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Kode :

PBO Prak 9

```java
import java.util.ArrayList;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import latihan.gui2.Database;
import latihan.gui2.Mahasiswa;

/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
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 */

/**
 *
 * @author Tyo
 */
public class MainFrame extends javax.swing.JFrame {

    /**
     * Creates new form MainFrame
     */
    public MainFrame() {
        initComponents();
        contentScrollPane.setViewportView(new LoginPanel(contentScrollPane));
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        buttonGroup1 = new javax.swing.ButtonGroup();
        contentScrollPane = new javax.swing.JScrollPane();
        jMenuBar1 = new javax.swing.JMenuBar();
        jMenu1 = new javax.swing.JMenu();
        homeMenuItem = new javax.swing.JMenuItem();
```

```java
        jMenu2 = new javax.swing.JMenu();
        mahasiswaMenuItem = new javax.swing.JMenuItem();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jMenu1.setText("File");

        homeMenuItem.setText("Home");
        homeMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                homeMenuItemActionPerformed(evt);
            }
        });
        jMenu1.add(homeMenuItem);

        jMenuBar1.add(jMenu1);

        jMenu2.setText("Entri");

        mahasiswaMenuItem.setText("Mahasiswa");
        mahasiswaMenuItem.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                mahasiswaMenuItemActionPerformed(evt);
            }
        });
        jMenu2.add(mahasiswaMenuItem);

        jMenuBar1.add(jMenu2);

        setJMenuBar(jMenuBar1);

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(contentScrollPane, javax.swing.GroupLayout.DEFAULT_SIZE, 723,
Short.MAX_VALUE)
                .addContainerGap())
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(contentScrollPane, javax.swing.GroupLayout.DEFAULT_SIZE, 425,
Short.MAX_VALUE)
                .addContainerGap())
        );

        pack();
```

```java
    }// </editor-fold>

    private void homeMenuItemActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        contentScrollPane.setViewportView(new HomePanel());
    }

    private void mahasiswaMenuItemActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        contentScrollPane.setViewportView(new EntryPanel());
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
         * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(MainFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(MainFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(MainFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(MainFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        }
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
```

```java
                new MainFrame().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.ButtonGroup buttonGroup1;
    private javax.swing.JScrollPane contentScrollPane;
    private javax.swing.JMenuItem homeMenuItem;
    private javax.swing.JMenu jMenu1;
    private javax.swing.JMenu jMenu2;
    private javax.swing.JMenuBar jMenuBar1;
    private javax.swing.JMenuItem mahasiswaMenuItem;
    // End of variables declaration
}
```

```java
import java.util.ArrayList;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import latihan.gui2.Database;
import latihan.gui2.Mahasiswa;

/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JPanel.java to edit this template
 */


/**
 *
 * @author Tyo
 */
public class EntryPanel extends javax.swing.JPanel {

    /**
     * Creates new form EntryPanel
     */
    public EntryPanel() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {
```

```java
buttonGroup1 = new javax.swing.ButtonGroup();
jPanel1 = new javax.swing.JPanel();
jLabel1 = new javax.swing.JLabel();
jScrollPane1 = new javax.swing.JScrollPane();
alamatTextArea = new javax.swing.JTextArea();
jLabel2 = new javax.swing.JLabel();
umurSpinner = new javax.swing.JSpinner();
jLabel3 = new javax.swing.JLabel();
simpanButton = new javax.swing.JButton();
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
provinsiComboBox = new javax.swing.JComboBox<>();
jLabel6 = new javax.swing.JLabel();
futsalCheckBox = new javax.swing.JCheckBox();
nimTextField = new javax.swing.JTextField();
basketCheckBox = new javax.swing.JCheckBox();
namaTextField = new javax.swing.JTextField();
tidurCheckBox = new javax.swing.JCheckBox();
lakiRadioButton = new javax.swing.JRadioButton();
jLabel7 = new javax.swing.JLabel();
perempuanRadioButton = new javax.swing.JRadioButton();
jLabel8 = new javax.swing.JLabel();
jPanel2 = new javax.swing.JPanel();
jScrollPane2 = new javax.swing.JScrollPane();
mahasiswaTable = new javax.swing.JTable();

setLayout(new java.awt.BorderLayout());

jLabel1.setText("NIM :");

alamatTextArea.setColumns(20);
alamatTextArea.setRows(5);
jScrollPane1.setViewportView(alamatTextArea);

jLabel2.setText("Nama :");

umurSpinner.setModel(new javax.swing.SpinnerNumberModel(15, 0, 60, 1));

jLabel3.setText("Jenis Kelamin :");

simpanButton.setText("simpan");
simpanButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        simpanButtonActionPerformed(evt);
    }
});

