ACTIVITY PERTEMUAN 1

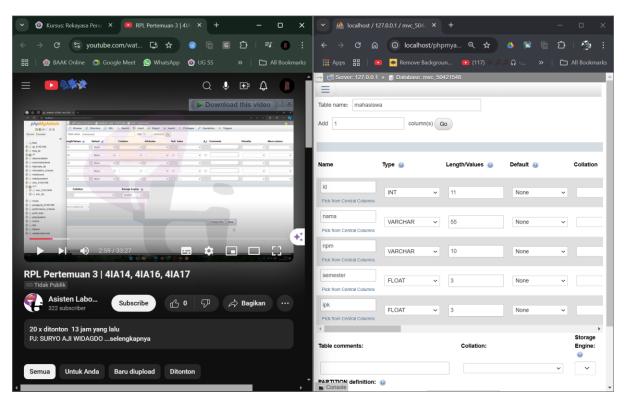NAMA : Gerald Evan Ariapraja Loppies

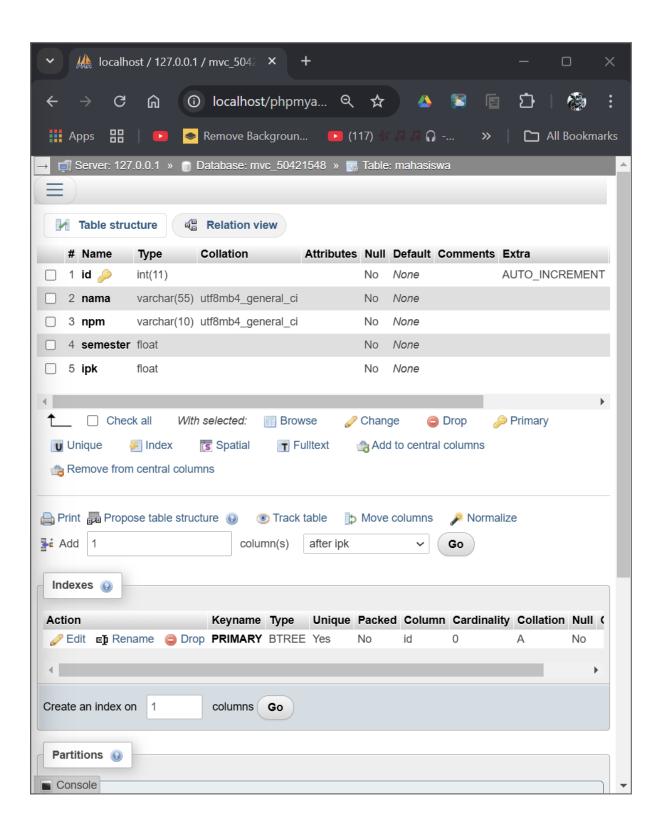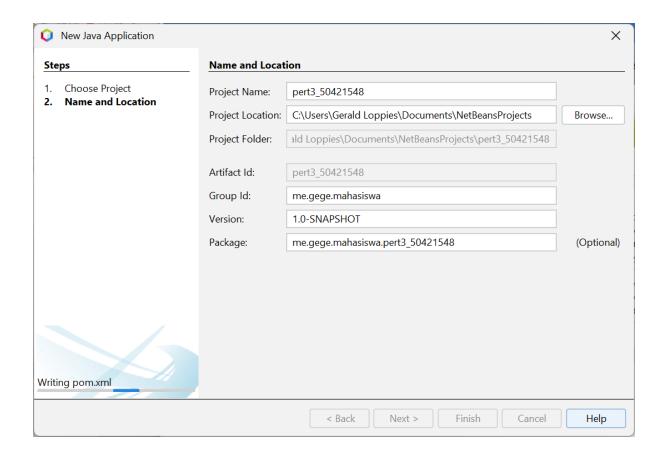NPM : 50421548

