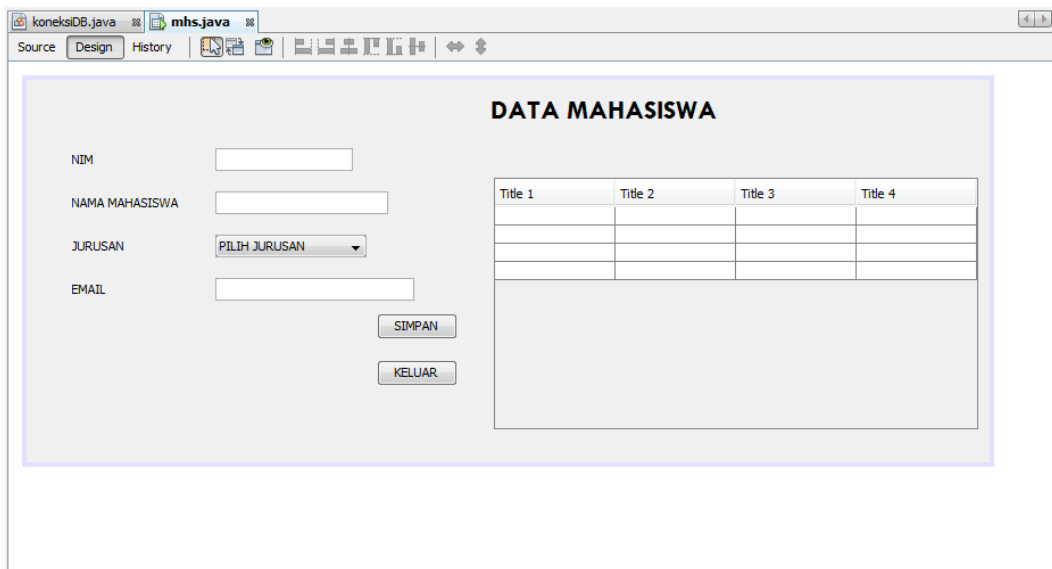
}
3. Menambahkan bagian Mysql JDBC driver untuk terhubung dengan database

4. Membuat form inputan

5. Listing form yang telah dibuat
Mhs.java
```
import java.sql.Connection;
import javax.swing.JTextField;
import javax.swing.table.DefaultTableModel;
/**
 *
 * @author Dell
 */
public class mhs extends javax.swing.JFrame {
```

```java
    private JTextField txtjurusan;
    private Object smpn;

    public mhs() {
        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("Email");

//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.setEditable(true);
    txtnim.setText(null);
    txtnama.setText(null);
    cbjurusan.setSelectedItem(this);
    txtemail.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.
     */
 private void initComponents() {
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();
txtjurusan = new javax.swing.JTextField();
jScrollPane1 = new javax.swing.JScrollPane();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE)
;
setBackground(new java.awt.Color(44, 82, 240));

jLabel1.setFont(new java.awt.Font("Times New Roman", 1, 18)); // NOI18N
jLabel1.setText("DATA MAHASISWA");
getContentPane().add(jLabel1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(48, 53, 41, 31));
jLabel2.setFont(new java.awt.Font("Tahoma 11 plain", 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("Tahoma 11 plain", 0, 12)); // NOI18N
jLabel3.setText("NAMA MAHASISWA");
getContentPane().add(jLabel3, new
org.netbeans.lib.awtextra.AbsoluteConstraints(48, 95, 41, 31));
jLabel4.setFont(new java.awt.Font("Tahoma 11 plain", 0, 12)); // NOI18N
jLabel4.setText("JURUSAN");
getContentPane().add(jLabel4, new
org.netbeans.lib.awtextra.AbsoluteConstraints(48, 137, 65, 31));
jLabel5.setFont(new java.awt.Font("Tahoma 11 plain", 0, 12)); // NOI18N
jLabel5.setText("EMAIL");
```

```java
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(txtjurusan, new
org.netbeans.lib.awtextra.AbsoluteConstraints(172, 137, 213, 31));
simpan.setText("SIMPAN");
simpan.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
simpanActionPerformed(evt);
}
});
getContentPane().add(simpan, new
org.netbeans.lib.awtextra.AbsoluteConstraints(231, 216, -1, 33));
edit.setText("EDIT");
edit.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
reActionPerformed(evt);
}
});
getContentPane().add(edit, 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"
}
));
```

```java
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));
hps.setText("HAPUS");
hps.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
edtActionPerformed(evt);
}
});
getContentPane().add(hps, new org.netbeans.lib.awtextra.AbsoluteConstraints(253,
359, -1, 33));
klr.setText("KELUAR");
klr.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
hpsActionPerformed(evt);
}
});
getContentPane().add(, 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) {
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:
}
```

```java
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.getSelectedI
t
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();
}
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        txtnim = new javax.swing.JTextField();
        txtnama = new javax.swing.JTextField();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        cbjurusan = new javax.swing.JComboBox<>();
        jLabel5 = new javax.swing.JLabel();
        txtemail = new javax.swing.JTextField();
        btHapus = new javax.swing.JButton();
        btKeluar = new javax.swing.JButton();
        jScrollPane1 = new javax.swing.JScrollPane();
        tablemahasiswa = new javax.swing.JTable();
        btSimpan = new javax.swing.JButton();
        btEdit = new javax.swing.JButton();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jLabel1.setFont(new java.awt.Font("Tw Cen MT", 1, 24)); // NOI18N
```

```java
jLabel1.setText("DATA MAHASISWA");
jLabel1.setName(""); // NOI18N

jLabel2.setText("NIM");

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

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

jLabel3.setText("NAMA MAHASISWA");

jLabel4.setText("JURUSAN");

cbjurusan.setModel(new  javax.swing.DefaultComboBoxModel<>(new  String[] {
"PILIH JURUSAN", "TEKNIK INFORMATIKA", "SISTEM INFORMASI", " " }));
cbjurusan.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
      cbjurusanActionPerformed(evt);
   }
});

jLabel5.setText("EMAIL");

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

btHapus.setText("HAPUS");
btHapus.addActionListener(new java.awt.event.ActionListener() {
   public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```java
        btHapusActionPerformed(evt);
      }
    });

    btKeluar.setText("KELUAR");
    btKeluar.addActionListener(new java.awt.event.ActionListener() {
      public void actionPerformed(java.awt.event.ActionEvent evt) {
        btKeluarActionPerformed(evt);
      }
    });

    tablemahasiswa.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"
      }
    ));
    jScrollPane1.setViewportView(tablemahasiswa);

    btSimpan.setText("SIMPAN");
    btSimpan.addActionListener(new java.awt.event.ActionListener() {
      public void actionPerformed(java.awt.event.ActionEvent evt) {
        btSimpanActionPerformed(evt);
      }
    });

    btEdit.setText("EDIT");
    btEdit.addActionListener(new java.awt.event.ActionListener() {
      public void actionPerformed(java.awt.event.ActionEvent evt) {
        btEditActionPerformed(evt);
      }
    });

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