jLabel4.setText("Umur :");

jLabel5.setText("Alamat :");
```

```java
        provinsiComboBox.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] {
"KalSel", "KalBar", "KalTim", "KalTeng", "KalTara", " " }));

        jLabel6.setText("Provinsi :");

        futsalCheckBox.setText("Futsal");

        basketCheckBox.setText("Basket");

        tidurCheckBox.setText("Tidur");

        buttonGroup1.add(lakiRadioButton);
        lakiRadioButton.setText("Laki-Laki");
        lakiRadioButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                lakiRadioButtonActionPerformed(evt);
            }
        });

        jLabel7.setText("Hobi :");

        buttonGroup1.add(perempuanRadioButton);
        perempuanRadioButton.setText("Perempuan");
        perempuanRadioButton.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                perempuanRadioButtonActionPerformed(evt);
            }
        });

        jLabel8.setText("Tahun");

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
                .addContainerGap(312, Short.MAX_VALUE)
                .addComponent(simpanButton)
                .addContainerGap())

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addContainerGap()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(jLabel1)
                        .addComponent(jLabel2)
                        .addComponent(jLabel3)
                        .addComponent(jLabel4)
                        .addComponent(jLabel6)
```

```
                    .addComponent(jLabel5)
                    .addComponent(jLabel7))
                .addGap(46, 46, 46)

    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(nimTextField)
                    .addComponent(namaTextField)
                    .addComponent(jScrollPane1, javax.swing.GroupLayout.DEFAULT_SIZE, 248,
Short.MAX_VALUE)
                    .addGroup(jPanel1Layout.createSequentialGroup()

    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(basketCheckBox)
                        .addComponent(futsalCheckBox)
                        .addComponent(provinsiComboBox, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(perempuanRadioButton)
                        .addGroup(jPanel1Layout.createSequentialGroup()
                            .addComponent(umurSpinner, javax.swing.GroupLayout.PREFERRED_SIZE, 54,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                            .addComponent(jLabel8))
                        .addComponent(lakiRadioButton)
                        .addComponent(tidurCheckBox))
                    .addGap(0, 0, Short.MAX_VALUE)))
                .addContainerGap()))
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
                .addContainerGap(442, Short.MAX_VALUE)
                .addComponent(simpanButton)
                .addContainerGap())

    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addContainerGap()

    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                    .addGroup(jPanel1Layout.createSequentialGroup()

    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                        .addComponent(jLabel1)
                        .addComponent(nimTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                        .addComponent(jLabel2)
```

```java
            .addComponent(namaTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                .addComponent(jLabel3)
                .addGap(5, 5, 5))
            .addComponent(lakiRadioButton))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(perempuanRadioButton)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(umurSpinner, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jLabel4)
                .addComponent(jLabel8))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(jLabel5)
                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(provinsiComboBox, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jLabel6))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(futsalCheckBox)
                .addComponent(jLabel7))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(basketCheckBox)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(tidurCheckBox)
            .addContainerGap(111, Short.MAX_VALUE)))
    );

    add(jPanel1, java.awt.BorderLayout.LINE_START);

    mahasiswaTable.setModel(new javax.swing.table.DefaultTableModel(
        new Object [][] {

        },
        new String [] {
            "NIM", "Nama", "Jenis Kelamin", "Umur"
        }
    ) {
        Class[] types = new Class [] {
            java.lang.String.class, java.lang.String.class, java.lang.String.class, java.lang.Integer.class
```

```java
        };
        boolean[] canEdit = new boolean [] {
            false, false, false, false
        };

        public Class getColumnClass(int columnIndex) {
            return types [columnIndex];
        }

        public boolean isCellEditable(int rowIndex, int columnIndex) {
            return canEdit [columnIndex];
        }
    });
    jScrollPane2.setViewportView(mahasiswaTable);

    javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
    jPanel2.setLayout(jPanel2Layout);
    jPanel2Layout.setHorizontalGroup(
        jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 484, Short.MAX_VALUE)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel2Layout.createSequentialGroup()
                .addComponent(jScrollPane2, javax.swing.GroupLayout.DEFAULT_SIZE, 478,
Short.MAX_VALUE)
                .addContainerGap()))
    );
    jPanel2Layout.setVerticalGroup(
        jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 470, Short.MAX_VALUE)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 0,
Short.MAX_VALUE)
                .addContainerGap()))
    );

    add(jPanel2, java.awt.BorderLayout.CENTER);
}// </editor-fold>

private void simpanButtonActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    //      System.out.println(nimTextField.getText());
    //      System.out.println(namaTextField.getText());
    //      if(lakiRadioButton.isSelected()){
    //          System.out.println("Laki-laki");
    //      }
    //      if(perempuanRadioButton.isSelected()){
```

```java
        //        System.out.println("Perempuan");
        //        }
        //        int umur = (Integer) umurSpinner.getValue();
        //        System.out.println(umur);
        //        System.out.println(alamatTextArea.getText());
        //        System.out.println(provinsiComboBox.getSelectedItem());
        //        if(futsalCheckBox.isSelected()){
        //            System.out.println("membaca");
        //        }
        //        if(basketCheckBox.isSelected()){
        //            System.out.println("menyanyi");
        //        }
        //        if(tidurCheckBox.isSelected()){
        //            System.out.println("berenang");
        //        }
        Mahasiswa mhs = new Mahasiswa();
        mhs.setNim(nimTextField.getText());
        mhs.setNama(namaTextField.getText());
        if(lakiRadioButton.isSelected()){
            mhs.setJenisKelamin("Laki-laki");
        }
        if(perempuanRadioButton.isSelected()){
            mhs.setJenisKelamin("Perempuan");
        }
        int umur = (Integer) umurSpinner.getValue();
        mhs.setUmur(umur);
        mhs.setAlamat(alamatTextArea.getText());

        mhs.setProvinsi(provinsiComboBox.getSelectedItem().toString());
        ArrayList<String> hobiList = new ArrayList<>();
        if(futsalCheckBox.isSelected()){
            hobiList.add("Futsal");
        }
        if(basketCheckBox.isSelected()){
            hobiList.add("Basket");
        }
        if(tidurCheckBox.isSelected()){
            hobiList.add("Tidur");
        }
        mhs.setHobi(hobiList);
        Database.getInstance().insertMahasiswa(mhs);
        clearForm();
        JOptionPane.showMessageDialog(this, "Sukses Tersimpan");
        loadTableData();
    }

    private void loadTableData(){
        DefaultTableModel dtm = (DefaultTableModel) mahasiswaTable.getModel();
        //refresh tabel
        while(dtm.getRowCount()>0){
            dtm.removeRow(0);
```

```java
        }
        //isi tabel
        for(Mahasiswa mhs : Database.getInstance().getListMahasiswa()){
            dtm.addRow(new
Object[]{mhs.getNim(),mhs.getNama(),mhs.getJenisKelamin(),mhs.getUmur()});
        }
    }

    private void clearForm(){
        nimTextField.setText("");
        namaTextField.setText("");
        buttonGroup1.clearSelection();
        umurSpinner.setValue(15);
        alamatTextArea.setText("");
        provinsiComboBox.setSelectedIndex(-1);
        futsalCheckBox.setSelected(false);
        basketCheckBox.setSelected(false);
        tidurCheckBox.setSelected(false);
    }

    private void lakiRadioButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void perempuanRadioButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
         * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(MainFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(MainFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (IllegalAccessException ex) {
```

```java
            java.util.logging.Logger.getLogger(MainFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(MainFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        }
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new MainFrame().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JTextArea alamatTextArea;
    private javax.swing.JCheckBox basketCheckBox;
    private javax.swing.ButtonGroup buttonGroup1;
    private javax.swing.JCheckBox futsalCheckBox;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JLabel jLabel5;
    private javax.swing.JLabel jLabel6;
    private javax.swing.JLabel jLabel7;
    private javax.swing.JLabel jLabel8;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JPanel jPanel2;
    private javax.swing.JScrollPane jScrollPane1;
    private javax.swing.JScrollPane jScrollPane2;
    private javax.swing.JRadioButton lakiRadioButton;
    private javax.swing.JTable mahasiswaTable;
    private javax.swing.JTextField namaTextField;
    private javax.swing.JTextField nimTextField;
    private javax.swing.JRadioButton perempuanRadioButton;
    private javax.swing.JComboBox<String> provinsiComboBox;
    private javax.swing.JButton simpanButton;
    private javax.swing.JCheckBox tidurCheckBox;
    private javax.swing.JSpinner umurSpinner;
    // End of variables declaration
}
```

