Laporan Hasil Praktikum Pemrograman Desktop



Tugas 6

ALYA AIMAN SALSABILA ARIF 1817101379

Tingkat III Rekayasa Perangkat Lunak Kripto
Politeknik Siber dan Sandi Negara
2020/2021

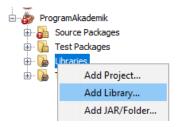
Daftar Isi

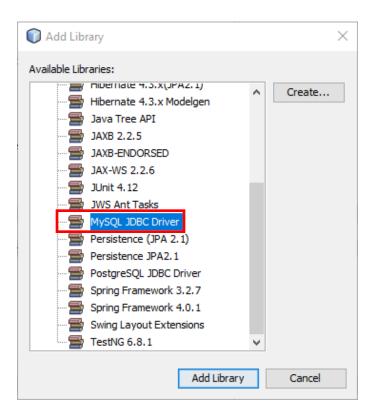
| 1. Praktikum | 2 |
|--------------|----|
| 2. Latihan | 10 |

1. Praktikum

Buat database baru dengan nama akademik dan tabel mahasiswa

Buat projek baru dengan nama ProgramAkademik. Tambahkan *library* MySQL JDBC Driver dengan cara klik kanan di projek yang dibuat

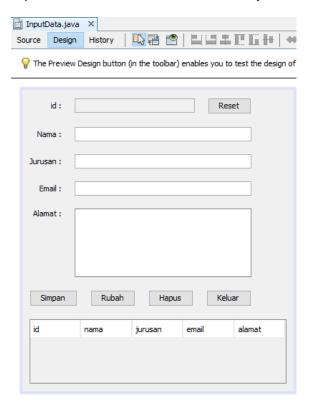




Buatlah kelas Connect. Masukkan source code sebagai berikut

```
Koneksi.java X
1 ± ...5 lines
 6
      package programakademik;
 7
 8 + import ...3 lines
11
12 + /**...4 lines */
      public class Koneksi {
17
         private static Connection con;
18 🖃
          public static Connection getKoneksi () {
19
             try {
                 String url = "jdbc:mysql://localhost/akademik";
20
                 String user = "root";
21
 9
                 String password = "";
                 DriverManager.registerDriver(new com.mysql.jdbc.Driver());
 23
 24
                 con = DriverManager.getConnection(url, user, password);
25
                 System.out.println("koneksi sukses");
26
             } catch (SQLException t) {
                 System.out.println("Error Membuat Koneksi");
27
28
             }
29
          return con;
30
31
```

Buatlah kelas InputData dengan menggunakan JFrame Form. Buatlah desain kelas InputData. Untuk TextField ID menjadi *enable false*



Masukkan source code sebagai berikut pada kelas ProgramAkademik

```
ProgramAkademik.java ×
Source History | 👺 👨 → 👼 → 💆 🔁 👺 🖶 📮 🖟 😓 🔁 🖆 | 🎱 📵 | 🕮 🚅
 1 + ...5 lines
 6
      package programakademik;
 8
   + /**...4 lines */
      public class ProgramAkademik {
12
13
14 +
          /**...3 lines */
   Ţ
17
          public static void main(String[] args) {
18
              // TODO code application logic here
              java.awt.EventQueue.invokeLater(new Runnable() {
    白
   Ŧ
₩.
                  public void run() {
21
                      new InputData().setVisible(true);
22
23
              });
24
25
26
```

