Nama : Muhammad Ridho

Kelas : 4IA06

NPM : 51421055

Materi : Implementasi Aspect Oriented Programming (AOP) dan Dependency injection pada Project Spring dan Hibernate.

Mata Praktikum : Rekayasa Perangkat Lunak 2

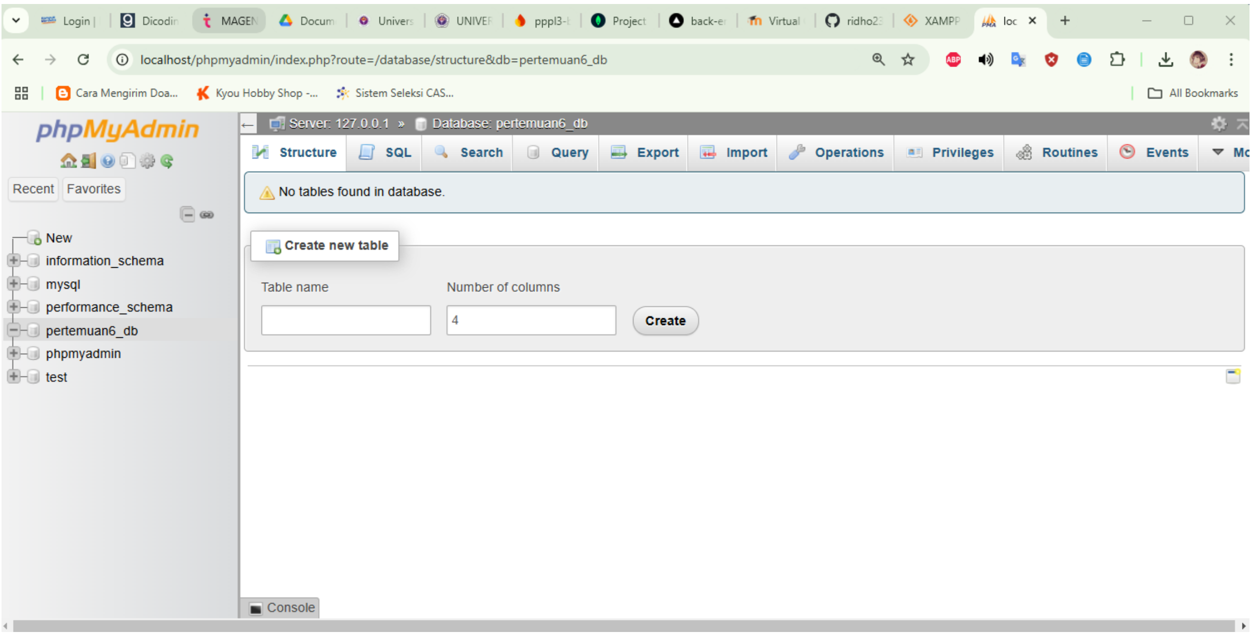
ACTIVITY 6

SOAL

1. Screenshoot hasil codingan kalian lengkap dengan window Projects, Navigator, dan Outputnya.

JAWABAN

1.

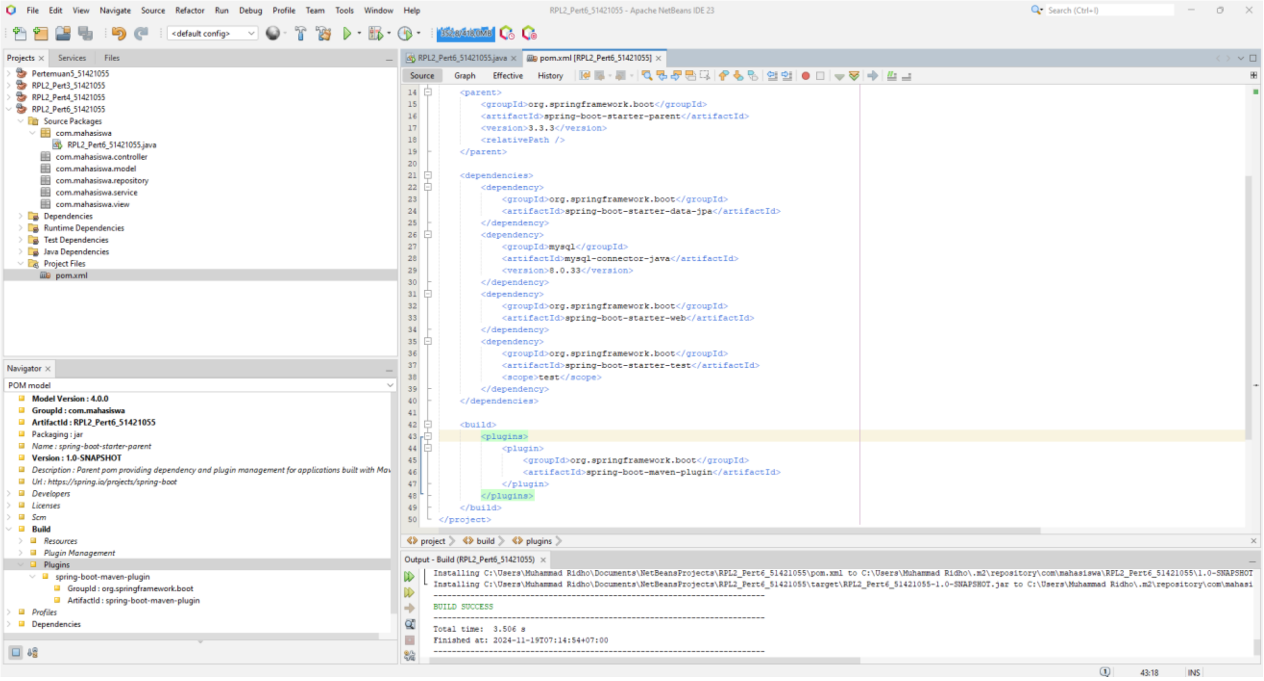


No tables found in database.

Table name:

Number of columns: 4

Pom.xml



Navigator

POM model

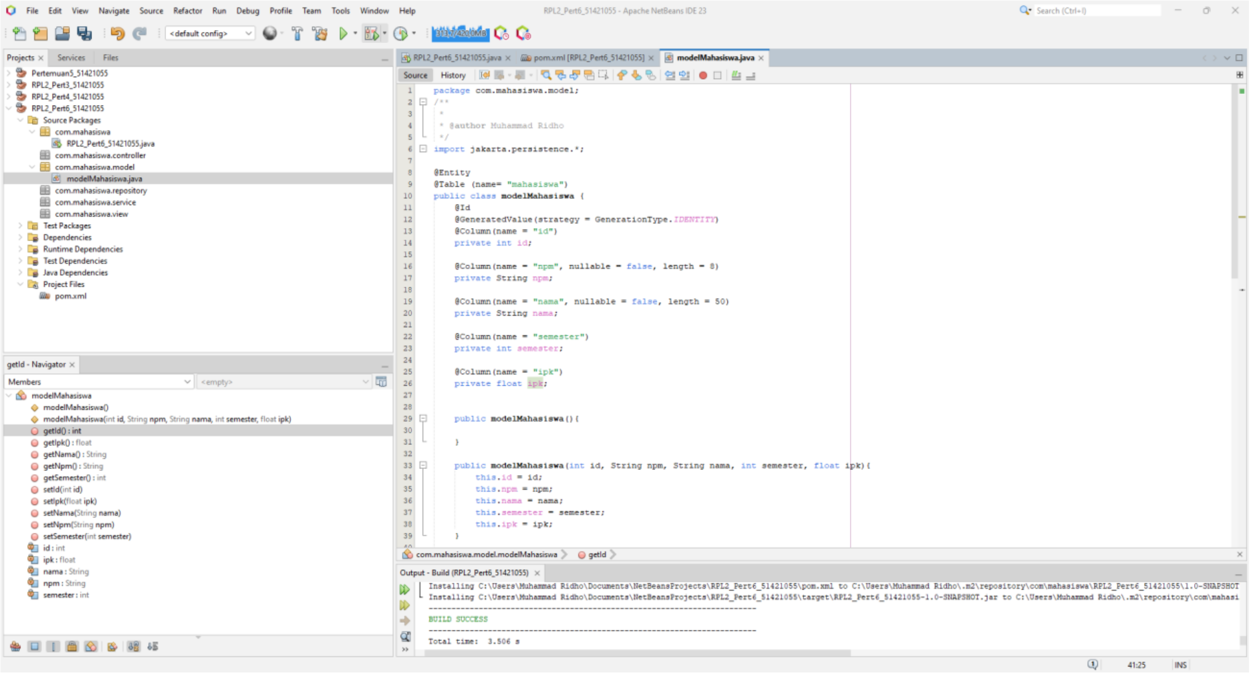
Model Version : 4.0.0
GroupId : com.mahasiswa
ArtifactId : RPL2_Pert6_51421055
Packaging : jar
Name : spring-boot-starter-parent
Version : 1.0-SNAPSHOT
Description : Parent pom providing dependency and plugin management for applications built with Mav
Url : https://spring.io/projects/spring-boot
Developers
Licenses
Scm
Build
Resources
Plugin Management
Plugins
spring-boot-maven-plugin
GroupId : org.springframework.boot
ArtifactId : spring-boot-maven-plugin
Profiles
Dependencies

```xml
    <parent>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-parent</artifactId>
        <version>3.3.3</version>
        <relativePath />
    </parent>

    <dependencies>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-data-jpa</artifactId>
        </dependency>
        <dependency>
            <groupId>mysql</groupId>
            <artifactId>mysql-connector-java</artifactId>
            <version>8.0.33</version>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-web</artifactId>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
        </dependency>
    </dependencies>

    <build>
        <plugins>
            <plugin>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-maven-plugin</artifactId>
            </plugin>
        </plugins>
    </build>
</project>
```

Output - Build (RPL2_Pert6_51421055)

```
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\pom.xml to C:\Users\Muhammad Ridho\.m2\repository\com\mahasiswa\RPL2_Pert6_51421055\1.0-SNAPSHOT
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar to C:\Users\Muhammad Ridho\.m2\repository\com\mahasi
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
Total time:  3.506 s
Finished at: 2024-11-19T07:14:54+07:00
------------------------------------------------------------------------
```

ModelMahasiswa.java



getId - Navigator

Members <empty>

modelMahasiswa
modelMahasiswa()
modelMahasiswa(int id, String npm, String nama, int semester, float ipk)
getId() : int
getIpk() : float
getNama() : String
getNpm() : String
getSemester() : int
setId(int id)
setIpk(float ipk)
setNama(String nama)
setNpm(String npm)
setSemester(int semester)
id : int
ipk : float
nama : String
npm : String
semester : int

```java
package com.mahasiswa.model;
/**
 *
 * @author Muhammad Ridho
 */
import jakarta.persistence.*;

@Entity
@Table (name= "mahasiswa")
public class modelMahasiswa {
    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "id")
    private int id;

    @Column(name = "npm", nullable = false, length = 8)
    private String npm;

    @Column(name = "nama", nullable = false, length = 50)
    private String nama;

    @Column(name = "semester")
    private int semester;

    @Column(name = "ipk")
    private float ipk;


    public modelMahasiswa(){

    }

    public modelMahasiswa(int id, String npm, String nama, int semester, float ipk){
        this.id = id;
        this.npm = npm;
        this.nama = nama;
        this.semester = semester;
        this.ipk = ipk;
    }
```

Output - Build (RPL2_Pert6_51421055)

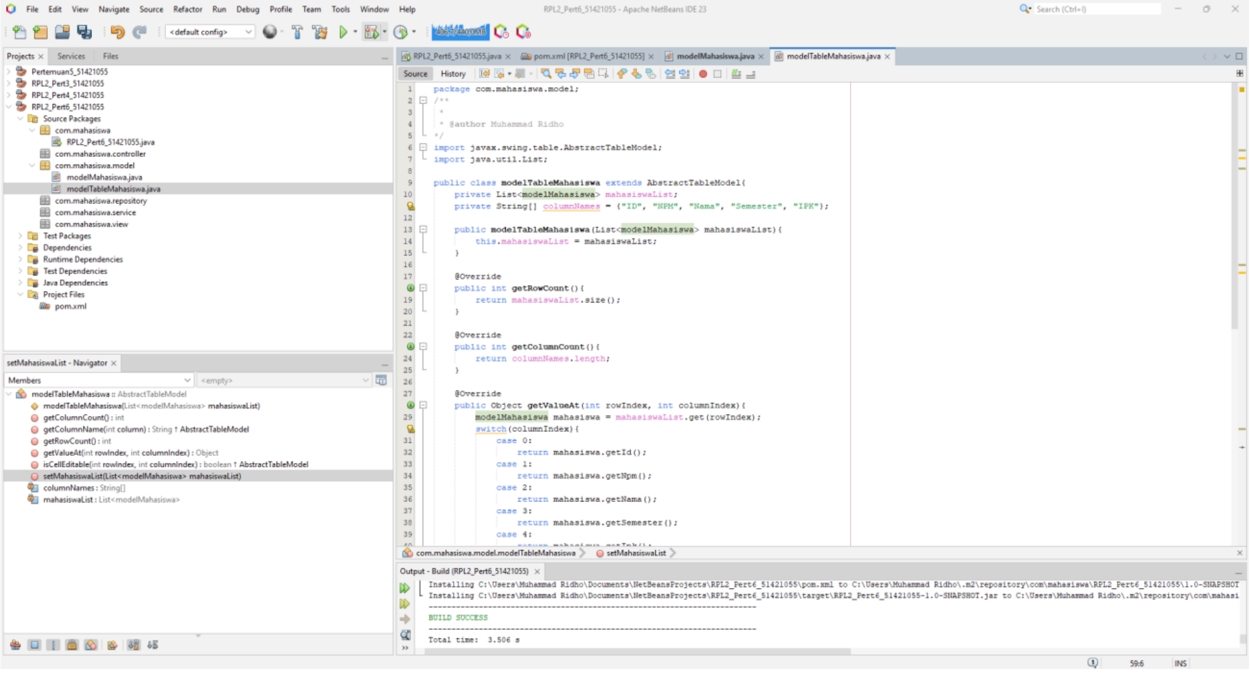
```
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\pom.xml to C:\Users\Muhammad Ridho\.m2\repository\com\mahasiswa\RPL2_Pert6_51421055\1.0-SNAPSHOT
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar to C:\Users\Muhammad Ridho\.m2\repository\com\mahasi
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
Total time:  3.506 s
```

