

Laporan Hasil Praktikum

Pemrograman Desktop



Tugas 7

ALYA AIMAN SALSABILA ARIF

1817101379

Tingkat III Rekayasa Perangkat Lunak Kripto

Politeknik Siber dan Sandi Negara

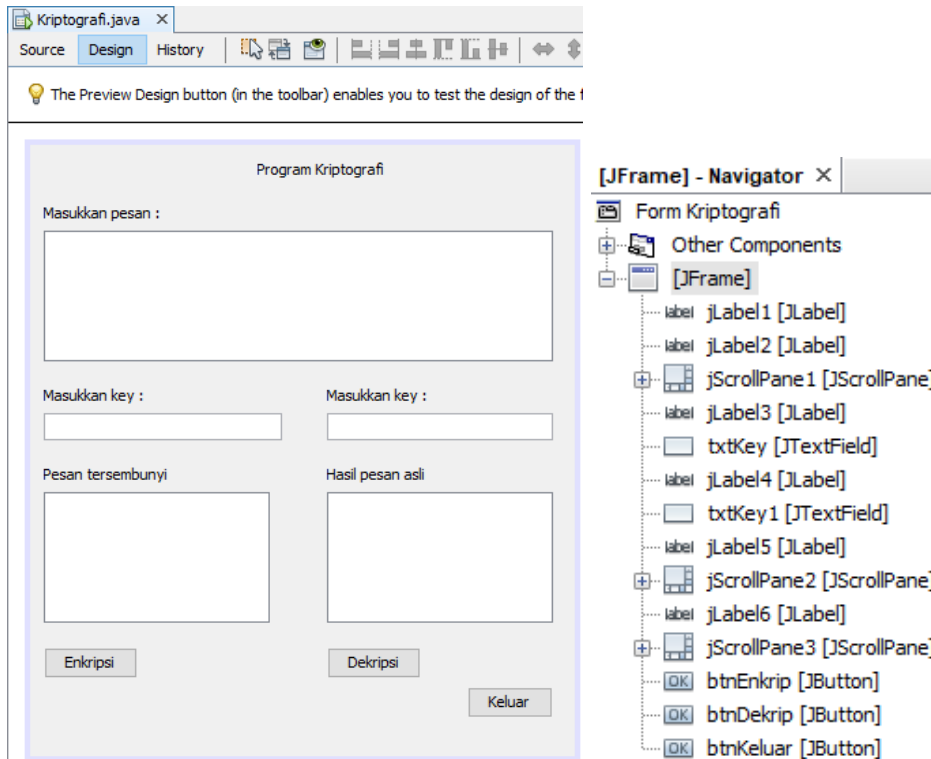
2020/2021

Daftar Isi

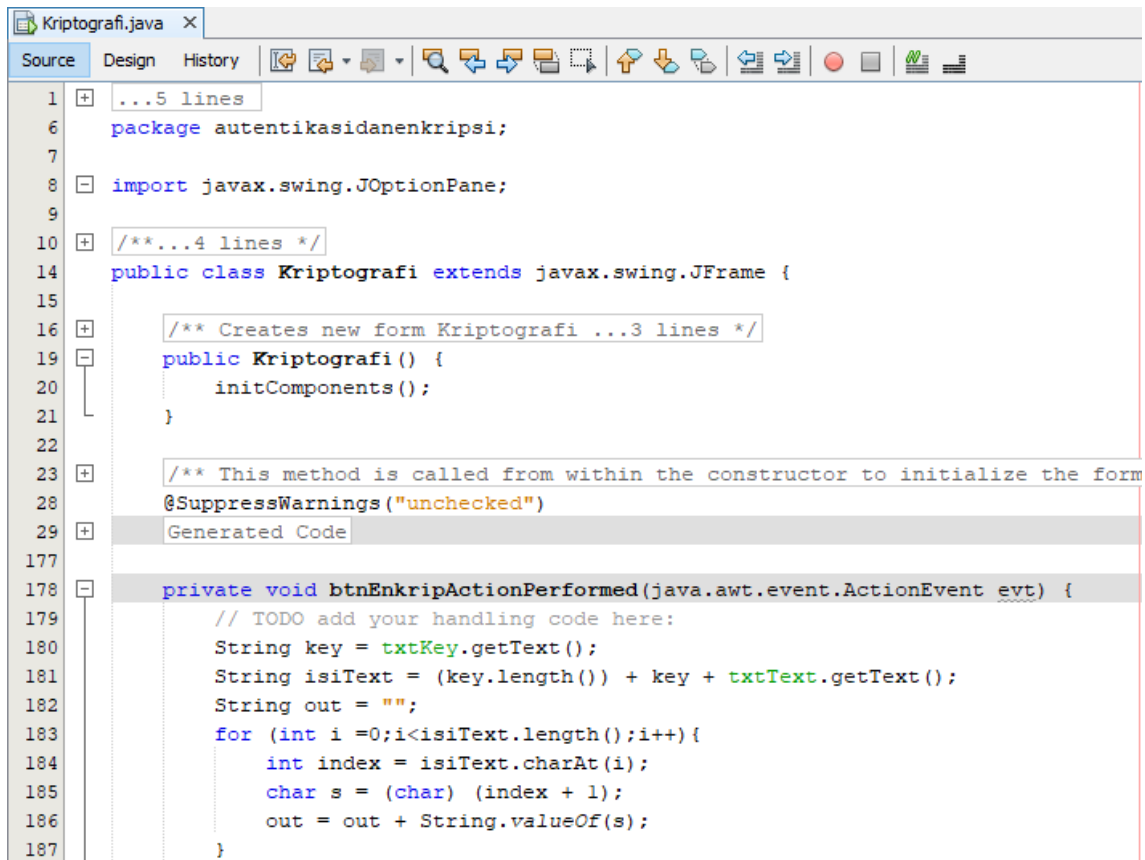
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1. Praktikum 1