KELAS : 4IA14

MATERI : KONSEP MVC

MATA PRAKTIKUM : Praktikum RPL 2 M3
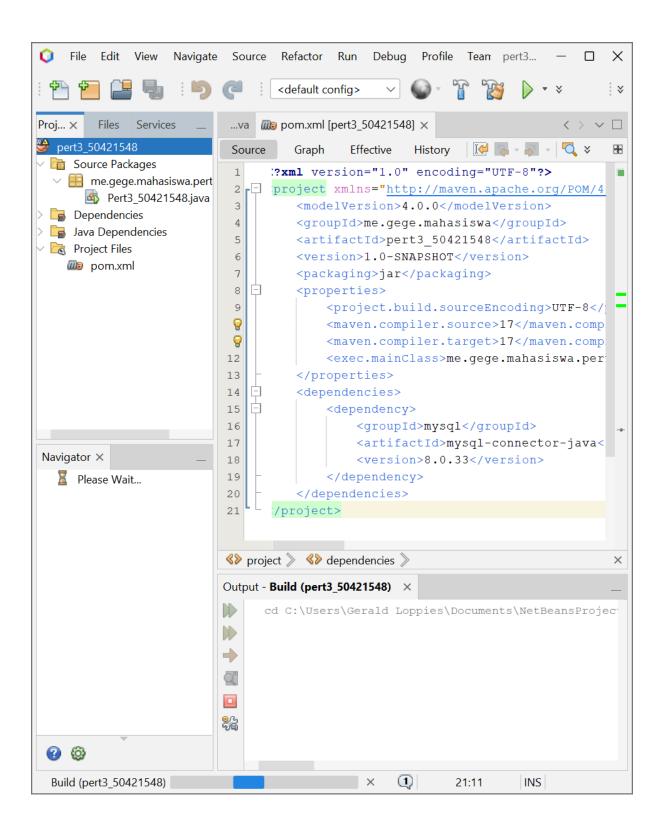
(Screenshoot langkah-langkah sesuai video pembelajaran dan jelaskan dengan ringkas)

Jawab :

≡

Table structure   **Relation view**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
☐	1 **id** 🔑	int(11)			No	*None*		AUTO_INCREMENT
☐	2 **nama**	varchar(55)	utf8mb4_general_ci		No	*None*		
☐	3 **npm**	varchar(10)	utf8mb4_general_ci		No	*None*		
☐	4 **semester**	float			No	*None*		
☐	5 **ipk**	float			No	*None*		

↑   ☐ Check all   *With selected:*   🗐 Browse   ✏ Change   ⊖ Drop   🔑 Primary

🅄 Unique   📇 Index   🆂 Spatial   🆃 Fulltext   Add to central columns

Remove from central columns

🖨 Print   📰 Propose table structure ❓   ◉ Track table   ▷ Move columns   🪄 Normalize

📲 Add [1]   column(s)   [after ipk ▾]   **Go**

Indexes ❓

Action			Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	
✏ Edit	🗟 Rename	⊖ Drop	**PRIMARY**	BTREE	Yes	No	id	0	A	No	

Create an index on [1]   columns   **Go**

Partitions ❓

■ Console

New Java Application

Steps

1. Choose Project
2. **Name and Location**

Name and Location

Project Name:	pert3_50421548
Project Location:	C:\Users\Gerald Loppies\Documents\NetBeansProjects
Project Folder:	ald Loppies\Documents\NetBeansProjects\pert3_50421548
Artifact Id:	pert3_50421548
Group Id:	me.gege.mahasiswa
Version:	1.0-SNAPSHOT
Package:	me.gege.mahasiswa.pert3_50421548 (Optional)

Browse...

Writing pom.xml

< Back   Next >   Finish   Cancel   Help

`<default config>`

pert3_50421548
- Source Packages
  - me.gege.mahasiswa.pert
    - Pert3_50421548.java
- Dependencies
- Java Dependencies
- Project Files
  - pom.xml

...va   pom.xml [pert3_50421548] ✕

Source   Graph   Effective   History

```xml
1      :?xml version="1.0" encoding="UTF-8"?>
2      project xmlns="http://maven.apache.org/POM/4
3          <modelVersion>4.0.0</modelVersion>
4          <groupId>me.gege.mahasiswa</groupId>
5          <artifactId>pert3_50421548</artifactId>
6          <version>1.0-SNAPSHOT</version>
7          <packaging>jar</packaging>
8          <properties>
9              <project.build.sourceEncoding>UTF-8</
10             <maven.compiler.source>17</maven.comp
11             <maven.compiler.target>17</maven.comp
12             <exec.mainClass>me.gege.mahasiswa.per
13         </properties>
14         <dependencies>
15             <dependency>
16                 <groupId>mysql</groupId>
17                 <artifactId>mysql-connector-java<
18                 <version>8.0.33</version>
19             </dependency>
20         </dependencies>
21     /project>
```

⟨⟩ project ⟩ ⟨⟩ dependencies ⟩   ✕

Navigator ✕   —

⏳ Please Wait...

