

NAMA : Muhamad Agus

NPM : 212310004

KELAS : TI-21-PA1

LATIHAN 1

SOURCE CODE

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

import java.awt.FlowLayout;
import java.awt.BorderLayout;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.WindowConstants;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class Latihan01 {
    public static void main(String[] args) {

        // String title[] = { "Hallo", "Everyone", "IBIK" };

        JButton button1 = new JButton("Hallo");
        ActionListener actionButton1 = new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                JOptionPane.showMessageDialog(null, "This is Hallo button",
                    "You just click Hallo button", JOptionPane.INFORMATION_MESSAGE);
            }
        };

        JButton button2 = new JButton("Everyone");
        ActionListener actionButton2 = new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                JOptionPane.showMessageDialog(null, "This is Everyone button", "You just click Everyone
button",
                    JOptionPane.INFORMATION_MESSAGE);
            }
        };

        JButton button3 = new JButton("IBIK");
        ActionListener actionButton3 = new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                JOptionPane.showMessageDialog(null, "IBIK is an acronym for 'Institut Bisnis dan
Informatika Kesatuan'",
                    "You just click IBIK button",
                    JOptionPane.INFORMATION_MESSAGE);
            }
        };

        JFrame frame = new JFrame();
        frame.setLayout(new BorderLayout());
        frame.setTitle("Latihan 01");
        frame.setLocationRelativeTo(null);
        frame.setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);

        JPanel northPanel = new JPanel(new FlowLayout(FlowLayout.CENTER));
```

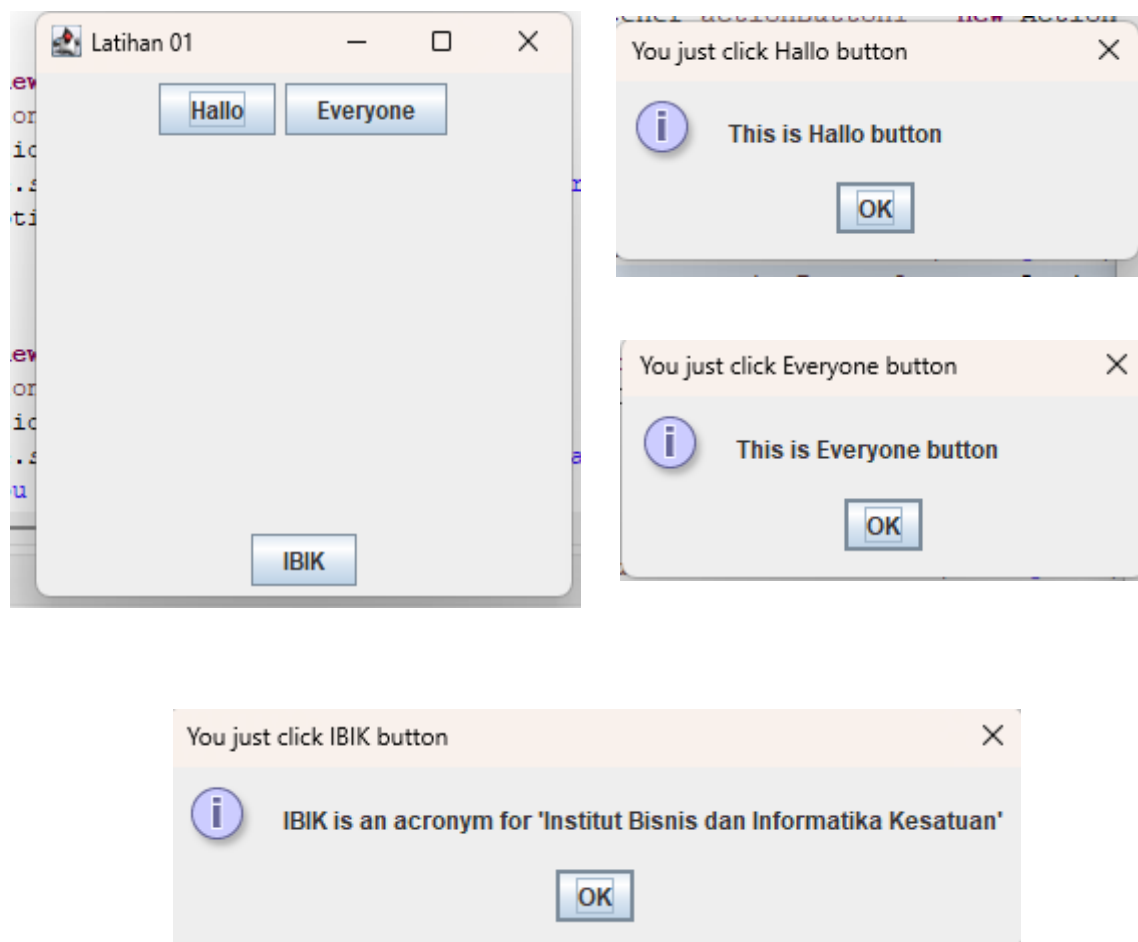
```
button1.addActionListener(actionButton1);
northPanel.add(button1);