Buat project baru dan sesuaikan tampilannya seperti berikut. Buatlah kelas Kriptografi dengan menggunakan JFrame Form. Buatlah desain kelas Kriptografi



Masukkan *source code* sebagai berikut pada kelas Kriptografi



```
1  ...5 lines
6  package autentikasidanenkripsi;
7
8  import javax.swing.JOptionPane;
9
10 /**...4 lines */
14 public class Kriptografi extends javax.swing.JFrame {
15
16     /** Creates new form Kriptografi ...3 lines */
19     public Kriptografi() {
20         initComponents();
21     }
22
23     /** This method is called from within the constructor to initialize the form
28     @SuppressWarnings("unchecked")
29     Generated Code
177
178     private void btnEnkripActionPerformed(java.awt.event.ActionEvent evt) {
179         // TODO add your handling code here:
180         String key = txtKey.getText();
181         String isiText = (key.length()) + key + txtText.getText();
182         String out = "";
183         for (int i = 0; i < isiText.length(); i++) {
184             int index = isiText.charAt(i);
185             char s = (char) (index + 1);
186             out = out + String.valueOf(s);
187         }
188     }
189 }
```

```

188         txtHasil.setText(out);
189         txtText.setText("");
190         txtKey.setText("");
191     }
192
193     private void btnDekripActionPerformed(java.awt.event.ActionEvent evt) {
194         // TODO add your handling code here:
195         String isiText = txtHasil.getText();
196         char k = (char) (isiText.charAt(0));
197         String key = "", out="";
198
199         int jumKey = Integer.parseInt(String.valueOf(k)) - 1;
200
201         for (int i=1; i <= jumKey; i++){
202             int index = isiText.charAt(i);
203             char s = (char) (index-1);
204             key = key + String.valueOf(s);
205         }
206         if (key.equals(txtKey1.getText())){
207             for (int i=(jumKey + 1); i < isiText.length(); i++){
208                 int index = isiText.charAt(i);
209                 char s = (char) (index-1);
210                 out = out + String.valueOf(s);
211             }
212             txtHasil1.setText(out);
213         }else {
214             JOptionPane.showMessageDialog(this, "key tidak cocok\nsilahkan coba lagi");
215         }
216     }
217
218     if (key.equals(txtKey1.getText())){
219         for (int i=(jumKey + 1); i < isiText.length(); i++){
220             int index = isiText.charAt(i);
221             char s = (char) (index-1);
222             out = out + String.valueOf(s);
223         }
224         txtHasil1.setText(out);
225     }else {
226         JOptionPane.showMessageDialog(this, "key tidak cocok\nsilahkan coba lagi");
227     }
228
229     private void txtKey1ActionPerformed(java.awt.event.ActionEvent evt) {
230         // TODO add your handling code here:
231     }
232
233     private void btnKeluarActionPerformed(java.awt.event.ActionEvent evt) {
234         // TODO add your handling code here:
235         System.exit(0);
236     }
237
238     /**...3 lines */
241     public static void main(String args[]) { ...27 lines }
268

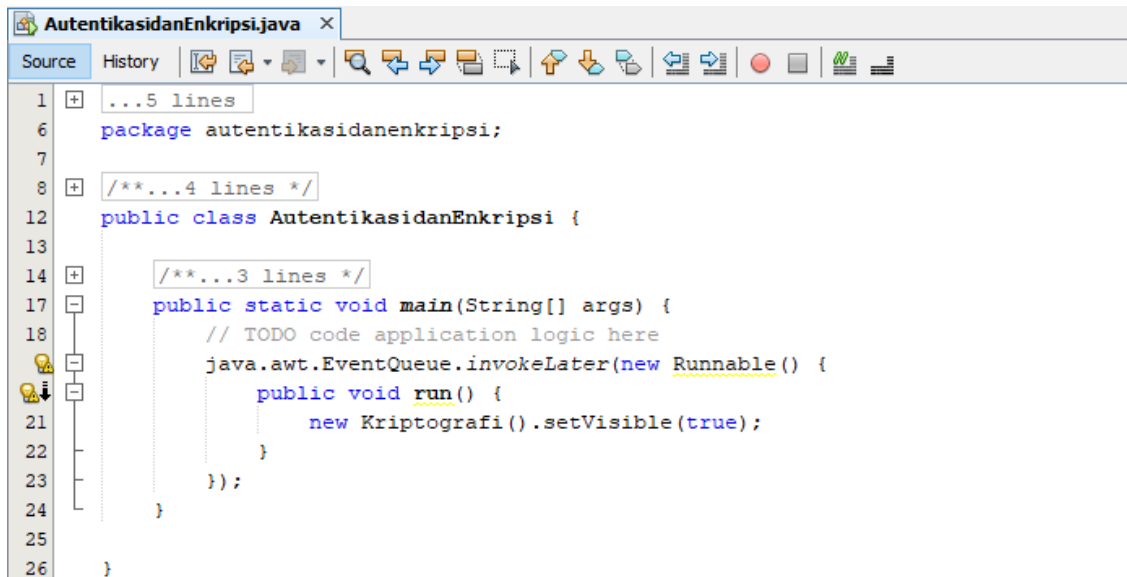
```

```

269 // Variables declaration - do not modify
270 private javax.swing.JButton btnDekrip;
271 private javax.swing.JButton btnEnkrip;
272 private javax.swing.JButton btnKeluar;
273 private javax.swing.JButton jButton1;
274 private javax.swing.JFormattedTextField jFormattedTextField1;
275 private javax.swing.JLabel jLabel1;
276 private javax.swing.JLabel jLabel2;
277 private javax.swing.JLabel jLabel3;
278 private javax.swing.JLabel jLabel4;
279 private javax.swing.JLabel jLabel5;
280 private javax.swing.JLabel jLabel6;
281 private javax.swing.JScrollPane jScrollPane1;
282 private javax.swing.JScrollPane jScrollPane2;
283 private javax.swing.JScrollPane jScrollPane3;
284 private javax.swing.JTextArea txtHasil;
285 private javax.swing.JTextArea txtHasil1;
286 private javax.swing.JTextField txtKey;
287 private javax.swing.JTextField txtKey1;
288 private javax.swing.JTextArea txtText;
289 // End of variables declaration
290 }

