Laporan Hasil Praktikum

Pemrograman Desktop

Tugas 9

ALYA AIMAN SALSABILA ARIF

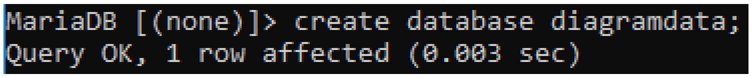
1817101379

Tingkat III Rekayasa Perangkat Lunak Kripto

Politeknik Siber dan Sandi Negara

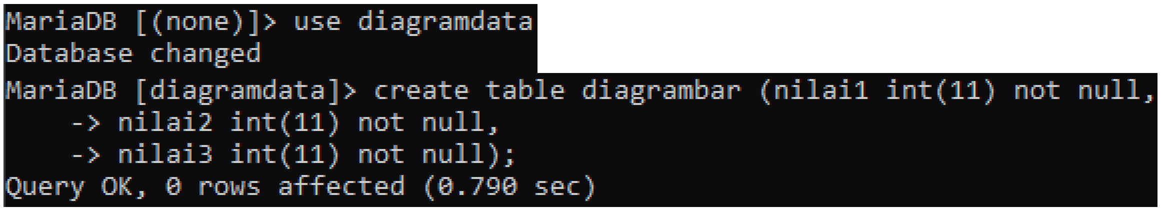
2020/2021

1. Buat basis data “diagramdata”



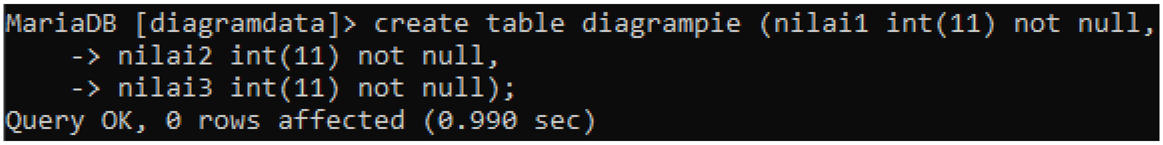
```
MariaDB [(none)]> create database diagramdata;
Query OK, 1 row affected (0.003 sec)
```

2. Buat tabel diagrambar



```
MariaDB [(none)]> use diagramdata
Database changed
MariaDB [diagramdata]> create table diagrambar (nilai1 int(11) not null,
    -> nilai2 int(11) not null,
    -> nilai3 int(11) not null);
Query OK, 0 rows affected (0.790 sec)
```

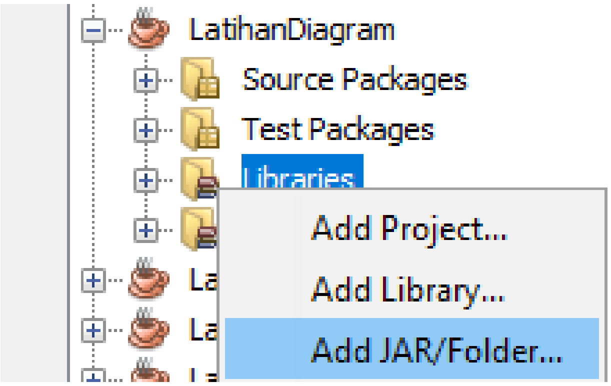
3. Buat tabel diagrampie



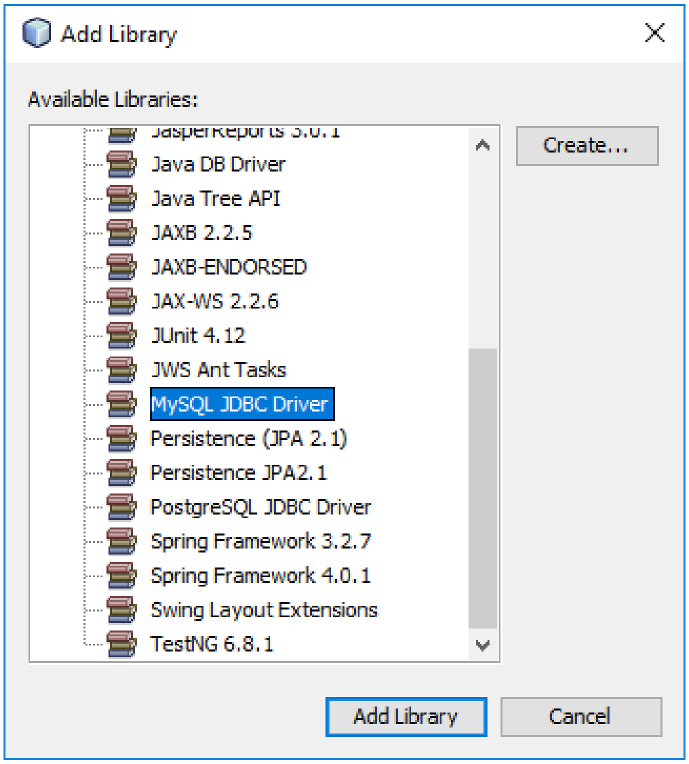
```
MariaDB [diagramdata]> create table diagrampie (nilai1 int(11) not null,
    -> nilai2 int(11) not null,
    -> nilai3 int(11) not null);
Query OK, 0 rows affected (0.990 sec)
```

4. Buat projek baru dengan nama LatihanDiagram

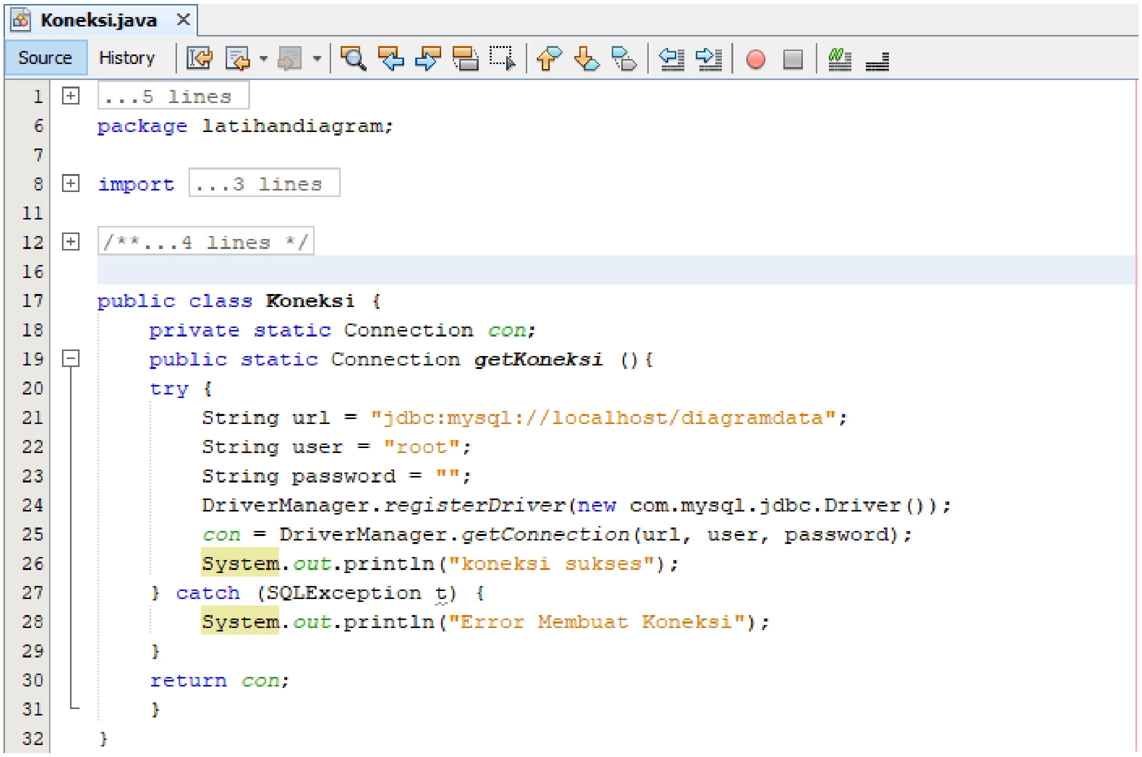
5. Tambahkan *library* dengan cara berikut



