

1. Berdasarkan UI pada soal praktikum-8 soal nomor 2 buatlah flow aplikasi sebagai berikut dengan JDBC:

#### a. Source Code - ConnectionDB.java

```

1 package com.ibik.pbo.praktikum;
2
3 import java.sql.Connection;
4 import java.sql.DriverManager;
5 import java.sql.SQLException;
6
7 public class ConnectionDB {
8     private Connection conn;
9
10    public Connection connect() throws SQLException {
11        String host = "127.0.0.1:3306";
12        String dbName = "university";
13        String dbuser = "root";
14        String dbpassword = "";
15
16        try {
17            Class.forName("com.mysql.cj.jdbc.Driver");
18        } catch (ClassNotFoundException e) {
19            e.printStackTrace();
20        }
21
22        Connection conn = DriverManager.getConnection("jdbc:mysql://" + host + "/" + dbName,
23            dbuser, dbpassword);
24
25        return conn;
26    }
27
28    public Connection close() throws SQLException {
29        conn.close();
30        return conn;
31    }
32 }
33

```

#### b. Source Code - Login.java

```

1 package com.ibik.pbo.praktikum;
2
3 import java.awt.EventQueue;
4
5 public class Login extends JFrame {
6
7     private JPanel contentPane;
8     private JTextField field_Email;
9     private JTextField field_Password;
10    private JButton button_Login;
11    private JButton btnRegister;
12
13    /**
14     * Launch the application.
15     */
16    public static void main(String[] args) {
17        EventQueue.invokeLater(new Runnable() {
18            public void run() {
19                try {
20                    Login frame = new Login();
21                    frame.setVisible(true);
22                } catch (Exception e) {
23                    e.printStackTrace();
24                }
25            }
26        });
27    }
28
29    /**
30     * Create the frame.
31     */
32    public Login() {
33        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
34        setBounds(100, 100, 258, 182);
35        setLocationRelativeTo(null);
36        contentPane = new JPanel();
37        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
38
39        setContentPane(contentPane);
40    }
41
42 }
43

```

```

58     contentPane.setLayout(null);
59
60     JLabel label_Email = new JLabel("Email");
61     label_Email.setBounds(10, 14, 46, 14);
62     contentPane.add(label_Email);
63
64     field_Email = new JTextField();
65     field_Email.setColumns(10);
66     field_Email.setBounds(99, 11, 133, 20);
67     contentPane.add(field_Email);
68
69     JLabel label_Password = new JLabel("Password");
70     label_Password.setBounds(10, 42, 79, 14);
71     contentPane.add(label_Password);
72
73     field_Password = new JTextField();
74     field_Password.setColumns(10);
75     field_Password.setBounds(99, 39, 133, 20);
76     contentPane.add(field_Password);
77
78     JCheckBox cb_RemPassword = new JCheckBox("Remember Password");
79     cb_RemPassword.setFont(new Font("Tahoma", Font.PLAIN, 11));
80     cb_RemPassword.setBounds(99, 66, 125, 23);
81     contentPane.add(cb_RemPassword);
82
83     button_Login = new JButton("LOGIN");
84     button_Login.addMouseListener(new MouseAdapter() {
85         @Override
86         public void mouseClicked(MouseEvent e) {
87             StudentDao studentdao1 = new StudentDao();
88             String message = "";
89
90             if (field_Email.getText().equals("") || field_Password.getText().equals("")) {
91                 message = "Data tidak lengkap!";
92             } else {
93                 try {
94                     Student student = studentdao1.findByAccount(field_Email.getText(), field_Password.getText());
95                     message = "Selamat datang " + student.getFullname() + "!";
96
97                     new MainMenu().setVisible(true);
98                     dispose();
99
100                 } catch (Exception e1) {
101                     e1.printStackTrace();
102                     message = "Data tidak ditemukan!";
103                 }
104                 JOptionPane.showMessageDialog(null, message);
105             }
106         });
107     button_Login.setBounds(125, 96, 107, 30);
108     contentPane.add(button_Login);
109
110     btnRegister = new JButton("REGISTER");
111     btnRegister.addMouseListener(new MouseAdapter() {
112         @Override
113         public void mouseClicked(MouseEvent e) {
114             new Register().setVisible(true);
115             dispose();
116         }
117     });
118     btnRegister.setBounds(10, 96, 107, 30);
119     contentPane.add(btnRegister);
120 }
121 }
122