```

Masukkan *source code* sebagai berikut pada kelas AutentikasikanEnkripsi



```

AutentikasikanEnkripsi.java
Source History
1 ...5 lines
6 package autentikasikanenkripsi;
7
8 /**...4 lines */
12 public class AutentikasikanEnkripsi {
13
14     /**...3 lines */
17     public static void main(String[] args) {
18         // TODO code application logic here
19         java.awt.EventQueue.invokeLater(new Runnable() {
20             public void run() {
21                 new Kriptografi().setVisible(true);
22             }
23         });
24     }
25
26 }

```

Jalankan program. Untuk melakukan enkripsi, masukkan pesan dan *key* yang berada di bagian kiri kemudian tekan *button* Enkripsi

Program Kriptografi

Masukkan pesan :
Alya Aiman Salsabila Arif

Masukkan key :
saya

Masukkan key :

Pesan tersembunyi

Hasil pesan asli

Enkripsi Dekripsi Keluar

Untuk melakukan dekripsi, masukkan pesan tersembunyi dan *key* yang berada di bagian kanan kemudian tekan *button* Dekripsi

Program Kriptografi

Masukkan pesan :

Masukkan key :

Masukkan key :
saya

Pesan tersembunyi
5tbzbBmzbIBjnboITbmtbcjmbIBsjg

Hasil pesan asli

Enkripsi Dekripsi Keluar

Program akan menampilkan sebagai berikut

Program Kriptografi

Masukkan pesan :

Masukkan key :

Masukkan key :

Pesan tersembunyi
5tbzbBmzbIBjnboITbmtbcjmbIBsjg

Hasil pesan asli

Enkripsi Dekripsi Keluar

Program akan menampilkan sebagai berikut

Program Kriptografi

Masukkan pesan :

Masukkan key :