Sourcecode:

```
package com.mahasiswa.model;

/**

 *

 * @author Muhammad Ridho

 */

import jakarta.persistence.*;


@Entity

@Table (name= "mahasiswa")

public class modelMahasiswa {

    @Id

    @GeneratedValue(strategy = GenerationType.IDENTITY)

    @Column(name = "id")

    private int id;


    @Column(name = "npm", nullable = false, length = 8)

    private String npm;


    @Column(name = "nama", nullable = false, length = 50)

    private String nama;


    @Column(name = "semester")

    private int semester;


    @Column(name = "ipk")

    private float ipk;
```

```
public modelMahasiswa(){

}

public modelMahasiswa(int id, String npm, String nama, int semester, float ipk){
    this.id = id;
    this.npm = npm;
    this.nama = nama;
    this.semester = semester;
    this.ipk = ipk;
}

public int getId() {
    return id;
}

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

public String getNpm() {
    return npm;
}

public void setNpm(String npm) {
    this.npm = npm;
}

public String getNama() {
        return nama;
    }

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

    public int getSemester() {
        return semester;
    }

    public void setSemester(int semester) {
        this.semester = semester;
    }

    public float getIpk() {
        return ipk;
    }

    public void setIpk(float ipk) {
        this.ipk = ipk;
    }

}
```

ModelTableMahasiswa.java


RPL2_Pert6_51421055 - Apache NetBeans IDE 23
RPL2_Pert6_51421055.java
pom.xml [RPL2_Pert6_51421055]
modelMahasiswa.java
modelTableMahasiswa.java
Source
History
com.mahasiswa.model.modelTableMahasiswa
setMahasiswaList
Output - Build (RPL2_Pert6_51421055)
59:6
INS

```java
package com.mahasiswa.model;
/**
 *
 * @author Muhammad Ridho
 */
import javax.swing.table.AbstractTableModel;
import java.util.List;

public class modelTableMahasiswa extends AbstractTableModel{
    private List<modelMahasiswa> mahasiswaList;
    private String[] columnNames = {"ID", "NPM", "Nama", "Semester", "IPK"};

    public modelTableMahasiswa(List<modelMahasiswa> mahasiswaList){
        this.mahasiswaList = mahasiswaList;
    }

    @Override
    public int getRowCount(){
        return mahasiswaList.size();
    }

    @Override
    public int getColumnCount(){
        return columnNames.length;
    }

    @Override
    public Object getValueAt(int rowIndex, int columnIndex){
        modelMahasiswa mahasiswa = mahasiswaList.get(rowIndex);
        switch(columnIndex){
            case 0:
                return mahasiswa.getId();
            case 1:
                return mahasiswa.getNpm();
            case 2:
                return mahasiswa.getNama();
            case 3:
                return mahasiswa.getSemester();
            case 4:
```

```
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\pom.xml to C:\Users\Muhammad Ridho\.m2\repository\com\mahasiswa\RPL2_Pert6_51421055\1.0-SNAPSHOT
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar to C:\Users\Muhammad Ridho\.m2\repository\com\mahasi
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
Total time:  3.506 s
```

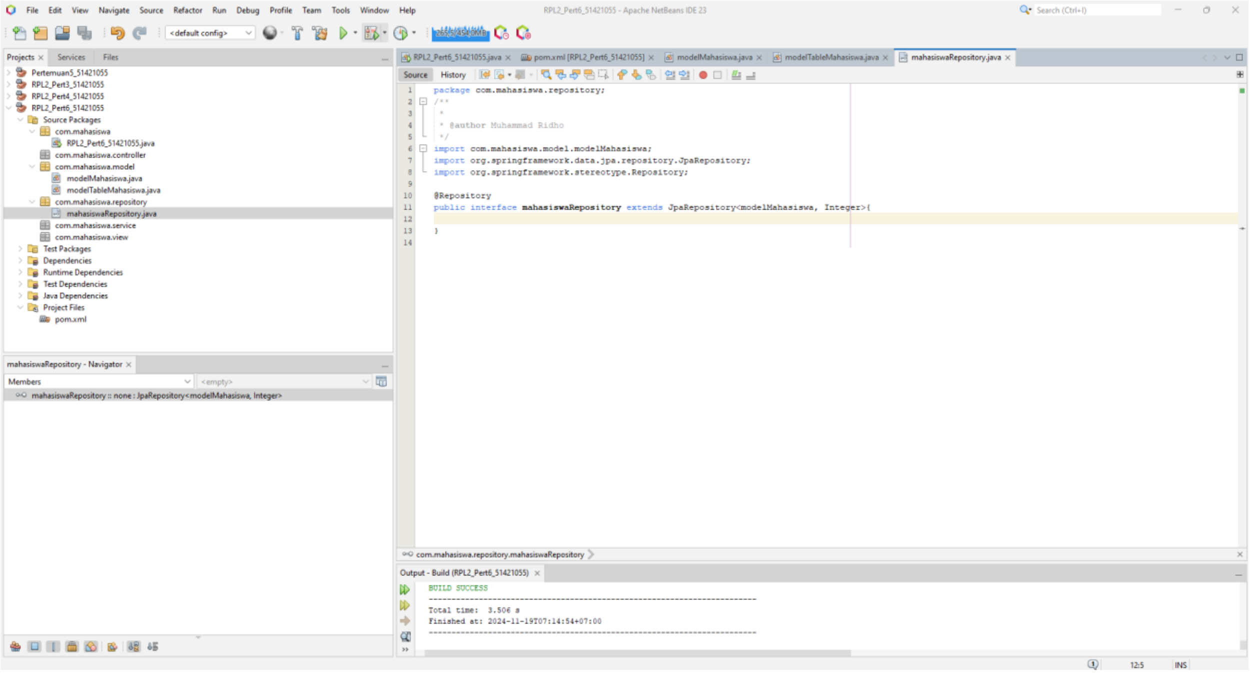
Sourcecode:

```java
package com.mahasiswa.model;

/**

 *

 * @author Muhammad Ridho

*/

import javax.swing.table.AbstractTableModel;

import java.util.List;


public class modelTableMahasiswa extends AbstractTableModel{

    private List<modelMahasiswa> mahasiswaList;

    private String[] columnNames = {"ID", "NPM", "Nama", "Semester", "IPK"};


    public modelTableMahasiswa(List<modelMahasiswa> mahasiswaList){

        this.mahasiswaList = mahasiswaList;

    }
```

```
@Override
public int getRowCount(){
    return mahasiswaList.size();
}

@Override
public int getColumnCount(){
    return columnNames.length;
}

@Override
public Object getValueAt(int rowIndex, int columnIndex){
    modelMahasiswa mahasiswa = mahasiswaList.get(rowIndex);
    switch(columnIndex){
        case 0:
            return mahasiswa.getId();
        case 1:
            return mahasiswa.getNpm();
        case 2:
            return mahasiswa.getNama();
        case 3:
            return mahasiswa.getSemester();
        case 4:
            return mahasiswa.getIpk();
        default:
            return null;
    }
}
```

```
    @Override
    public String getColumnName(int column){
        return columnNames[column];
    }

    @Override
    public boolean isCellEditable(int rowIndex, int columnIndex){
        return false;
    }

    public void setMahasiswaList(List<modelMahasiswa> mahasiswaList){
        this.mahasiswaList = mahasiswaList;
        fireTableDataChanged();
    }
}
```

mahasiswaRepository.java



```
package com.mahasiswa.repository;
/**
 *
 * @author Muhammad Ridho
 */
import com.mahasiswa.model.modelMahasiswa;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

@Repository
public interface mahasiswaRepository extends JpaRepository<modelMahasiswa, Integer>{

}
```