```

### c. Source Code - Register.java

```
1 package com.ibik.pbo.praktikum;
2
3 import java.awt.EventQueue;
4
23 public class Register extends JFrame {
24
25     private JPanel contentPane;
26     private JTextField field_Email;
27     private JTextField field_Fullname;
28     private JTextField field_Phone;
29     private JLabel label_Gender;
30     private JTextField field_Password;
31     String gender = "";
32     String citizenship = "";
33
34     /**
35      * Launch the application.
36      */
37
38     public static void main(String[] args) {
39         EventQueue.invokeLater(new Runnable() {
40             public void run() {
41                 try {
42                     Register frame = new Register();
43                     frame.setVisible(true);
44                 } catch (Exception e) {
45                     e.printStackTrace();
46                 }
47             }
48         });
49     }
50
51     /**
52      * Create the frame.
53      */
54     public Register() {
55         setTitle("Register");
56         setResizable(false);
57         setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
58         setBounds(100, 100, 265, 284);
59         setLocationRelativeTo(null);
60         contentPane = new JPanel();
61
62         contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
63
64         setContentPane(contentPane);
65         contentPane.setLayout(null);
66
67         final JLabel label_Fullname = new JLabel("Fullname");
68         label_Fullname.setBounds(26, 11, 46, 14);
69         contentPane.add(label_Fullname);
70
71         field_Email = new JTextField();
72         field_Email.setBounds(82, 39, 133, 20);
73         contentPane.add(field_Email);
74         field_Email.setColumns(10);
75
76         final JLabel label_Email = new JLabel("Email");
77         label_Email.setBounds(26, 42, 46, 14);
78         contentPane.add(label_Email);
79
80         field_Fullname = new JTextField();
81         field_Fullname.setColumns(10);
82         field_Fullname.setBounds(82, 8, 133, 20);
83         contentPane.add(field_Fullname);
84
85         final JLabel label_Phone = new JLabel("Phone");
86         label_Phone.setBounds(26, 73, 46, 14);
87         contentPane.add(label_Phone);
88
89         field_Phone = new JTextField();
90         field_Phone.setColumns(10);
91         field_Phone.setBounds(82, 70, 133, 20);
92         contentPane.add(field_Phone);
93
94         label_Gender = new JLabel("Gender");
95         label_Gender.setBounds(26, 101, 46, 14);
96         contentPane.add(label_Gender);
97
98         final JRadioButton rb_Female = new JRadioButton("Female");
99         rb_Female.setBounds(82, 97, 59, 23);
100        contentPane.add(rb_Female);
101    }
```

```

102     final JRadioButton rb_Male = new JRadioButton("Male");
103     rb_Male.setBounds(156, 97, 59, 23);
104     contentPane.add(rb_Male);
105
106     ButtonGroup gender_group = new ButtonGroup();
107     gender_group.add(rb_Male);
108     gender_group.add(rb_Female);
109
110     final JLabel label_Citizenship = new JLabel("Citizenship");
111     label_Citizenship.setBounds(21, 129, 51, 14);
112     contentPane.add(label_Citizenship);
113
114     final JComboBox cb_Citizenship = new JComboBox();
115     cb_Citizenship.setModel(new DefaultComboBoxModel(new String[] {"Indonesia", "Malaysia", "Singapore", "Laos", "Cambodia"}));
116     cb_Citizenship.setToolTipText("");
117     cb_Citizenship.setBounds(82, 127, 133, 22);
118     contentPane.add(cb_Citizenship);
119
120     JButton button_Submit = new JButton("SUBMIT");
121     button_Submit.addMouseListener(new MouseAdapter() {
122         @Override
123         public void mouseClicked(MouseEvent e) {
124             if (field_Fullname.getText().equals("") || field_Email.getText().equals("") || field_Phone.getText().equals("") ||
125                 JOptionPane.showMessageDialog(null, "Data tidak boleh kosong. Silakan periksa kembali\r\n"
126                     + "isian anda", "Error", JOptionPane.ERROR_MESSAGE);
127             }else {
128                 if (rb_Female.isSelected() == true) {
129                     gender = "Female";
130                 }else {
131                     gender = "Male";
132                 }
133                 JOptionPane.showMessageDialog(null, label_Fullname.getText() + " : " + field_Fullname.getText() + "\n" + label_
134                     citizenship = (String) cb_Citizenship.getSelectedItem();
135
136                 try {
137                     Insert();
138                     JOptionPane.showMessageDialog(null, "Berhasil Disimpan!");
139                     new Login().setVisible(true);
140                     dispose();
141                 } catch (Exception e1) {
142                     JOptionPane.showMessageDialog(null, "Gagal Menyimpan!" + e1.getMessage());
143
144                     e1.printStackTrace();
145                 }
146             }
147         });
148
149     button_Submit.setBounds(82, 191, 136, 30);
150     contentPane.add(button_Submit);
151
152     JLabel label_Password = new JLabel("Password");
153     label_Password.setBounds(26, 163, 46, 14);
154     contentPane.add(label_Password);
155
156     field_Password = new JPasswordField();
157     field_Password.setColumns(10);
158     field_Password.setBounds(82, 160, 133, 20);
159     contentPane.add(field_Password);
160 }
161
162 private void Insert() throws Exception {
163     Student student1 = new Student();
164     student1.setFullname(field_Fullname.getText());
165     student1.setEmail(field_Email.getText());
166     student1.setPhone(field_Phone.getText());
167     student1.setGender(gender);
168     student1.setCitizenship(citizenship);
169     student1.setPassword(field_Password.getText());
170
171     StudentDao studentdao1 = new StudentDao();
172     studentdao1.saved(student1);
173 }
174 }
175