Masukkan key :
saya

Pesan tersembunyi
5tbzbBmzbIBjnboITbmtbcjmbIBsjg

Hasil pesan asli
Alya Aiman Salsabila Arif

Enkripsi Dekripsi Keluar

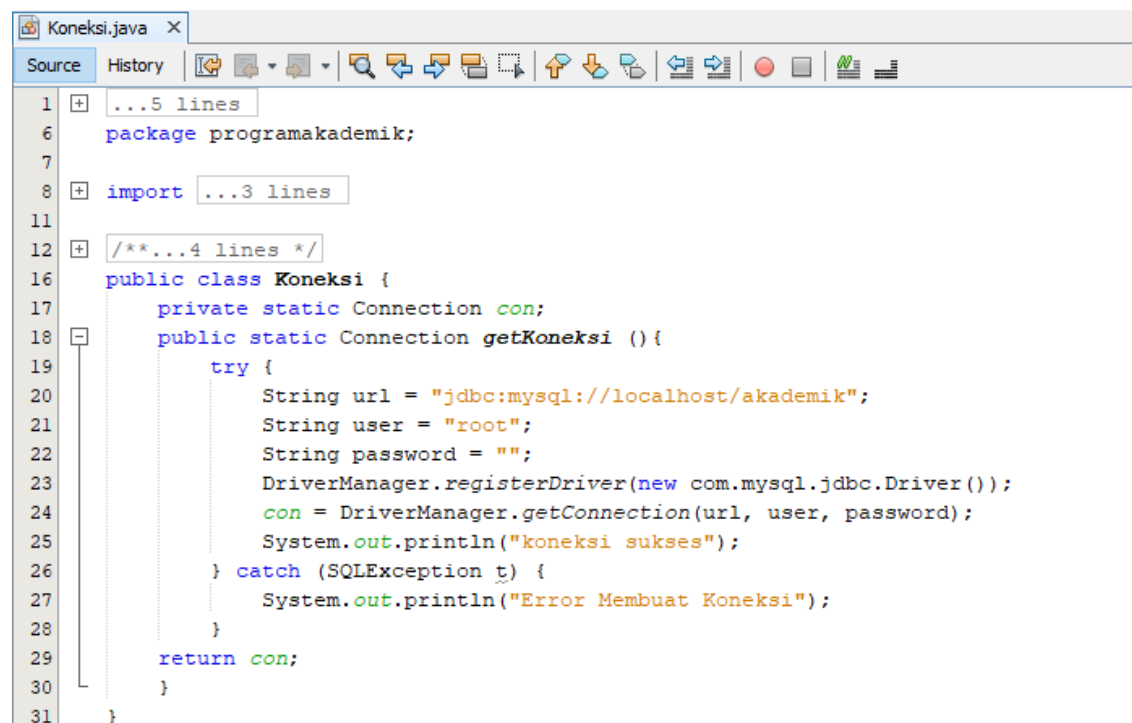
2. Praktikum 2

Kemudian dengan menggunakan koding enkripsi dan dekripsi sebelumnya kita modifikasi “ProgramAkademik” yang sudah dibuat sebelumnya. Tambahkan JTextField untuk melakukan *input key*

Isikan data *username* dan *password* yang sudah dienkrpsi di tabel *user*

```
mysql> use akademik
Database changed
mysql> insert into user values ('1', '5tbzbbmzb', '5tbzbbmzb');
Query OK, 1 row affected (0.07 sec)
```

Buatlah kelas Koneksi dan masukkan *source code* sebagai berikut



```
Koneksi.java X
Source History
1  ...5 lines
6  package programakademik;
7
8  import ...3 lines
11
12  /**...4 lines */
16  public class Koneksi {
17      private static Connection con;
18      public static Connection getKoneksi () {
19          try {
20              String url = "jdbc:mysql://localhost/akademik";
21              String user = "root";
22              String password = "";
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) {
27              System.out.println("Error Membuat Koneksi");
28          }
29          return con;
30      }
31  }
```


Buatlah desain kelas InputData.

InputData.java

Source Design History

To select multiple components in an area hold Shift and drag mouse over the

id :

Nama :

Jurusan :

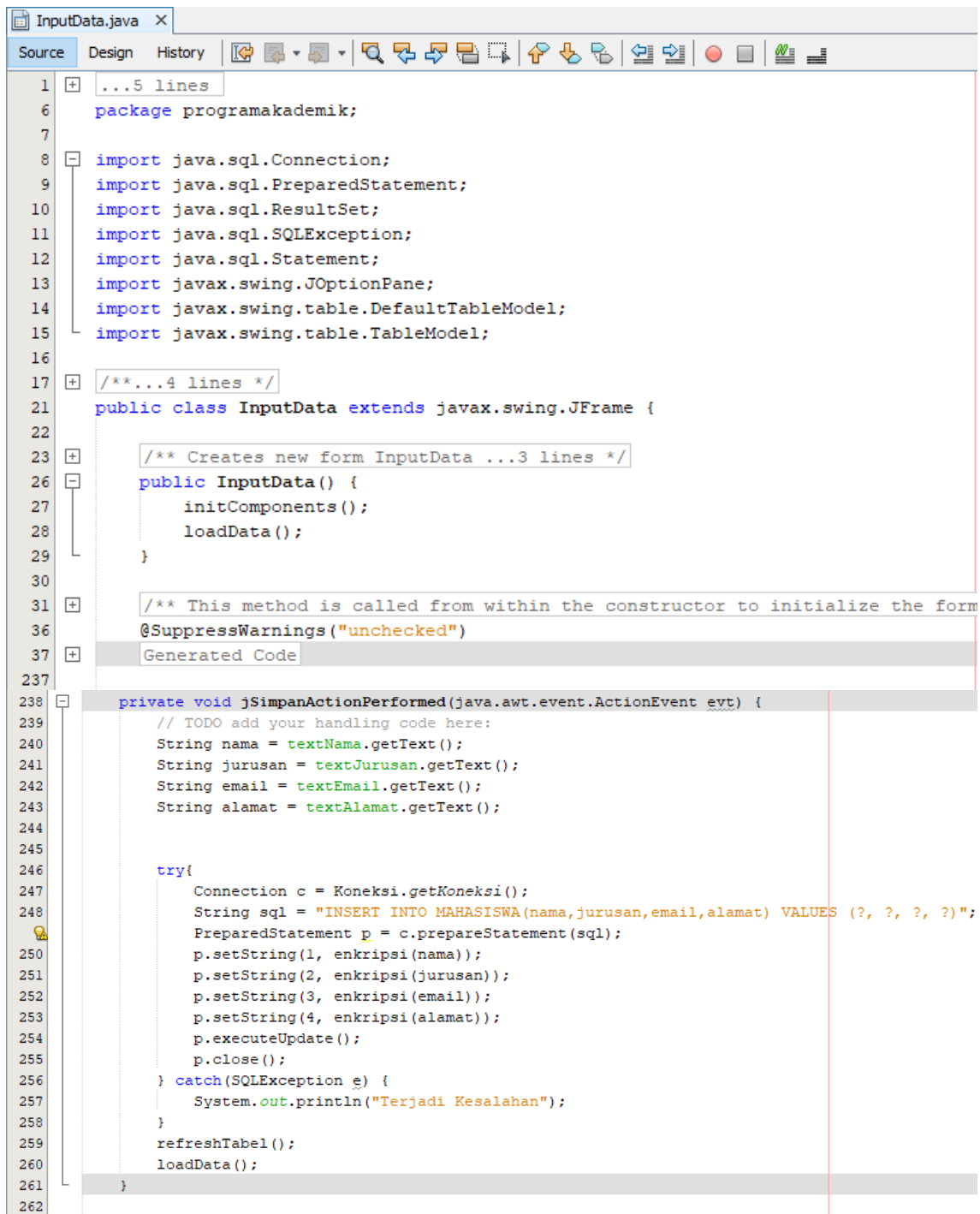
Email :