6. Tambahkan juga *library* MySQL JDBC Driver

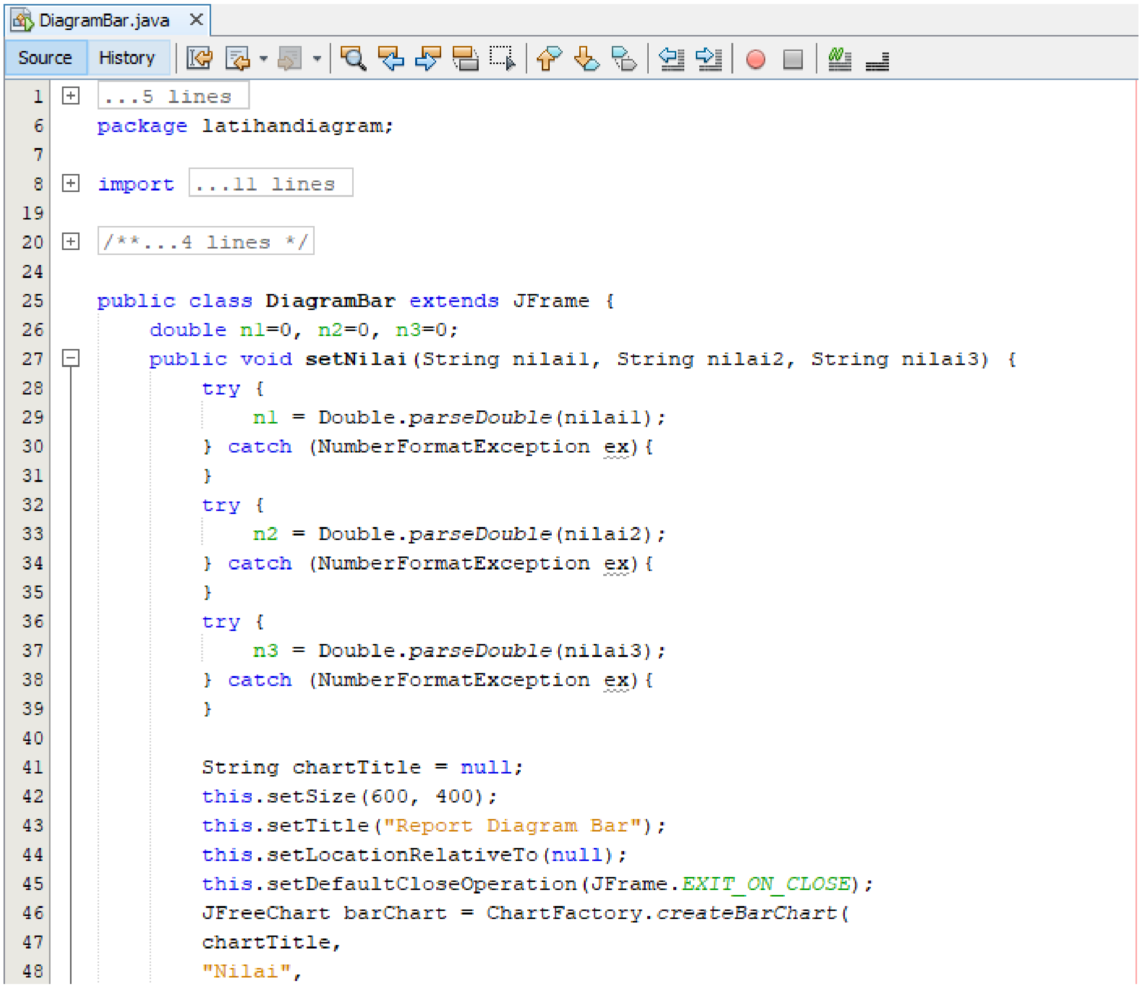


7. Buatlah kelas Koneksi dan masukkan *source code* sebagai berikut

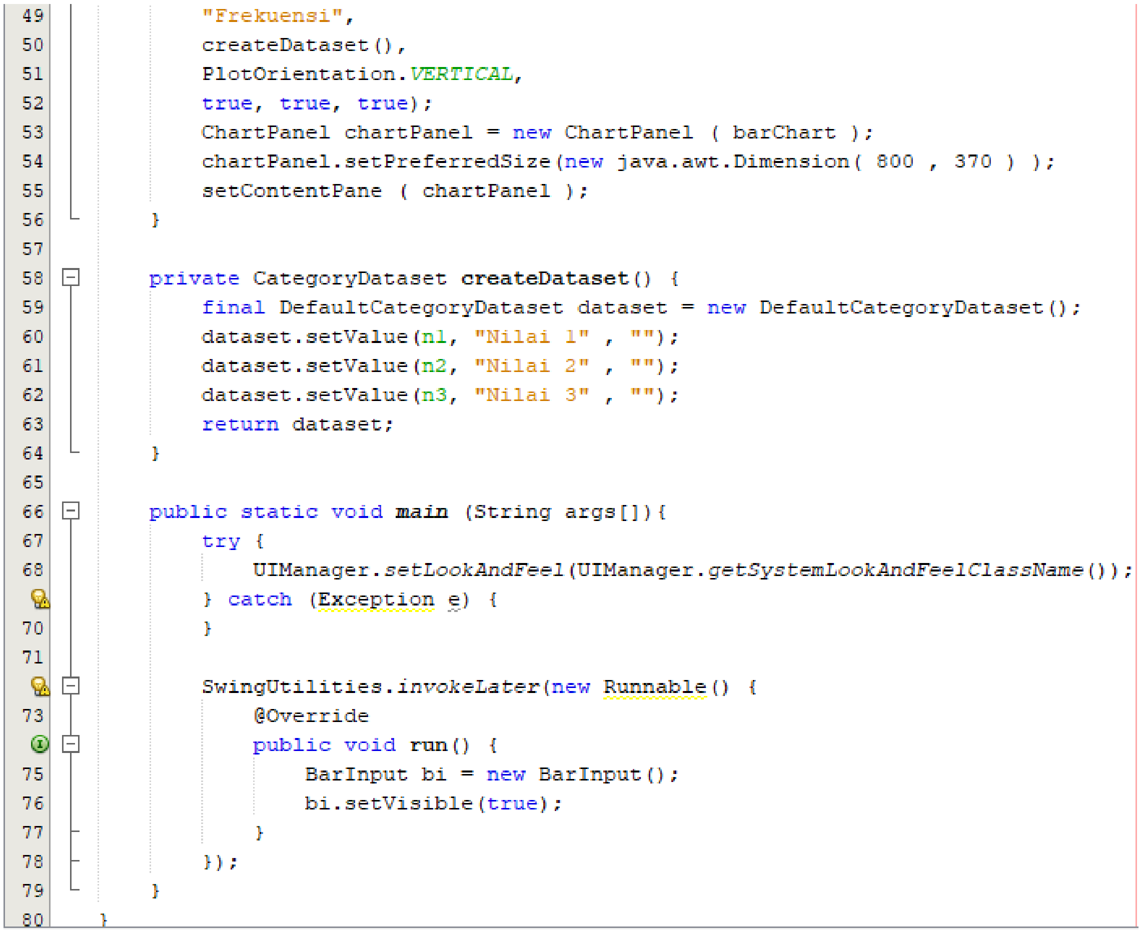


```
...5 lines
package latihandiagram;

import ...3 lines

/**...4 lines */

public class Koneksi {
    private static Connection con;
    public static Connection getKoneksi (){
    try {
        String url = "jdbc:mysql://localhost/diagramdata";
        String user = "root";
        String password = "";
        DriverManager.registerDriver(new com.mysql.jdbc.Driver());
        con = DriverManager.getConnection(url, user, password);
        System.out.println("koneksi sukses");
    } catch (SQLException t) {
        System.out.println("Error Membuat Koneksi");
    }
    return con;
    }
}
```

8. Buatlah kelas DiagramBar dan masukkan *source code* sebagai berikut

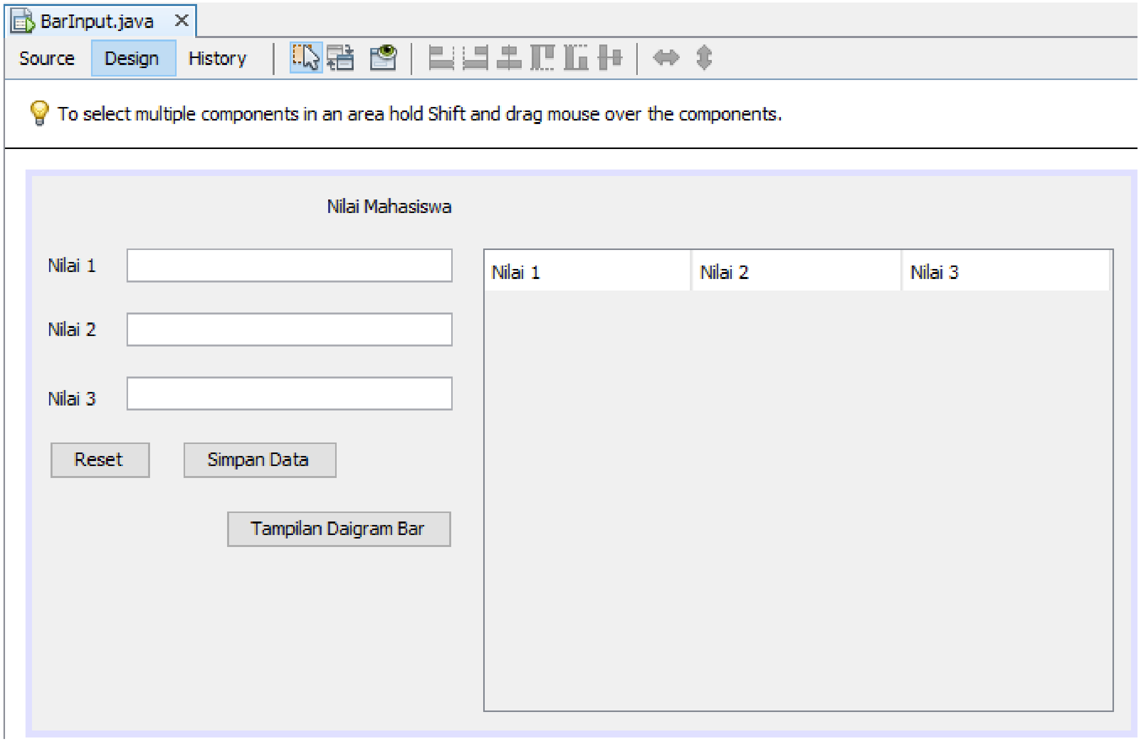


```
...5 lines
package latihandiagram;

import ...11 lines

/**...4 lines */

public class DiagramBar extends JFrame {
    double n1=0, n2=0, n3=0;
    public void setNilai(String nilai1, String nilai2, String nilai3) {
        try {
            n1 = Double.parseDouble(nilai1);
        } catch (NumberFormatException ex){
        }
        try {
            n2 = Double.parseDouble(nilai2);
        } catch (NumberFormatException ex){
        }
        try {
            n3 = Double.parseDouble(nilai3);
        } catch (NumberFormatException ex){
        }

        String chartTitle = null;
        this.setSize(600, 400);
        this.setTitle("Report Diagram Bar");
        this.setLocationRelativeTo(null);
        this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        JFreeChart barChart = ChartFactory.createBarChart(
        chartTitle,
        "Nilai",
```



```
        "Frekuensi",
        createDataset(),
        PlotOrientation.VERTICAL,
        true, true, true);
        ChartPanel chartPanel = new ChartPanel ( barChart );
        chartPanel.setPreferredSize(new java.awt.Dimension( 800 , 370 ) );
        setContentPane ( chartPanel );
    }

    private CategoryDataset createDataset() {
        final DefaultCategoryDataset dataset = new DefaultCategoryDataset();
        dataset.setValue(n1, "Nilai 1" , "");
        dataset.setValue(n2, "Nilai 2" , "");
        dataset.setValue(n3, "Nilai 3" , "");
        return dataset;
    }

    public static void main (String args[]){
        try {
            UIManager.setLookAndFeel(UIManager.getSystemLookAndFeelClassName());
        } catch (Exception e) {
        }

        SwingUtilities.invokeLater(new Runnable() {
            @Override
            public void run() {
                BarInput bi = new BarInput();
                bi.setVisible(true);
            }
        });
    }
}
```