```

#### d. Source Code - MainMenu.java

```
1 package com.ibik.pbo.praktikum;
2
3 import java.awt.EventQueue;
4
5 public class MainMenu extends JFrame {
6     private.JTable table_2;
7     private.JTextField field_Npm;
8     private.JTextField field_Nama;
9     String nilai;
10    final ButtonGroup nilai_group = new ButtonGroup();
11    /**
12     * Launch the application.
13     */
14    public static void main(String[] args) {
15        EventQueue.invokeLater(new Runnable() {
16            public void run() {
17                try {
18                    MainMenu frame = new MainMenu();
19                    frame.setVisible(true);
20                } catch (Exception e) {
21                    e.printStackTrace();
22                }
23            }
24        });
25    }
26
27    /**
28     * Create the frame.
29     * @throws SQLException
30     */
31    public MainMenu() throws SQLException {
32        setResizable(false);
33        setTitle("Latihan 04");
34        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
35        setBounds(100, 100, 899, 614);
36        setLocationRelativeTo(null);
37
38        JMenuBar menuBar = new JMenuBar();
39        setJMenuBar(menuBar);
40
41        JMenu menu_File = new JMenu("File");
42
43        menuBar.add(menu_File);
44
45        JMenuItem new_MenuItem = new JMenuItem("New");
46        menu_File.add(new_MenuItem);
47
48        JMenuItem save_MenuItem = new JMenuItem("Save");
49        menu_File.add(save_MenuItem);
50
51        JMenuItem exit_MenuItem = new JMenuItem("Exit");
52        menu_File.add(exit_MenuItem);
53
54        JMenu menu_Edit = new JMenu("Edit");
55        menuBar.add(menu_Edit);
56
57        JMenu menu_Help = new JMenu("Help");
58        menuBar.add(menu_Help);
59        getContentPane().setLayout(null);
60
61        JScrollPane scrollPane = new JScrollPane();
62        scrollPane.setBounds(348, 88, 535, 454);
63        getContentPane().add(scrollPane);
64
65        final JRadioButton rdbtnA = new JRadioButton("A");
66        rdbtnA.setBounds(38, 377, 33, 23);
67        getContentPane().add(rdbtnA);
68
69        final JRadioButton rdbtnB = new JRadioButton("B");
70        rdbtnB.setBounds(84, 377, 33, 23);
71        getContentPane().add(rdbtnB);
72
73        final JRadioButton rdbtnC = new JRadioButton("C");
74        rdbtnC.setBounds(130, 377, 33, 23);
75        getContentPane().add(rdbtnC);
76
77        final JRadioButton rdbtnD = new JRadioButton("D");
78        rdbtnD.setBounds(175, 377, 33, 23);
79        getContentPane().add(rdbtnD);
80
81        final JRadioButton rdbtnE = new JRadioButton("E");
82        rdbtnE.setBounds(224, 377, 33, 23);
83        getContentPane().add(rdbtnE);
84    }
85}
```

```

111     final JRadioButton rdbtnF = new JRadioButton("F");
112     rdbtnF.setBounds(269, 377, 33, 23);
113     getContentPane().add(rdbtnF);
114
115     rdbtnA.setActionCommand("A");
116     nilai_group.add(rdbtnA);
117
118     rdbtnB.setActionCommand("B");
119     nilai_group.add(rdbtnB);
120
121     rdbtnC.setActionCommand("C");
122     nilai_group.add(rdbtnC);
123
124     rdbtnD.setActionCommand("D");
125     nilai_group.add(rdbtnD);
126
127     rdbtnE.setActionCommand("E");
128     nilai_group.add(rdbtnE);
129
130     rdbtnF.setActionCommand("F");
131     nilai_group.add(rdbtnF);
132
133     table_2 = new JTable();
134     table_2.addMouseListener(new MouseAdapter() {
135         @Override
136         public void mouseClicked(MouseEvent e) {
137             int row = table_2.getSelectedRow();
138             field_Npm.setText((String) table_2.getModel().getValueAt(row, 0));
139             field>Nama.setText((String) table_2.getModel().getValueAt(row, 1));
140
141             if (table_2.getModel().getValueAt(row, 2).equals("A")) {
142                 rdbtnA.setSelected(true);
143                 nilai = "A";
144             } else if (table_2.getModel().getValueAt(row, 2).equals("B")) {
145                 rdbtnB.setSelected(true);
146                 nilai = "B";
147             } else if (table_2.getModel().getValueAt(row, 2).equals("C")) {
148                 rdbtnC.setSelected(true);
149                 nilai = "C";
150             } else if (table_2.getModel().getValueAt(row, 2).equals("D")) {
151                 rdbtnD.setSelected(true);
152                 nilai = "D";
153             } else if (table_2.getModel().getValueAt(row, 2).equals("E")) {
154                 rdbtnE.setSelected(true);
155                 nilai = "E";
156             } else if (table_2.getModel().getValueAt(row, 2).equals("F")) {
157                 rdbtnF.setSelected(true);
158                 nilai = "F";
159             }
160         }
161     });
162     table_2.setShowVerticalLines(false);
163     table_2.setShowHorizontalLines(false);
164     table_2.setShowGrid(false);
165     StudentDao table1 = new StudentDao();
166     table_2.setModel(table1.tabel());
167     table_2.getColumnModel().getColumn(0).setMaxWidth(150);
168     scrollPane.setViewportViewView(table_2);
169
170     JLabel lblNewLabel = new JLabel("FORM PENILAIAN MATA KULIAH PBO ");
171     lblNewLabel.setHorizontalAlignment(SwingConstants.CENTER);
172     lblNewLabel.setFont(new Font("Tahoma", Font.PLAIN, 30));
173     lblNewLabel.setBounds(164, 11, 553, 58);
174     getContentPane().add(lblNewLabel);
175
176     JLabel lblNewLabel_1_1 = new JLabel("NPM");
177     lblNewLabel_1_1.setFont(new Font("Tahoma", Font.PLAIN, 15));
178     lblNewLabel_1_1.setBounds(30, 140, 117, 14);
179     getContentPane().add(lblNewLabel_1_1);
180
181     field_Npm = new JTextField();
182     field_Npm.setBounds(40, 166, 265, 39);
183     getContentPane().add(field_Npm);
184     field_Npm.setColumns(10);
185
186     field>Nama = new JTextField();
187     field>Nama.setColumns(10);
188     field>Nama.setBounds(40, 267, 265, 39);
189     getContentPane().add(field>Nama);
190
191     JLabel lblNewLabel_1_1_1 = new JLabel("Nama");
192     lblNewLabel_1_1_1.setFont(new Font("Tahoma", Font.PLAIN, 15));