Alamat :

Masukkan Key :

id	nama	jurusan	email	alamat

Masukkan *source code* sebagai berikut pada kelas InputData



```
1  ...5 lines
6  package programakademik;
7
8  import java.sql.Connection;
9  import java.sql.PreparedStatement;
10 import java.sql.ResultSet;
11 import java.sql.SQLException;
12 import java.sql.Statement;
13 import javax.swing.JOptionPane;
14 import javax.swing.table.DefaultTableModel;
15 import javax.swing.table.TableModel;
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();
28         loadData();
29     }
30
31     /** This method is called from within the constructor to initialize the form
36     @SuppressWarnings("unchecked")
37     Generated Code
237
238     private void jSimpanActionPerformed(java.awt.event.ActionEvent evt) {
239         // TODO add your handling code here:
240         String nama = textNama.getText();
241         String jurusan = textJurusan.getText();
242         String email = textEmail.getText();
243         String alamat = textAlamat.getText();
244
245
246         try{
247             Connection c = Koneksi.getKoneksi();
248             String sql = "INSERT INTO MAHASISWA(nama,jurusan,email,alamat) VALUES (?, ?, ?, ?)";
249             PreparedStatement p = c.prepareStatement(sql);
250             p.setString(1, enkripsi(nama));
251             p.setString(2, enkripsi(jurusan));
252             p.setString(3, enkripsi(email));
253             p.setString(4, enkripsi(alamat));
254             p.executeUpdate();
255             p.close();
256         } catch(SQLException e) {
257             System.out.println("Terjadi Kesalahan");
258         }
259         refreshTabel();
260         loadData();
261     }
262 }
```

```

263 private void tabelMahasiswaMouseClicked(java.awt.event.MouseEvent evt) {
264     // TODO add your handling code here:
265     int index = tabelMahasiswa.getSelectedRow();
266     TableModel model = tabelMahasiswa.getModel();
267
268     textkode.setText(model.getValueAt(index, 0).toString());
269     textNama.setText(dekrip(model.getValueAt(index, 1).toString()));
270     textJurusan.setText(dekrip(model.getValueAt(index, 2).toString()));
271     textEmail.setText(dekrip(model.getValueAt(index, 3).toString()));
272     textAlamat.setText(dekrip(model.getValueAt(index, 4).toString()));
273 }
274
275 private void jRubahActionPerformed(java.awt.event.ActionEvent evt) {
276     // TODO add your handling code here:
277     String nama = (textNama.getText());
278     String jurusan = (textJurusan.getText());
279     String email = (textEmail.getText());
280     String alamat = (textAlamat.getText());
281     String id = textkode.getText();
282
283     try{
284         Connection c = Koneksi.getKoneksi();
285         String sql = "update mahasiswa set nama = ?,jurusan = ?,email = ?,alamat = ? where id = ?";
286         PreparedStatement p = c.prepareStatement(sql);
287         p.setString(1, enkripsi(nama));
288         p.setString(2, enkripsi(jurusan));
289         p.setString(3, enkripsi(email));
290         p.setString(4, enkripsi(alamat));
291         p.setString(5, id);
292         p.executeUpdate();
293         p.close();
294         JOptionPane.showMessageDialog(this, "data berhasil dirubah");
295         jRubah.setEnabled(false);
296         jHapus.setEnabled(false);
297         jSimpan.setEnabled(true);
298     } catch (SQLException e) {
299         System.out.println("Terjadi Kesalahan");
300     }
301     refreshTabel();
302     loadData();
303 }
304