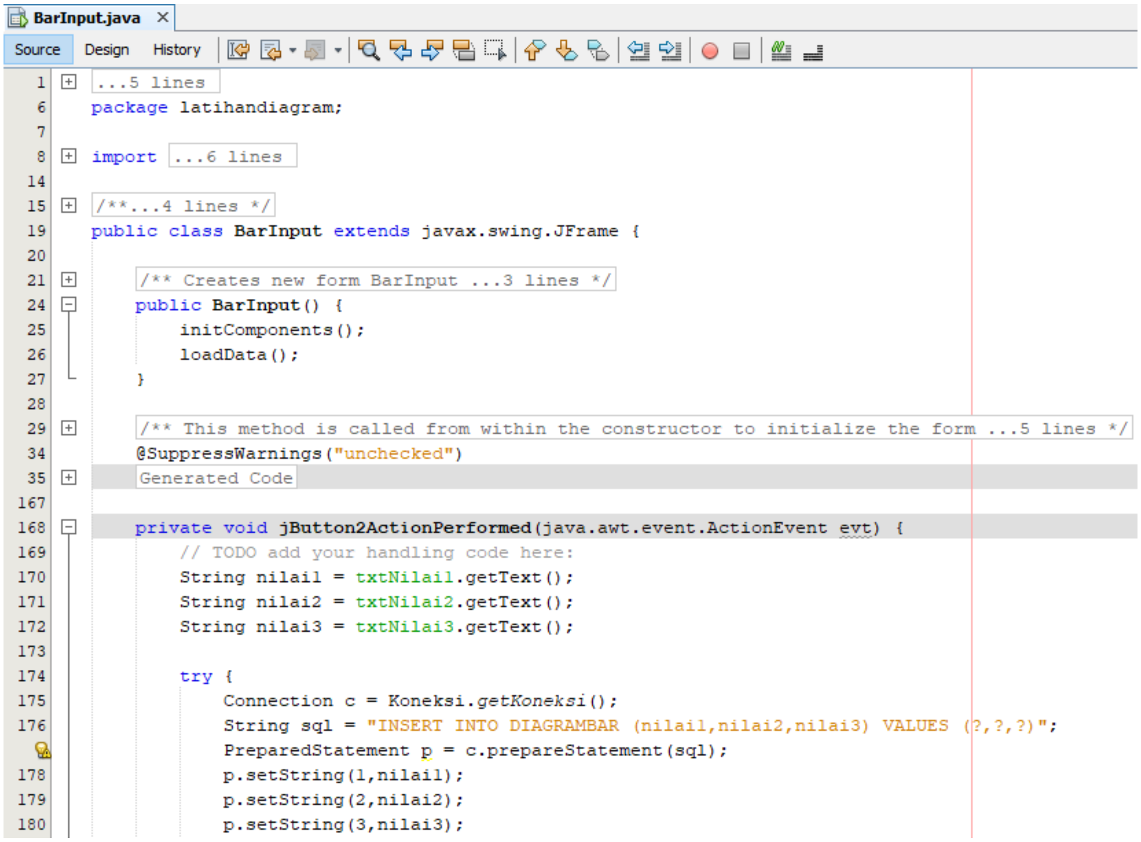
9. Buatlah kelas BarInput dengan JFrame Form. Buatlah desain kelas BarInput.



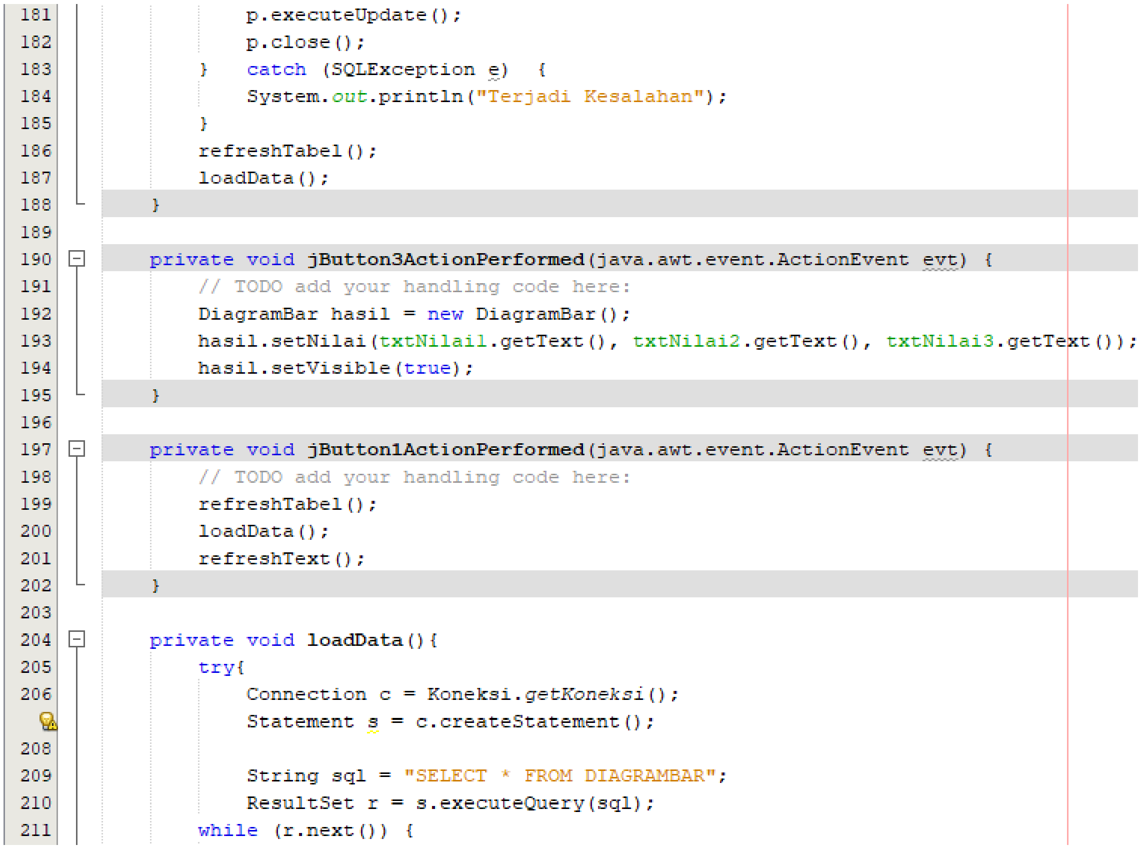
To select multiple components in an area hold Shift and drag mouse over the components.

Nilai 1	Nilai 2	Nilai 3

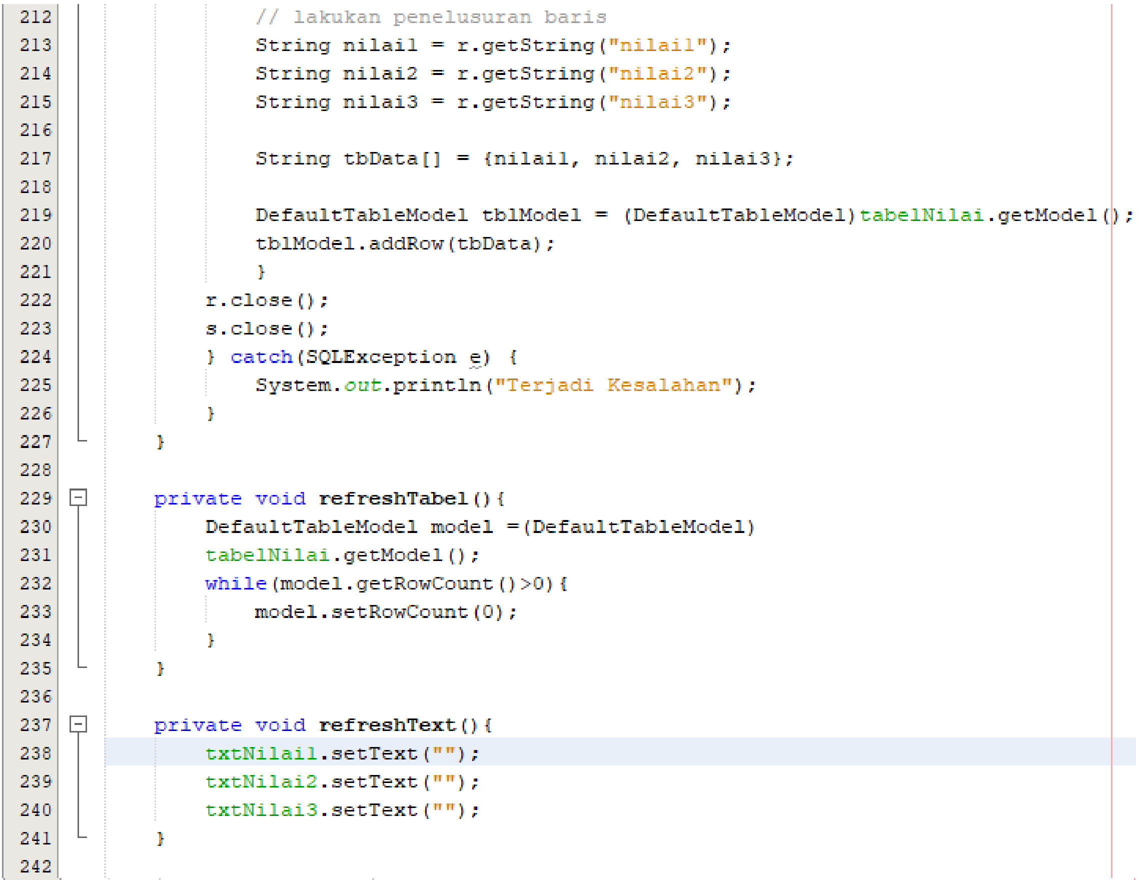
10. Masukkan *source code* berikut pada kelas BarInput