```

```

193 lblNewLabel_1_1_1.setBounds(30, 241, 117, 14);
194 getContentPane().add(lblNewLabel_1_1_1);
195
196 JLabel lblNewLabel_1_1_1_1 = new JLabel("Nilai");
197 lblNewLabel_1_1_1_1.setFont(new Font("Tahoma", Font.PLAIN, 15));
198 lblNewLabel_1_1_1_1.setBounds(30, 343, 117, 14);
199 getContentPane().add(lblNewLabel_1_1_1_1);
200
201 JButton button_Save = new JButton("Save");
202 button_Save.addMouseListener(new MouseAdapter() {
203     @Override
204     public void mouseClicked(MouseEvent e) {
205         nilai = getSelectedButtonGroup(nilai_group);
206         if (field_Npm.getText().isEmpty() || field_Nama.getText().isEmpty() || nilai == null) {
207             JOptionPane.showMessageDialog(null, "Data tidak lengkap!", "Error", JOptionPane.ERROR_MESSAGE);
208         } else {
209             try {
210                 InsertScore();
211                 JOptionPane.showMessageDialog(null, "Data Berhasil Disimpan!");
212                 Clear();
213             } catch (Exception e2) {
214                 JOptionPane.showMessageDialog(null, "Data Gagal Disimpan!", "Error", JOptionPane.ERROR_MESSAGE);
215             }
216         }
217     }
218 });
219 button_Save.setBounds(34, 427, 89, 39);
220 getContentPane().add(button_Save);
221
222 JButton button_Delete = new JButton("Delete");
223 button_Delete.addMouseListener(new MouseAdapter() {
224     @Override
225     public void mouseClicked(MouseEvent e) {
226         if (field_Npm.getText().equals("") || field_Nama.getText().equals("") || nilai == null) {
227             JOptionPane.showMessageDialog(null, "Pilih data yang ingin dihapus!", "Error", JOptionPane.ERROR_MESSAGE);
228         } else {
229             try {
230                 DeleteScore();
231                 JOptionPane.showMessageDialog(null, "Data Berhasil Dihapus!");
232                 Clear();
233             } catch (Exception e2) {
234                 JOptionPane.showMessageDialog(null, "Data Gagal Dihapus!");
235             }
236         }
237     }
238 });
239 button_Delete.setBounds(133, 427, 89, 39);
240 getContentPane().add(button_Delete);
241
242 JButton button_Clear = new JButton("Clear");
243 button_Clear.addMouseListener(new MouseAdapter() {
244     @Override
245     public void mouseClicked(MouseEvent e) {
246         Clear();
247     }
248 });
249 button_Clear.setBounds(232, 427, 89, 39);
250 getContentPane().add(button_Clear);
251
252 JPanel panel = new JPanel();
253 panel.setBorder(new TitledBorder(new EtchedBorder(EtchedBorder.LOWERED, new Color(255, 255, 255), new Color(160, 160, 160)
254 panel.setBounds(10, 81, 328, 461);
255 getContentPane().add(panel);
256 }
257
258 private void InsertScore() throws Exception {
259     StudentScore studentscorel = new StudentScore();
260     studentscorel.setNpm(field_Npm.getText());
261     studentscorel.setNama(field_Nama.getText());
262     studentscorel.setNilai(nilai);
263
264     StudentDao studentdaol = new StudentDao();
265     studentdaol.savedScore(studentscorel);
266 }
267
268 private void DeleteScore() throws Exception {
269     StudentScore studentscorel = new StudentScore();
270     studentscorel.setNpm(field_Npm.getText());
271
272     StudentDao studentdaol = new StudentDao();
273     studentdaol.deleteScore(studentscorel.getNpm());
274 }