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JPanel.java to edit this template
 */
```

```java
/**
 *
 * @author Tyo
 */
public class HomePanel extends javax.swing.JPanel {

    /**
     * Creates new form HomePanel
     */
    public HomePanel() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jLabel1 = new javax.swing.JLabel();

        jLabel1.setFont(new java.awt.Font("Segoe UI Black", 0, 36)); // NOI18N
        jLabel1.setText("Selamat Datang");
        add(jLabel1);
    }// </editor-fold>


    // Variables declaration - do not modify
    private javax.swing.JLabel jLabel1;
    // End of variables declaration
}
```

```java
import javax.swing.JScrollPane;

/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JPanel.java to edit this template
 */

/**
 *
 * @author Tyo
 */
public class LoginPanel extends javax.swing.JPanel {
    private JScrollPane contentScrollPane;
    /**
```

```
 * Creates new form LoginPanel
 */
public LoginPanel(JScrollPane contentScrollPane) {
    this.contentScrollPane = contentScrollPane;
    initComponents();
}
/**
 * Creates new form LoginPanel
 */
public LoginPanel() {
    initComponents();
}

/**
 * This method is called from within the constructor to initialize the form.
 * WARNING: Do NOT modify this code. The content of this method is always
 * regenerated by the Form Editor.
 */
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

    jLabel1 = new javax.swing.JLabel();
    jTextField1 = new javax.swing.JTextField();
    jLabel2 = new javax.swing.JLabel();
    jTextField2 = new javax.swing.JTextField();
    loginButton = new javax.swing.JButton();

    jLabel1.setText("Username");

    jLabel2.setText("Password");

    loginButton.setText("Login");
    loginButton.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            loginButtonActionPerformed(evt);
        }
    });

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(this);
    this.setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addGap(94, 94, 94)
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                .addComponent(jLabel2)
                .addComponent(jLabel1))
            .addGap(18, 18, 18)
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(loginButton)
```

```java
                .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED_SIZE, 138,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED_SIZE, 138,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addContainerGap(97, Short.MAX_VALUE))
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap(80, Short.MAX_VALUE)
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel1)
                    .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel2)
                    .addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)
                .addComponent(loginButton)
                .addGap(115, 115, 115))
        );
    }// </editor-fold>

    private void loginButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        contentScrollPane.setViewportView(new HomePanel());
    }




    // Variables declaration - do not modify
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JTextField jTextField1;
    private javax.swing.JTextField jTextField2;
    private javax.swing.JButton loginButton;
    // End of variables declaration
}
```

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit this template
 */

/**
 *
 * @author Tyo
 */
public class TestFrame extends javax.swing.JFrame {
```

```java
    /**
     * Creates new form TestFrame
     */
    public TestFrame() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        getContentPane().setLayout(new java.awt.FlowLayout());

        pack();
    }// </editor-fold>

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
         * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(TestFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(TestFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (IllegalAccessException ex) {
```

```java
java.util.logging.Logger.getLogger(TestFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(TestFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    }
    //</editor-fold>

    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
      public void run() {
        new TestFrame().setVisible(true);
      }
    });
  }

  // Variables declaration - do not modify
  // End of variables declaration
}
```

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
 */
package latihan.gui2;

import java.util.ArrayList;

/**
 *
 * @author Tyo
 */
public class Mahasiswa {
  private String nim,nama,jenisKelamin;
  private int umur;
  private String alamat, provinsi;
  private ArrayList<String> hobi;

  public String getNim() {
    return nim;
  }

  public void setNim(String nim) {
    this.nim = nim;
  }

  public String getNama() {
    return nama;
  }
```

```java
    public void setNama(String nama) {
        this.nama = nama;
    }

    public String getJenisKelamin() {
        return jenisKelamin;
    }

    public void setJenisKelamin(String jenisKelamin) {
        this.jenisKelamin = jenisKelamin;
    }

    public int getUmur() {
        return umur;
    }

    public void setUmur(int umur) {
        this.umur = umur;
    }

    public String getAlamat() {
        return alamat;
    }

    public void setAlamat(String alamat) {
        this.alamat = alamat;
    }

    public String getProvinsi() {
        return provinsi;
    }

    public void setProvinsi(String provinsi) {
        this.provinsi = provinsi;
    }

    public ArrayList<String> getHobi() {
        return hobi;
    }

    public void setHobi(ArrayList<String> hobi) {
        this.hobi = hobi;
    }

}
```

```java
package latihan.gui2;

import java.util.ArrayList;
import java.util.List;

/**
 *
 * @author Tyo
 */
public class Database {
    public static Database instance;
    private ArrayList<Mahasiswa> data = new ArrayList<>();
    private Database(){
    }

    public static synchronized Database getInstance(){
        if(instance == null){
            instance = new Database();
        }
        return instance;
    }

    public void insertMahasiswa(Mahasiswa mahasiswa){
        data.add(mahasiswa);
    }

    public List<Mahasiswa> getListMahasiswa(){
        return data;
    }
}
```

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Main.java to edit this template
 */
package latihan.gui2;

/**
 *
 * @author Tyo
 */
public class LatihanGUI2 {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
    }

}
```

File   Entri

Username

Password

Login

Selamat Datang

```
package latihan.gu...

import java.util.Ar...
import java.util.Lis...

/**
 *
 * @author Tyo
 */
public class Datab...
    public static Dat...
    private ArrayLis...
    private Databas...
    }

    public static syn...
        if(instance == null){
            instance = new Database();
        }
        return instance;
    }

    public void insertMahasiswa(Mahasiswa mahasiswa){
        data.add(mahasiswa);
    }

    public List<Mahasiswa> getListMahasiswa(){
        return data;
```