```

```

305 private void textkodeActionPerformed(java.awt.event.ActionEvent evt) {
306     // TODO add your handling code here:
307 }
308
309 private void jHapusActionPerformed(java.awt.event.ActionEvent evt) {
310     // TODO add your handling code here:
311     String id = textkode.getText();
312
313     try{
314         Connection c = Koneksi.getKoneksi();
315         String sql = "DELETE FROM MAHASISWA where id = ?";
316         PreparedStatement p = c.prepareStatement(sql);
317         p.setString(1, id);
318         p.executeUpdate();
319         p.close();
320         JOptionPane.showMessageDialog(this, "data berhasil dihapus");
321         jRubah.setEnabled(false);
322         jHapus.setEnabled(false);
323         jSimpan.setEnabled(true);
324     } catch(SQLException e) {
325         System.out.println("Terjadi Kesalahan");
326     }
327     refreshTabel();
328     loadData();
329     refreshText();
330 }
331
332 private void jResetActionPerformed(java.awt.event.ActionEvent evt) {
333     // TODO add your handling code here:
334     refreshTabel();
335     loadData();
336     refreshText();
337     jSimpan.setEnabled(true);
338     jRubah.setEnabled(false);
339     jHapus.setEnabled(false);
340 }
341
342 private void jKeluarActionPerformed(java.awt.event.ActionEvent evt) {
343     // TODO add your handling code here:
344     System.exit(0);
345 }
346