```java
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
        .addComponent(jLabel1)
        .addGap(240, 240, 240))
    .addGroup(layout.createSequentialGroup()
        .addGap(40, 40, 40)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jLabel2)
            .addComponent(jLabel3)
            .addComponent(jLabel4)
            .addComponent(jLabel5)
            .addComponent(btSimpan)
            .addComponent(btEdit))

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(32, 32, 32)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(cbjurusan,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(txtnim,
javax.swing.GroupLayout.PREFERRED_SIZE,                              121,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(txtnama,
javax.swing.GroupLayout.PREFERRED_SIZE,                              152,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(txtemail,
javax.swing.GroupLayout.PREFERRED_SIZE,                              175,
javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addGroup(layout.createSequentialGroup()
                .addGap(174, 174, 174)
```

```
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(btHapus)
                    .addComponent(btKeluar))))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
32, Short.MAX_VALUE)
            .addComponent(jScrollPane1,   javax.swing.GroupLayout.PREFERRED_SIZE,
426, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap())
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel1,   javax.swing.GroupLayout.PREFERRED_SIZE,   31,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE
)
                    .addComponent(jLabel2)
                    .addComponent(txtnim,       javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addGap(18, 18, 18)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE
)
                            .addComponent(txtnama,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(jLabel3))
                        .addGap(18, 18, 18)

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

```
                .addComponent(cbjurusan,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jLabel4))
                .addGap(18, 18, 18)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE
)
                    .addComponent(jLabel5)
                    .addComponent(txtemail,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

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

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE
)
                    .addComponent(btHapus)
                    .addComponent(btSimpan))
                .addGap(18, 18, 18)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE
)
                    .addComponent(btKeluar)
                    .addComponent(btEdit))
                .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(jScrollPane1,
javax.swing.GroupLayout.PREFERRED_SIZE,                          221,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(29, 29, 29))))
    );
```

```java
        jLabel1.getAccessibleContext().setAccessibleName("");

        getAccessibleContext().setAccessibleName("Aplikasi Data Mahasiswa");

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

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

    }

    private void btKeluarActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        system.exit(0);
    }

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

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

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

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

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

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

```
        }

    public static void main(String args[]) {
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new mhs().setVisible(true);
            }
        });
    }
    // Variables declaration - do not modify
    private javax.swing.JButton btEdit;
    private javax.swing.JButton btHapus;
    private javax.swing.JButton btKeluar;
    private javax.swing.JButton btSimpan;
    private javax.swing.JComboBox<String> cbjurusan;
    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.JTable tablemahasiswa;
    private javax.swing.JTextField txtemail;
    private javax.swing.JTextField txtnama;
    private javax.swing.JTextField txtnim;
    // End of variables declaration
}
```

6. Hasil run program