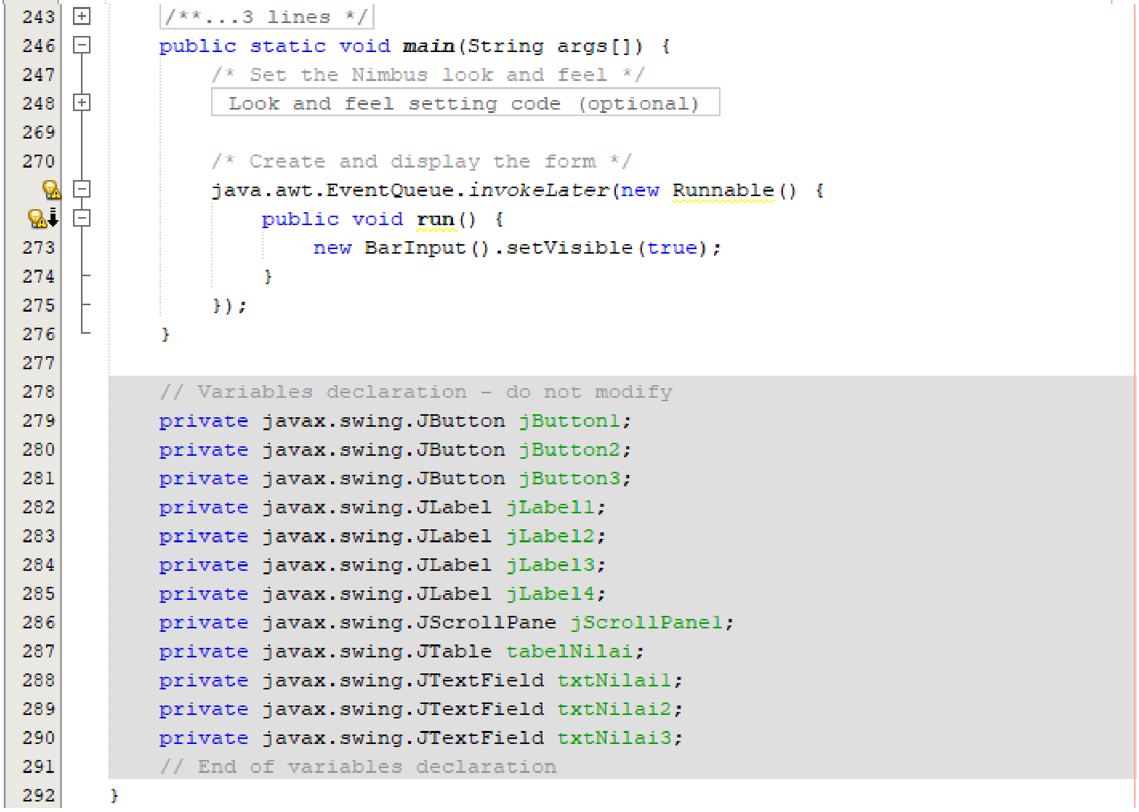
```
...5 lines
package latihandiagram;

import ...6 lines

/**...4 lines */
public class BarInput extends javax.swing.JFrame {

    /** Creates new form BarInput ...3 lines */
    public BarInput() {
        initComponents();
        loadData();
    }

    /** This method is called from within the constructor to initialize the form ...5 lines */
    @SuppressWarnings("unchecked")
    Generated Code

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String nilai1 = txtNilai1.getText();
        String nilai2 = txtNilai2.getText();
        String nilai3 = txtNilai3.getText();

        try {
            Connection c = Koneksi.getKoneksi();
            String sql = "INSERT INTO DIAGRAMBAR (nilai1,nilai2,nilai3) VALUES (?,?,?)";
            PreparedStatement p = c.prepareStatement(sql);
            p.setString(1,nilai1);
            p.setString(2,nilai2);
            p.setString(3,nilai3);
```



```
            p.executeUpdate();
            p.close();
        }   catch (SQLException e)   {
            System.out.println("Terjadi Kesalahan");
        }
        refreshTabel();
        loadData();
    }

    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        DiagramBar hasil = new DiagramBar();
        hasil.setNilai(txtNilai1.getText(), txtNilai2.getText(), txtNilai3.getText());
        hasil.setVisible(true);
    }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        refreshTabel();
        loadData();
        refreshText();
    }

    private void loadData(){
        try{
            Connection c = Koneksi.getKoneksi();
            Statement s = c.createStatement();

            String sql = "SELECT * FROM DIAGRAMBAR";
            ResultSet r = s.executeQuery(sql);
        while (r.next()) {
```

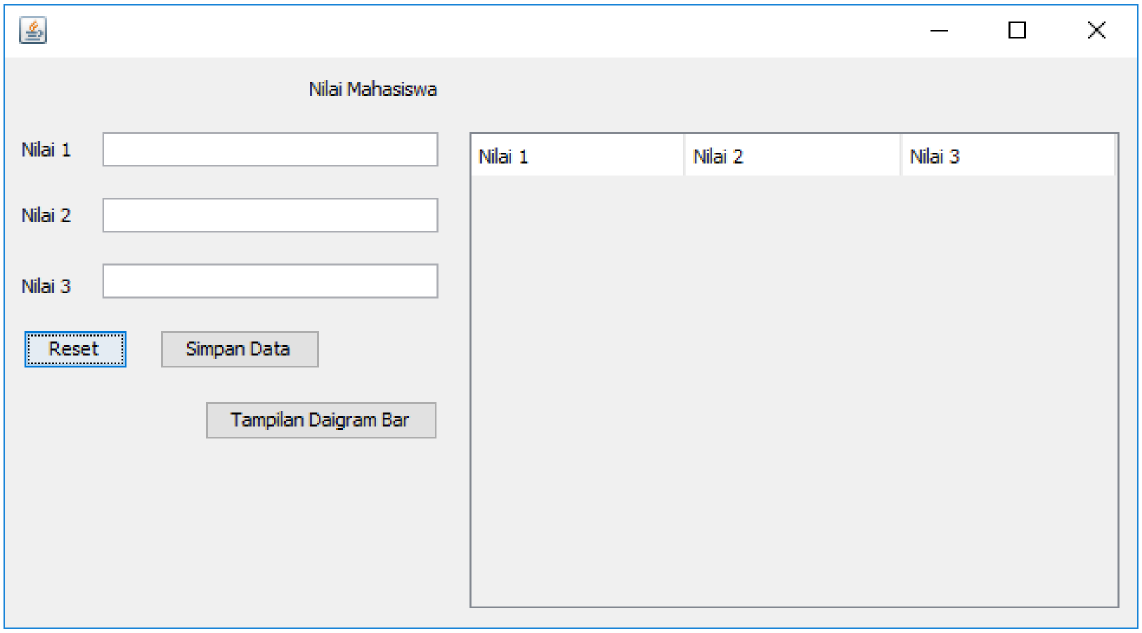


```
                // lakukan penelusuran baris
                String nilai1 = r.getString("nilai1");
                String nilai2 = r.getString("nilai2");
                String nilai3 = r.getString("nilai3");

                String tbData[] = {nilai1, nilai2, nilai3};

                DefaultTableModel tblModel = (DefaultTableModel)tabelNilai.getModel();
                tblModel.addRow(tbData);
                }
            r.close();
            s.close();
            } catch(SQLException e) {
                System.out.println("Terjadi Kesalahan");
            }
    }

    private void refreshTabel(){
        DefaultTableModel model =(DefaultTableModel)
        tabelNilai.getModel();
        while(model.getRowCount()>0){
            model.setRowCount(0);
        }
    }

    private void refreshText(){
        txtNilai1.setText("");
        txtNilai2.setText("");
        txtNilai3.setText("");
    }

```

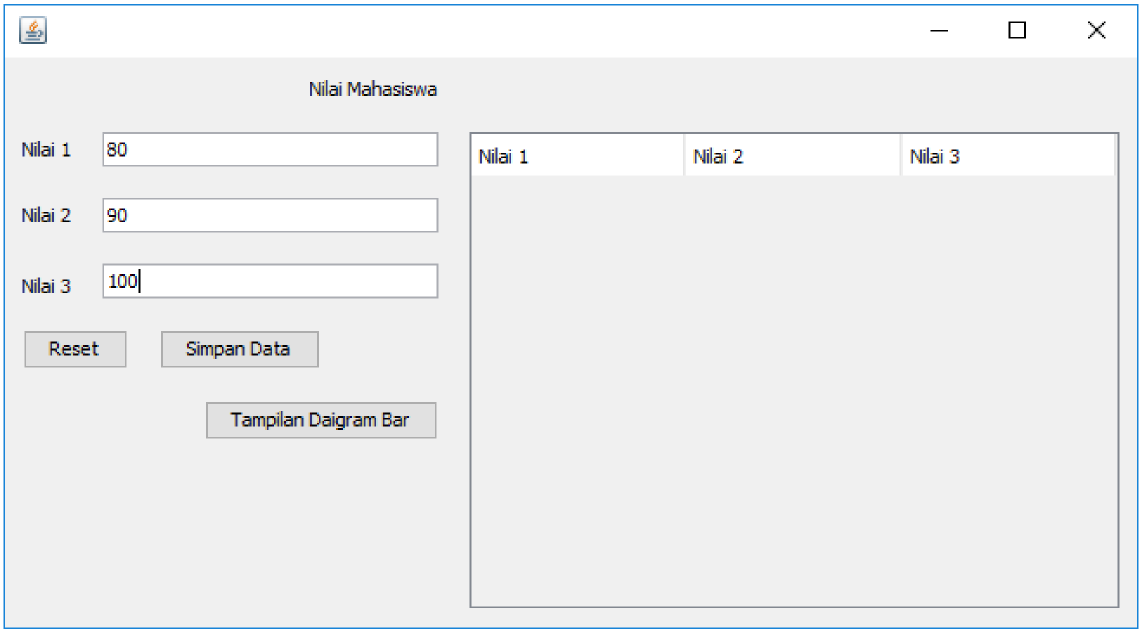


```
    /**...3 lines */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        Look and feel setting code (optional)

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

    // Variables declaration - do not modify
    private javax.swing.JButton jButton1;
    private javax.swing.JButton jButton2;
    private javax.swing.JButton jButton3;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JScrollPane jScrollPane1;
    private javax.swing.JTable tabelNilai;
    private javax.swing.JTextField txtNilai1;
    private javax.swing.JTextField txtNilai2;
    private javax.swing.JTextField txtNilai3;
    // End of variables declaration
}
```

11. Jalankan program. Program akan menampilkan sebagai berikut



Masukkan nilai 1, nilai 2, dan nilai 3. Kemudian tekan *button* Simpan Data untuk menyimpan data

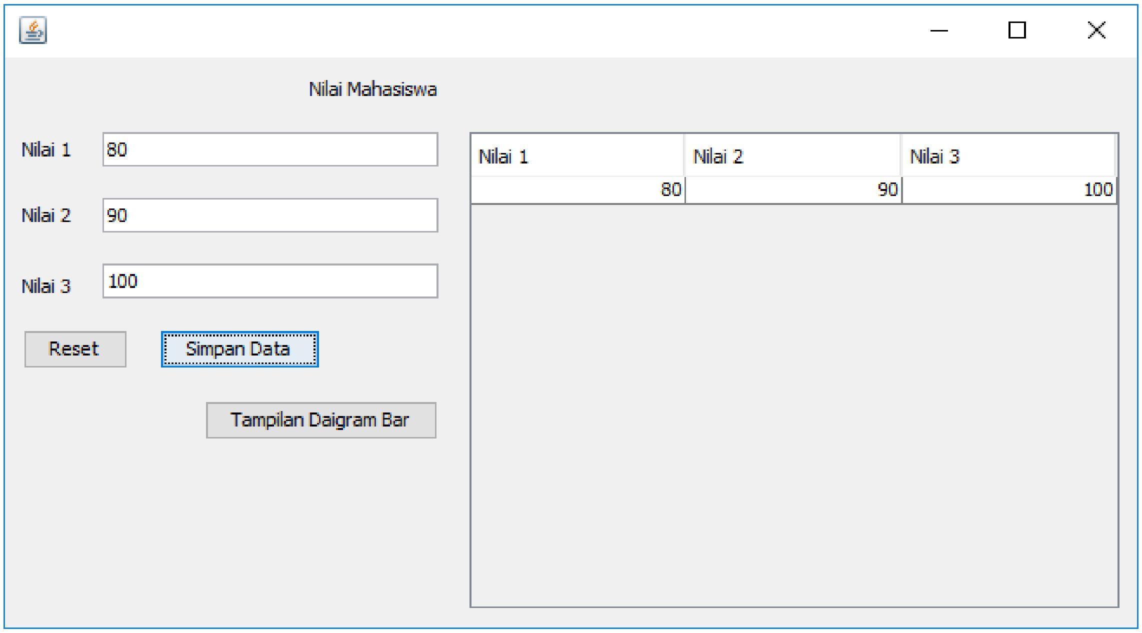


Nilai 1 80

Nilai 2 90

Nilai 3 100

Program akan menampilkan seperti berikut. Tekan tombol *button* Tampilkan Diagram Bar untuk menampilkan diagram bar.



