

ACTIVITY PERTEMUAN 6

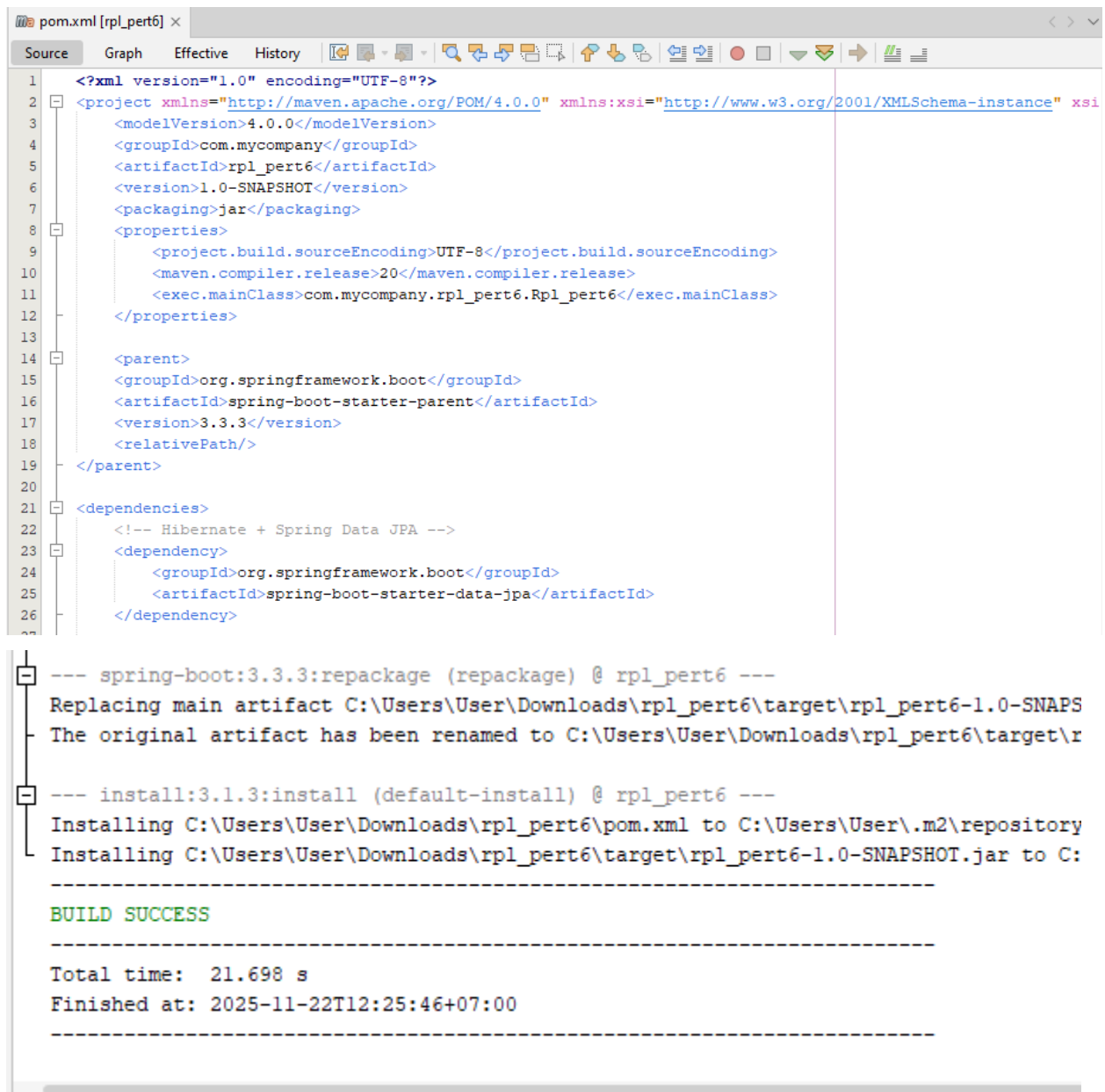
NAMA : Andi Purnama

NPM : 50422215

KELAS : 4IA18

MATERI : IMPLEMENTASI AOP DAN DEPENDENCY INJECTION PADA PROJECT SPRING DAN HIBERNATE

MATA PRAKTIKUM : Rekayasa Perangkat Lunak 2



The screenshot displays an IDE window with a tab titled 'pom.xml [rpl_pert6]'. The 'Source' view shows the XML content of the pom.xml file, which is a Maven project configuration. The XML includes a project declaration with a model version of 4.0.0, a group ID of 'com.mycompany', an artifact ID of 'rpl_pert6', and a version of '1.0-SNAPSHOT'. It also specifies the packaging as 'jar' and includes properties for source encoding, compiler release, and the main class. The parent project is 'spring-boot-starter-parent' with version '3.3.3'. A dependency on 'spring-boot-starter-data-jpa' is listed. The 'Execution' view below shows the output of the Maven build process, including the repackage phase for 'spring-boot:3.3.3' and the install phase for 'spring-boot:3.1.3'. The build concludes with a 'BUILD SUCCESS' message, a total time of 21.698 seconds, and a finish time of 2025-11-22T12:25:46+07:00.

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi
<modelVersion>4.0.0</modelVersion>
<groupId>com.mycompany</groupId>
<artifactId>rpl_pert6</artifactId>
<version>1.0-SNAPSHOT</version>
<packaging>jar</packaging>
<properties>
  <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
  <maven.compiler.release>20</maven.compiler.release>
  <exec.mainClass>com.mycompany.rpl_pert6.Rpl_pert6</exec.mainClass>
</properties>
<parent>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-parent</artifactId>
  <version>3.3.3</version>
  <relativePath/>
</parent>
<dependencies>
  <!-- Hibernate + Spring Data JPA -->
  <dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-data-jpa</artifactId>
  </dependency>