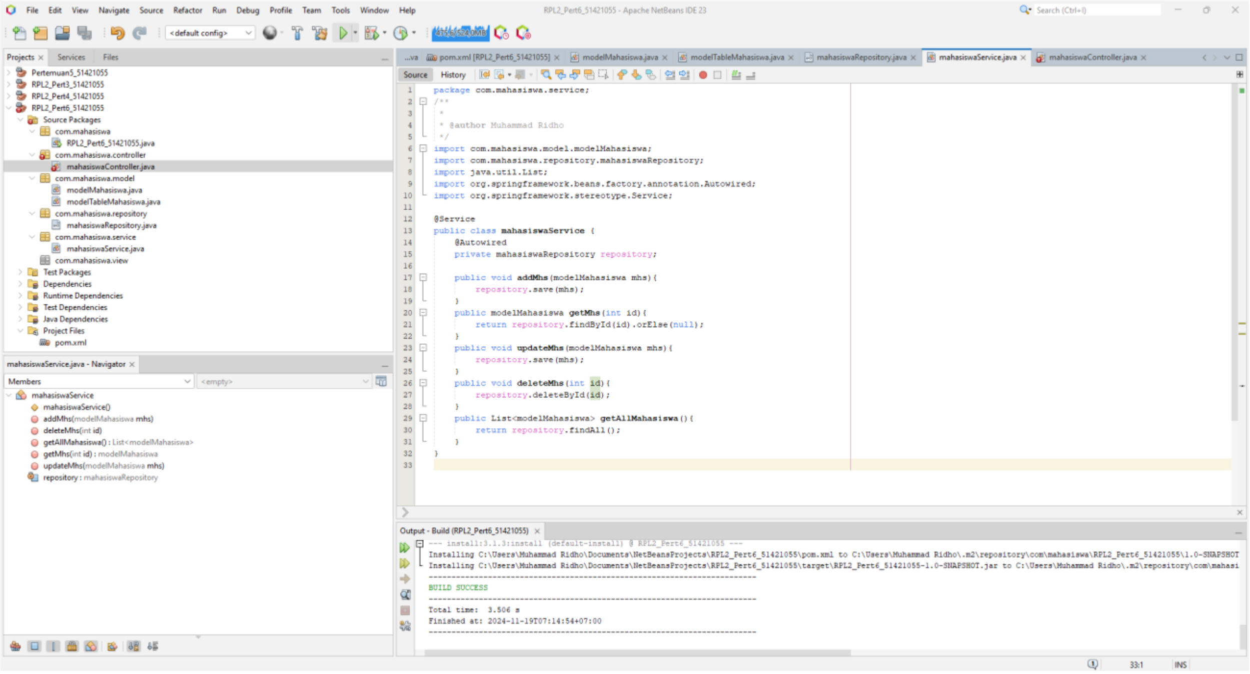
Output - Build (RPL2_Pert6_51421055)

```
BUILD SUCCESS
------------------------------------------------------------------------
Total time:  3.506 s
Finished at: 2024-11-19T07:14:54+07:00
------------------------------------------------------------------------
```

Sourcecode:

```
package com.mahasiswa.repository;
/**
 *
 * @author Muhammad Ridho
 */
import com.mahasiswa.model.modelMahasiswa;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

@Repository
public interface mahasiswaRepository extends JpaRepository<modelMahasiswa, Integer>{

}
```

mahasiswaService.java



```
package com.mahasiswa.service;
/**
 *
 * @author Muhammad Ridho
 */
import com.mahasiswa.model.modelMahasiswa;
import com.mahasiswa.repository.mahasiswaRepository;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;

@Service
public class mahasiswaService {
    @Autowired
    private mahasiswaRepository repository;

    public void addMhs(modelMahasiswa mhs){
        repository.save(mhs);
    }
    public modelMahasiswa getMhs(int id){
        return repository.findById(id).orElse(null);
    }
    public void updateMhs(modelMahasiswa mhs){
        repository.save(mhs);
    }
    public void deleteMhs(int id){
        repository.deleteById(id);
    }
    public List<modelMahasiswa> getAllMahasiswa(){
        return repository.findAll();
    }
}
```

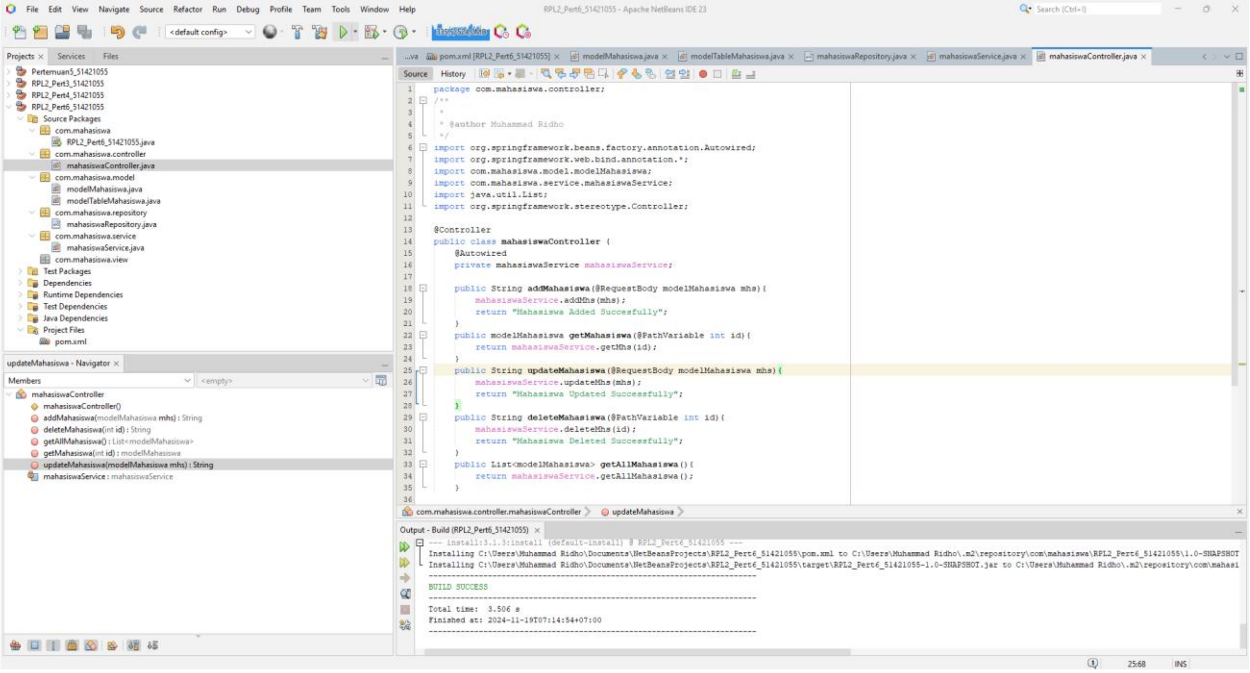
```
--- install:3.1.3:install (default-install) @ RPL2_Pert6_51421055 ---
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\pom.xml to C:\Users\Muhammad Ridho\.m2\repository\com\mahasiswa\RPL2_Pert6_51421055\1.0-SNAPSHOT
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar to C:\Users\Muhammad Ridho\.m2\repository\com\mahasi
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
Total time:  3.506 s
Finished at: 2024-11-19T07:14:54+07:00
------------------------------------------------------------------------
```