button2.addActionListener(actionButton2);
northPanel.add(button2);

JPanel southPanel = new JPanel(new FlowLayout(FlowLayout.CENTER));
button3.addActionListener(actionButton3);
southPanel.add(button3);

frame.add(northPanel, BorderLayout.NORTH);
frame.add(southPanel, BorderLayout.SOUTH);
frame.pack();
frame.setVisible(true);
frame.setSize(300, 300);
}
}
```

SCREEN CAPTURE



LATIHAN 2

SORCE CODE

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

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.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 Latihan02 extends JFrame {
    /**
     *
     */
    private static final long serialVersionUID = 1L;

    Latihan02() {
        // menampilkan jendela pada layar
        setVisible(true);
        // menentukan posisi jendela pada tengah layar
        pack();
        setLocationRelativeTo(null);
        // menentukan ukuran width dan height ada jendela
        setSize(350, 400);
        // berikan judul pada jendela
        setTitle("Contoh Window Frame");
        // menutup jendela secara penuh
        setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
        GenerateUI(this);
    }

    public static void main(String[] args) {
        new Latihan02();
    }

    private void GenerateUI(Latihan02 frame) {
        JPanel mainPanel = new JPanel();
        mainPanel.setLayout(new BorderLayout());
        frame.setContentPane(mainPanel);

        JPanel panell1 = new JPanel();
        panell1.setLayout(null);
        mainPanel.add(panell1, BorderLayout.NORTH);

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

        panell1.add(lblFullName);

        final JTextField textFullName = new JTextField();
        textFullName.setBounds(105, 18, 169, 30);
        textFullName.setEditable(true);
        // textFullName.setText("Muhamad Agus");
        // textFullName.setBackground(Color.LIGHT_GRAY);
    }
}
```

```

panel1.add(textFullName);

JLabel lblEmail = new JLabel("Email");
lblEmail.setBounds(22, 69, 61, 16);
panel1.add(lblEmail);

final JTextField textEmail = new JTextField();
textEmail.setBounds(105, 64, 169, 30);
panel1.add(textEmail);
JLabel lblPhone = new JLabel("Phone");
lblPhone.setBounds(22, 109, 61, 16);
panel1.add(lblPhone);

final JTextField txtPhone = new JTextField();
txtPhone.setBounds(105, 104, 169, 30);
panel1.add(txtPhone);

JLabel lblGender = new JLabel("Gender");
lblGender.setBounds(22, 150, 61, 16);
panel1.add(lblGender);

final JRadioButton radioGender1 = new JRadioButton("Female");
radioGender1.setBounds(105, 145, 100, 30);
panel1.add(radioGender1);

final JRadioButton radioGender2 = new JRadioButton("Male");
radioGender2.setBounds(200, 145, 100, 30);
panel1.add(radioGender2);

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

JLabel lblCityzen = new JLabel("Citizenship");
lblCityzen.setBounds(22, 185, 100, 16);
panel1.add(lblCityzen);

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

final JComboBox<String> selectCitizen = new JComboBox<>(country);
selectCitizen.setBounds(105, 180, 169, 30);
panel1.add(selectCitizen);

JButton btnSubmit = new JButton("Submit");
btnSubmit.setBounds(105, 250, 169, 40);
ActionListener actionSubmit = new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        ArrayList<String> data = new ArrayList<String>();

        if (!textFullName.getText().isEmpty()) {
            data.add(textFullName.getText());
        } else {
            JOptionPane.showMessageDialog(null,
                "Ada Data Yang Belom Di Isi. Isi Semua Data
Gus.",
                "Alert!", JOptionPane.ERROR_MESSAGE);
        }

        if (!textEmail.getText().isEmpty()) {