Masukkan source code sebagai berikut pada kelas InputData

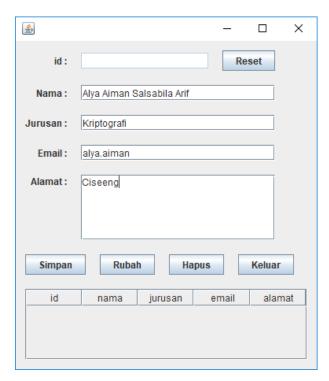
```
☐ InputData.java ×
                      Source Design History
   1 ± ...5 lines
        package programakademik;
   6
     + import ...8 lines
  8
  16
  17 + /**...4 lines */
  21
        public class InputData extends javax.swing.JFrame {
  22
  23 +
             /** Creates new form InputData ...3 lines */
  26
     public InputData() {
  27
                 initComponents();
                 loadData();
  28
  29
  30
             /** This method is called from within the constructor to initialize the form
  31
     +
  36
             @SuppressWarnings("unchecked")
  37
     +
             Generated Code
 223
             private void jSimpanActionPerformed(java.awt.event.ActionEvent evt) {
 224
     225
                 // TODO add your handling code here:
                 String nama = textNama.getText();
 226
 227
                 String jurusan = textJurusan.getText();
 228
                 String email = textEmail.getText();
 229
                 String alamat = textAlamat.getText();
 230
 231
                  Connection c = Koneksi.getKoneksi();
 232
                  String sql = "INSERT INTO MAHASISWA (nama, jurusan, email, alamat) VALUES (?, ?, ?, ?)";
                  PreparedStatement p = c.prepareStatement(sql);
 235
                  p.setString(1, nama);
 236
                  p.setString(2, jurusan);
                  p.setString(3, email);
 237
 238
                  p.setString(4, alamat);
 239
                  p.executeUpdate();
 240
                  p.close();
 241
              } catch(SQLException e) {
 242
                  System.out.println("Terjadi Kesalahan");
 243
 244
              refreshTabel();
 245
              loadData();
 246
 247
 248 🚍
          private void tabelMahasiswaMouseClicked(java.awt.event.MouseEvent evt) {
 249
              // TODO add your handling code here:
              int index = tabelMahasiswa.getSelectedRow();
 250
              TableModel model = tabelMahasiswa.getModel();
 252
 253
              textkode.setText(model.getValueAt(index, 0).toString());
 254
              textNama.setText(model.getValueAt(index, 1).toString());
              textJurusan.setText(model.getValueAt(index, 2).toString());
 256
              textEmail.setText(model.getValueAt(index, 3).toString());
              textAlamat.setText(model.getValueAt(index, 4).toString());
 257
 258
259
```

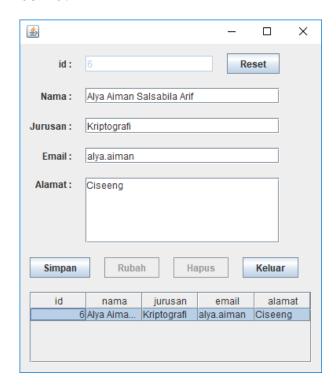
```
260 private void jRubahActionPerformed(java.awt.event.ActionEvent evt) {
             // TODO add your handling code here:
262
             String nama = textNama.getText();
263
             String jurusan = textJurusan.getText();
264
             String email = textEmail.getText();
             String alamat = textAlamat.getText();
266
             String id = textkode.getText();
267
268
269
                 Connection c = Koneksi.getKoneksi();
                 String sql = "update mahasiswa set nama = ?,jurusan = ?,email = ?,alamat = ? where id = ?";
270
                 PreparedStatement p = c.prepareStatement(sql);
272
                 p.setString(1, nama);
273
                 p.setString(2, jurusan);
274
                 p.setString(3, email);
275
                 p.setString(4, alamat);
276
                 p.setString(5, id);
277
                 p.executeUpdate();
278
                 p.close();
279
                 JOptionPane.showMessageDialog(this, "data berhasil dirubah");
280
                 jRubah.setEnabled(false);
281
                 iHapus.setEnabled(false);
282
                 jSimpan.setEnabled(true);
283
             } catch(SQLException e) {
284
                 System.out.println("Terjadi Kesalahan");
285
286
             refreshTabel();
287
             loadData();
288
             refreshText();
289
290
             private void textkodeActionPerformed(java.awt.event.ActionEvent evt) {
291 =
292
                  // TODO add your handling code here:
293
294
295
     Ţ
             private void jHapusActionPerformed(java.awt.event.ActionEvent evt) {
296
                 // TODO add your handling code here:
                 String id = textkode.getText();
297
298
299
                 trv{
300
                      Connection c = Koneksi.getKoneksi();
301
                      String sql = "DELETE FROM MAHASISWA where id = ?";
  Q.
                      PreparedStatement p = c.prepareStatement(sql);
303
                      p.setString(1, id);
304
                      p.executeUpdate();
305
                      p.close():
306
                      JOptionPane.showMessageDialog(this, "data berhasil dihapus");
307
                      jRubah.setEnabled(false);
308
                      jHapus.setEnabled(false);
309
                      jSimpan.setEnabled(true);
310
                 } catch(SQLException e) {
311
                      System.out.println("Terjadi Kesalahan");
312
313
                 refreshTabel();
314
                 loadData();
315
316
```

```
private void jResetActionPerformed(java.awt.event.ActionEvent evt) {
318
               // TODO add your handling code here:
319
               refreshTabel();
320
               loadData();
               refreshText();
321
322
               jSimpan.setEnabled(true);
323
               jRubah.setEnabled(false);
324
               jHapus.setEnabled(false);
325
326
327
   private void loadData() {
328
               try{
329
                   Connection c = Koneksi.getKoneksi();
 Q.
                   Statement s = c.createStatement();
331
332
                   String sql = "SELECT * FROM MAHASISWA";
333
                   ResultSet r = s.executeQuery(sql);
334
               while (r.next()) {
335
                   // lakukan penelusuran baris
336
                   String id = r.getString("id");
337
                   String nama = r.getString("nama");
338
                   String jurusan = r.getString("jurusan");
339
                   String email = r.getString("email");
340
                   String alamat = r.getString("alamat");
341
                   String tbData[] = {id,nama,jurusan,email,alamat};
342
                   DefaultTableModel tblModel = (DefaultTableModel)tabelMahasiswa.getModel();
343
                   tblModel.addRow(tbData);
344
345
                r.close();
346
                s.close();
347
                } catch(SQLException e) {
                    System.out.println("Terjadi Kesalahan");
348
349
                1
350
351
352 -
            private void refreshTabel(){
                DefaultTableModel model = (DefaultTableModel)
353
354
                tabelMahasiswa.getModel();
355
                while (model.getRowCount()>0) {
356
                    model.setRowCount(0);
357
                }
358
359
           private void refreshText() {
360
    361
               textkode.setText("");
362
                textNama.setText("");
363
                textJurusan.setText("");
364
                textEmail.setText("");
365
                textAlamat.setText("");
366
367
```