Sourcecode:

```
package com.mahasiswa.service;
/**
 *
 * @author Muhammad Ridho
 */
import com.mahasiswa.model.modelMahasiswa;
import com.mahasiswa.repository.mahasiswaRepository;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;

@Service
public class mahasiswaService {
   @Autowired
   private mahasiswaRepository repository;
```

```
    public void addMhs(modelMahasiswa mhs){
        repository.save(mhs);
    }
    public modelMahasiswa getMhs(int id){
        return repository.findById(id).orElse(null);
    }
    public void updateMhs(modelMahasiswa mhs){
        repository.save(mhs);
    }
    public void deleteMhs(int id){
        repository.deleteById(id);
    }
    public List<modelMahasiswa> getAllMahasiswa(){
        return repository.findAll();
    }
}
```

mahasiswaController.java



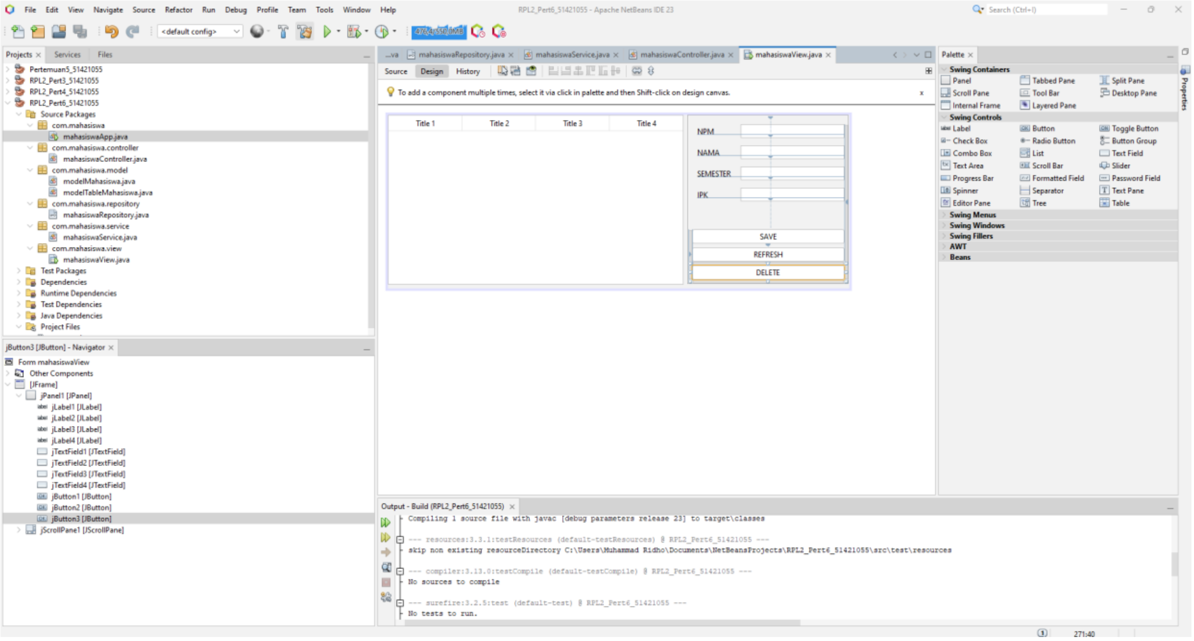
```
package com.mahasiswa.controller;
/**
 *
 * @author Muhammad Ridho
 */
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.*;
import com.mahasiswa.model.modelMahasiswa;
import com.mahasiswa.service.mahasiswaService;
import java.util.List;
import org.springframework.stereotype.Controller;

@Controller
public class mahasiswaController {
    @Autowired
    private mahasiswaService mahasiswaService;

    public String addMahasiswa(@RequestBody modelMahasiswa mhs){
        mahasiswaService.addMhs(mhs);
        return "Mahasiswa Added Succesfully";
    }
    public modelMahasiswa getMahasiswa(@PathVariable int id){
        return mahasiswaService.getMhs(id);
    }
    public String updateMahasiswa(@RequestBody modelMahasiswa mhs){
        mahasiswaService.updateMhs(mhs);
        return "Mahasiswa Updated Successfully";
    }
    public String deleteMahasiswa(@PathVariable int id){
        mahasiswaService.deleteMhs(id);
        return "Mahasiswa Deleted Successfully";
    }
    public List<modelMahasiswa> getAllMahasiswa(){
        return mahasiswaService.getAllMahasiswa();
    }
```

```
--- install:3.1.3:install (default-install) @ RPL2_Pert6_51421055 ---
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\pom.xml to C:\Users\Muhammad Ridho\.m2\repository\com\mahasiswa\RPL2_Pert6_51421055\1.0-SNAPSHOT
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar to C:\Users\Muhammad Ridho\.m2\repository\com\mahasi
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
Total time:  3.506 s
Finished at: 2024-11-19T07:14:54+07:00
------------------------------------------------------------------------
```

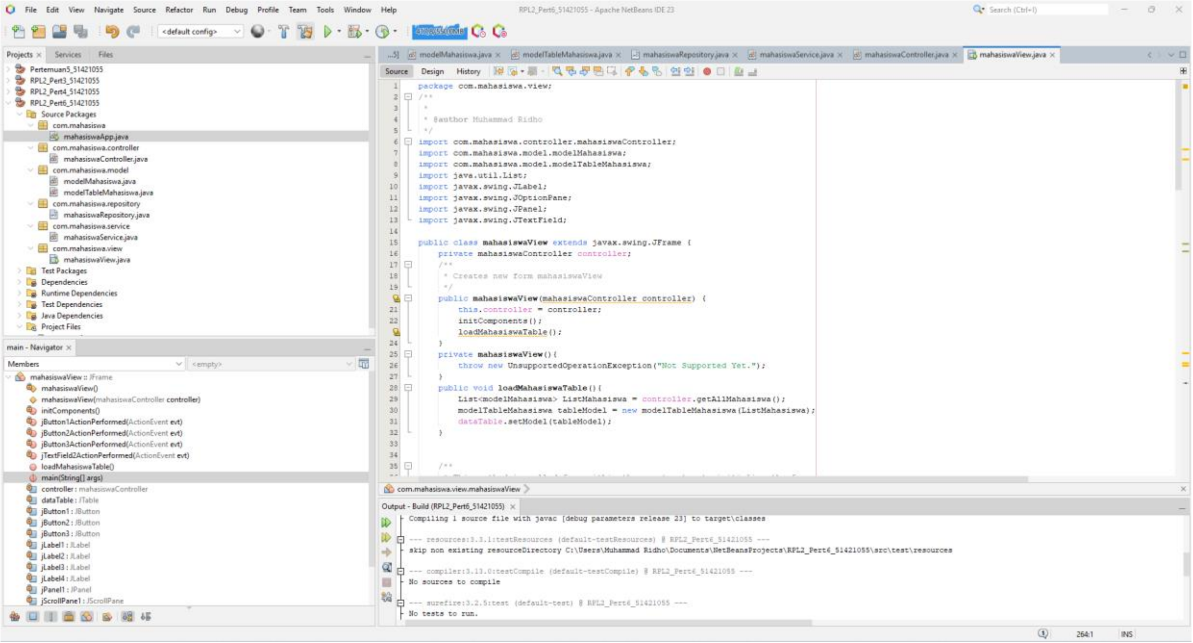
Sourcecode:

```
package com.mahasiswa.controller;
/**
 *
 * @author Muhammad Ridho
 */
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.*;
import com.mahasiswa.model.modelMahasiswa;
import com.mahasiswa.service.mahasiswaService;
import java.util.List;
import org.springframework.stereotype.Controller;


@Controller
public class mahasiswaController {
    @Autowired
    private mahasiswaService mahasiswaService;

    public String addMahasiswa(@RequestBody modelMahasiswa mhs){
        mahasiswaService.addMhs(mhs);
        return "Mahasiswa Added Succesfully";
    }
    public modelMahasiswa getMahasiswa(@PathVariable int id){
        return mahasiswaService.getMhs(id);
    }
    public String updateMahasiswa(@RequestBody modelMahasiswa mhs){
        mahasiswaService.updateMhs(mhs);
        return "Mahasiswa Updated Successfully";
    }
    public String deleteMahasiswa(@PathVariable int id){
        mahasiswaService.deleteMhs(id);
        return "Mahasiswa Deleted Successfully";
    }
    public List<modelMahasiswa> getAllMahasiswa(){
        return mahasiswaService.getAllMahasiswa();
    }

}
```