```

```

        data.add(textEmail.getText());
    } else {
        JOptionPane.showMessageDialog(null,
            "Ada Data Yang Belum Di Isi. Isi Semua Data
Gus.",
            "Alert!", JOptionPane.ERROR_MESSAGE);
    }

    if (!txtPhone.getText().isEmpty()) {
        data.add(txtPhone.getText());
    } else {
        JOptionPane.showMessageDialog(null,
            "Ada Data Yang Belum Di Isi. Isi Semua Data
Gus.",
            "Alert!", JOptionPane.ERROR_MESSAGE);
    }

    if (radioGender1.isSelected()) {
        data.add(radioGender1.getText());
    } else if (radioGender2.isSelected()) {
        data.add(radioGender2.getText());
    }

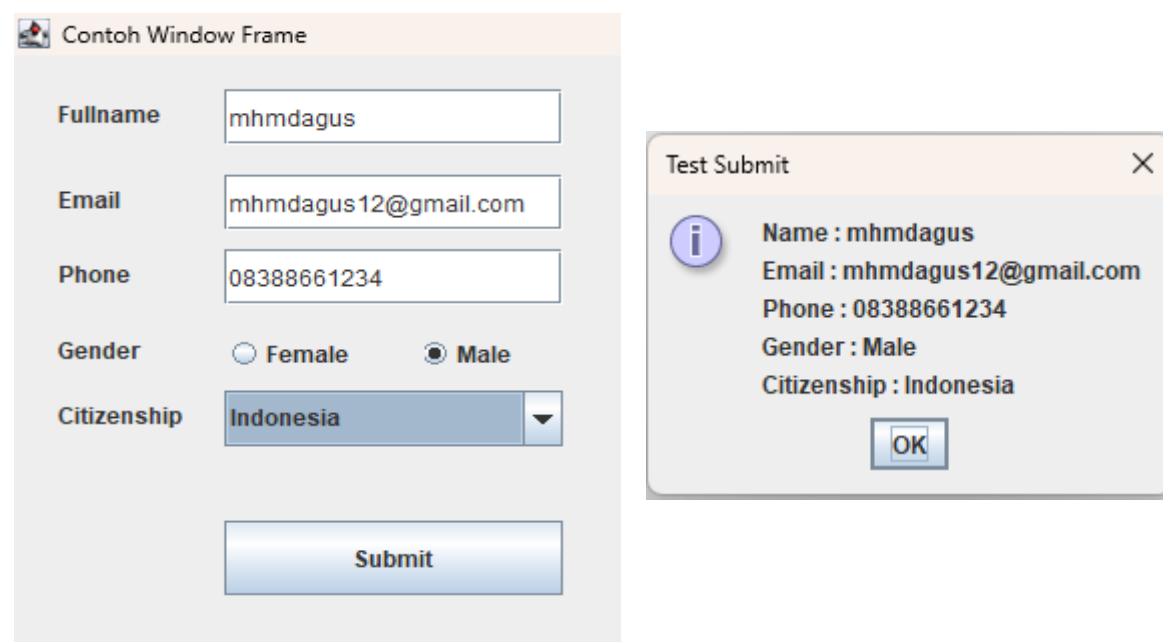
    data.add(selectCitizen.getSelectedItem().toString());

    String output = "";
    output += "Name : " + data.get(0) + "\n";
    output += "Email : " + data.get(1) + "\n";
    output += "Phone : " + data.get(2) + "\n";
    output += "Gender : " + data.get(3) + "\n";
    output += "Citizenship : " + data.get(4) + "\n";
    JOptionPane.showMessageDialog(null, output, "Test Submit",
JOptionPane.INFORMATION_MESSAGE);
    }
};
btnSubmit.addActionListener(actionSubmit);
panell.add(btnSubmit);

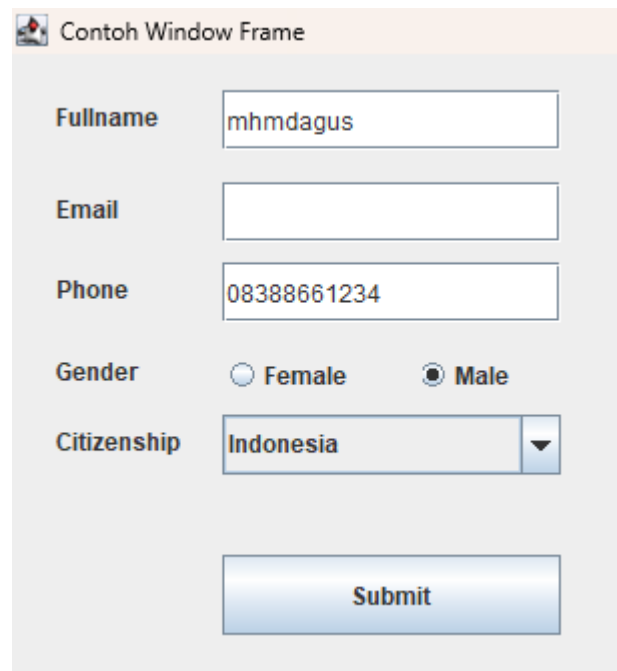
frame.add(panell);
}
}