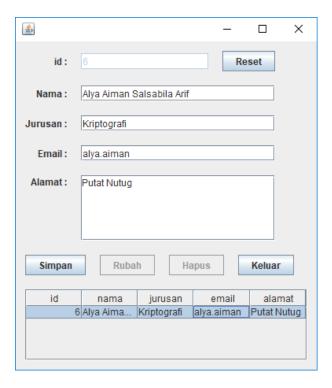
```
368
           // Variables declaration - do not modify
           private javax.swing.JButton jButton4;
369
370
           private javax.swing.JButton jHapus;
371
           private javax.swing.JLabel jLabell;
372
           private javax.swing.JLabel jLabel2;
373
           private javax.swing.JLabel jLabel3;
374
           private javax.swing.JLabel jLabel4;
375
           private javax.swing.JLabel jLabel5;
376
           private javax.swing.JButton jReset;
377
           private javax.swing.JButton jRubah;
           private javax.swing.JScrollPane jScrollPanel;
378
           private javax.swing.JScrollPane jScrollPane2;
379
380
           private javax.swing.JScrollPane jScrollPane3;
381
           private javax.swing.JButton jSimpan;
382
           private javax.swing.JTable jTablel;
383
           private javax.swing.JTable tabelMahasiswa;
           private javax.swing.JTextArea textAlamat;
384
385
           private javax.swing.JTextField textEmail;
386
           private javax.swing.JTextField textJurusan;
387
           private javax.swing.JTextField textNama;
388
           private javax.swing.JTextField textkode;
389
           // End of variables declaration
390
```