Output - Build (pert3_50421548) ✕   —

```
cd C:\Users\Gerald Loppies\Documents\NetBeansProject
```

Build (pert3_50421548) ▮▮▮▮   ✕   ①   21:11   INS

Proj... ×   Files   Services

pert3_50421548
- Source Packages
  - me.gege.mahasiswa.pert
    - Pert3_50421548.java
- Dependencies
  - mysql-connector-j-8.0.33
  - protobuf-java-3.21.9.jar
- Java Dependencies
- Project Files
  - pom.xml

...va   pom.xml [pert3_50421548] ×

Source   Graph   Effective   History

```xml
1    :?xml version="1.0" encoding="UTF-8"?>
2    :project xmlns="http://maven.apache.org/POM/4
3        <modelVersion>4.0.0</modelVersion>
4        <groupId>me.gege.mahasiswa</groupId>
5        <artifactId>pert3_50421548</artifactId>
6        <version>1.0-SNAPSHOT</version>
7        <packaging>jar</packaging>
8        <properties>
9            <project.build.sourceEncoding>UTF-8</
         <maven.compiler.source>17</maven.comp
         <maven.compiler.target>17</maven.comp
12           <exec.mainClass>me.gege.mahasiswa.per
13       </properties>
14       <dependencies>
15           <dependency>
16               <groupId>mysql</groupId>
17               <artifactId>mysql-connector-java<
18               <version>8.0.33</version>
19           </dependency>
20       </dependencies>
21   :/project>
```

project > dependencies >

Navigator ×

- deploy **deploy-file**
- install **install-file**
- jar **test-jar**
- resources **copy-resources**
- site **attach-descriptor**
- site **effective-site**
- site **jar**
- site **run**
- site **stage**
- site **stage-deploy**

Output - Build (pert3_50421548) ×

```
--- install:3.1.1:install (default-install) @ pert3_
Installing C:\Users\Gerald Loppies\Documents\NetBear
Installing C:\Users\Gerald Loppies\Documents\NetBear
------------------------------------------------
BUILD SUCCESS
------------------------------------------------
Total time:  56.973 s
Finished at: 2024-10-28T14:21:09+07:00
------------------------------------------------
```

21:11   INS

Projects × | Files | Services

- pert3_50421548
  - Source Packages
    - me.gege.mahasiswa.controller
    - me.gege.mahasiswa.model
    - me.gege.mahasiswa.pert3_50421548
      - Pert3_50421548.java
    - me.gege.mahasiswa.view
  - Dependencies
    - mysql-connector-j-8.0.33.jar
    - protobuf-java-3.21.9.jar
  - Java Dependencies
  - Project Files
    - pom.xml

pom.xml [pert3_50421548]...

Source | Graph | Effective | History

```xml
1   <?xml version="1.0" encoding
2   <project xmlns="http://maven
3       <modelVersion>4.0.0</mod
4       <groupId>me.gege.mahasis
5       <artifactId>pert3_504215
6       <version>1.0-SNAPSHOT</v
7       <packaging>jar</packagin
8       <properties>
9           <project.build.sourc
            <maven.compiler.sour
            <maven.compiler.targ
12          <exec.mainClass>me.g
13      </properties>
14      <dependencies>
15          <dependency>
16              <groupId>mysql</
17              <artifactId>mysq
18              <version>8.0.33<
19          </dependency>
20      </dependencies>
21  </project>
```

project

Navigator ×

POM model

- Model Version : 4.0.0
- GroupId : me.gege.mahasiswa
- ArtifactId : pert3_50421548
- Packaging : jar
- Version : 1.0-SNAPSHOT
- Dependencies
- Properties

Output - Build (pert3_50421548) ×

```
--- install:3.1.1:install (defau
Installing C:\Users\Gerald Loppi
Installing C:\Users\Gerald Loppi
------------------------------
BUILD SUCCESS
------------------------------
Total time:  56.973 s
Finished at: 2024-10-28T14:21:09-
------------------------------
```

20:20   INS

<default config>   448.7/540.0MB

Projects × Files Services

Start Page × Pert3_50421548.java × pom.xml [pert3_50421548] × ModelMahasiswa.java ×

