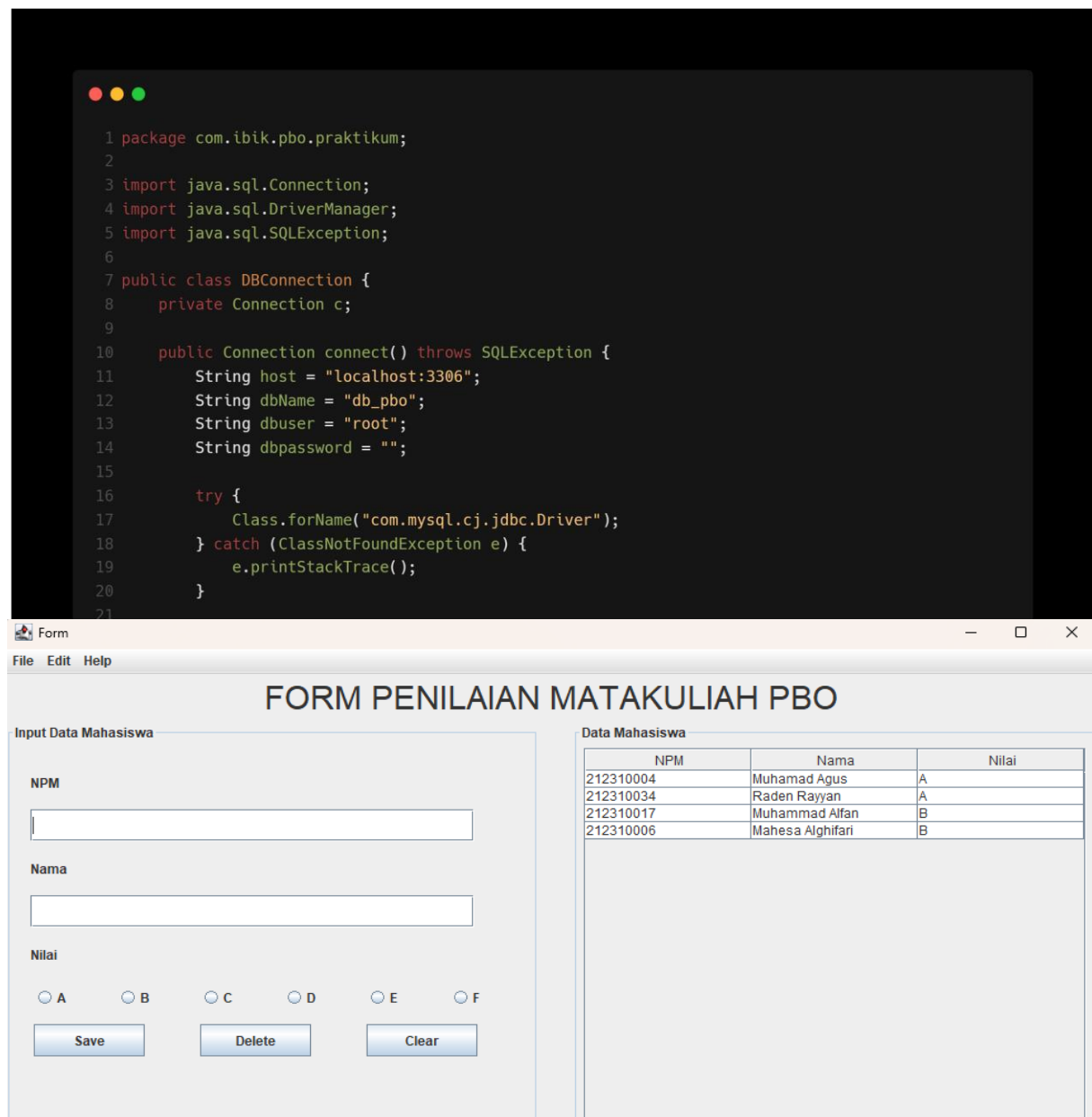


## LEMBAR JAWABAN TUGAS

Nama : Muhamad Agus S 212310004  
Kelas : TI-21-PA1  
Mata Kuliah : Lab PBO P9  
Dosen : Pak Febry Fairuz Damatraseta

DBConnection.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 DBConnection {
8     private Connection c;
9
10    public Connection connect() throws SQLException {
11        String host = "localhost:3306";
12        String dbName = "db_pbo";
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 }
```

**FORM PENILAIAN MATAKULIAH PBO**

**Input Data Mahasiswa**

NPM

Nama

Nilai  
☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

**Data Mahasiswa**

NPM	Nama	Nilai
212310004	Muhamad Agus	A
212310034	Raden Rayyan	A
212310017	Muhammad Alfian	B
212310006	Mahesa Alghifari	B

### FormPage.java

```
package com.ibik.pbo.praktikum;

import java.awt.Font;
import java.awt.BorderLayout;
import java.awt.FlowLayout;
import java.awt.Dimension;
import java.awt.EventQueue;

import javax.swing.BorderFactory;
import javax.swing.ButtonGroup;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JMenu;
import javax.swing.JMenuBar;
import javax.swing.JMenuItem;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JRadioButton;
import javax.swing.JScrollPane;
import javax.swing.JTable;
import javax.swing.JTextField;
import javax.swing.WindowConstants;
import javax.swing.border.Border;
import javax.swing.table.DefaultTableModel;
import java.awt.event.MouseEvent;
import java.awt.event.MouseListener;

import javax.swing.event.MouseInputAdapter;
import javax.swing.event.MouseInputListener;

import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.util.Arrays;
import java.util.List;

public class FormPage extends JFrame {
    private JTable jt;

    public FormPage() {
        setVisible(true);
        pack();
        setLocationRelativeTo(null);
        setSize(1000, 480);
        setTitle("Form");
        setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
        GenerateUI(this);
    }