  --- spring-boot:3.3.3:repackage (repackage) @ rpl_pert6 ---
  Replacing main artifact C:\Users\User\Downloads\rpl_pert6\target\rpl_pert6-1.0-SNAPS
  The original artifact has been renamed to C:\Users\User\Downloads\rpl_pert6\target\r
  --- install:3.1.3:install (default-install) @ rpl_pert6 ---
  Installing C:\Users\User\Downloads\rpl_pert6\pom.xml to C:\Users\User\.m2\repository
  Installing C:\Users\User\Downloads\rpl_pert6\target\rpl_pert6-1.0-SNAPSHOT.jar to C:
  -----
  BUILD SUCCESS
  -----
  Total time: 21.698 s
  Finished at: 2025-11-22T12:25:46+07:00
  -----
```

—
□
×

NPM

NAMA

SEMESTER

IPK

Simpan

Refresh

Hapus

ID	NPM	Nama	Semester	IPK
3	50422215	Andi Purnama	7	3.8

MahasiswaApp.java ×

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```

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 com.mycompany.rpl_pert6;
6
7   import com.mycompany.rpl_pert6.controller.MahasiswaController;
8   import com.mycompany.rpl_pert6.service.MahasiswaService;
9   import com.mycompany.rpl_pert6.view.MahasiswaView;
10  import org.springframework.beans.factory.annotation.Autowired;
11  import org.springframework.boot.ApplicationArguments;
12  import org.springframework.boot.ApplicationRunner;
13  import org.springframework.boot.SpringApplication;
14  import org.springframework.boot.autoconfigure.SpringBootApplication;
15  import org.springframework.context.ApplicationContext;
16
17
18  @SpringBootApplication
19  public class MahasiswaApp implements ApplicationRunner {
20
21      @Autowired
22      private MahasiswaService mahasiswaService;
23
24      public static void main(String[] args) {
25          System.setProperty("java.awt.headless", "false"); // Disable headless mode
26
27          // Start the Spring application and get the application context
28          ApplicationContext context = SpringApplication.run(MahasiswaApp.class, args);
  