Source History

- pert3_50421548
  - Source Packages
    - me.gege.mahasiswa.controller
    - me.gege.mahasiswa.model
      - ModelMahasiswa.java
    - me.gege.mahasiswa.pert3_50421548
      - Pert3_50421548.java
    - me.gege.mahasiswa.view
  - Test Packages
  - Dependencies
    - mysql-connector-j-8.0.33.jar
    - protobuf-java-3.21.9.jar
  - Java Dependencies
  - Project Files
    - pom.xml

```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 me.gege.mahasiswa.model;

/**
 *
 * @author Gerald Loppies
 */
public class ModelMahasiswa {
    private int id;
    private String nama;
    private String npm;
    private int semester;
    private float ipk;

    public ModelMahasiswa(int id, string )
}
```

ModelMahasiswa - Navigator ×

Members   <empty>

- ModelMahasiswa
  - ModelMahasiswa(int id, string <error>)
  - id : int
  - ipk : float
  - nama : String
  - npm : String
  - semester : int

me.gege.mahasiswa.model.ModelMahasiswa ModelMahasiswa

Output - Build (pert3_50421548) ×

```
--- install:3.1.1:install (default-install) @ pert3_50421548 ---
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50421548\pom.xml to C:\Users\Gerald Loppies\.m2\repo
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50421548\target\pert3_50421548-1.0-SNAPSHOT.jar to C
------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------
Total time:  56.973 s
Finished at: 2024-10-28T14:21:09+07:00
------------------------------------------------------------
```

18:41   INS Windows (CRLF)

---

fig>   406.8/540.0MB

...8] ModelMahasiswa.java × MahasiswaDAO.java × ModelMahasiswa.java × MahasiswaView.java ×

Source History

```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 me.gege.mahasiswa.model;

import java.sql.*;
import java.util.ArrayList;
import java.util.List;
/**
 *
 * @author totos
 */
public class MahasiswaDAO {
    private Connection connection;

    public MahasiswaDAO() {
        try{
            Class.forName("com.mysql.cj.jdbc.Driver");
            connection = DriverManager.getConnection("jdbc:mysql://localhost:3306/mvc_51421357", "root", "'
        } catch (Exception e) {
```

Find: ronal   Previous   Next   Select

Output - Build (pert3_50421548) ×

```
--- install:3.1.1:install (default-install) @ pert3_50421548 ---
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50
------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------
Total time:  56.973 s
Finished at: 2024-10-28T14:21:09+07:00
------------------------------------------------------------
```

Snipping Tool

Screenshot copied to clipboard and saved
Select here to mark up and share.

5:16   INS Windows (CRLF)

```java
    public void closeConnection() {
        try {
            if(connection != null) {
                connection.close();
            }
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }

    public void addMahasiswa(ModelMahasiswa mahasiswa) {
        String sql = "INSERT INTO mahasiswa (npm, nama, semester, ipk) VALUES (?, ?, ?, ?)";
        try {
            PreparedStatement pstmt = connection.prepareStatement(sql);
            pstmt.setString(1, mahasiswa.getNpm());
            pstmt.setString(2, mahasiswa.getNama());
            pstmt.setInt(3, mahasiswa.getSemester());
            pstmt.setFloat(4, mahasiswa.getIpk());
            pstmt.executeUpdate();
        } catch (SQLException e) {
            e.printStackTrace();
```

Find: ronal | Previous | Next | Select | No matches ×

Output - Build (pert3_50421548) ×

```java
    public List<ModelMahasiswa> getAllMahasiswa(){
        List<ModelMahasiswa> mahasiswaList = new ArrayList<>();
        String sql = "SELECT * FROM mahasiswa";
        try{
            Statement stmt = connection.createStatement();
            ResultSet rs = stmt.executeQuery(sql);
            while(rs.next()){
                mahasiswaList.add(new ModelMahasiswa(
                        rs.getInt("id"),
                        rs.getString("npm"),
                        rs.getString("nama"),
                        rs.getInt("semester"),
                        rs.getFloat("ipk")
                ));
            }
        } catch(SQLException e) {
            e.printStackTrace();
        }
        return mahasiswaList;
    }
```