```

```

347 private void loadData(){
348     try{
349         Connection c = Koneksi.getKoneksi();
350         Statement s = c.createStatement();
351
352         String sql = "SELECT * FROM MAHASISWA";
353         ResultSet r = s.executeQuery(sql);
354         while (r.next()) {
355             // lakukan penelusuran baris
356             String id = r.getString("id");
357             String nama = r.getString("nama");
358             String jurusan = r.getString("jurusan");
359             String email = r.getString("email");
360             String alamat = r.getString("alamat");
361             String tbData[] = {id,nama,jurusan,email,alamat};
362             DefaultTableModel tblModel = (DefaultTableModel)tabelMahasiswa.getModel();
363             tblModel.addRow(tbData);
364         }
365         r.close();
366         s.close();
367     } catch (SQLException e) {
368         System.out.println("Terjadi Kesalahan");
369     }
370 }
371
372 private void refreshTabel(){
373     DefaultTableModel model =(DefaultTableModel)
374     tabelMahasiswa.getModel();
375     while(model.getRowCount()>0){
376         model.setRowCount(0);
377     }
378 }
379
380 private void refreshText(){
381     textkode.setText("");
382     textNama.setText("");
383     textJurusan.setText("");
384     textEmail.setText("");
385     textAlamat.setText("");
386 }
387
388 private String enkripsi(String text){
389     String key = txtKey.getText();
390     String isiText = (key.length()) + key + text;
391     String out = "";
392     for (int i =0;i<isiText.length();i++){
393         int index = isiText.charAt(i);
394         char s = (char) (index + 1);
395         out = out + String.valueOf(s);
396     }
397     return out;
398 }
399

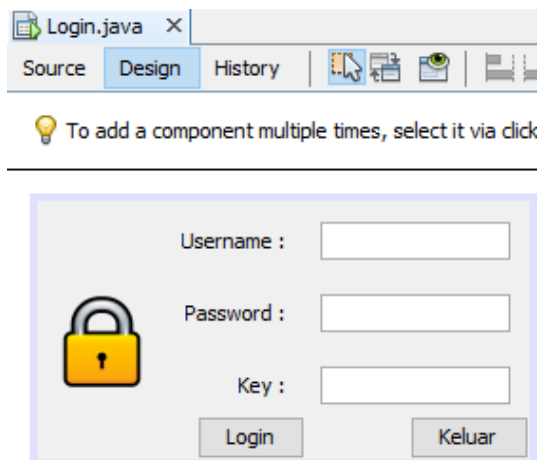
```

```

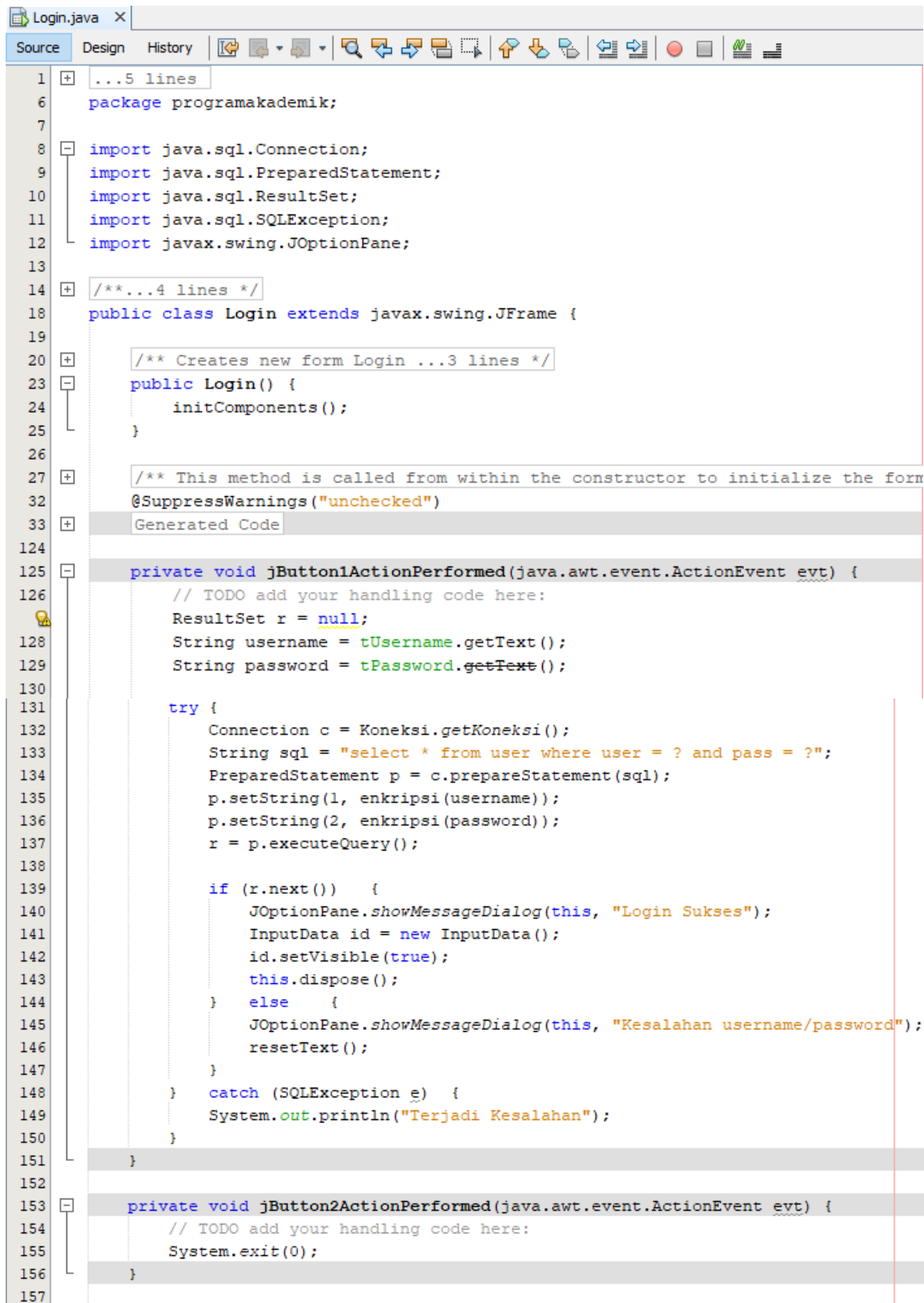
400 private String dekrip(String isiText){
401     //isiText = txtHasil.getText();
402     char k = (char) (isiText.charAt(0));
403     String key = "", out="";
404
405     int jumKey = Integer.parseInt(String.valueOf(k)) - 1;
406
407     for (int i=1; i <= jumKey; i++){
408         int index = isiText.charAt(i);
409         char s = (char) (index-1);
410         key = key + String.valueOf(s);
411     }
412     if (key.equals(txtKey.getText())){
413         for (int i=(jumKey + 1); i < isiText.length(); i++){
414             int index = isiText.charAt(i);
415             char s = (char) (index-1);
416             out = out + String.valueOf(s);
417         }
418     }
419     //else {
420     //JOptionPane.showMessageDialog(this, "key tidak cocok\nsilahkan cobalagi");
421     //}
422     return out;
423 }
424