Jalankan program, masukkan data dan tekan *button* Simpan untuk menyimpan data

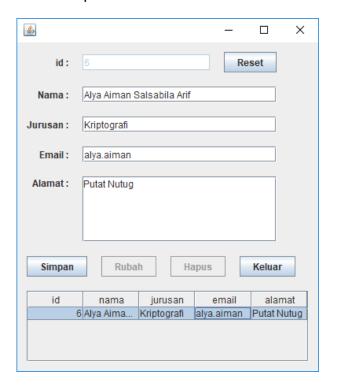




Untuk mengubah data, ubah teks yang terdapat di aplikasi dan klik *button* Rubah

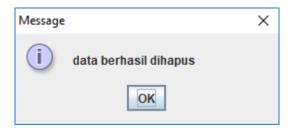


Untuk menghapus dapat klik tombol *button* hapus



Program akan menampilkan sebagai berikut





2. Latihan

Buat tabel baru dengan nama user. Isikan data di tabel tersebut

Buatlah kelas Koneksi dan masukkan source code sebagai berikut

```
Source History 🔯 👼 🔻 🔻 🗸 🖓 😓 📮 🖟 😓 😭 🖆 📦 📵 📓 📲 🚅
 1 + ...5 lines
 6
      package programakademik;
 8 ± import ...3 lines
11
12 + /**...4 lines */
16
      public class Koneksi {
17
          private static Connection con;
18 🖃
          public static Connection getKoneksi () {
19
                 String url = "jdbc:mysql://localhost/akademik";
20
21
                 String user = "root";
                 String password = "";
22
23
                 DriverManager.registerDriver(new com.mysql.jdbc.Driver());
24
                  con = DriverManager.getConnection(url, user, password);
 25
                 System.out.println("koneksi sukses");
26
              } catch (SQLException t) {
                 System.out.println("Error Membuat Koneksi");
27
28
              1
29
          return con;
 30
          }
31
```

Buatlah kelas Login dengan menggunakan JFrame Form. Buatlah desain kelas Login

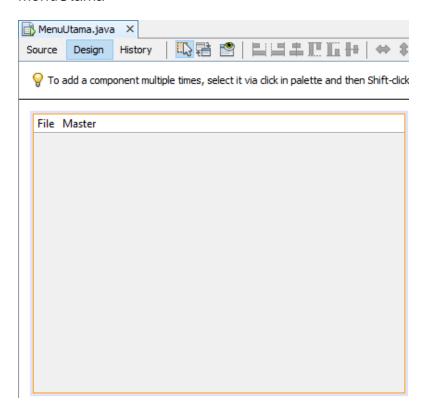


Hapus kelas ProgramAkademik. Masukkan *source code* sebagai berikut pada kelas Login

```
Login.java X
                   Source Design History
  1 ± ...5 lines
       package programakademik;
  6
  8 - import java.sql.Connection;
       import java.sql.PreparedStatement;
  9
       import java.sql.ResultSet;
 10
       import java.sql.SQLException;
 11
     import javax.swing.JOptionPane;
 12
 13
    + /**...4 lines */
 14
 18
       public class Login extends javax.swing.JFrame {
 19
 20
    +
           /** Creates new form Login ...3 lines */
    口
 23
           public Login() {
               initComponents();
 24
 25
 26
 27
    +
           /** This method is called from within the constructor to initialize the form
 32
           @SuppressWarnings("unchecked")
 33 +
           Generated Code
 109
 110 =
           private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
 111
               // TODO add your handling code here:
               ResultSet r = null;
  <u>@</u>
 113
               String username = tUsername.getText();
               String password = tPassword.getText();
 114
 115
```

```
116
               try {
117
                   Connection c = Koneksi.getKoneksi();
118
                   String sql = "select * from user where user = ? and pass = ?";
119
                  PreparedStatement p = c.prepareStatement(sql);
120
                  p.setString(1, username);
121
                   p.setString(2, password);
122
                  r = p.executeQuery();
123
124
                  if (r.next())
125
                      JOptionPane.showMessageDialog(this, "Login Sukses");
126
                      MenuUtama mu = new MenuUtama();
127
                      mu.setVisible(true);
128
                      this.dispose();
129
                      else
                             -{
130
                       JOptionPane.showMessageDialog(this, "Kesalahan username/password");
131
                      resetText():
132
133
                  catch (SQLException e) {
134
                  System.out.println("Terjadi Kesalahan");
135
               }
136
137
138
          private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
139
              // TODO add your handling code here:
               System.exit(0);
140
141
142
143 🚍
           private void resetText() {
144
              tUsername.setText("");
145
               tPassword.setText("");
146
147 +
           /**...3 lines */
150 -
           public static void main(String args[]) {
               /* Set the Nimbus look and feel */
151
152 ±
               Look and feel setting code (optional)
173
174
               /* Create and display the form */
   白
               java.awt.EventQueue.invokeLater(new Runnable() {
₩.
   阜
                   public void run() {
177
                       new Login().setVisible(true);
178
179
               });
180
181
           // Variables declaration - do not modify
182
183
           private javax.swing.JButton jButtonl;
184
           private javax.swing.JButton jButton2;
185
           private javax.swing.JLabel jLabell;
186
           private javax.swing.JLabel jLabel2;
187
           private javax.swing.JLabel jLabel3;
188
           private javax.swing.JPasswordField tPassword;
189
           private javax.swing.JTextField tUsername;
190
           // End of variables declaration
191
```