Find: ronal | Previous | Next | Select | No matches ×

Output - Build (pert3_50421548) ×

```
--- install:3.1.1:install (default-install) @ pert3_50421548 ---
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50421548\pom.xml to C:\Users\Gerald Loppies\.m2\repo
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50421548\target\pert3_50421548-1.0-SNAPSHOT.jar to C
------------------------------------------------------------------------
```

```java
 80            }
 81
 82        public void updateMahasiswa(ModelMahasiswa mahasiswa){
 83            String sql = "UPDATE mahasiswa SET npm = ?, nama = ?, semester = ?, ipk = ? WHERE id = ?";
 84            try{
 85                PreparedStatement pstmt = connection.prepareStatement(sql);
                   pstmt.setString(1, mahasiswa.getNpm());
                   pstmt.setString(2, mahasiswa.getNama());
                   pstmt.setInt(3, mahasiswa.getSemester());
                   pstmt.setFloat(4, mahasiswa.getIpk());
                   pstmt.setInt(5, mahasiswa.getId());
 91            } catch(SQLException e) {
                   e.printStackTrace();
 93            }
 94        }
 95
 96        public void deleteMahasiswa(int id){
 97            String sql = "DELETE FROM mahasiswa WHERE id = ?";
 98            try{
 99                PreparedStatement pstmt = connection.prepareStatement(sql);
100                pstmt.setInt(1, id);
```

Find: ronal   Previous   Next   Select   No matches

```java
 95
 96        public void deleteMahasiswa(int id){
 97            String sql = "DELETE FROM mahasiswa WHERE id = ?";
 98            try{
 99                PreparedStatement pstmt = connection.prepareStatement(sql);
100                pstmt.setInt(1, id);
101                pstmt.executeUpdate();
102            } catch(SQLException e){
                   e.printStackTrace();
104            }
105        }
106    }
107
```

```java
  1    /*
  2     * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
  3     * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
  4     */
  5    package me.gege.mahasiswa.model;
  6
  7    /**
  8     *
  9     * @author totos
 10     */
 11    public class ModelMahasiswa {
 12        private int id;
 13        private String nama;
 14        private String npm;
 15        private int semester;
 16        private float ipk;
 17
 18        public ModelMahasiswa(int id, String nama, String npm, int semester, float ipk) {
 19            this.id = id;
 20            this.nama = nama;
 21            this.npm = npm;
            this.semester = semester;
```

Source History

```java
26      public int getId() {
27          return id;
28      }
29
30      public void setId(int id) {
31          this.id = id;
32      }
33
34      public String getNama() {
35          return nama;
36      }
37
38      public void setNama(String nama) {
39          this.nama = nama;
40      }
41
42      public String getNpm() {
43          return npm;
44      }
45
46      public void setNpm(String npm) {
```

Find:ronal   Previous   Next Select   No matches ×

Output - Build (pert3_50421548) ×

--- install:3.1.1:install (default-install) @ pert3 50421548 ---

Source History

```java
46      public void setNpm(String npm) {
47          this.npm = npm;
48      }
49
50      public int getSemester() {
51          return semester;
52      }
53
54      public void setSemester(int semester) {
55          this.semester = semester;
56      }
57
58      public float getIpk() {
59          return ipk;
60      }
61
62      public void setIpk(float ipk) {
63          this.ipk = ipk;
64      }
65
66
67  }
```

Find:ronal   Previous   Next Select   No

```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 me.gege.mahasiswa.view;

import me.gege.mahasiswa.controller.MahasiswaController;
import me.gege.mahasiswa.model.MahasiswaDAO;
import java.util.Scanner;
/**
 *
 * @author totos
 */
public class MahasiswaView {
    public static void main(String[] args) {
        MahasiswaDAO mahasiswaDAO = new MahasiswaDAO();
        MahasiswaController mahasiswaController = new MahasiswaController(mahasiswaDAO);

        Scanner scanner = new Scanner(System.in);
        int pilihan;

        while(true) {
```

Tabs: ...8] ModelMahasiswa.java × MahasiswaDAO.java × ModelMahasiswa.java × **MahasiswaView.java** ×

```java
        int pilihan;

        while(true) {
            System.out.println("Menu:");
            System.out.println("1. Tampilkan Semua Mahasiswa");
            System.out.println("2. Tambah Mahasiswa");
            System.out.println("3. Update Mahasiswa");
            System.out.println("4. Hapus Mahasiswa");
            System.out.println("5. Cek Koneksi Database");
            System.out.println("6. Keluar");
            System.out.println("PILIH OPSI: ");
            pilihan = scanner.nextInt();
            scanner.nextLine();

            switch (pilihan){
                case 1:
                    mahasiswaController.displayAllMahasiswa();
                    break;

                case 2:
                    // tambah mhs
```