Nilai Mahasiswa

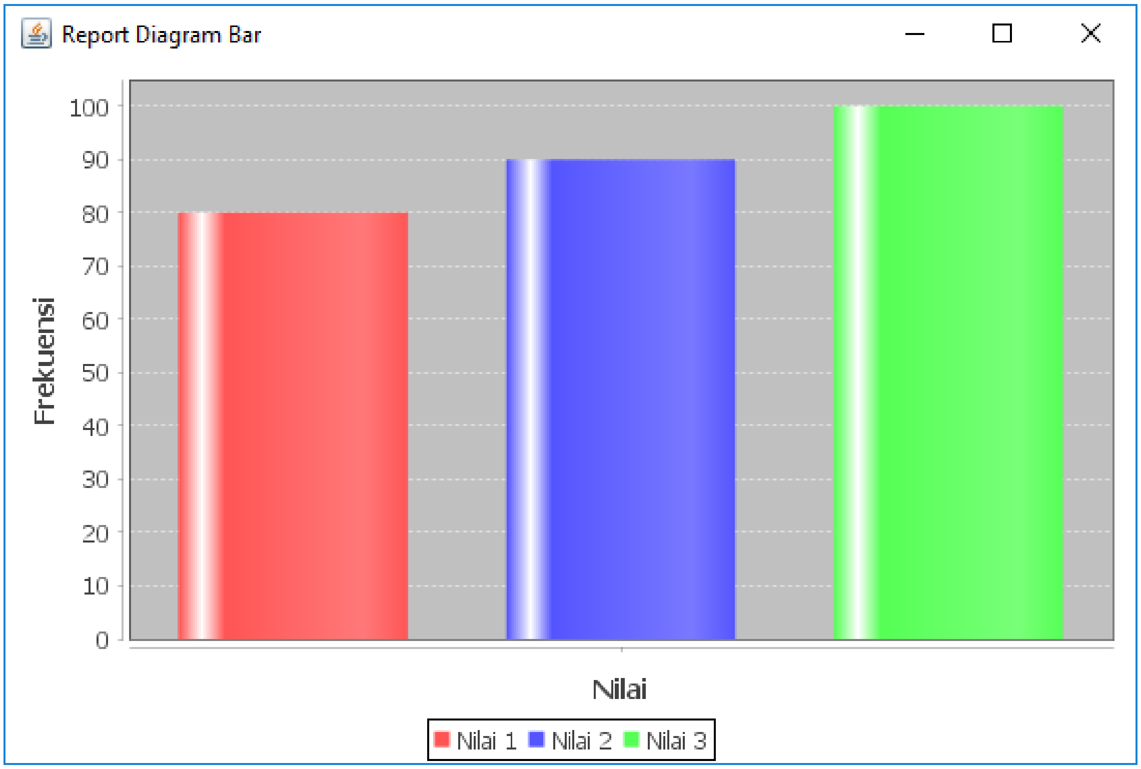
Nilai 1 80

Nilai 2 90

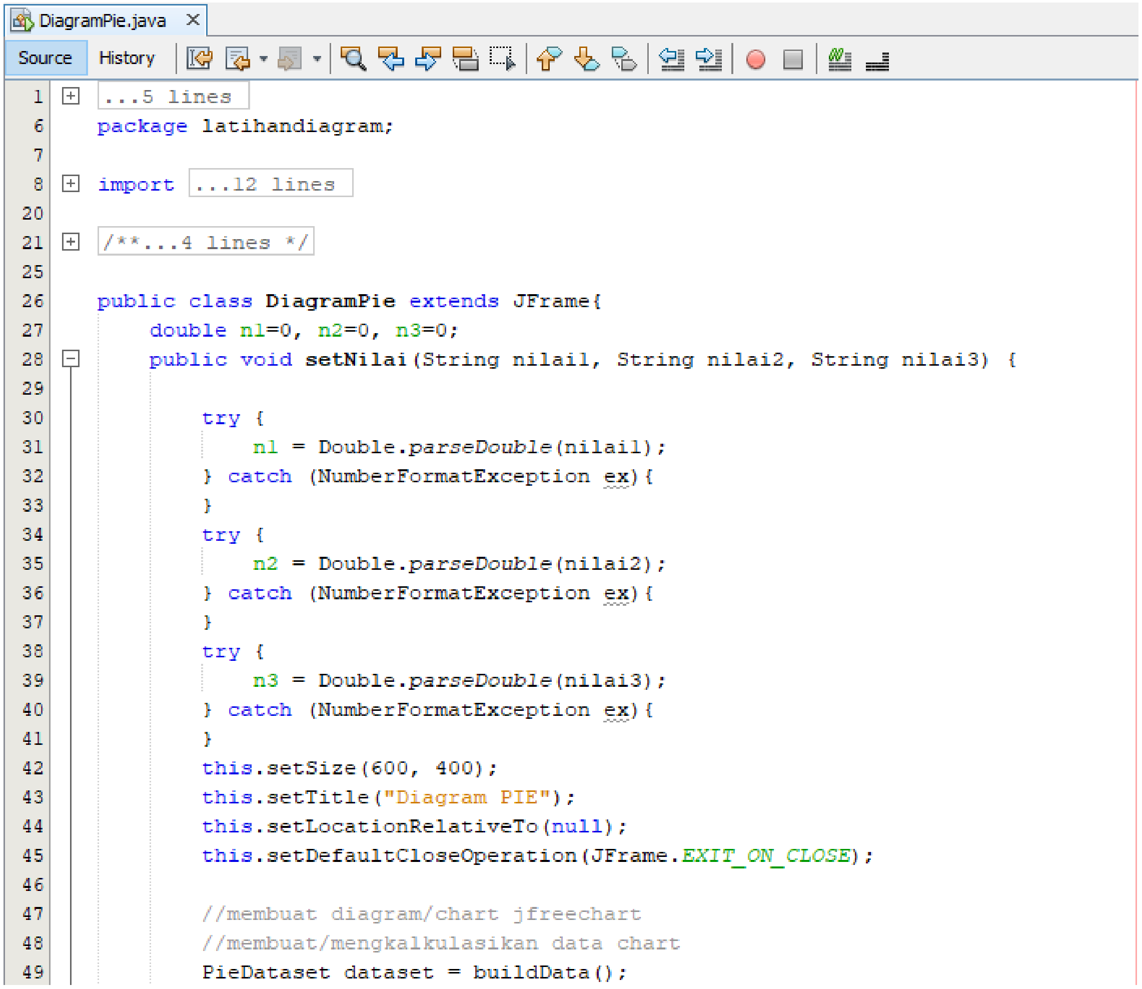
Nilai 3 100

Nilai 1	Nilai 2	Nilai 3
80	90	100

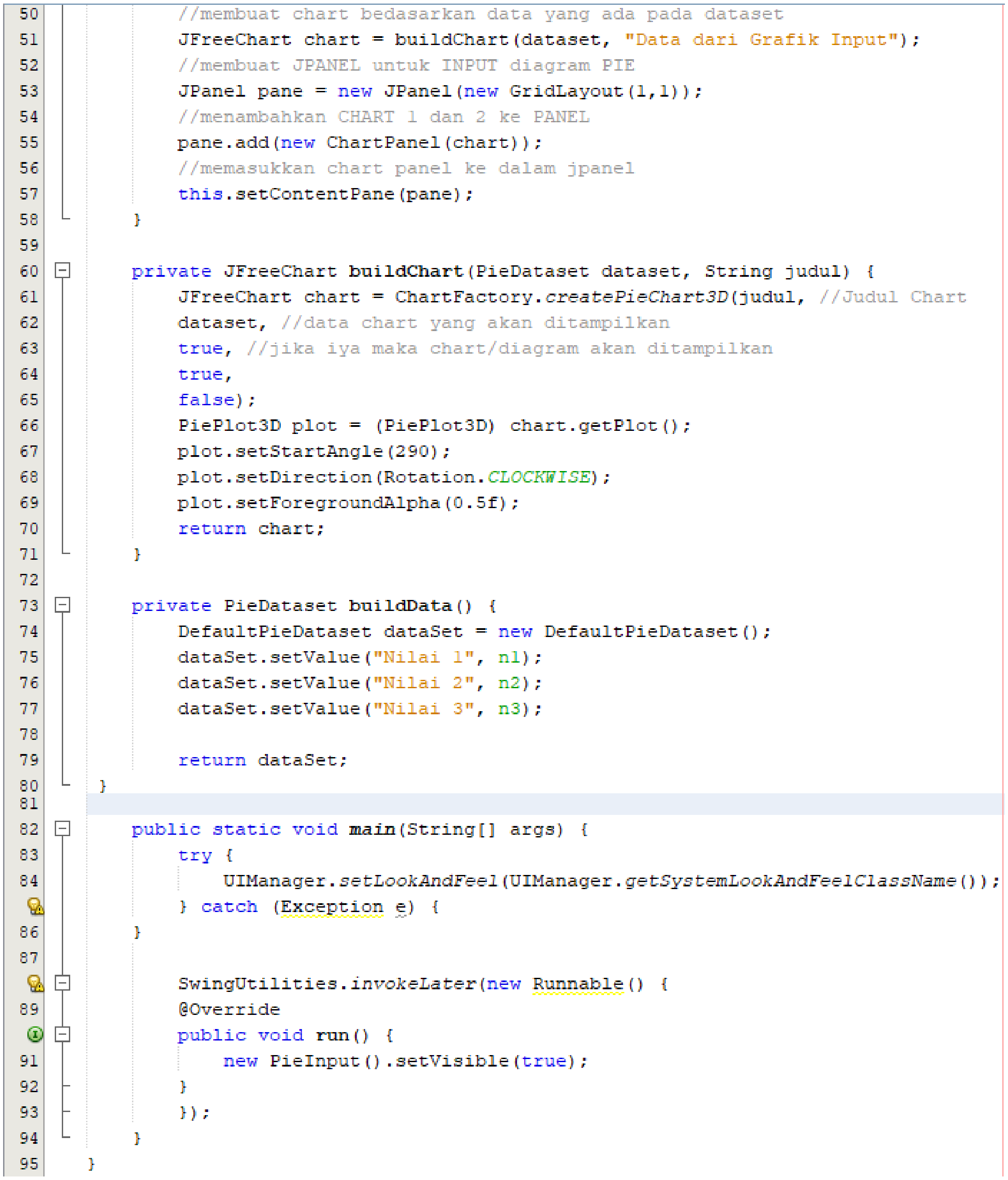
Program akan menampilkan sebagai berikut