```

SCREEN CAPTURE



JIKA TIDAK DI ISI



Contoh Window Frame

Fullname

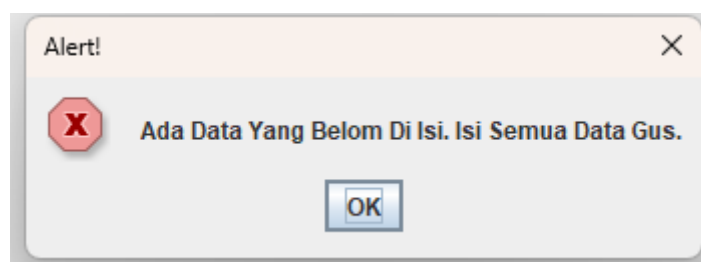
Email

Phone

Gender ☐ Female ☒ Male

Citizenship

Submit



LATIHAN 3

SOURCE CODE

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

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

public class Latihan03 extends JFrame{
```

```

private static final long serialVersionUID = 1L;

Latihan03() {
    // menampilkan jendela pada layar
    setVisible(true);
    // menentukan posisi jendela pada tengah layar
    pack();
    setLocationRelativeTo(null);
    // menentukan ukuran width dan height ada jendela
    setSize(500, 500);
    // berikan judul pada jendela
    setTitle("Contoh Window Frame");
    // menutup jendela secara penuh
    setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
    GenerateUI(this);
}

public static void main(String[] args) {
    new Latihan03();
}

private void GenerateUI(Latihan03 frame) {
    JPanel mainPanel = new JPanel();
    mainPanel.setLayout(new BorderLayout());
    frame.setContentPane(mainPanel);

    JPanel panel1 = new JPanel();
    panel1.setLayout(null);
    mainPanel.add(panel1, BorderLayout.NORTH);

    JLabel lblEmail = new JLabel("Email");
    lblEmail.setBounds(22, 23, 80, 16);
    panel1.add(lblEmail);

    final JTextField textEmail = new JTextField();
    textEmail.setBounds(105, 18, 169, 30);
    panel1.add(textEmail);

    JLabel lblPassword = new JLabel("Password");
    lblPassword.setBounds(22, 69, 61, 16);
    panel1.add(lblPassword);

    final JPasswordField textPassword = new JPasswordField();
    textPassword.setBounds(105, 64, 169, 30);
    panel1.add(textPassword);