    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    new FormPage();
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }
}
```

```
    }  
    });  
}  
  
public void GenerateUI(FormPage frame) {  
    // Menu  
    JMenuBar menuBar = new JMenuBar();  
    JMenu fileMenu = new JMenu("File");  
    JMenu editMenu = new JMenu("Edit");  
    JMenu helpMenu = new JMenu("Help");  
  
    menuBar.add(fileMenu);  
    menuBar.add(editMenu);  
    menuBar.add(helpMenu);  
  
    JMenuItem item1 = new JMenuItem("Open Student Data");  
    JMenuItem item3 = new JMenuItem("Exit");  
  
    fileMenu.add(item1);  
    fileMenu.add(item3);  
  
    frame.setJMenuBar(menuBar);  
  
    // Main Panel  
    JPanel mainPanel = new JPanel();  
    mainPanel.setLayout(new BorderLayout());  
    frame.setContentPane(mainPanel);  
  
    // Header Title  
    JPanel headerPanel = new JPanel();  
    headerPanel.setLayout(new FlowLayout(FlowLayout.CENTER));  
    mainPanel.add(headerPanel, BorderLayout.NORTH);  
    JLabel headerTitle = new JLabel("FORM PENILAIAN MATAKULIAH PBO");  
    headerTitle.setFont(new Font("Arial", Font.PLAIN, 30));  
    headerPanel.add(headerTitle);  
  
    // Start of Form  
    Border leftPanelBorder = BorderFactory.createTitledBorder("Input  
Data Mahasiswa");  
    JPanel leftPanel = new JPanel();  
    leftPanel.setLayout(null);  
    leftPanel.setPreferredSize(new Dimension(480, 480));  
    mainPanel.add(leftPanel, BorderLayout.WEST);  
    // Start of Panel Content  
  
    // // Input NPM  
    JLabel npmLabel = new JLabel("NPM");  
    npmLabel.setBounds(22, 40, 80, 30);  
    leftPanel.add(npmLabel);  
  
    final JTextField inputNPM = new JTextField();  
    inputNPM.setBounds(22, 80, 400, 30);  
    leftPanel.add(inputNPM);  
  
    // // Input Nama  
    JLabel namaLabel = new JLabel("Nama");  
    namaLabel.setBounds(22, 120, 80, 30);  
    leftPanel.add(namaLabel);
```

```
final JTextField inputNama = new JTextField();
inputNama.setBounds(22, 160, 400, 30);
leftPanel.add(inputNama);

// // Input Nilai
JLabel gradeLabel = new JLabel("Nilai");
gradeLabel.setBounds(22, 200, 80, 30);
leftPanel.add(gradeLabel);

final JRadioButton gradeA = new JRadioButton("A");
gradeA.setBounds(25, 240, 50, 30);
leftPanel.add(gradeA);

final JRadioButton gradeB = new JRadioButton("B");
gradeB.setBounds(100, 240, 50, 30);
leftPanel.add(gradeB);

final JRadioButton gradeC = new JRadioButton("C");
gradeC.setBounds(175, 240, 50, 30);
leftPanel.add(gradeC);

final JRadioButton gradeD = new JRadioButton("D");
gradeD.setBounds(250, 240, 50, 30);
leftPanel.add(gradeD);

final JRadioButton gradeE = new JRadioButton("E");
gradeE.setBounds(325, 240, 50, 30);
leftPanel.add(gradeE);

final JRadioButton gradeF = new JRadioButton("F");
gradeF.setBounds(400, 240, 50, 30);
leftPanel.add(gradeF);

ButtonGroup bg = new ButtonGroup();
bg.add(gradeA);
bg.add(gradeB);
bg.add(gradeC);
bg.add(gradeD);
bg.add(gradeE);
bg.add(gradeF);

// // Button CRUD Data
JButton btnSave = new JButton("Save");
btnSave.setBounds(25, 280, 100, 30);
ActionListener actionSave = new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        Students student = new Students();

        if (!inputNPM.getText().isEmpty()) {
            student.setNpm(inputNPM.getText());
        } else {
            JOptionPane.showMessageDialog(null, "Data tidak boleh
kosong! (NPM)", "Alert!",
JOptionPane.ERROR_MESSAGE);
        }

        if (!inputNama.getText().isEmpty()) {
            student.setFullname(inputNama.getText());
        } else {
```

```
JOptionPane.showMessageDialog(null, "Data tidak boleh
kosong! (Nama)", "Alert!",
    JOptionPane.ERROR_MESSAGE);
}

if (gradeA.isSelected()) {
    student.setScore(gradeA.getText());
} else if (gradeB.isSelected()) {
    student.setScore(gradeB.getText());
} else if (gradeC.isSelected()) {
    student.setScore(gradeC.getText());
} else if (gradeD.isSelected()) {
    student.setScore(gradeD.getText());
} else if (gradeE.isSelected()) {
    student.setScore(gradeE.getText());
} else if (gradeF.isSelected()) {
    student.setScore(gradeF.getText());
}

StudentsDAO stdDAO = new StudentsDAO();
try {
    stdDAO.saved(student);
    JOptionPane.showMessageDialog(null, "Successfully
Added!", "Score Board",
        JOptionPane.INFORMATION_MESSAGE);
} catch (Exception e1) {
    // TODO Auto-generated catch block
    JOptionPane.showMessageDialog(null, "Error: " +
e1.getMessage());
    e1.printStackTrace();
}
}