12. Buatlah kelas DiagramPie dan masukkan *source code* sebagai berikut

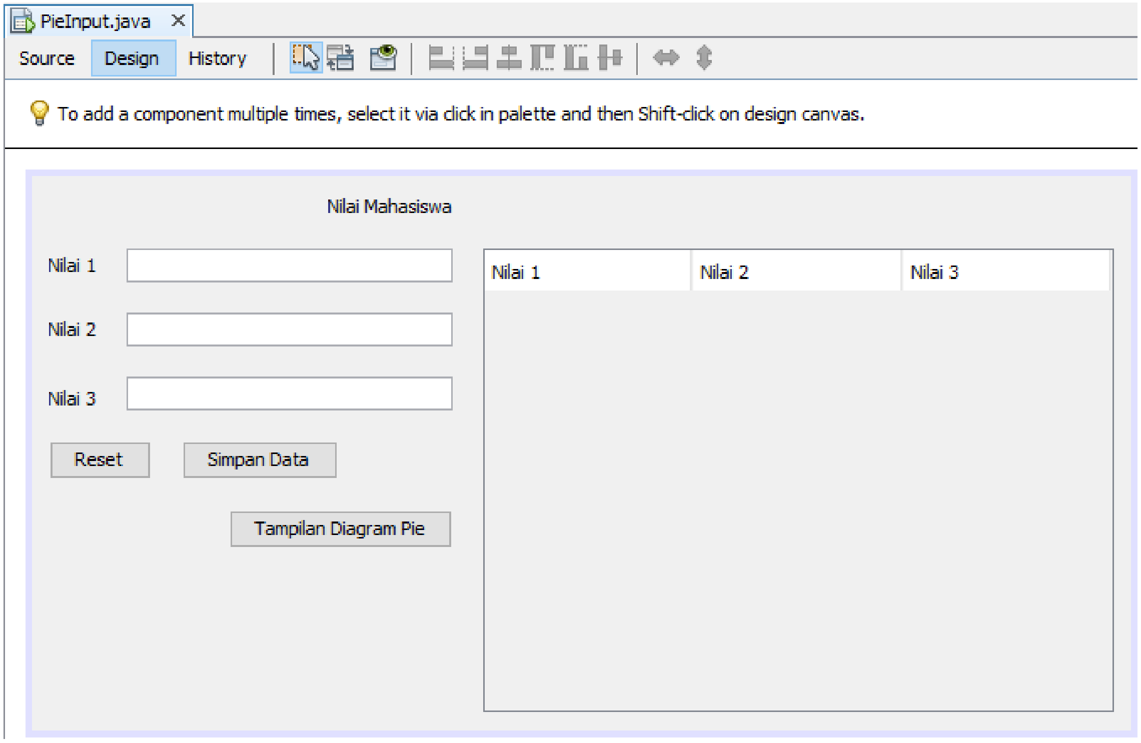


```
...5 lines
package latihandiagram;

import ...12 lines

/**...4 lines */

public class DiagramPie extends JFrame{
    double n1=0, n2=0, n3=0;
    public void setNilai(String nilai1, String nilai2, String nilai3) {

        try {
            n1 = Double.parseDouble(nilai1);
        } catch (NumberFormatException ex){
        }
        try {
            n2 = Double.parseDouble(nilai2);
        } catch (NumberFormatException ex){
        }
        try {
            n3 = Double.parseDouble(nilai3);
        } catch (NumberFormatException ex){
        }
        this.setSize(600, 400);
        this.setTitle("Diagram PIE");
        this.setLocationRelativeTo(null);
        this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        //membuat diagram/chart jfreechart
        //membuat/mengkalkulasikan data chart
        PieDataset dataset = buildData();
```



```
        //membuat chart bedasarkan data yang ada pada dataset
        JFreeChart chart = buildChart(dataset, "Data dari Grafik Input");
        //membuat JPANEL untuk INPUT diagram PIE
        JPanel pane = new JPanel(new GridLayout(1,1));
        //menambahkan CHART 1 dan 2 ke PANEL
        pane.add(new ChartPanel(chart));
        //memasukkan chart panel ke dalam jpanel
        this.setContentPane(pane);
    }

    private JFreeChart buildChart(PieDataset dataset, String judul) {
        JFreeChart chart = ChartFactory.createPieChart3D(judul, //Judul Chart
        dataset, //data chart yang akan ditampilkan
        true, //jika iya maka chart/diagram akan ditampilkan
        true,
        false);
        PiePlot3D plot = (PiePlot3D) chart.getPlot();
        plot.setStartAngle(290);
        plot.setDirection(Rotation.CLOCKWISE);
        plot.setForegroundAlpha(0.5f);
        return chart;
    }

    private PieDataset buildData() {
        DefaultPieDataset dataSet = new DefaultPieDataset();
        dataSet.setValue("Nilai 1", n1);
        dataSet.setValue("Nilai 2", n2);
        dataSet.setValue("Nilai 3", n3);

        return dataSet;
 }

    public static void main(String[] args) {
        try {
            UIManager.setLookAndFeel(UIManager.getSystemLookAndFeelClassName());
        } catch (Exception e) {
    }

        SwingUtilities.invokeLater(new Runnable() {
        @Override
        public void run() {
            new PieInput().setVisible(true);
        }
        });
    }
}
```

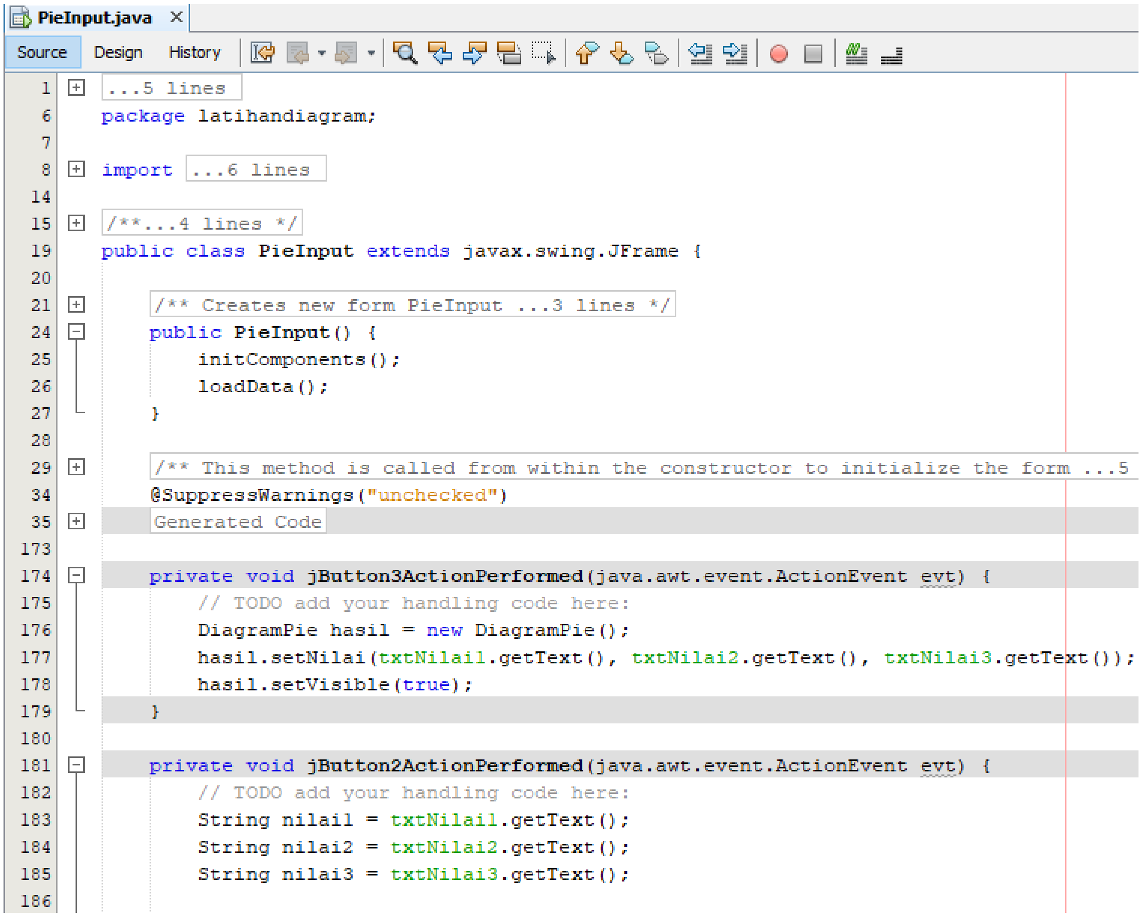
13. Buatlah kelas PieInput dengan JFrame Form. Buatlah desain kelas PieInput.



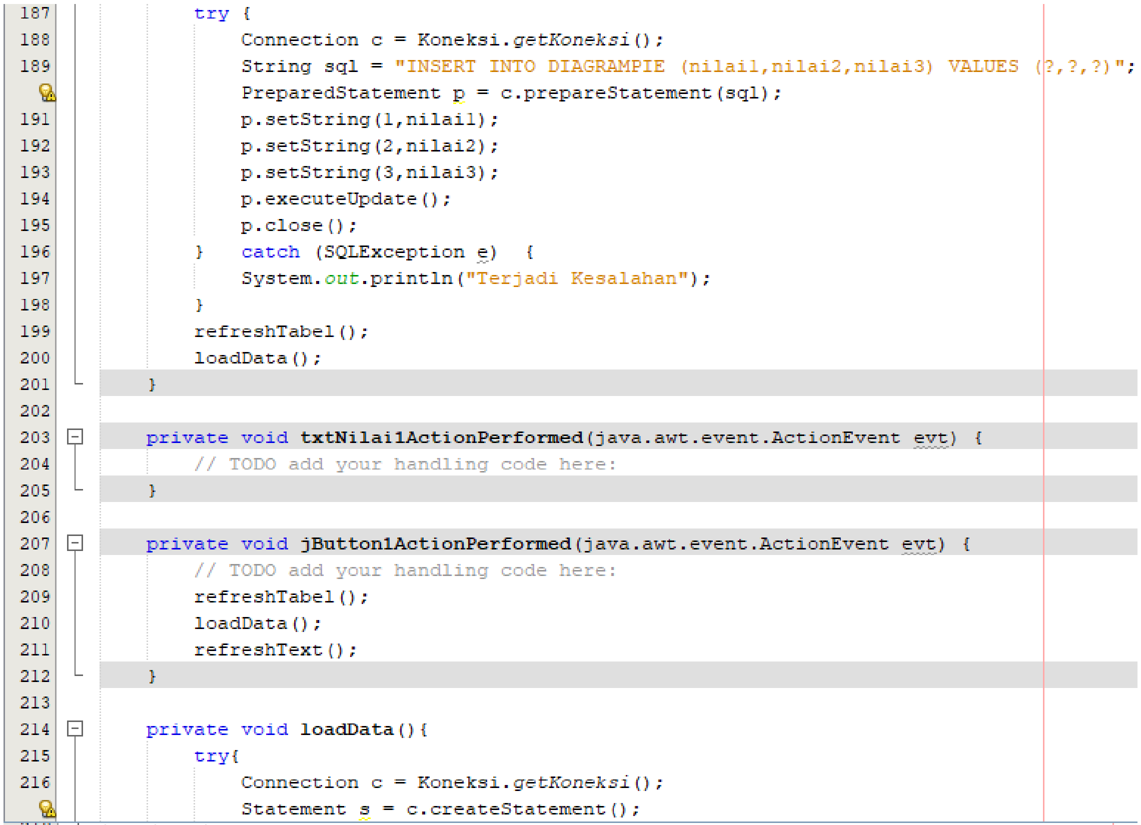
PieInput.java
Source
Design
History
To add a component multiple times, select it via click in palette and then Shift-click on design canvas.
Nilai Mahasiswa
Nilai 1
Nilai 2
Nilai 3
Reset
Simpan Data
Tampilan Diagram Pie