mahasiswaView.java


RPL2_Pert6_51421055 - Apache NetBeans IDE 23
Title 1
Title 2
Title 3
Title 4
NPM
NAMA
SEMESTER
IPK
SAVE
REFRESH
DELETE
To add a component multiple times, select it via click in palette and then Shift-click on design canvas.
Output - Build (RPL2_Pert6_51421055)

```
Compiling 1 source file with javac [debug parameters release 23] to target\classes

--- resources:3.3.1:testResources (default-testResources) @ RPL2_Pert6_51421055 ---
skip non existing resourceDirectory C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\src\test\resources

--- compiler:3.13.0:testCompile (default-testCompile) @ RPL2_Pert6_51421055 ---
No sources to compile

--- surefire:3.2.5:test (default-test) @ RPL2_Pert6_51421055 ---
No tests to run.
```


RPL2_Pert6_51421055 - Apache NetBeans IDE 23
Source
Design
History
com.mahasiswa.view.mahasiswaView
Output - Build (RPL2_Pert6_51421055)

```java
package com.mahasiswa.view;
/**
 *
 * @author Muhammad Ridho
 */
import com.mahasiswa.controller.mahasiswaController;
import com.mahasiswa.model.modelMahasiswa;
import com.mahasiswa.model.modelTableMahasiswa;
import java.util.List;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JTextField;

public class mahasiswaView extends javax.swing.JFrame {
    private mahasiswaController controller;
    /**
     * Creates new form mahasiswaView
     */
    public mahasiswaView(mahasiswaController controller) {
        this.controller = controller;
        initComponents();
        loadMahasiswaTable();
    }
    private mahasiswaView(){
        throw new UnsupportedOperationException("Not Supported Yet.");
    }
    public void loadMahasiswaTable(){
        List<modelMahasiswa> ListMahasiswa = controller.getAllMahasiswa();
        modelTableMahasiswa tableModel = new modelTableMahasiswa(ListMahasiswa);
        dataTable.setModel(tableModel);
    }


    /**
```

```
Compiling 1 source file with javac [debug parameters release 23] to target\classes

--- resources:3.3.1:testResources (default-testResources) @ RPL2_Pert6_51421055 ---
skip non existing resourceDirectory C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\src\test\resources

--- compiler:3.13.0:testCompile (default-testCompile) @ RPL2_Pert6_51421055 ---
No sources to compile

--- surefire:3.2.5:test (default-test) @ RPL2_Pert6_51421055 ---
No tests to run.
```

Sourcecode:

package com.mahasiswa.view;

*/***

 ***

 ** @author Muhammad Ridho*

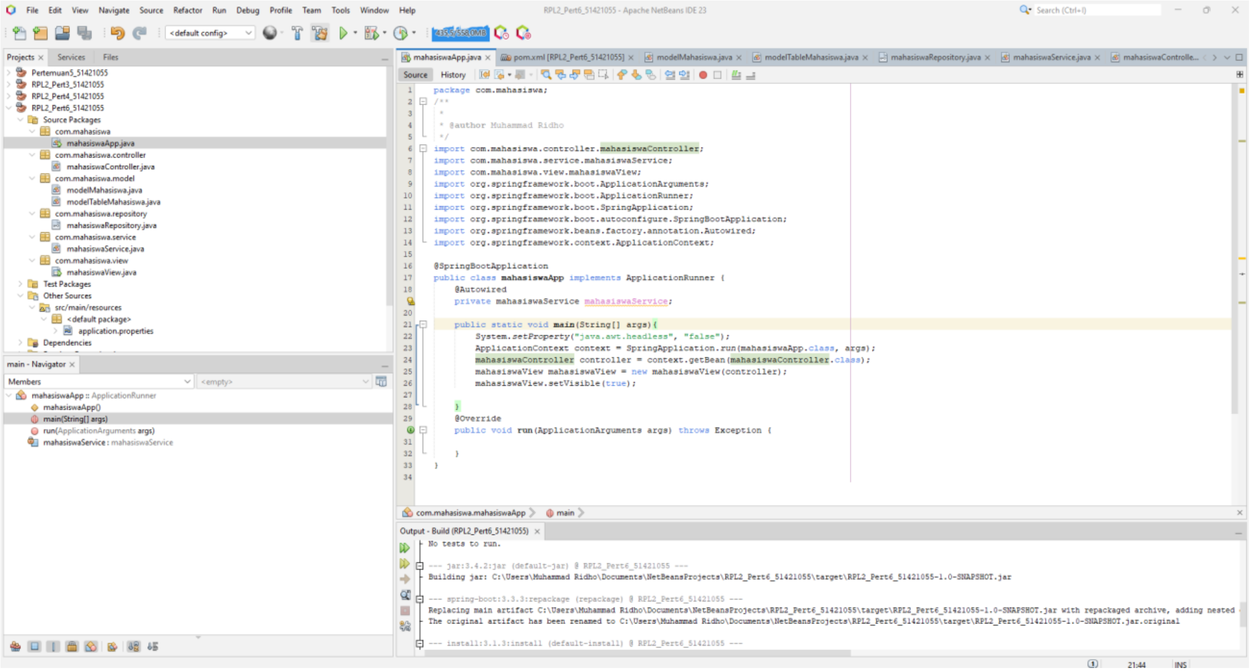
 **/*

```
import com.mahasiswa.controller.mahasiswaController;
import com.mahasiswa.model.modelMahasiswa;
import com.mahasiswa.model.modelTableMahasiswa;
import java.util.List;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JTextField;

public class mahasiswaView extends javax.swing.JFrame {
    private mahasiswaController controller;
    /**
     * Creates new form mahasiswaView
     */
    public mahasiswaView(mahasiswaController controller) {
        this.controller = controller;
        initComponents();
        loadMahasiswaTable();
    }
    private mahasiswaView(){
        throw new UnsupportedOperationException("Not Supported Yet.");
    }
    public void loadMahasiswaTable(){
        List<modelMahasiswa> ListMahasiswa = controller.getAllMahasiswa();
        modelTableMahasiswa tableModel = new modelTableMahasiswa(ListMahasiswa);
        dataTable.setModel(tableModel);
    }
        @SuppressWarnings("unchecked")
```

```
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
     loadMahasiswaTable();
}

private void jTextField2ActionPerformed(java.awt.event.ActionEvent evt) {

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    String npm = jTextField1.getText();
    String nama = jTextField2.getText();
    int semester = Integer.parseInt(jTextField3.getText());
    float ipk = Float.parseFloat(jTextField4.getText());
    modelMahasiswa mahasiswa = new modelMahasiswa(0, npm, nama, semester, ipk);
    System.out.println(mahasiswa.getIpk());
    System.out.println(mahasiswa.getNama());
    System.out.println(mahasiswa.getSemester());
    System.out.println(mahasiswa.getNpm());

    controller.addMahasiswa(mahasiswa);
    loadMahasiswaTable();
}

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
    JTextField idField = new JTextField(10);

    JPanel panel = new JPanel();
    panel.add(new JLabel("Masukkan ID yang Ingin Dihapus : "));
    panel.add(idField);
```

```
       int result = JOptionPane.showConfirmDialog(null, panel, "Hapus Mahasiswa",
JOptionPane.OK_CANCEL_OPTION, JOptionPane.PLAIN_MESSAGE);
        if(result == JOptionPane.OK_OPTION) {
            try{
                int id = Integer.parseInt(idField.getText());
                controller.deleteMahasiswa(id);
                JOptionPane.showMessageDialog(null, "Data Berhasil dihapus", "Sukses",
JOptionPane.INFORMATION_MESSAGE);
            }catch (NumberFormatException e){
                JOptionPane.showMessageDialog(null,"ID harus berupa angka" , "Error",
JOptionPane.ERROR_MESSAGE);
            }
        }
    }

    /**
     * @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(mahasiswaView.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        } catch (InstantiationException ex) {

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

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

java.util.logging.Logger.getLogger(mahasiswaView.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 mahasiswaView().setVisible(true);
            }
        });
    }
```