};

btnSave.addActionListener(actionSave);
leftPanel.add(btnSave);

JButton btnDelete = new JButton("Delete");
btnDelete.setBounds(175, 280, 100, 30);
leftPanel.add(btnDelete);

JButton btnClear = new JButton("Clear");
btnClear.setBounds(325, 280, 100, 30);
leftPanel.add(btnClear);
// End of Panel Content
leftPanel.setBorder(leftPanelBorder);
// End of Form

// Table
Border rPanelBorder = BorderFactory.createTitledBorder("Data
Mahasiswa");
JPanel rightPanel = new JPanel();
rightPanel.setLayout(new FlowLayout(FlowLayout.CENTER));
mainPanel.add(rightPanel, BorderLayout.EAST);

DefaultTableModel tableModel = FetchDataSelect();
jt = new JTable(tableModel) {
    public boolean isCellEditable(int row, int column) {
        return false;
    }
};
```

```
};
jt.setBounds(22, 40, 480, 450);
jt.addMouseListener(new MouseListener() {

    @Override
    public void mouseReleased(MouseEvent e) {
        // TODO Auto-generated method stub

    }

    @Override
    public void mousePressed(MouseEvent e) {
        // TODO Auto-generated method stub

    }

    @Override
    public void mouseExited(MouseEvent e) {
        // TODO Auto-generated method stub

    }

    @Override
    public void mouseEntered(MouseEvent e) {
        jt.setModel(new FetchDataSelect());
    }

    @Override
    public void mouseClicked(MouseEvent e) {
        GetSelectedData();
    }
});

JScrollPane sp = new JScrollPane(jt);

rightPanel.add(sp);

rightPanel.setBorder(rPanelBorder);
}

public DefaultTableModel FetchDataSelect() {

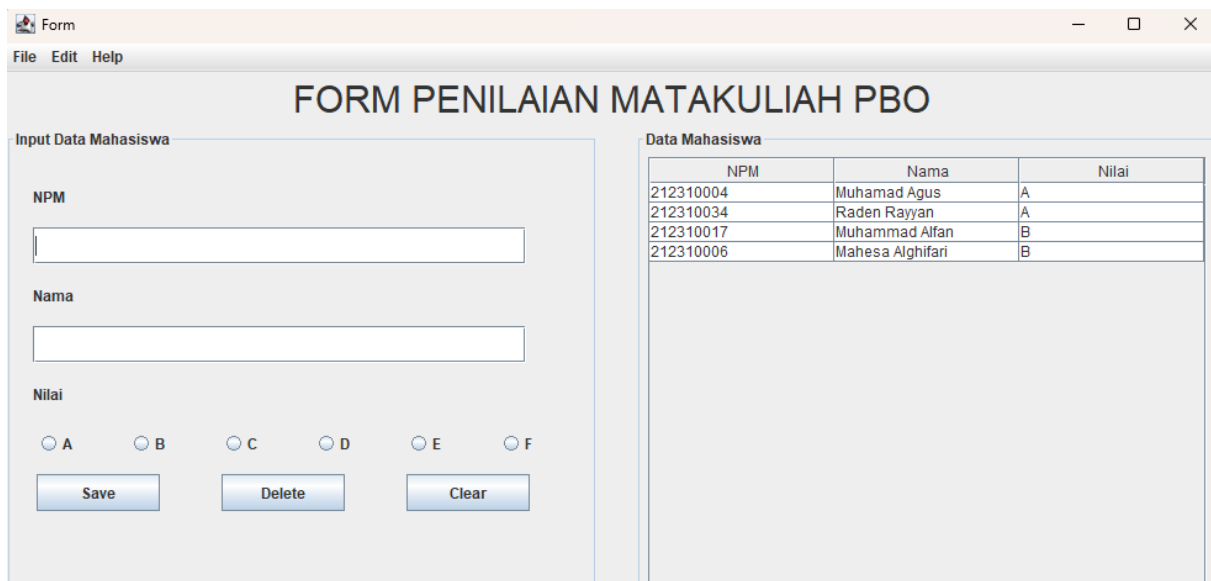
    DefaultTableModel tableModel = new DefaultTableModel();
    tableModel.addColumn("NPM");
    tableModel.addColumn("Nama");
    tableModel.addColumn("Nilai");
    StudentsDAO stdDao = new StudentsDAO();

    try {
        List<Students> students = stdDao.findAll();
        for (int i = 0; i < students.size(); i++) {
            String data[] = {
                students.get(i).getNpm(),
                students.get(i).getFullname(),
                students.get(i).getScore()
            };
            tableModel.addRow(data);
        }
    } catch (Exception e) {
```

```
JOptionPane.showMessageDialog(null, "Error: " + e.getMessage(),
"Alert!", JOptionPane.ERROR_MESSAGE);
}

return tableModel;
}

private void GetSelectedData() {
DefaultTableModel jtModel = (DefaultTableModel) jt.getModel();
int selectedRow = jt.getSelectedRow();
System.out.println("You just click row " + selectedRow);
String npm = jtModel.getValueAt(selectedRow,
0).toString();
String name = jtModel.getValueAt(selectedRow,
1).toString();
String score = jtModel.getValueAt(selectedRow, 2).toString();
System.out.println("Data:");
System.out.println("NPM: " + npm);
System.out.println("Fullname: " + name);
System.out.println("Score: " + score);
}
}
```



**FORM PENILAIAN MATAKULIAH PBO**

**Input Data Mahasiswa**

NPM

Nama

Nilai  
☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

**Data Mahasiswa**

NPM	Nama	Nilai
212310004	Muhamad Agus	A
212310034	Raden Rayyan	A
212310017	Muhammad Alfian	B
212310006	Mahesa Alghifari	B

## MainApps.java