```

```
MahasiswaController.java x
Source History
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 com.mycompany.rpl_pert6.controller;
6
7   import com.mycompany.rpl_pert6.model.ModelMahasiswa;
8   import com.mycompany.rpl_pert6.service.MahasiswaService;
9   import java.util.List;
10  import org.springframework.beans.factory.annotation.Autowired;
11  import org.springframework.stereotype.Controller;
12  import org.springframework.web.bind.annotation.PathVariable;
13  import org.springframework.web.bind.annotation.RequestBody;
14
15
16  @Controller
17  public class MahasiswaController {
18
19      @Autowired
20      private MahasiswaService mahasiswaService;
21
22      // Add new Mahasiswa
23      public String addMahasiswa(@RequestBody ModelMahasiswa mhs) {
24          mahasiswaService.addMhs(mhs);
25          return "Mahasiswa added successfully";
26      }
27  }
```

```
ModelMahasiswa.java x
Source History
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 com.mycompany.rpl_pert6.model;
6
7   import jakarta.persistence.*;
8
9
10  @Entity
11  @Table(name = "mahasiswa")
12  public class ModelMahasiswa {
13
14      @Id
15      @GeneratedValue(strategy = GenerationType.IDENTITY)
16      @Column(name = "id")
17      private int id;
18
19      @Column(name = "npm", nullable = false, length = 8)
20      private String npm;
21
22      @Column(name = "nama", nullable = false, length = 50)
23      private String nama;
24
25      @Column(name = "semester")
26      private int semester;
27
28      @Column(name = "ipk")
29      private float ipk;
30  }
```

```
ModelTableMahasiswa.java x
Source History
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 com.mycompany.rpl_pert6.model;
6
7   import java.util.List;
8   import javax.swing.table.AbstractTableModel;
9
10
11  public class ModelTableMahasiswa extends AbstractTableModel{
12      private List<ModelMahasiswa> mahasiswaList;
13      private String[] columnNames = {"ID", "NPM", "Nama", "Semester", "IPK"};
14
15      public ModelTableMahasiswa(List<ModelMahasiswa> mahasiswaList) {
16          this.mahasiswaList = mahasiswaList;
17      }
18
19      @Override
20      public int getRowCount() {
21          return mahasiswaList.size(); // Jumlah baris sesuai dengan jumlah data mahasiswa
22      }
23
24      @Override
25      public int getColumnCount() {
26          return columnNames.length; // Jumlah kolom sesuai dengan jumlah elemen dalam columnNames
27      }
28
29      @Override
30      public Object getValueAt(int rowIndex, int columnIndex) {
31          ModelMahasiswa mahasiswa = mahasiswaList.get(rowIndex);
```

```
MahasiswaRepository.java x
Source History
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 com.mycompany.rpl_pert6.repository;
6
7   import com.mycompany.rpl_pert6.model.ModelMahasiswa;
8   import org.springframework.data.jpa.repository.JpaRepository;
9   import org.springframework.stereotype.Repository;
10
11
12  @Repository
13  public interface MahasiswaRepository extends JpaRepository<ModelMahasiswa, Integer> {
14
15  }
16
17
```

MahasiswaService.java x

SourceHistory

```
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 com.mycompany.rpl_pert6.service;
6
7   import com.mycompany.rpl_pert6.model.ModelMahasiswa;
8   import com.mycompany.rpl_pert6.repository.MahasiswaRepository;
9   import java.util.List;
10  import org.springframework.beans.factory.annotation.Autowired;
11  import org.springframework.stereotype.Service;
12
13
14
15  @Service
16  public class MahasiswaService {
17
18      @Autowired
19      private MahasiswaRepository repository;
20
21      public void addMhs (ModelMahasiswa mhs) {
22          repository.save (mhs) ;
23      }
24
25      public ModelMahasiswa getMhs (int id) {
26          return repository.findById (id) .orElse (null) ;
27      }
28
29      public void updateMhs (ModelMahasiswa mhs) {
30          repository.save (mhs) ;
31      }
32  }
```