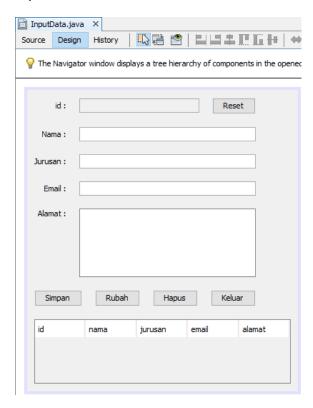
Buatlah kelas MenuUtama dengan menggunakan JFrame Form. Buatlah desain kelas MenuUtama



Masukkan source code sebagai berikut pada kelas MenuUtama

```
MenuUtama.java X
 Source Design History 🕼 🖟 🔻 🔻 🗸 🗸 🖶 🖫 🖓 😤 🔛 🖆 🎒 🔘 🗎 🦓
  1 + ...5 lines
  6
       package programakademik;
  7
  8
    + /**...4 lines */
  12
       public class MenuUtama extends javax.swing.JFrame {
  13
           /** Creates new form MenuUtama ...3 lines */
  14 +
  17 =
           public MenuUtama() {
               initComponents();
  18
  19
  20
           /** This method is called from within the constructor to initialize the form
  21 +
           @SuppressWarnings("unchecked")
  26
  27 +
           Generated Code
  76
  77
    private void jMenuItem1ActionPerformed(java.awt.event.ActionEvent evt) {
  78
               // TODO add your handling code here:
  79
               Login 1 = new Login();
  80
               1.setVisible(true);
  81
               this.dispose();
  82
  83
    private void jMenuItem2ActionPerformed(java.awt.event.ActionEvent evt) {
  84
  85
               // TODO add your handling code here:
  86
               InputData ip = new InputData();
  87
               ip.setVisible(true);
  88
  89
    +
           /**...3 lines */
  90
  93
    口
           public static void main(String args[]) {
  94
               /* Set the Nimbus look and feel */
  95 🕀
               Look and feel setting code (optional)
 116
 117
               /* Create and display the form */
  java.awt.EventQueue.invokeLater(new Runnable() {
 ₩. 🖨
                   public void run() {
 120
                       new MenuUtama().setVisible(true);
 121
 122
               });
 123
 124
           // Variables declaration - do not modify
 125
 126
           private javax.swing.JMenu jMenul;
 127
           private javax.swing.JMenu jMenu2;
 128
           private javax.swing.JMenuBar jMenuBarl;
 129
           private javax.swing.JMenuItem jMenuIteml;
 130
           private javax.swing.JMenuItem jMenuItem2;
 131
           // End of variables declaration
132
```

Buatlah kelas InputData dengan menggunakan JFrame Form. Buatlah desain kelas InputData.