```
1 package com.ibik.pbo.praktikum;
2
3 import javax.swing.JOptionPane;
4 import com.ibik.pbo.praktikum.auth.*;
5
6 public class MainApps {
7     public static void main(String[] args) {
8         DBConnection db = new DBConnection();
9         try {
10             db.connect();
11             // RegisterForm regForm = new RegisterForm();
12             LoginForm login = new LoginForm();
13             login.setVisible(true);
14         } catch (Exception e) {
15             JOptionPane.showMessageDialog(null, e.getMessage(), "Error",
16                                     JOptionPane.ERROR_MESSAGE);
17         }
18     }
19 }
```

Login Page

Email:

Password:

☐ Remember Account ?

Register Form

Fullname:

Email:

Password:

Conf. Pa...:

Phone:

Gender: ☐ Female ☐ Male

Citizenship:

Sukses!

Selamat Datang!

Form

File Edit Help

### FORM PENILAIAN MATAKULIAH PBO

Input Data Mahasiswa

NPM:

Nama:

Nilai: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F


Data Mahasiswa

NPM	Nama	Nilai
212310004	Muhamad Agus	A
212310034	Raden Rayyan	A
212310017	Muhammad Alfian	B
212310006	Mahesa Alghifari	B



## Students.java

```
1 package com.ibik.pbo.praktikum;
2
3 public class Students {
4     private Integer id;
5     private String npm;
6     private String fullname;
7     private String score;
8
9     public void setNpm(String npm) {
10         this.npm = npm;
11     }
12
13     public String getNpm() {
14         return npm;
15     }
16
17     public void setFullname(String fullname) {
18         this.fullname = fullname;
19     }
20
21     public String getFullname() {
22         return fullname;
23     }
24
25     public void setScore(String score) {
26         this.score = score;
27     }
28
29     public String getScore() {
30         return score;
31     }
32
33     public void setId(Integer id) {
34         this.id = id;
35     }
36
37     public Integer getId() {
38         return id;
39     }
40 }
```

 Login Page

Email

aguss2412@gmail.com

Password

...

☐ Remember Account ?

Register

Login

## StudentsDAO

```
1 package com.ibik.pbo.praktikum;
2
3 import java.sql.Connection;
4 import java.sql.PreparedStatement;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.util.ArrayList;
8 import java.util.List;
9
10 public class StudentsDAO {
11
12     private String queryInsert = "insert into students (npm, fullname, score) "
13         + " values (?, ?, ?) ";
14
15     private String querySelectAll = "select * from students";
16
17     public void saved(Students students) throws Exception {
18         Connection c = new DBConnection().connect();
19
20         PreparedStatement psInsert = c.prepareStatement(queryInsert);
21
22         psInsert.setString(1, students.getNpm());
23         psInsert.setString(2, students.getFullname());
24         psInsert.setString(3, students.getScore());
25
26         psInsert.executeUpdate();
27
28         c.close();
29     }
30
31     public List<Students> findAll() throws Exception {
32         List<Students> hasil = new ArrayList<Students>();
33
34         Connection c = new DBConnection().connect();
35         PreparedStatement psFindAll = c.prepareStatement(querySelectAll);
36
37         ResultSet rs = psFindAll.executeQuery();
38
39         while (rs.next()) {
40             Students students = konversiResultSet(rs);
41             hasil.add(students);
42         }
43
44         c.close();
45
46         return hasil;
47     }
48
49     private Students konversiResultSet(ResultSet rs) throws SQLException {
50         Students students = new Students();
51         students.setId(rs.getInt("id"));
52         students.setNpm(rs.getString("npm"));
53         students.setFullname(rs.getString("fullname"));
54         students.setScore(rs.getString("score"));
55         return students;
56     }
57
58 }
```

## Admin

```
package com.ibik.pbo.praktikum.auth;

public class Admin {
    private Integer id;
    private String email;
    private String password;
    private String fullname;
    private String phone;
    private String gender;
    private String citizenship;

    public String getEmail() {
        return email;
    }

    public void setEmail(String email) {
        this.email = email;
    }

    public String getPassword() {
        return password;
    }

    public void setPassword(String password) {
        this.password = password;
    }

    public String getFullname() {
        return fullname;
    }

    public void setFullname(String fullname) {
        this.fullname = fullname;
    }

    public String getPhone() {
        return phone;
    }

    public void setPhone(String phone) {
        this.phone = phone;
    }

    public String getGender() {
        return gender;
    }

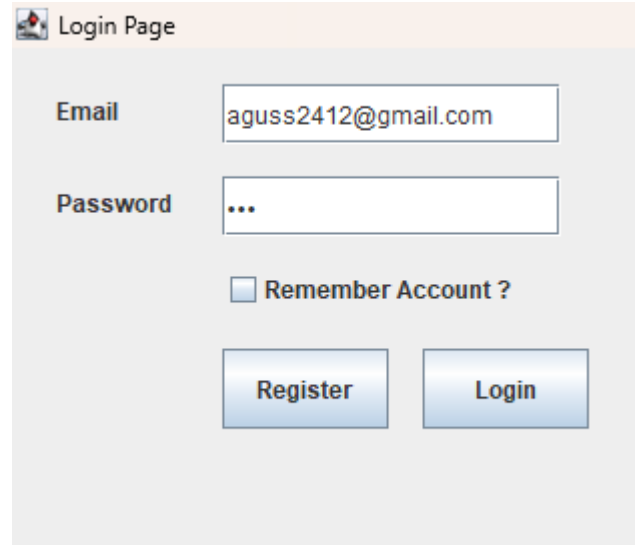
    public void setGender(String gender) {
        this.gender = gender;
    }