    JCheckBox chkRemember = new JCheckBox("Remember Account ?");
    chkRemember.setBounds(105, 100, 169, 40);
    panel1.add(chkRemember);

    JButton btnSubmit = new JButton("Submit");
    btnSubmit.setBounds(105, 150, 169, 40);
    ActionListener actionSubmit = new ActionListener() {
        public void actionPerformed(ActionEvent e) {
            String myEmail = "212310004@student.ibik.ac.id";
            String myName = "Muhamad Agus Setiawan";
            String myPass = "212310004";

            String inputPass = new String(textPassword.getPassword());

```

```

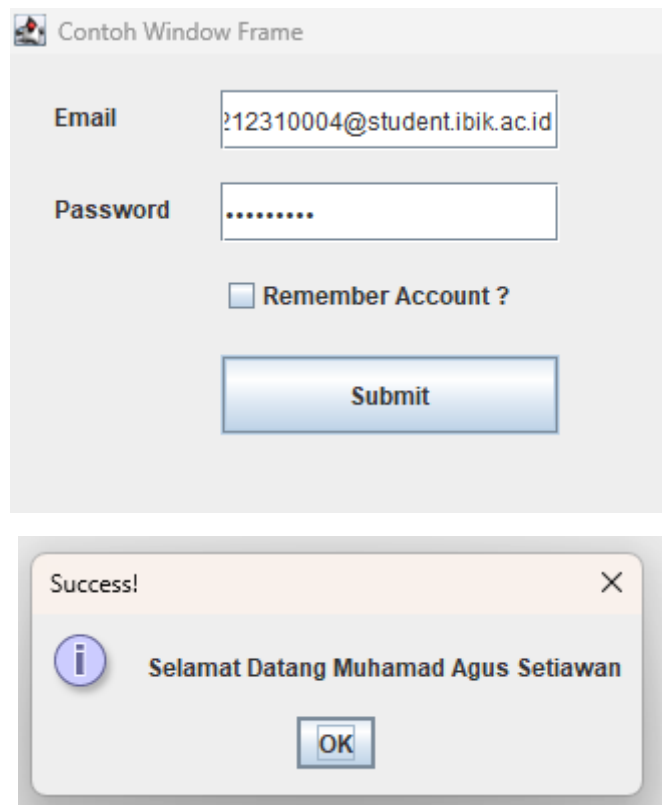
        if (inputEmail.getText().isEmpty() || inputPass.isEmpty()) {
            JOptionPane.showMessageDialog(null, "Silakan mengisi data
dengan benar", "Alert",
                JOptionPane.ERROR_MESSAGE);
        } else {
            if (!inputEmail.getText().equals(myEmail) &&
!inputPass.equals(myPass)) {
                JOptionPane.showMessageDialog(null, "Data yang anda
masukan salah", "Alert",
                    JOptionPane.ERROR_MESSAGE);
            } else {
                JOptionPane.showMessageDialog(null, "Selamat Datang " +
myName, "Success!",
                    JOptionPane.INFORMATION_MESSAGE);
            }
        }
    }
};
btnSubmit.addActionListener(actionSubmit);
panel1.add(btnSubmit);