```

Buatlah desain kelas Login



Masukkan *source code* sebagai berikut pada kelas Login



```
1  ...5 lines
6  package programakademik;
7
8  import java.sql.Connection;
9  import java.sql.PreparedStatement;
10 import java.sql.ResultSet;
11 import java.sql.SQLException;
12 import javax.swing.JOptionPane;
13
14 /**...4 lines */
18 public class Login extends javax.swing.JFrame {
19
20     /** Creates new form Login ...3 lines */
23     public Login() {
24         initComponents();
25     }
26
27     /** This method is called from within the constructor to initialize the form
32     @SuppressWarnings("unchecked")
33     Generated Code
124
125     private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
126         // TODO add your handling code here:
127         ResultSet r = null;
128         String username = tUsername.getText();
129         String password = tPassword.getText();
130
131         try {
132             Connection c = Koneksi.getKoneksi();
133             String sql = "select * from user where user = ? and pass = ?";
134             PreparedStatement p = c.prepareStatement(sql);
135             p.setString(1, enkripsi(username));
136             p.setString(2, enkripsi(password));
137             r = p.executeQuery();
138
139             if (r.next()) {
140                 JOptionPane.showMessageDialog(this, "Login Sukses");
141                 InputData id = new InputData();
142                 id.setVisible(true);
143                 this.dispose();
144             } else {
145                 JOptionPane.showMessageDialog(this, "Kesalahan username/password");
146                 resetText();
147             }
148         } catch (SQLException e) {
149             System.out.println("Terjadi Kesalahan");
150         }
151     }
152
153     private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
154         // TODO add your handling code here:
155         System.exit(0);
156     }
157 }
```

```

158 private void resetText(){
159     tUsername.setText("");
160     tPassword.setText("");
161 }
162
163 private String enkripsi(String text){
164     String key = tKey.getText();
165     String isiText = (key.length()) + key + text;
166     String out = "";
167     for (int i =0;i<isiText.length();i++){
168         int index = isiText.charAt(i);
169         char s = (char) (index + 1);
170         out = out + String.valueOf(s);
171     }
172     return out;
173 }
174
175 private String dekrip(String isiText){
176     //isiText = txtHasil.getText();
177     char k = (char) (isiText.charAt(0));
178     String key = "",out="";
179     int jumKey = Integer.parseInt(String.valueOf(k)) - 1;
180     for (int i=1;i <= jumKey; i++){
181         int index = isiText.charAt(i);
182         char s = (char) (index-1);
183         key = key + String.valueOf(s);
184     }
185     if (key.equals(tKey.getText())){
186         for (int i=(jumKey + 1);i < isiText.length(); i++){
187             int index = isiText.charAt(i);
188             char s = (char) (index-1);
189             out = out + String.valueOf(s);
190         }
191     }
192     //else {
193     //JOptionPane.showMessageDialog(this, "key tidak cocok\nsilahkan cobalagi");
194     //}
195     return out;
196 }
197
198 /**...3 lines */
201 public static void main(String args[]) {
202     /* Set the Nimbus look and feel */
203     Look and feel setting code (optional)
204 }
224

```



```

225      /* Create and display the form */
226      java.awt.EventQueue.invokeLater(new Runnable() {
227          public void run() {
228              new Login().setVisible(true);
229          }
230      });
231  }
232
233  // Variables declaration - do not modify
234  private javax.swing.JButton jButton1;
235  private javax.swing.JButton jButton2;
236  private javax.swing.JLabel jLabel1;
237  private javax.swing.JLabel jLabel2;
238  private javax.swing.JLabel jLabel3;
239  private javax.swing.JLabel jLabel4;
240  private javax.swing.JTextField tKey;
241  private javax.swing.JPasswordField tPassword;
242  private javax.swing.JTextField tUsername;
243  // End of variables declaration
244  }

```

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

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

id	nama	jurusan	email	alamat

Masukkan data dan tekan *button* Simpan untuk menyimpan data

The screenshot shows a Java Swing window with a light gray background. It contains the following elements:

- id :** A text input field with a "Reset" button to its right.
- Nama :** A text input field containing "Alya Aiman Salsabila Arif".
- Jurusan :** A text input field containing "Kriptografi".
- Email :** A text input field containing "alya.aiman".
- Alamat :** A text area containing "Ciseeng".
- Masukkan Key :** A text input field containing "saya".
- Buttons:** "Simpan", "Rubah", "Hapus", and "Keluar" are arranged horizontally at the bottom.
- Table:** A table with 5 columns: id, nama, jurusan, email, and alamat. It is currently empty.

This screenshot shows the same window after the data has been saved. The table now contains one row of data:

id	nama	jurusan	email	alamat
12	5tbzbBm...	5tbzbLsj...	5tbzbbmz...	5tbzbDjtff...

Program akan menampilkan sebagai berikut

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

id : Reset

Nama :

Jurusan :

Email :

Alamat :

Masukkan Key :

Simpan Rubah Hapus Keluar

id	nama	jurusan	email	alamat
12	5tbzbBm...	5tbzbLsj...	5tbzbbmz...	5tbzbDjtff...

id : Reset

Nama :

Jurusan :

Email :

Alamat :

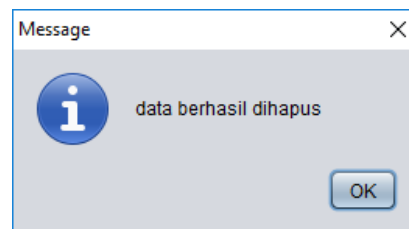
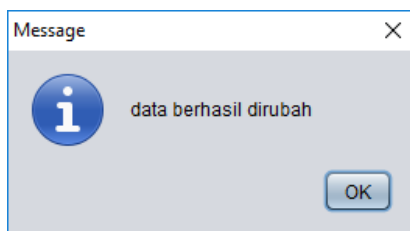
Masukkan Key :

Simpan Rubah Hapus Keluar


id	nama	jurusan	email	alamat
14	5tbzbBm...	5tbzbLsj...	5tbzbbmz...	5tbzbDjtff...

Program akan menampilkan sebagai berikut

Program akan menampilkan sebagai berikut



Untuk menghapus dapat klik tombol *button* Hapus



—

□

×

id :

Reset

Nama :

Jurusan :

Email :

Alamat :

Masukkan Key :

Simpan

Rubah

Hapus

Keluar

id	nama	jurusan	email	alamat