    public String getCitizenship() {
        return citizenship;
    }

    public void setCitizenship(String citizenship) {
        this.citizenship = citizenship;
    }

    public Integer getId() {
        return id;
    }

    public void setId(Integer id) {
        this.id = id;
    }
}
```



The screenshot shows a web application titled "Login Page". It features two input fields: "Email" with the value "aguss2412@gmail.com" and "Password" with a masked value "...". Below the password field is a checkbox labeled "Remember Account ?". At the bottom, there are two buttons: "Register" and "Login".

## LoginDAO

```
1 package com.ibik.pbo.praktikum.auth;
2
3 import java.sql.Connection;
4 import java.sql.PreparedStatement;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.util.ArrayList;
8 import java.util.List;
9
10 import com.ibik.pbo.praktikum.DBConnection;
11
12 public class LoginDAO {
13     private String queryLogin = "select * from admin where email = ? and password = ?";
14
15     public boolean authLogin(String email, String password) throws Exception {
16         boolean isUser = false;
17         try {
18             Connection c = new DBConnection().connect();
19             PreparedStatement ps = c.prepareStatement(queryLogin);
20             ps.setString(1, email);
21             ps.setString(2, password);
22             ResultSet result = ps.executeQuery();
23             if (result.next()) {
24                 isUser = true;
25                 System.out.println("Login Success!");
26             } else {
27                 System.out.println("Invalid username or password!");
28             }
29         } catch (Exception e) {
30             System.out.println("Error : " + e.getMessage());
31             e.printStackTrace();
32         }
33         return isUser;
34     }
35 }
```

## LoginForm

```
package com.ibik.pbo.praktikum.auth;

import java.awt.BorderLayout;
import java.awt.Color;

import javax.swing.JButton;
import javax.swing.JCheckBox;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JPasswordField;
import javax.swing.JTextField;
import javax.swing.SwingConstants;
import javax.swing.WindowConstants;

import com.ibik.pbo.praktikum.FormPage;

import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class LoginForm extends JFrame {
    public LoginForm() {
        setVisible(true);
        pack();
        setLocationRelativeTo(null);
        setSize(400, 400);
        setTitle("Login Page");
        setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
        GenerateUI(this);
    }

    public static void main(String[] args) {
        new LoginForm();
    }

    private void GenerateUI(LoginForm frame) {
        JPanel mainPanel = new JPanel();
        mainPanel.setLayout(new BorderLayout());
        frame.setContentPane(mainPanel);

        JPanel panell = new JPanel();
        panell.setLayout(null);
        mainPanel.add(panell, BorderLayout.NORTH);

        JLabel lblEmail = new JLabel("Email");
        lblEmail.setBounds(22, 23, 80, 16);
        panell.add(lblEmail);

        final JTextField textEmail = new JTextField();
        textEmail.setBounds(105, 18, 169, 30);
        panell.add(textEmail);

        JLabel lblPassword = new JLabel("Password");
        lblPassword.setBounds(22, 69, 61, 16);
        panell.add(lblPassword);

        final JPasswordField textPassword = new JPasswordField();
        textPassword.setBounds(105, 64, 169, 30);
        panell.add(textPassword);

        JCheckBox chkRemember = new JCheckBox("Remember Account ?");
        chkRemember.setBounds(105, 100, 169, 40);
        panell.add(chkRemember);

        JButton btnRegister = new JButton("Register");
        btnRegister.setBounds(105, 150, 83, 40);
        btnRegister.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                RegisterForm regPage = new RegisterForm();
                regPage.setVisible(true);
            }
        });
    }
}
```

```
        dispose();
    }
});
panell.add(btnRegister);

JButton btnLogin = new JButton("Login");
btnLogin.setBounds(205, 150, 83, 40);
btnLogin.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        String mail = textEmail.getText();
        String password = new String(textPassword.getPassword());

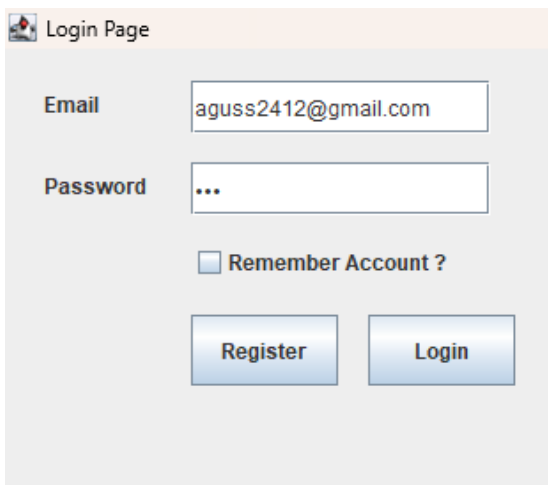
        LoginDAO login = new LoginDAO();
        Admin adm = new Admin();
        try {
            if (login.authLogin(mail, password)) {
                JOptionPane.showMessageDialog(null, "Selamat Datang!", "Sukses!",
                    JOptionPane.INFORMATION_MESSAGE);