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

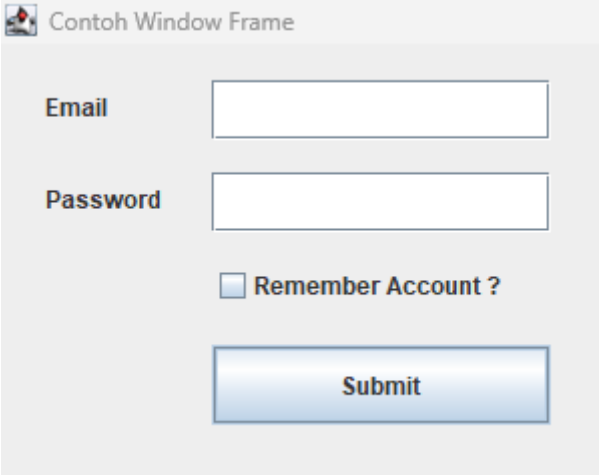
frame.add(panel1);
}
}

```

SCREEN CAPTURE



JIKA KOSONG

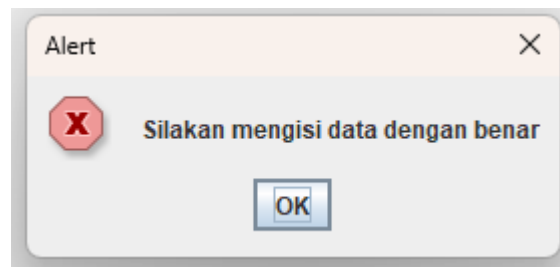


Contoh Window Frame

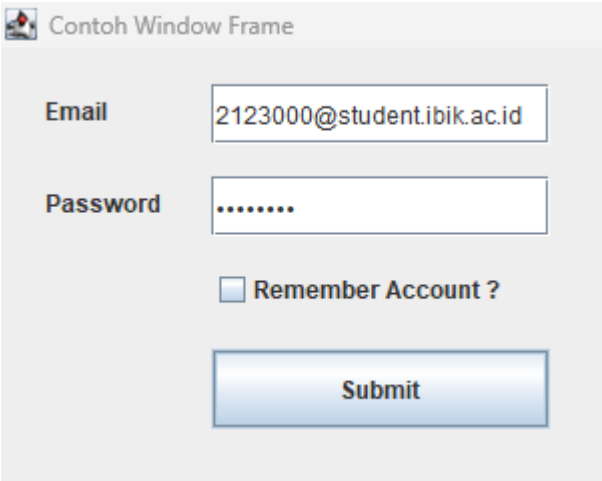
Email

Password

☐ Remember Account ?



JIKA SALAH

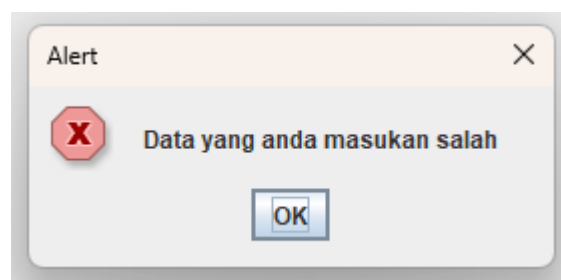


Contoh Window Frame

Email

Password

☐ Remember Account ?



LATIHAN 4

SOURCE CODE

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

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

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.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;

public class Latihan04 extends JFrame {
    /**
     *
     */
    private static final long serialVersionUID = 1L;

    Latihan04() {
        setVisible(true);
        pack();
        setLocationRelativeTo(null);
        setSize(1000, 480);
        setTitle("Form");
        setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
        GenerateUI(this);
    }

    public static void main(String[] args) {
        new Latihan04();
    }

    private void GenerateUI(Latihan04 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("New");
```

```

JMenuItem item2 = new JMenuItem("Save");
JMenuItem item3 = new JMenuItem("Exit");

fileMenu.add(item1);
fileMenu.add(item2);
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);

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);

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);

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

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

```

```

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

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

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

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);
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(lftPanelBorder);
// 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);

String data[][] = {
    { "212310004", "Muhamad Agus", "B" },
    { "212310002", "Raihan Dwi", "C" },
    { "212310003", "Raihan Prtama", "A" }
};

String column[] = {
    "Student ID",
    "Name",
    "Grade"
};

JTable jt = new JTable(data, column);
jt.setBounds(22, 40, 480, 450);

```

```
JScrollPane sp = new JScrollPane(jt);

rightPanel.add(sp);

rightPanel.setBorder(rPanelBorder);
}
}
```

SCREEN CAPTURE

FORM PENILAIAN MATAKULIAH PBO

Input Data Mahasiswa

NPM

Nama

Nilai

☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

Save Delete Clear

Data Mahasiswa

Student ID	Name	Grade
212310004	Muhamad Agus	B
212310002	Raihan Dwi	C
212310003	Raihan Prtama	A