Masukkan source code sebagai berikut pada kelas InputData

```
☐ InputData.java ×
                      Source Design History
   1 + ...5 lines
   6
        package programakademik;
  8
     + import ...8 lines
  16
  17 + /**...4 lines */
        public class InputData extends javax.swing.JFrame {
  21
  22
  23 +
            /** Creates new form InputData ...3 lines */
     public InputData() {
  26
  27
                 initComponents();
  28
                 loadData();
  29
  30
             /** This method is called from within the constructor to initialize the form
  31
     +
  36
             @SuppressWarnings("unchecked")
     +
             Generated Code
  37
 228
             private void jSimpanActionPerformed(java.awt.event.ActionEvent evt) {
 229
     230
                 // TODO add your handling code here:
                 String nama = textNama.getText();
 231
 232
                 String jurusan = textJurusan.getText();
 233
                 String email = textEmail.getText();
 234
                 String alamat = textAlamat.getText();
 235
 236
              try{
 237
                  Connection c = Koneksi.getKoneksi();
 238
                  String sql = "INSERT INTO MAHASISWA (nama, jurusan, email, alamat) VALUES (?, ?, ?, ?)";
                  PreparedStatement p = c.prepareStatement(sql);
 240
                  p.setString(1, nama);
 241
                  p.setString(2, jurusan);
 242
                  p.setString(3, email);
 243
                  p.setString(4, alamat);
 244
                  p.executeUpdate();
 245
                  p.close();
 246
              } catch(SQLException e) {
 247
                  System.out.println("Terjadi Kesalahan");
 248
 249
              refreshTabel();
              loadData();
 250
 251
 253
          private void tabelMahasiswaMouseClicked(java.awt.event.MouseEvent evt) {
 254
              // TODO add your handling code here:
              int index = tabelMahasiswa.getSelectedRow();
 255
              TableModel model = tabelMahasiswa.getModel();
 257
 258
              textkode.setText(model.getValueAt(index, 0).toString());
 259
              textNama.setText(model.getValueAt(index, 1).toString());
              textJurusan.setText(model.getValueAt(index, 2).toString());
 260
 261
              textEmail.setText(model.getValueAt(index, 3).toString());
 262
              textAlamat.setText(model.getValueAt(index, 4).toString());
 263
 264
```

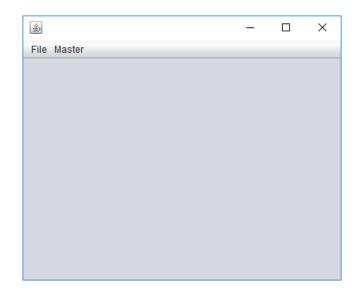
```
265 private void jRubahActionPerformed(java.awt.event.ActionEvent evt) {
266
              // TODO add your handling code here:
              String nama = textNama.getText();
267
268
             String jurusan = textJurusan.getText();
             String email = textEmail.getText();
269
270
             String alamat = textAlamat.getText();
271
             String id = textkode.getText();
272
273
274
                 Connection c = Koneksi.getKoneksi();
                 String sql = "update mahasiswa set nama = ?,jurusan = ?,email = ?,alamat = ? where id = ?";
275
                 PreparedStatement p = c.prepareStatement(sql);
277
                 p.setString(1, nama);
278
                 p.setString(2, jurusan);
279
                 p.setString(3, email);
280
                 p.setString(4, alamat);
281
                 p.setString(5, id);
282
                 p.executeUpdate();
283
                 p.close();
284
                 JOptionPane.showMessageDialog(this, "data berhasil dirubah");
285
                 jRubah.setEnabled(false);
286
                 jHapus.setEnabled(false);
287
                 jSimpan.setEnabled(true);
288
             } catch(SQLException e) {
289
                 System.out.println("Terjadi Kesalahan");
290
291
             refreshTabel();
292
             loadData();
293
294
295
     private void textkodeActionPerformed(java.awt.event.ActionEvent evt) {
296
                 // TODO add your handling code here:
297
298
299
    戸
             private void jHapusActionPerformed(java.awt.event.ActionEvent evt) {
300
                 // TODO add your handling code here:
                 String id = textkode.getText();
301
302
303
                 trv{
                      Connection c = Koneksi.getKoneksi();
304
                      String sql = "DELETE FROM MAHASISWA where id = ?";
305
                      PreparedStatement p = c.prepareStatement(sql);
307
                      p.setString(1, id);
308
                      p.executeUpdate();
309
                      p.close();
310
                      JOptionPane.showMessageDialog(this, "data berhasil dihapus");
311
                      jRubah.setEnabled(false);
312
                      jHapus.setEnabled(false);
313
                      jSimpan.setEnabled(true);
314
                 } catch(SQLException e) {
315
                      System.out.println("Terjadi Kesalahan");
316
                  1
317
                 refreshTabel();
318
                 loadData();
319
                 refreshText();
320
321
```

```
322 =
            private void jResetActionPerformed(java.awt.event.ActionEvent evt) {
323
                // TODO add your handling code here:
324
                refreshTabel();
325
                loadData();
326
                refreshText();
327
                jSimpan.setEnabled(true);
328
                jRubah.setEnabled(false);
329
                jHapus.setEnabled(false);
330
331
332
    private void jKeluarActionPerformed(java.awt.event.ActionEvent evt) {
333
                // TODO add your handling code here:
334
                this.dispose();
335
336
337
    private void loadData() {
338
                try{
339
                     Connection c = Koneksi.getKoneksi();
  Q.
                     Statement s = c.createStatement();
341
342
                     String sql = "SELECT * FROM MAHASISWA";
343
                     ResultSet r = s.executeQuery(sql);
344
345
                     while (r.next()) {
346
                         // lakukan penelusuran baris
347
                         String id = r.getString("id");
348
                         String nama = r.getString("nama");
349
                         String jurusan = r.getString("jurusan");
350
                         String email = r.getString("email");
351
                         String alamat = r.getString("alamat");
352
                         String tbData[] = {id,nama,jurusan,email,alamat};
353
                      DefaultTableModel tblModel = (DefaultTableModel)tabelMahasiswa.getModel();
354
                      tblModel.addRow(tbData);
355
356
                  r.close();
357
                  s.close();
358
              } catch(SQLException e) {
                  System.out.println("Terjadi Kesalahan");
359
360
361
362
363
           private void refreshTabel(){
364
              DefaultTableModel model = (DefaultTableModel)
365
               tabelMahasiswa.getModel();
366
              while (model.getRowCount()>0) {
367
                  model.setRowCount(0);
368
369
370
371
           private void refreshText() {
372
              textkode.setText("");
373
              textNama.setText("");
374
               textJurusan.setText("");
375
              textEmail.setText("");
376
              textAlamat.setText("");
377
378
```