                // Go To Form
                FormPage form = new FormPage();
                form.setVisible(true);
                dispose();
            } else {
                JOptionPane.showMessageDialog(null, "Login Gagal!", "Alert!",
                    JOptionPane.ERROR_MESSAGE);
            }
        } catch (Exception e1) {
            // TODO Auto-generated catch block
            JOptionPane.showConfirmDialog(null, "Login Gagal. Error: " +
                e1.getMessage());
            e1.printStackTrace();
        }
    }
});

panell.add(btnLogin);

JLabel lblCopyright = new JLabel("copyright IBIK @ 2022", SwingConstants.CENTER);
lblCopyright.setBackground(Color.BLUE);
lblCopyright.setSize(300, 50);
mainPanel.add(lblCopyright, BorderLayout.SOUTH);

frame.add(panell);
}
```



The screenshot shows a Java Swing window titled "Login Page". It contains two text input fields: "Email" with the value "aguss2412@gmail.com" and "Password" with masked characters "...". Below the password field is a checkbox labeled "Remember Account ?" which is currently unchecked. At the bottom of the window are two buttons: "Register" and "Login".

## RegisterDAO

```
1 package com.ibik.pbo.praktikum.auth;
2
3 import java.sql.Connection;
4 import java.sql.PreparedStatement;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.util.ArrayList;
8 import java.util.List;
9
10 import com.ibik.pbo.praktikum.DBConnection;
11
12 public class RegisterDAO {
13
14     private String queryRegister = "insert into admin (email, password, fullname, phone, gender,
15     citizenship) "
16     + "values (?, ?, ?, ?, ?, ?)";
17
18     public void savedRegister(Admin admin) throws Exception {
19         Connection c = new DBConnection().connect();
20
21         PreparedStatement psInsert = c.prepareStatement(queryRegister);
22
23         psInsert.setString(1, admin.getEmail());
24         psInsert.setString(2, admin.getPassword());
25         psInsert.setString(3, admin.getFullname());
26         psInsert.setString(4, admin.getPhone());
27         psInsert.setString(5, admin.getGender());
28         psInsert.setString(6, admin.getCitizenship());
29
30         psInsert.executeUpdate();
31
32         c.close();
33 }
```

## RegisterForm

```
package com.ibik.pbo.praktikum.auth;

import java.awt.BorderLayout;

import javax.swing.ButtonGroup;
import javax.swing.JButton;
import javax.swing.JComboBox;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JPasswordField;
import javax.swing.JRadioButton;
import javax.swing.JTextField;
import javax.swing.WindowConstants;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.util.ArrayList;

public class RegisterForm extends JFrame {
    public RegisterForm() {
        setVisible(true);
        pack();
        setLocationRelativeTo(null);
        setSize(500, 500);
        setTitle("Register Form");
        setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
        GenerateUI(this);
    }

    public static void main(String[] args) {
        new RegisterForm();
    }

    private void GenerateUI(RegisterForm frame) {
        JPanel mainPanel = new JPanel();
        mainPanel.setLayout(new BorderLayout());
        frame.setContentPane(mainPanel);

        JPanel panell = new JPanel();
        panell.setLayout(null);
        mainPanel.add(panell, BorderLayout.NORTH);

        JLabel lblFullName = new JLabel("Fullname");
        lblFullName.setBounds(22, 23, 80, 16);

        panell.add(lblFullName);

        final JTextField textFullName = new JTextField();
        textFullName.setBounds(105, 18, 169, 30);
        textFullName.setEditable(true);
        panell.add(textFullName);

        JLabel lblEmail = new JLabel("Email");
        lblEmail.setBounds(22, 69, 61, 16);
        panell.add(lblEmail);

        final JTextField textEmail = new JTextField();
        textEmail.setBounds(105, 64, 169, 30);
        panell.add(textEmail);

        JLabel lblPassword = new JLabel("Password");
        lblPassword.setBounds(22, 109, 61, 16);
        panell.add(lblPassword);

        final JPasswordField textPassword = new JPasswordField();
        textPassword.setBounds(105, 104, 169, 30);
        panell.add(textPassword);

        JLabel lblRePassword = new JLabel("Conf. Password");
        lblRePassword.setBounds(22, 149, 61, 16);
        panell.add(lblRePassword);
    }
}
```



```
final JPasswordField textRePassword = new JPasswordField();
textRePassword.setBounds(105, 144, 169, 30);
panell.add(textRePassword);

JLabel lblPhone = new JLabel("Phone");
lblPhone.setBounds(22, 189, 61, 16);
panell.add(lblPhone);

final JTextField txtPhone = new JTextField();
txtPhone.setBounds(105, 184, 169, 30);
panell.add(txtPhone);

JLabel lblGender = new JLabel("Gender");
lblGender.setBounds(22, 240, 61, 16);
panell.add(lblGender);

final JRadioButton radioGender1 = new JRadioButton("Female");
radioGender1.setBounds(105, 235, 100, 30);
panell.add(radioGender1);

final JRadioButton radioGender2 = new JRadioButton("Male");
radioGender2.setBounds(200, 235, 100, 30);
panell.add(radioGender2);

ButtonGroup bg = new ButtonGroup();
bg.add(radioGender1);
bg.add(radioGender2);

JLabel lblCityzen = new JLabel("Citizenship");
lblCityzen.setBounds(22, 280, 100, 16);
panell.add(lblCityzen);

String country[] = {
    "Indonesia",
    "India",
    "Australia",
    "U.S.A",
    "England",
    "New Zealand"
};

final JComboBox selectCitizen = new JComboBox<>(country);
selectCitizen.setBounds(105, 275, 169, 30);
panell.add(selectCitizen);