Nilai 1	Nilai 2	Nilai 3

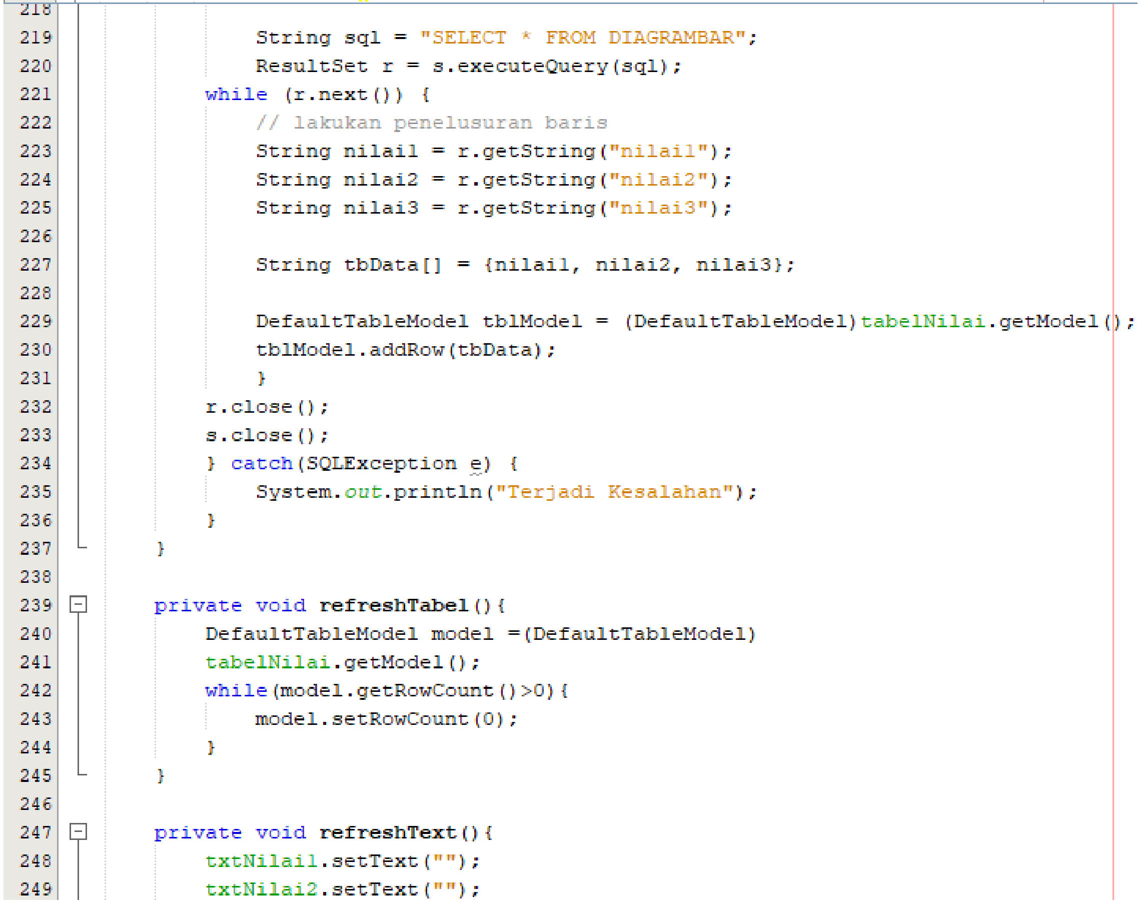
14. Masukkan *source code* berikut pada kelas PieInput



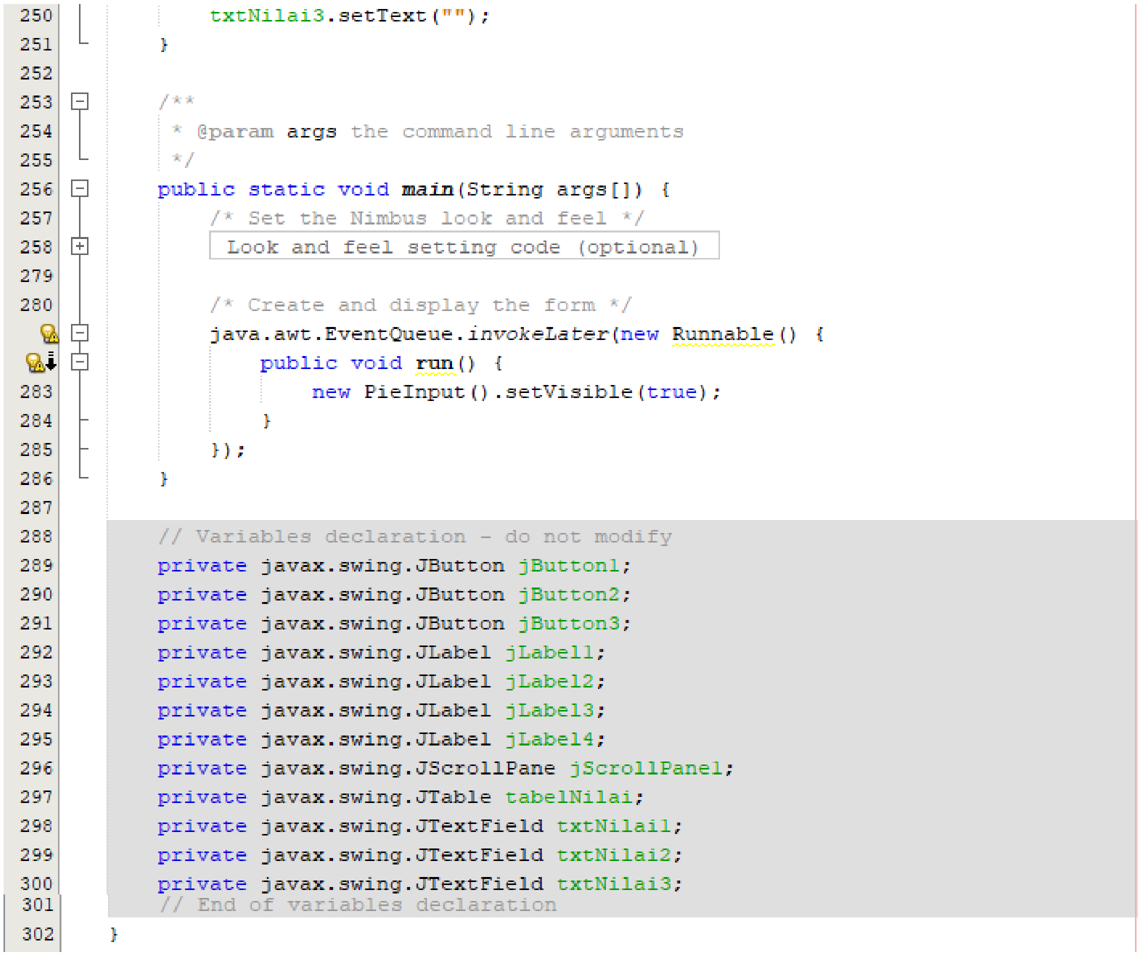
```
...5 lines
package latihandiagram;

import ...6 lines

/**...4 lines */
public class PieInput extends javax.swing.JFrame {

    /** Creates new form PieInput ...3 lines */
    public PieInput() {
        initComponents();
        loadData();
    }

    /** This method is called from within the constructor to initialize the form ...5
    @SuppressWarnings("unchecked")
    Generated Code

    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        DiagramPie hasil = new DiagramPie();
        hasil.setNilai(txtNilai1.getText(), txtNilai2.getText(), txtNilai3.getText());
        hasil.setVisible(true);
    }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String nilai1 = txtNilai1.getText();
        String nilai2 = txtNilai2.getText();
        String nilai3 = txtNilai3.getText();

```



```java
            try {
                Connection c = Koneksi.getKoneksi();
                String sql = "INSERT INTO DIAGRAMPIE (nilai1,nilai2,nilai3) VALUES (?,?,?)";
                PreparedStatement p = c.prepareStatement(sql);
                p.setString(1,nilai1);
                p.setString(2,nilai2);
                p.setString(3,nilai3);
                p.executeUpdate();
                p.close();
            }   catch (SQLException e)   {
                System.out.println("Terjadi Kesalahan");
            }
            refreshTabel();
            loadData();
        }

        private void txtNilai1ActionPerformed(java.awt.event.ActionEvent evt) {
            // TODO add your handling code here:
        }

        private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
            // TODO add your handling code here:
            refreshTabel();
            loadData();
            refreshText();
        }

        private void loadData(){
            try{
                Connection c = Koneksi.getKoneksi();
                Statement s = c.createStatement();
```

