

## ACTIVITY PERTEMUAN 6

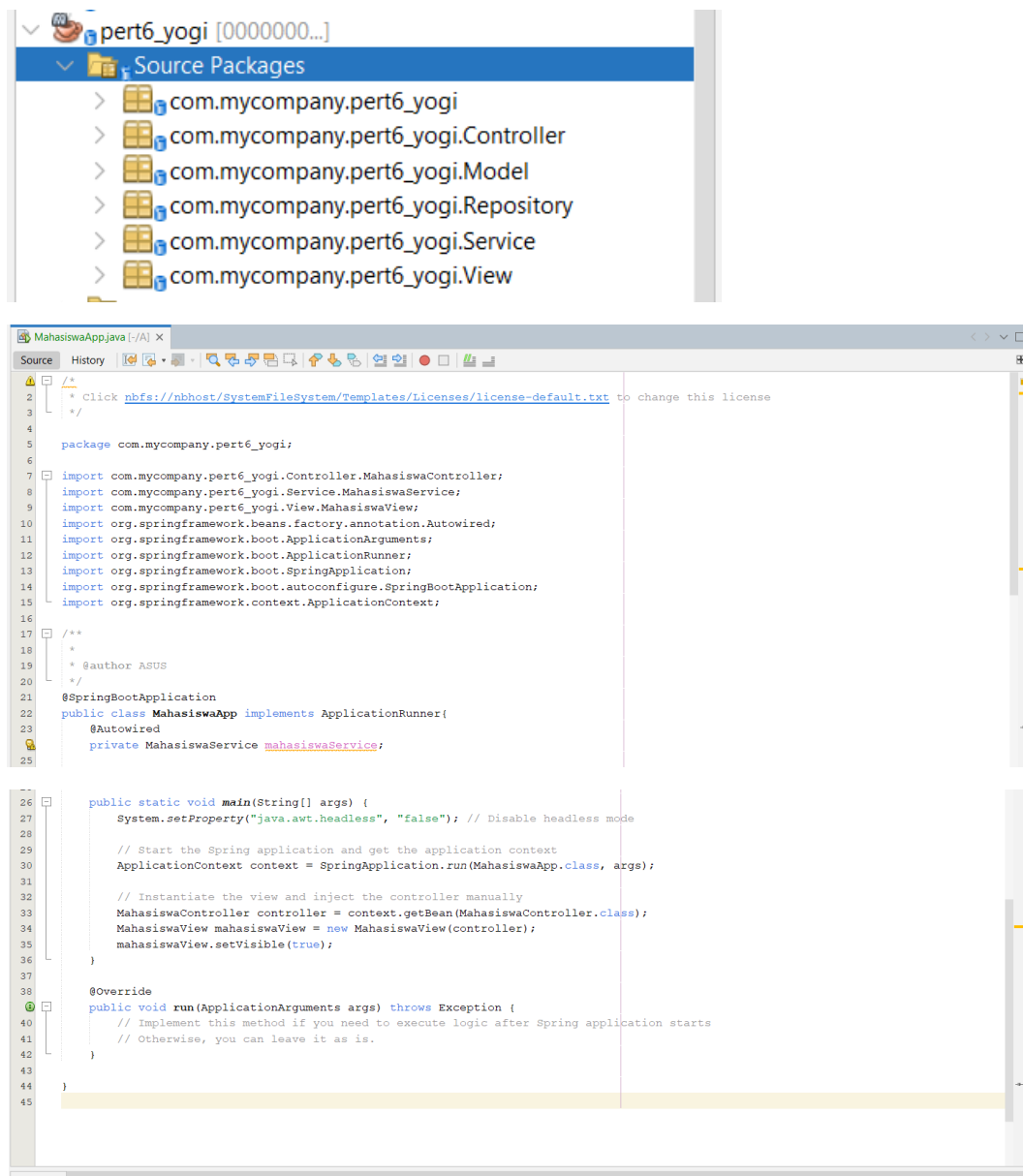
**NAMA : Yogi Setiawan**

**NPM : 5142648**

**KELAS : 4IA17**

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

**MATA PRAKTIKUM : RPL 2**



```
MahasiswaController.java [:/A] X
Source History
2  * Click nbfs://nbhost/SystemFileSystem/Template/Licenses/license-default.txt to change this license
3  * Click nbfs://nbhost/SystemFileSystem/Template/Classes/Class.java to edit this template
4  */
5  package com.mycompany.pert6_yogi.Controller;
6
7  import com.mycompany.pert6_yogi.Model.ModelMahasiswa;
8  import com.mycompany.pert6_yogi.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  *
17  * @author ASUS
18  */
19 @Controller
20 public class MahasiswaController {
21     @Autowired
22     private MahasiswaService mahasiswaService;
23
24     public String addMahasiswa(@RequestBody ModelMahasiswa mhs) {
25         mahasiswaService.addMhs(mhs);
26         return "Mahasiswa added successfully";
27     }
28
29     public ModelMahasiswa getMahasiswa(@PathVariable int id) {
30         return mahasiswaService.getMhs(id);
31     }
32
33     public String updateMahasiswa(@RequestBody ModelMahasiswa mhs) {
34         mahasiswaService.updateMhs(mhs);
35         return "Mahasiswa updated successfully";
36     }
37
38     public String deleteMahasiswa(@PathVariable int id) {
39         mahasiswaService.deleteMhs(id);
40         return "Mahasiswa deleted successfully";
41     }
42
43     public List<ModelMahasiswa> getAllMahasiswa() {
44         return mahasiswaService.getAllMahasiswa();
45     }
46
47 }
48
```

```
ModelMahasiswa.java [-A] x
Source History
2  /*
3   * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
4   * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
5   */
6   package com.mycompany.pert6_yogi.Model;
7
8   import jakarta.persistence.Entity;
9   import jakarta.persistence.*;
10
11  /**
12   *
13   * @author ASUS
14   */
15  @Entity
16  @Table(name="mahasiswa")
17  public class ModelMahasiswa {
18      @Id
19      @GeneratedValue(strategy = GenerationType.IDENTITY)
20      @Column(name="id")
21      private int id;
22
23      @Column(name="npm", nullable=false, length=10)
24      private String npm;
25
26      @Column(name="nama", nullable=false, length=50)
27      private String nama;
28
29      @Column(name="semester", nullable=false)
30      private int semester;
31
32      @Column(name="ipk", nullable=false)
33      private float ipk;
34
35      public ModelMahasiswa() {
36
37      }
38