```

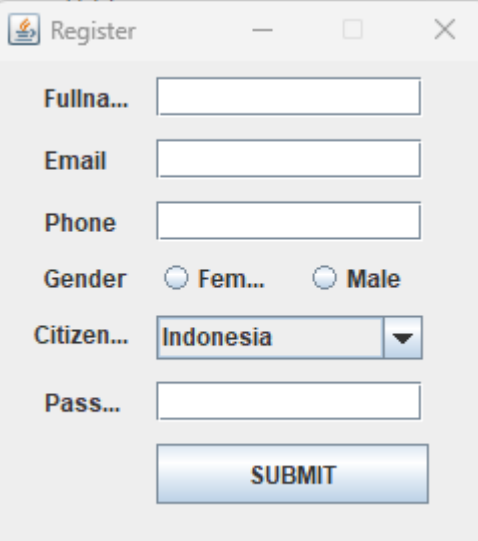
```

275
276 private void Clear() {
277     field_Npm.setText("");
278     field_Nama.setText("");
279     nilai_group.clearSelection();
280 }
281
282 public String getSelectedButtonGroup(ButtonGroup buttonGroup) {
283     for (Enumeration<AbstractButton> buttons = buttonGroup.getElements(); buttons.hasMoreElements();) {
284         AbstractButton button = buttons.nextElement();
285
286         if (button.isSelected()) {
287             return button.getText();
288         }
289     }
290     return null;
291 }
292
293 }
294

```

### e. Output - Flow App

- Memilih Register



Register

Fullna...

Email

Phone

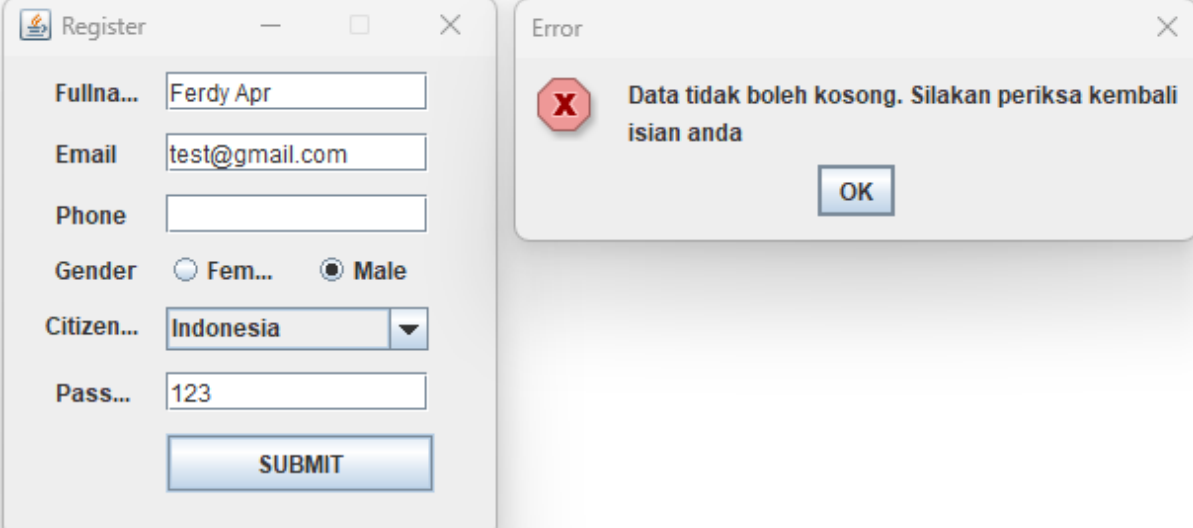
Gender ☐ Fem... ☐ Male

Citizen...  ▼

Pass...

**SUBMIT**

- Data register tidak lengkap



Register

Fullna...

Email

Phone

Gender ☐ Fem... ☒ Male

Citizen...  ▼

Pass...