JButton btnSubmit = new JButton("Submit");
btnSubmit.setBounds(105, 345, 169, 40);
ActionListener actionSubmit = new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        // ArrayList<String> data = new ArrayList<String>();
        Admin admins = new Admin();

        if (!textFullName.getText().isEmpty()) {
            // data.add(textFullName.getText());
            admins.setFullname(textFullName.getText());
        } else {
            JOptionPane.showMessageDialog(null,
                "Data tidak boleh kosong (Nama Kosong). Silakan periksa kembali isian anda.",
                "Alert!", JOptionPane.ERROR_MESSAGE);
        }

        if (!textEmail.getText().isEmpty()) {
            // data.add(textEmail.getText());
            admins.setEmail(textEmail.getText());
        } else {
            JOptionPane.showMessageDialog(null,
                "Data tidak boleh kosong (Email Kosong). Silakan periksa kembali isian anda.",
                "Alert!", JOptionPane.ERROR_MESSAGE);
        }
    }
};
```

```
String passText = new String(textPassword.getPassword());
String confPass = new String(textRePassword.getPassword());

if (!passText.isEmpty()) {
    if (!passText.equals(confPass)) {
        JOptionPane.showMessageDialog(null,
            "Password tidak sesuai.\nHarap periksa kembali Password dan
Conf. Password", "Alert!",
            JOptionPane.ERROR_MESSAGE);
    } else {
        admins.setPassword(passText);
    }
} else {
    JOptionPane.showMessageDialog(null, "Kolom Password harus diisi",
    "Alert!",
        JOptionPane.ERROR_MESSAGE);
}

if (!txtPhone.getText().isEmpty()) {
    // data.add(txtPhone.getText());
    admins.setPhone(txtPhone.getText());
} else {
    JOptionPane.showMessageDialog(null,
        "Data tidak boleh kosong (No. Telepon Kosong). Silakan periksa
kembali isian anda.",
        "Alert!", JOptionPane.ERROR_MESSAGE);
}

if (radioGender1.isSelected()) {
    // data.add(radioGender1.getText());
    admins.setGender("F");
} else if (radioGender2.isSelected()) {
    // data.add(radioGender2.getText());
    admins.setGender("M");
}

// data.add(selectCitizen.getSelectedItem().toString());
admins.setCitizenship(selectCitizen.getSelectedItem().toString());

RegisterDAO regDAO = new RegisterDAO();
try {
    regDAO.savedRegister(admins);
} catch (Exception e1) {
    // TODO Auto-generated catch block
    JOptionPane.showMessageDialog(null, "Error : " + e1.getMessage());
    e1.printStackTrace();
}

LoginForm loginPage = new LoginForm();
loginPage.setVisible(true);
dispose();
}

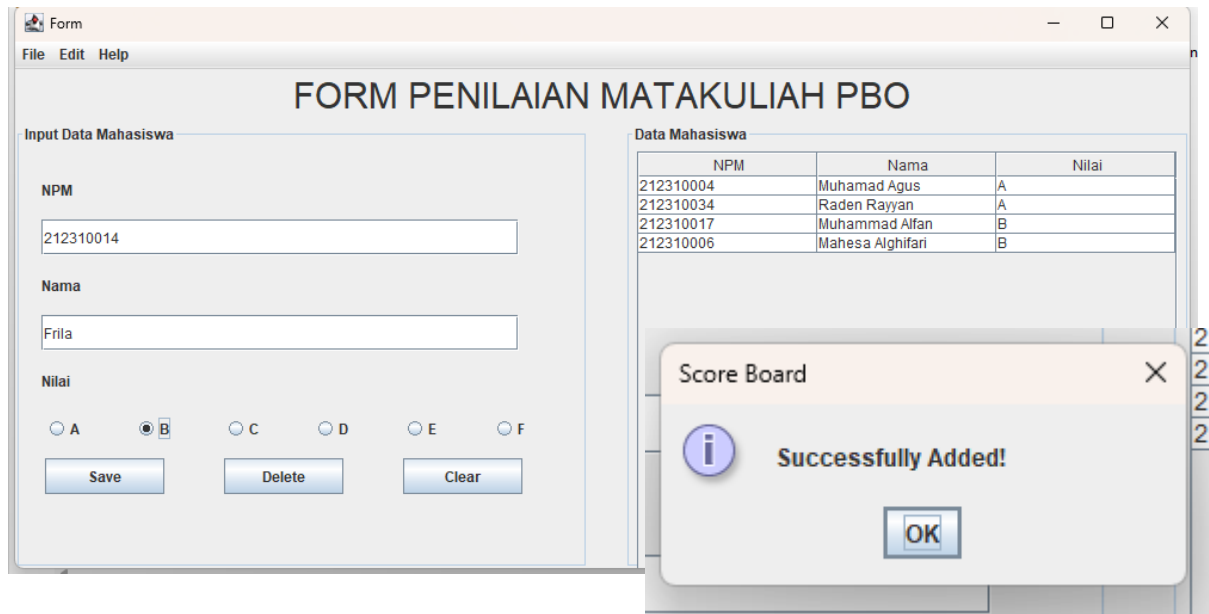
};
btnSubmit.addActionListener(actionSubmit);
panell.add(btnSubmit);