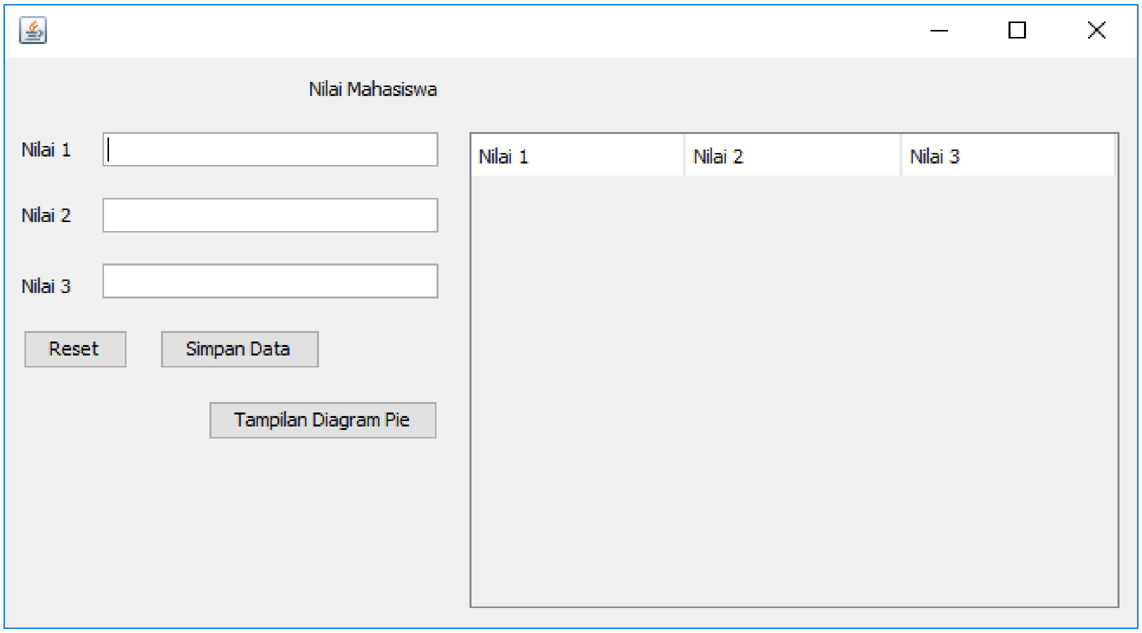


```java
                String sql = "SELECT * FROM DIAGRAMBAR";
                ResultSet r = s.executeQuery(sql);
            while (r.next()) {
                // lakukan penelusuran baris
                String nilai1 = r.getString("nilai1");
                String nilai2 = r.getString("nilai2");
                String nilai3 = r.getString("nilai3");

                String tbData[] = {nilai1, nilai2, nilai3};

                DefaultTableModel tblModel = (DefaultTableModel)tabelNilai.getModel();
                tblModel.addRow(tbData);
                }
            r.close();
            s.close();
            } catch(SQLException e) {
                System.out.println("Terjadi Kesalahan");
            }
        }

        private void refreshTabel(){
            DefaultTableModel model =(DefaultTableModel)
            tabelNilai.getModel();
            while(model.getRowCount()>0){
                model.setRowCount(0);
            }
        }

        private void refreshText(){
            txtNilai1.setText("");
            txtNilai2.setText("");
```

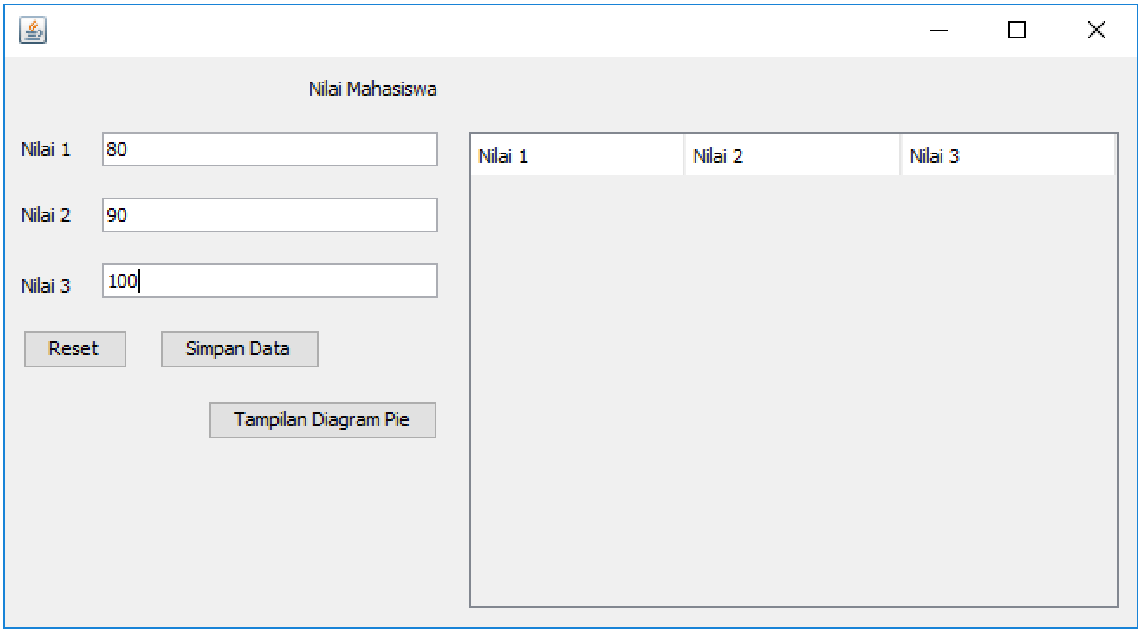


```
        txtNilai3.setText("");
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        Look and feel setting code (optional)

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

    // Variables declaration - do not modify
    private javax.swing.JButton jButton1;
    private javax.swing.JButton jButton2;
    private javax.swing.JButton jButton3;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JScrollPane jScrollPane1;
    private javax.swing.JTable tabelNilai;
    private javax.swing.JTextField txtNilai1;
    private javax.swing.JTextField txtNilai2;
    private javax.swing.JTextField txtNilai3;
    // End of variables declaration
}
```

15. Jalankan program. Program akan menampilkan sebagai berikut



Masukkan nilai 1, nilai 2, dan nilai 3. Kemudian tekan *button* Simpan Data untuk menyimpan data



Nilai Mahasiswa

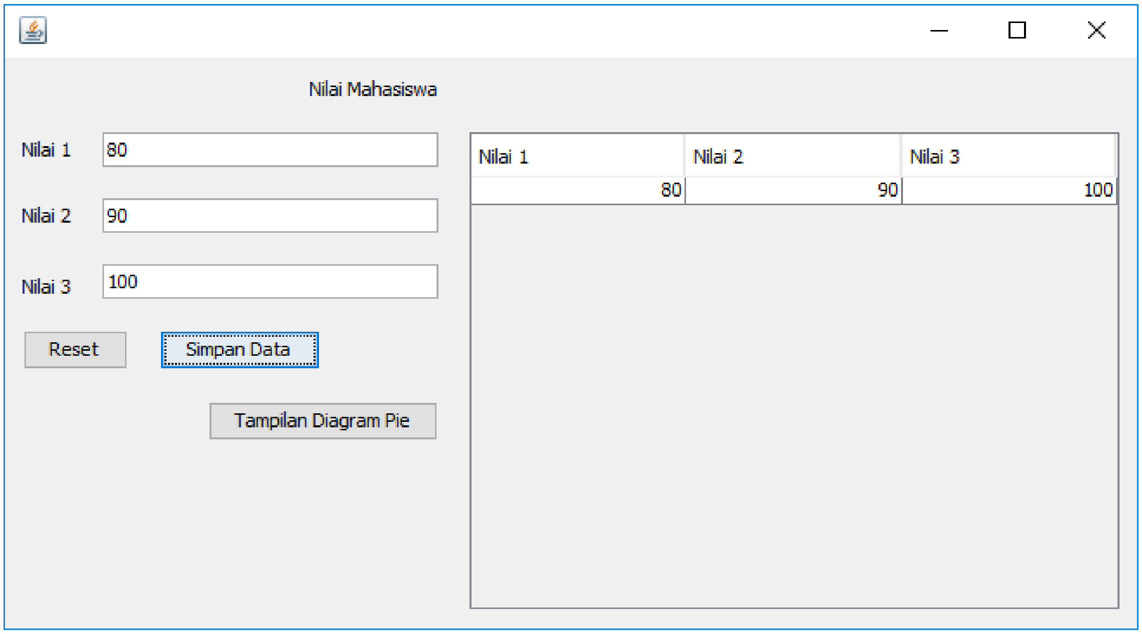
Nilai 1: 80

Nilai 2: 90

Nilai 3: 100

Nilai 1	Nilai 2	Nilai 3

Program akan menampilkan seperti berikut. Tekan tombol *button* Tampilkan Diagram Pie untuk menampilkan diagram pie.



Nilai Mahasiswa

Nilai 1: 80

Nilai 2: 90

Nilai 3: 100

Nilai 1	Nilai 2	Nilai 3
80	90	100

Program akan menampilkan sebagai berikut

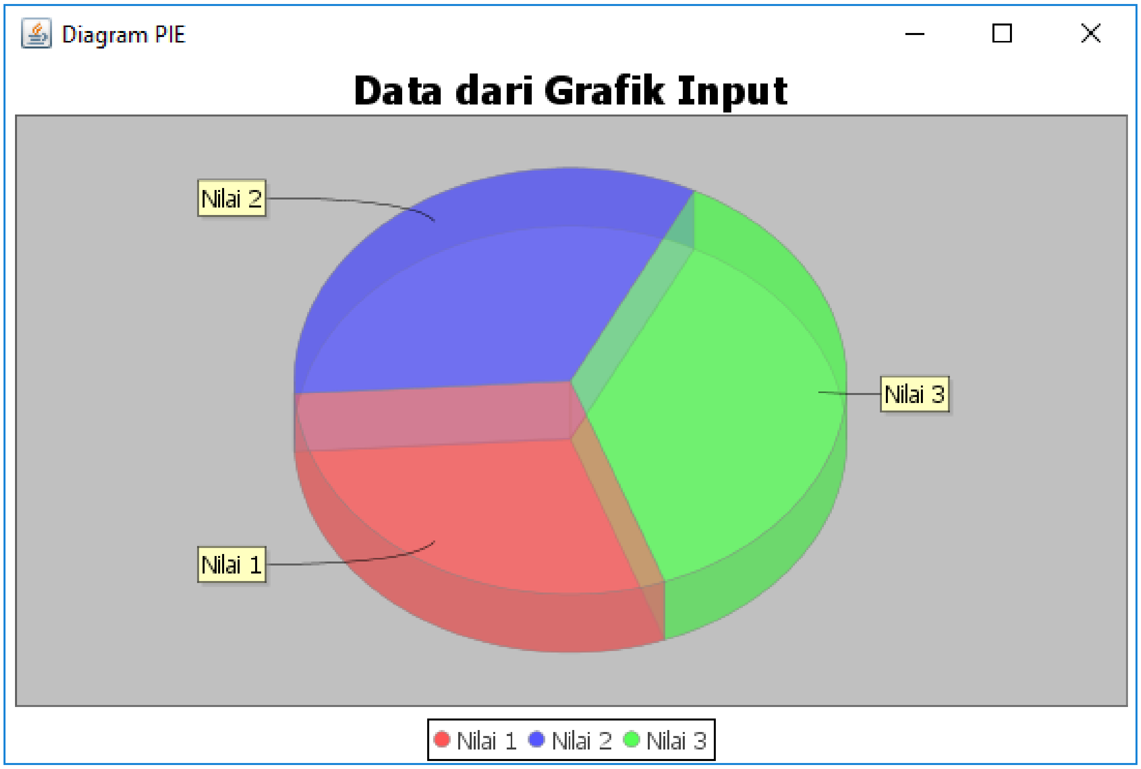


Diagram PIE
Data dari Grafik Input
Nilai 2
Nilai 3
Nilai 1
● Nilai 1 ● Nilai 2 ● Nilai 3