**SUBMIT**

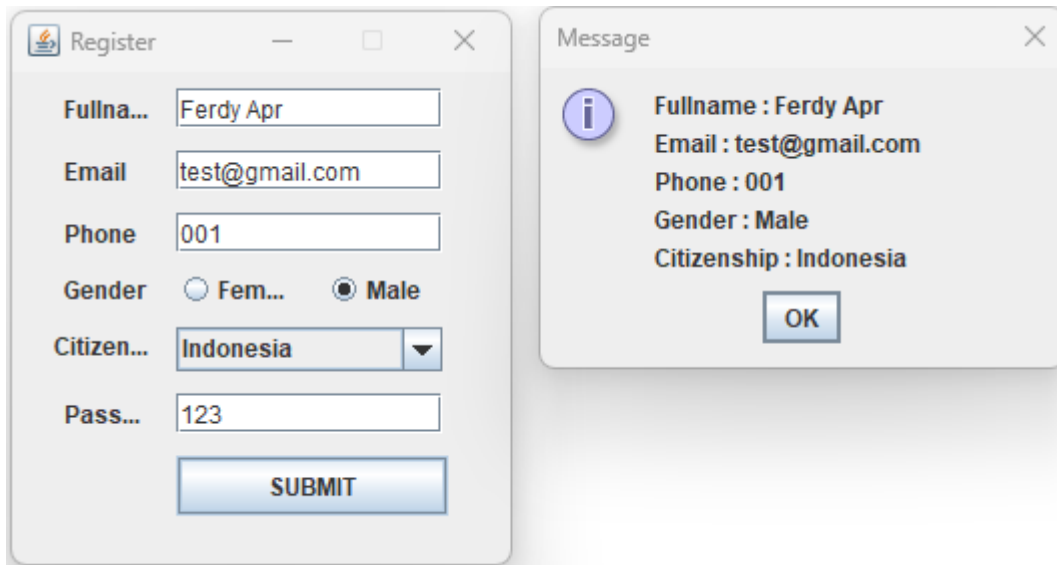
Error

**X** Data tidak boleh kosong. Silakan periksa kembali isian anda

**OK**



- Data register lengkap



The image shows two windows from a Java Swing application. The 'Register' window on the left contains several text input fields and a dropdown menu. The fields are labeled 'Fullna...', 'Email', 'Phone', 'Gender', 'Citizen...', and 'Pass...'. The 'Gender' field has two radio buttons, 'Fem...' and 'Male', with 'Male' selected. The 'Citizen...' field is a dropdown menu showing 'Indonesia'. Below the fields is a 'SUBMIT' button. The 'Message' window on the right is a dialog box with an information icon and an 'OK' button. It displays the following text: 'Fullname : Ferdy Apr', 'Email : test@gmail.com', 'Phone : 001', 'Gender : Male', and 'Citizenship : Indonesia'.

Register

Fullna...

Email

Phone

Gender ☐ Fem... ☒ Male

Citizen...

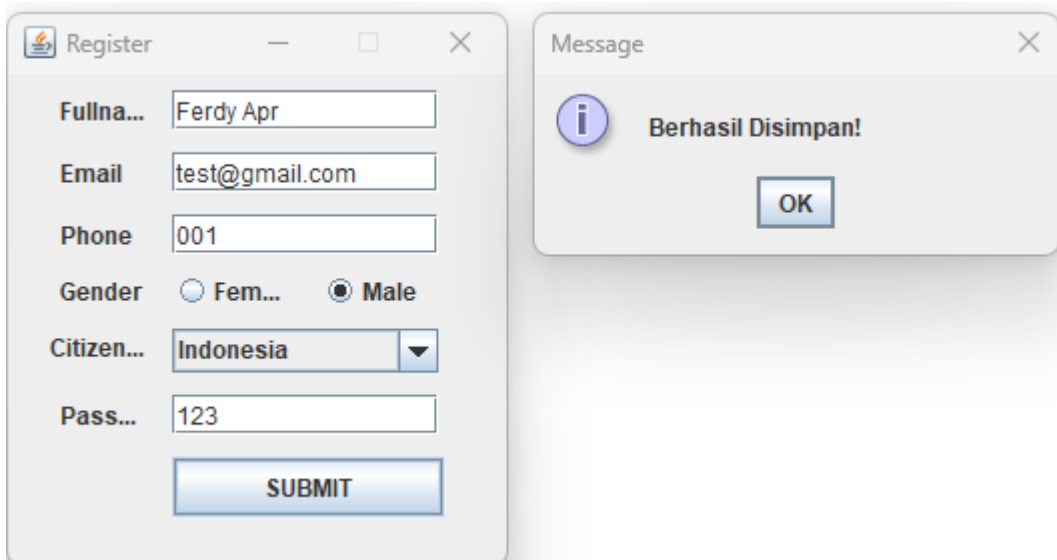
Pass...

SUBMIT

Message

Fullname : Ferdy Apr  
Email : test@gmail.com  
Phone : 001  
Gender : Male  
Citizenship : Indonesia

OK



This image is identical to the one above, showing the 'Register' window and a 'Message' dialog box. The 'Message' dialog box now displays the text: 'Berhasil Disimpan!' (Successfully Saved!).

Register

Fullna...

Email

Phone

Gender ☐ Fem... ☒ Male

Citizen...