mahasiswaApp.java



```java
package com.mahasiswa;
/**
 *
 * @author Muhammad Ridho
 */
import com.mahasiswa.controller.mahasiswaController;
import com.mahasiswa.service.mahasiswaService;
import com.mahasiswa.view.mahasiswaView;
import org.springframework.boot.ApplicationArguments;
import org.springframework.boot.ApplicationRunner;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.ApplicationContext;

@SpringBootApplication
public class mahasiswaApp implements ApplicationRunner {
    @Autowired
    private mahasiswaService mahasiswaService;

    public static void main(String[] args){
        System.setProperty("java.awt.headless", "false");
        ApplicationContext context = SpringApplication.run(mahasiswaApp.class, args);
        mahasiswaController controller = context.getBean(mahasiswaController.class);
        mahasiswaView mahasiswaView = new mahasiswaView(controller);
        mahasiswaView.setVisible(true);

    }
    @Override
    public void run(ApplicationArguments args) throws Exception {

    }
}
```

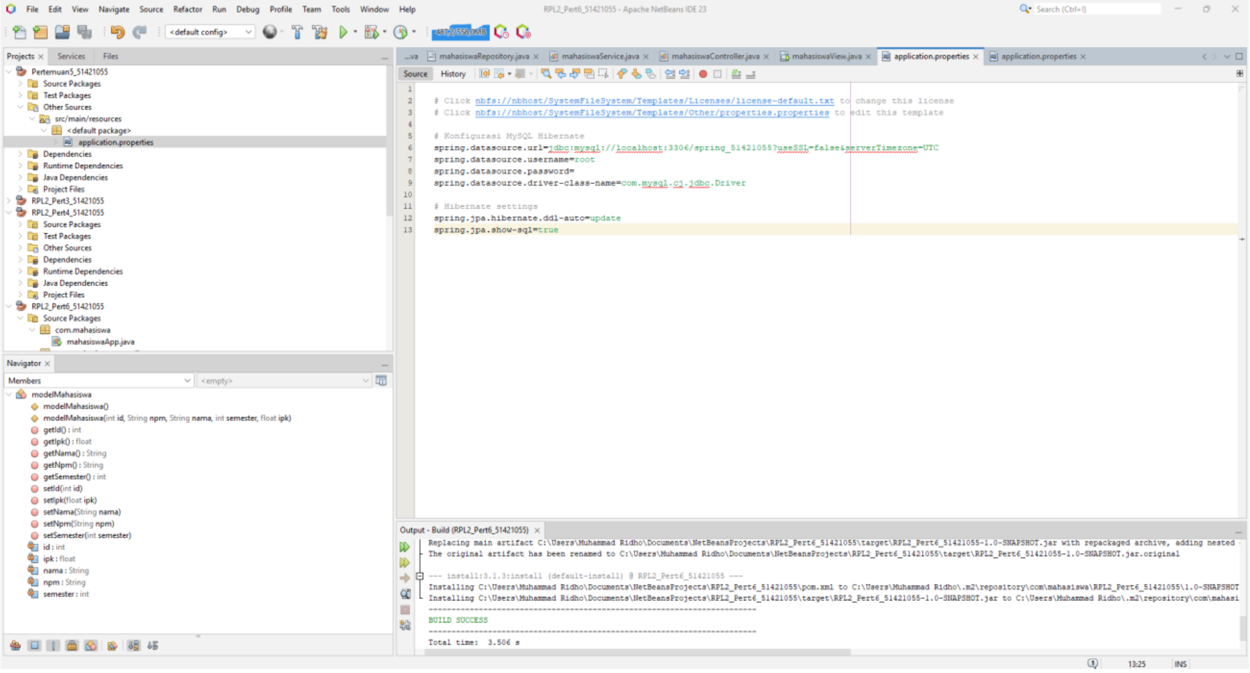
```
No tests to run.

--- jar:3.4.2:jar (default-jar) @ RPL2_Pert6_51421055 ---
Building jar: C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar

--- spring-boot:3.3.3:repackage (repackage) @ RPL2_Pert6_51421055 ---
Replacing main artifact C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar with repackaged archive, adding nested
The original artifact has been renamed to C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar.original

--- install:3.1.3:install (default-install) @ RPL2_Pert6_51421055 ---
```

Sourcecode:

```java
package com.mahasiswa;

/**

 *

 * @author Muhammad Ridho

 */

import com.mahasiswa.controller.mahasiswaController;

import com.mahasiswa.service.mahasiswaService;

import com.mahasiswa.view.mahasiswaView;

import org.springframework.boot.ApplicationArguments;

import org.springframework.boot.ApplicationRunner;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.context.ApplicationContext;
```

```
@SpringBootApplication
public class mahasiswaApp implements ApplicationRunner {
    @Autowired
    private mahasiswaService mahasiswaService;

    public static void main(String[] args){
        System.setProperty("java.awt.headless", "false");
        ApplicationContext context = SpringApplication.run(mahasiswaApp.class, args);
        mahasiswaController controller = context.getBean(mahasiswaController.class);
        mahasiswaView mahasiswaView = new mahasiswaView(controller);
        mahasiswaView.setVisible(true);

    }
    @Override
    public void run(ApplicationArguments args) throws Exception {

    }
}
```

mahasiswa.properties



```
# Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
# Click nbfs://nbhost/SystemFileSystem/Templates/Other/properties.properties to edit this template

# Konfigurasi MySQL Hibernate
spring.datasource.url=jdbc:mysql://localhost:3306/spring_51421055?useSSL=false&serverTimezone=UTC
spring.datasource.username=root
spring.datasource.password=
spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver

# Hibernate settings
spring.jpa.hibernate.ddl-auto=update
spring.jpa.show-sql=true
```

```
Replacing main artifact C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar with repackaged archive, adding nested
The original artifact has been renamed to C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar.original

--- install:3.1.3:install (default-install) @ RPL2_Pert6_51421055 ---
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\pom.xml to C:\Users\Muhammad Ridho\.m2\repository\com\mahasiswa\RPL2_Pert6_51421055\1.0-SNAPSHOT
Installing C:\Users\Muhammad Ridho\Documents\NetBeansProjects\RPL2_Pert6_51421055\target\RPL2_Pert6_51421055-1.0-SNAPSHOT.jar to C:\Users\Muhammad Ridho\.m2\repository\com\mahasi
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
Total time:  3.506 s
```