Find: ronal   Previous   Next   Select   No matches

Output - Build (pert3_50421548) ×

```
--- install:3.1.1:install (default-install) @ pert3_50421548 ---
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50421548\pom.xml to C:\Users\Gerald Loppies\.m2\repo
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50421548\target\pert3_50421548-1.0-SNAPSHOT.jar to C
```

```java
47              System.out.println("Masukkan IPK: ");
48              float ipk = scanner.nextFloat();
49              System.out.println(npm + nama + semester + ipk);
50
51              mahasiswaController.addMahasiswa(npm, nama, semester, ipk);
52              break;
53
54          case 3:
55              System.out.print("Masukkan ID mahasiswa: ");
56              int id = scanner.nextInt();
57              scanner.nextLine();
58
59              System.out.println("Masukkan NPM: ");
60              String npmBaru = scanner.next();
61              System.out.println("Masukkan Nama: ");
62              String namaBaru = scanner.next();
63              System.out.println("Masukkan Semester: ");
64              int semesterBaru = scanner.nextInt();
65              System.out.println("Masukkan IPK: ");
66              float ipkBaru = scanner.nextFloat();
67
```

Find: ronal   Previous   Next   Select   No matches
...8] ModelMahasiswa.java ×   MahasiswaDAO.java ×   ModelMahasiswa.java ×   MahasiswaView.java ×
Source   History

```java
71          case 4:
72              System.out.print("Masukkan ID Mahasiswa: ");
73              int idHapus = scanner.nextInt();
74              mahasiswaController.deleteMahasiswa(idHapus);
75
76          case 5:
77              mahasiswaController.checkDatabaseConnection();
78              break;
79
80          case 6:
81              // keluar
82              mahasiswaController.closeConnection();
83              System.out.println("Program Selesai.");
84              return;
85
86          default:
87              System.out.println("Input Tidak Valid");
88              }
89          }
90      }
91  }
92
```

Output - Build (pert3_50421548) ×

```
--- install:3.1.1:install (default-install) @ pert3_50421548 ---
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50421548\pom.xml to C:\Users\Gerald Loppies\.m2\repo
Installing C:\Users\Gerald Loppies\Documents\NetBeansProjects\pert3_50421548\target\pert3_50421548-1.0-SNAPSHOT.jar to C
------------------------------------------------------------------------
```
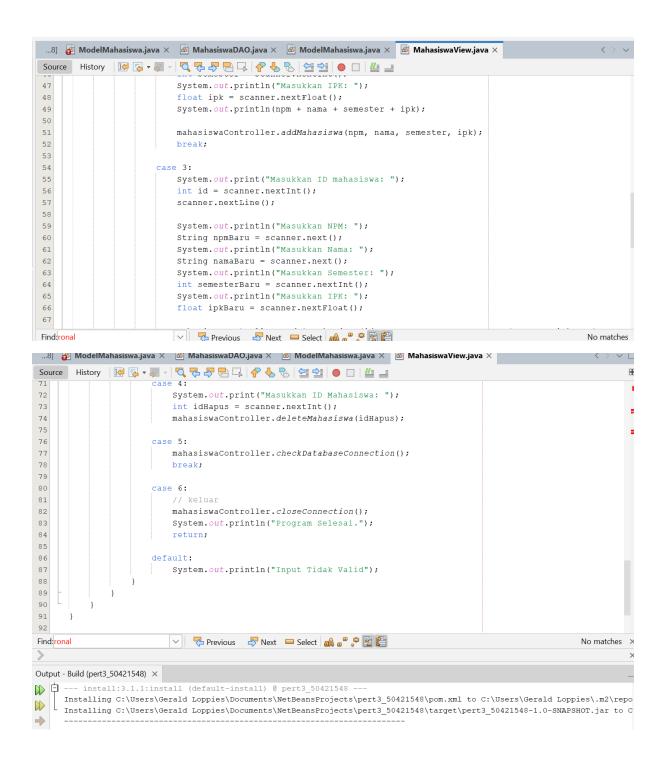
Mohon Maaf jika Belum selesai ka karna banyak error