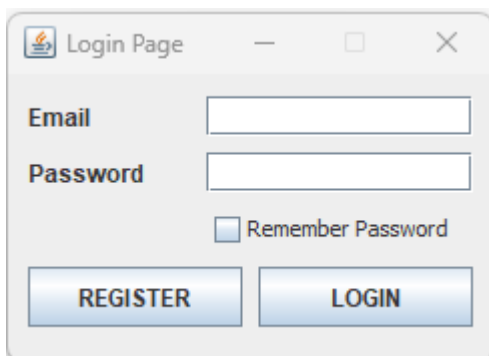
Pass...

SUBMIT

Message

Berhasil Disimpan!

OK



The image shows a 'Login Page' window. It contains two text input fields labeled 'Email' and 'Password'. Below the 'Password' field is a checkbox labeled 'Remember Password'. At the bottom of the window are two buttons: 'REGISTER' and 'LOGIN'.

Login Page

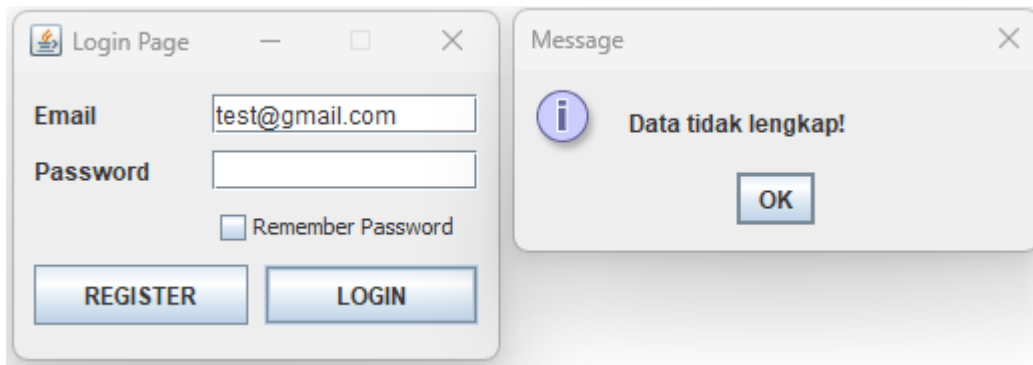
Email

Password

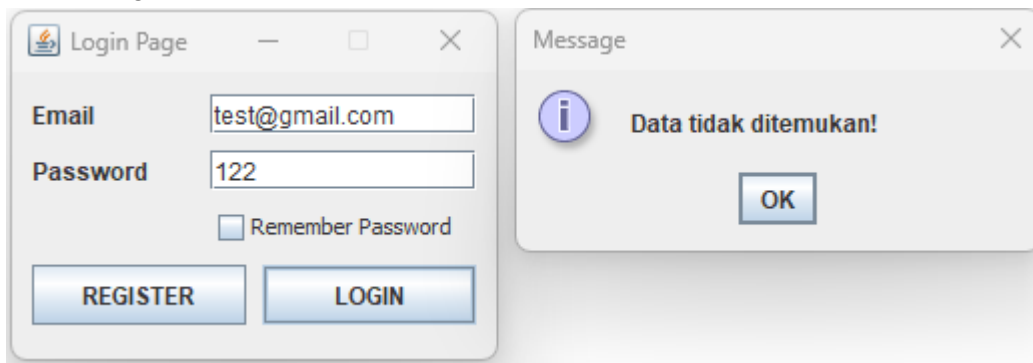
☐ Remember Password

REGISTER LOGIN

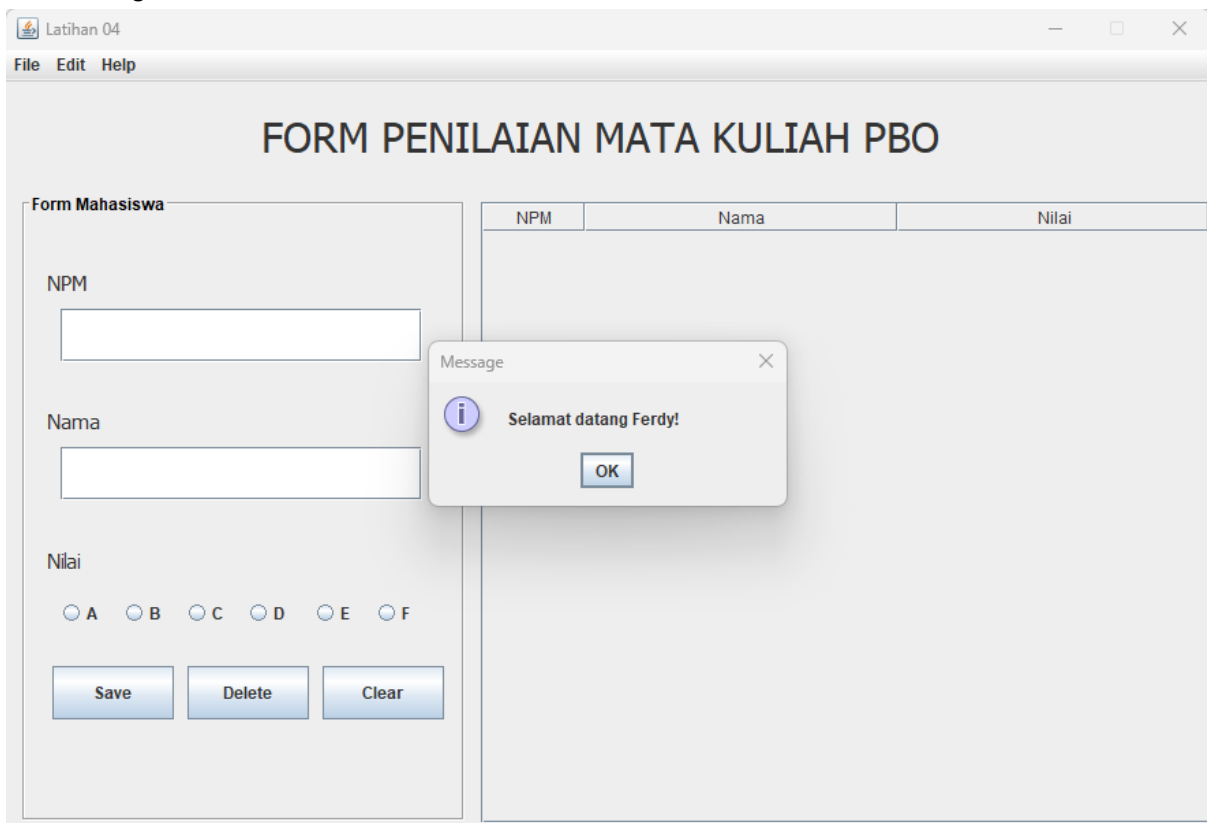
- Login data tidak lengkap



- Login data tidak sesuai



- Login data sesuai



2. Pada form dibawah ini buatlah Create Retrieve Update Delete dimana seluruh data dibawah ini disimpan didalam table student\_score - (Source Code ada di atas (MainMenu.java)).

a. Output - Save(Create) - Data tidak lengkap

Latihan 04

File Edit Help

## FORM PENILAIAN MATA KULIAH PBO

**Form Mahasiswa**

NPM

212310012

Nama

Nilai

☒ A ☐ B ☐ C ☐ D ☐ E ☐ F

Save Delete Clear

Error

Data tidak lengkap!

OK

b. Output - Save(Create) - Data lengkap

Latihan 04

File Edit Help

## FORM PENILAIAN MATA KULIAH PBO

**Form Mahasiswa**

NPM


Nama

Nilai

☒ A ☐ B ☐ C ☐ D ☐ E ☐ F

NPM	Nama	Nilai
-----	------	-------

Message

 Data Berhasil Disimpan!

c. Output - Retrieve - Mengambil data dari database dan ditampilkan di JTable

Latihan 04

File Edit Help

## FORM PENILAIAN MATA KULIAH PBO

**Form Mahasiswa**

NPM

212310012

Nama

Ferdy Apr

Nilai

☒ A ☐ B ☐ C ☐ D ☐ E ☐ F

Save Delete Clear

NPM	Nama	Nilai
212310012	Ferdy Apr	A