frame.add(panell);
}
```

Register Form

Fullname	<input type="text"/>
Email	<input type="text"/>
Password	<input type="password"/>
Conf. Pa...	<input type="password"/>
Phone	<input type="text"/>
Gender	<input type="radio"/> Female <input type="radio"/> Male
Citizenship	<input type="text" value="Indonesia"/>
<input type="button" value="Submit"/>	

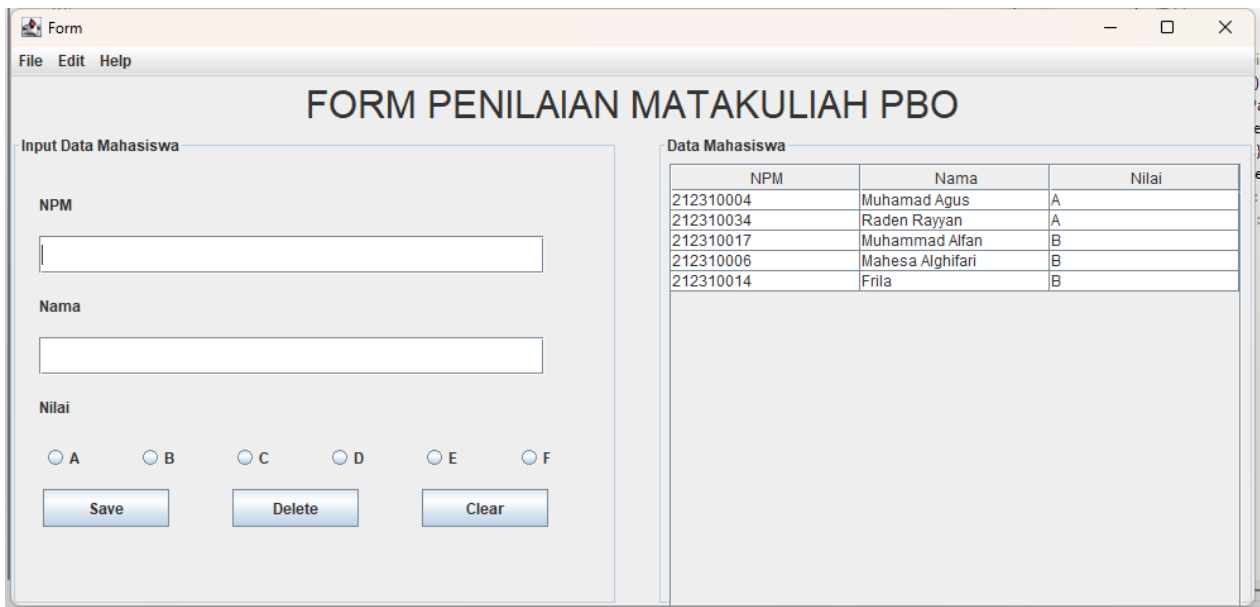
### Menginput kan Data



The screenshot shows a web application window titled "Form". It contains a section "Input Data Mahasiswa" with fields for NPM (212310014), Nama (Frila), and Nilai (radio buttons for A, B, C, D, E, F, with B selected). Below these fields are "Save", "Delete", and "Clear" buttons. To the right, a "Data Mahasiswa" table lists students. A "Score Board" dialog box is open in the foreground, displaying "Successfully Added!" and an "OK" button.

NPM	Nama	Nilai
212310004	Muhamad Agus	A
212310034	Raden Rayyan	A
212310017	Muhammad Alfian	B
212310006	Mahesa Alghifari	B

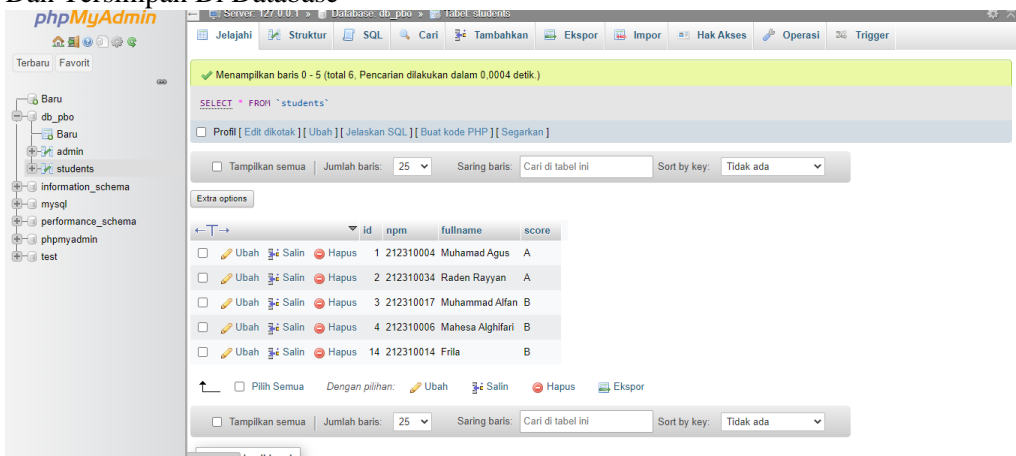
### Penginputan Berhasil



The screenshot shows the same web application window. The "Input Data Mahasiswa" section now has empty fields for NPM, Nama, and Nilai. The "Data Mahasiswa" table on the right now includes the new student: Frila (NPM: 212310014, Nilai: B).

NPM	Nama	Nilai
212310004	Muhamad Agus	A
212310034	Raden Rayyan	A
212310017	Muhammad Alfian	B
212310006	Mahesa Alghifari	B
212310014	Frila	B

### Dan Tersimpan Di Database



The screenshot shows the phpMyAdmin interface. The "students" table is selected, and the SQL query "SELECT \* FROM `students`" is executed. The result shows 6 rows of student data, including the newly added student Frila.

id	npm	fullname	score
1	212310004	Muhamad Agus	A
2	212310034	Raden Rayyan	A
3	212310017	Muhammad Alfian	B
4	212310006	Mahesa Alghifari	B
14	212310014	Frila	B