Sourcecode:

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

# Click nbfs://nbhost/SystemFileSystem/Templates/Other/properties.properties to edit this template

# Konfigurasi MySQL Hibernate

spring.datasource.url=jdbc:mysql://localhost:3306/pertemuan6_db?useSSL=false&serverTimezone=UTC

spring.datasource.username=root

spring.datasource.password=

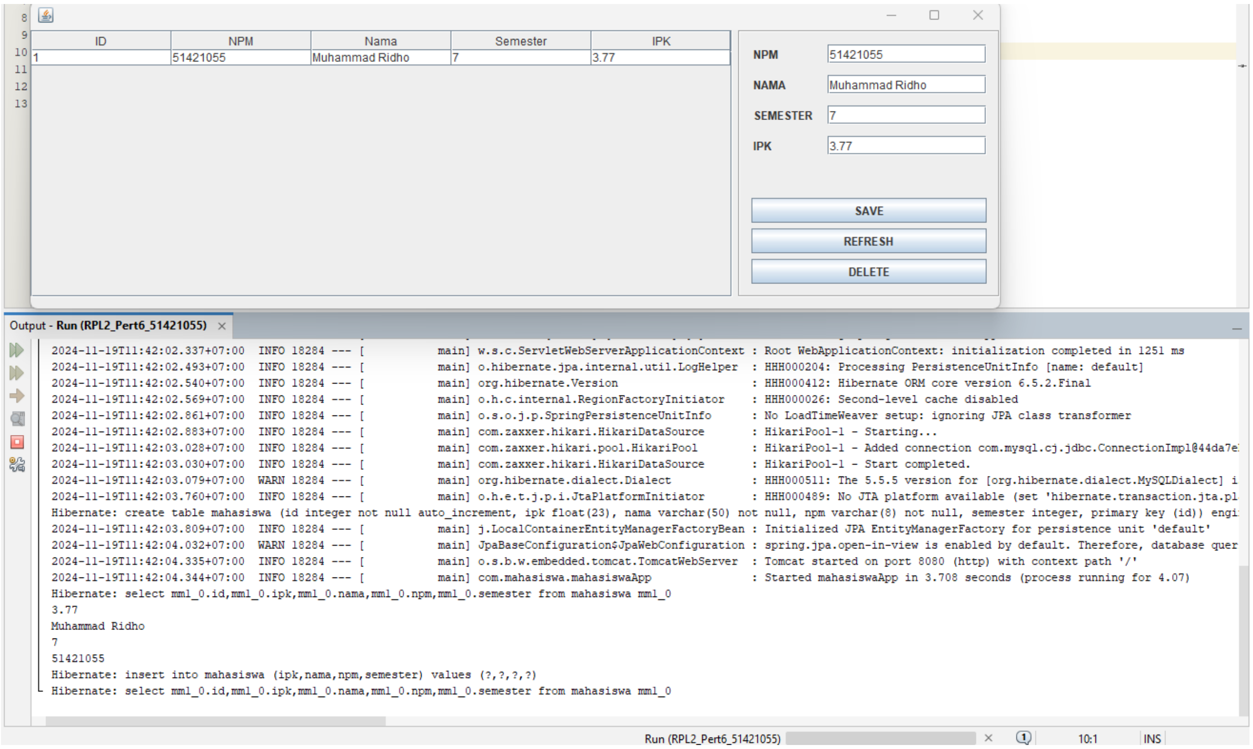
spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver

# Hibernate settings

spring.jpa.hibernate.ddl-auto=update

spring.jpa.show-sql=true

Output:



ID	NPM	Nama	Semester	IPK
1	51421055	Muhammad Ridho	7	3.77

NPM: 51421055

NAMA: Muhammad Ridho

SEMESTER: 7

IPK: 3.77

```
2024-11-19T11:42:02.337+07:00  INFO 18284 --- [           main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1251 ms
2024-11-19T11:42:02.493+07:00  INFO 18284 --- [           main] o.hibernate.jpa.internal.util.LogHelper  : HHH000204: Processing PersistenceUnitInfo [name: default]
2024-11-19T11:42:02.540+07:00  INFO 18284 --- [           main] org.hibernate.Version                    : HHH000412: Hibernate ORM core version 6.5.2.Final
2024-11-19T11:42:02.569+07:00  INFO 18284 --- [           main] o.h.c.internal.RegionFactoryInitiator    : HHH000026: Second-level cache disabled
2024-11-19T11:42:02.861+07:00  INFO 18284 --- [           main] o.s.o.j.p.SpringPersistenceUnitInfo      : No LoadTimeWeaver setup: ignoring JPA class transformer
2024-11-19T11:42:02.883+07:00  INFO 18284 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Starting...
2024-11-19T11:42:03.028+07:00  INFO 18284 --- [           main] com.zaxxer.hikari.pool.HikariPool        : HikariPool-1 - Added connection com.mysql.cj.jdbc.ConnectionImpl@44da7e
2024-11-19T11:42:03.030+07:00  INFO 18284 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Start completed.
2024-11-19T11:42:03.079+07:00  WARN 18284 --- [           main] org.hibernate.dialect.Dialect            : HHH000511: The 5.5.5 version for [org.hibernate.dialect.MySQLDialect] i
2024-11-19T11:42:03.760+07:00  INFO 18284 --- [           main] o.h.e.t.j.p.i.JtaPlatformInitiator       : HHH000489: No JTA platform available (set 'hibernate.transaction.jta.pl
Hibernate: create table mahasiswa (id integer not null auto_increment, ipk float(23), nama varchar(50) not null, npm varchar(8) not null, semester integer, primary key (id)) engi
2024-11-19T11:42:03.809+07:00  INFO 18284 --- [           main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2024-11-19T11:42:04.032+07:00  WARN 18284 --- [           main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database quer
2024-11-19T11:42:04.335+07:00  INFO 18284 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port 8080 (http) with context path '/'
2024-11-19T11:42:04.344+07:00  INFO 18284 --- [           main] com.mahasiswa.mahasiswaApp               : Started mahasiswaApp in 3.708 seconds (process running for 4.07)
Hibernate: select mml_0.id,mml_0.ipk,mml_0.nama,mml_0.npm,mml_0.semester from mahasiswa mml_0
3.77
Muhammad Ridho
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51421055
Hibernate: insert into mahasiswa (ipk,nama,npm,semester) values (?,?,?,?)
Hibernate: select mml_0.id,mml_0.ipk,mml_0.nama,mml_0.npm,mml_0.semester from mahasiswa mml_0
```