d. Output - Delete - Belum ada data yang ingin dihapus(belum dipilih)

Latihan 04

File Edit Help

## FORM PENILAIAN MATA KULIAH PBO

**Form Mahasiswa**

NPM

Nama

Nilai

☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

Save Delete Clear

NPM	Nama	Nilai
212310012	Ferdy Apr	A

Error

Pilih data yang ingin dihapus!

OK

e. Output - Delete - Menghapus data yang dipilih dari JTable

The screenshot shows a Java Swing window titled 'Latihan 04' with a menu bar (File, Edit, Help). The main title is 'FORM PENILAIAN MATA KULIAH PBO'. On the left, under 'Form Mahasiswa', there are input fields for 'NPM' (212310012), 'Nama' (Ferdy Apr), and 'Nilai' (radio buttons A-F, with A selected). Below these are 'Save', 'Delete', and 'Clear' buttons. On the right, a JTable displays student data. The first row is selected (highlighted in blue):

NPM	Nama	Nilai
212310012	Ferdy Apr	A

A 'Message' dialog box is displayed in the center, showing an information icon and the text 'Data Berhasil Dihapus!' with an 'OK' button.

f. Output - Clear Button

This screenshot shows the same application as above, but the 'Clear' button has been clicked. The input fields are now empty: 'NPM' is empty, 'Nama' contains 'Ferdy Apr', and 'Nilai' has radio buttons A-F (with A selected). The 'Save', 'Delete', and 'Clear' buttons are still present. The JTable on the right remains unchanged, showing the same data row as before.

Latihan 04

File Edit Help

FORM PENILAIAN MATA KULIAH PBO

Form Mahasiswa

NPM

Nama

Nilai

☐ A

☐ B

☐ C

☐ D

☐ E

☐ F

Save

Delete

Clear

NPM	Nama	Nilai
212310012	Ferdy Apr	A