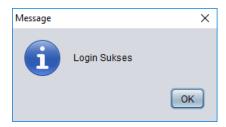
```
379
           // Variables declaration - do not modify
380
           private javax.swing.JButton jHapus;
381
           private javax.swing.JButton jKeluar;
382
           private javax.swing.JLabel jLabell;
383
           private javax.swing.JLabel jLabel2;
384
           private javax.swing.JLabel jLabel3;
385
           private javax.swing.JLabel jLabel4;
386
           private javax.swing.JLabel jLabel5;
           private javax.swing.JButton jReset;
387
388
           private javax.swing.JButton jRubah;
           private javax.swing.JScrollPane jScrollPanel;
389
390
           private javax.swing.JScrollPane jScrollPane2;
391
           private javax.swing.JScrollPane jScrollPane3;
392
           private javax.swing.JButton jSimpan;
393
           private javax.swing.JTable jTablel;
394
           private javax.swing.JTable tabelMahasiswa;
395
           private javax.swing.JTextArea textAlamat;
396
           private javax.swing.JTextField textEmail;
397
           private javax.swing.JTextField textJurusan;
398
           private javax.swing.JTextField textNama;
399
           private javax.swing.JTextField textkode;
400
           // End of variables declaration
401
```

Jalankan program, masukkan *username* dan *password*. Kemudian tekan *button* Login

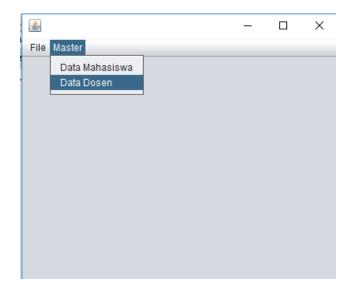


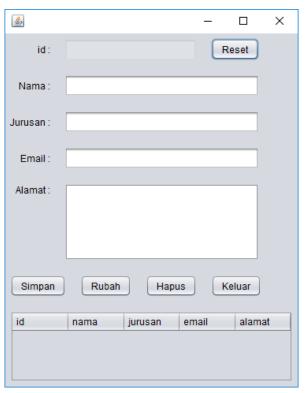


Jika *username* dan *password* sesuai, maka program akan menampilkan sebagai berikut



Pilih *menu item* Data Mahasiswa atau Data Dosen pada *menu* Master. Jika memilih *menu item* Data Mahasiswa, maka akan kembali ke tampilan *login*





Jika memilih *menu item* Data Dosen, maka program akan menampilkan sebagai berikut.

Masukkan data dan tekan *button* Simpan untuk menyimpan data



Program akan menampilkan sebagai berikut



Untuk mengubah data, ubah teks yang terdapat di program dan klik *button* Rubah





Untuk menghapus dapat klik tombol *button* Hapus