39      public ModelMahasiswa(int id, String npm, String nama, int semester, float ipk) {
40          this.id = id;
41          this.npm = npm;
42          this.nama = nama;
43          this.semester = semester;
44          this.ipk = ipk;
45      }
46
47      public int getId() {
48          return id;
49      }
50
51      public void setId(int id) {
52          this.id = id;
53      }
54
55      public String getNpm() {
56          return npm;
57      }
58
59      public void setNpm(String npm) {
60          this.npm = npm;
61      }
62
63      public String getNama() {
64          return nama;
65      }
66
67      public void setNama(String nama) {
68          this.nama = nama;
69      }
70
71      public int getSemester() {
72          return semester;
73      }
74
75      public void setSemester(int semester) {
76          this.semester = semester;
77      }
78
79      public float getIpk() {
80          return ipk;
81      }
82
83      public void setIpk(float ipk) {
84          this.ipk = ipk;
85      }
86
87  }
```

```
ModelTabelMahasiswa.java [-A] x
Source History
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/*
 * 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 com.mycompany.pert6_yogi.Model;

import java.util.List;
import javax.swing.table.AbstractTableModel;

/**
 *
 * @author ASUS
 */
public class ModelTabelMahasiswa extends AbstractTableModel{
    private List<ModelMahasiswa> mahasiswaList;
    private String[] columnNames = {"ID", "NPM", "Nama", "Semester", "IPK"};

    public ModelTabelMahasiswa(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]; // Mengatur nama kolom
    }

    @Override
    public boolean isCellEditable(int rowIndex, int columnIndex) {
        return false; // Semua sel tidak dapat diedit
    }

    // Method untuk menambahkan atau memodifikasi data, jika dibutuhkan
    public void setMahasiswaList(List<ModelMahasiswa> mahasiswaList) {
        this.mahasiswaList = mahasiswaList;
        fireTableDataChanged(); // Memberitahu JTable bahwa data telah berubah
    }
}
```

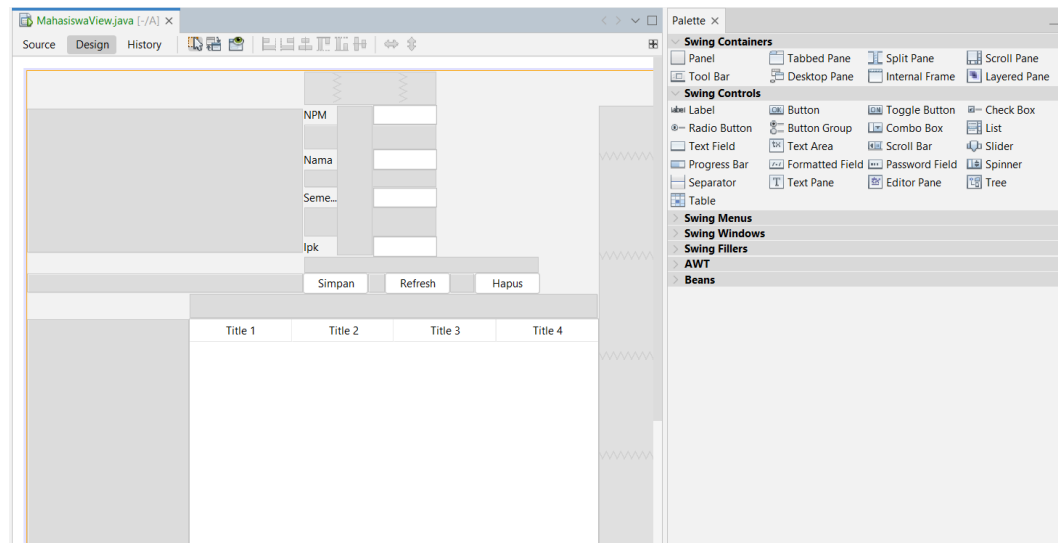
```
MahasiswaRepository.java [-A] x
Source History
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/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Interface.java to edit this template
 */
package com.mycompany.pert6_yogi.Repository;

import com.mycompany.pert6_yogi.Model.ModelMahasiswa;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;

@Repository
public interface MahasiswaRepository extends JpaRepository<ModelMahasiswa, Integer> {
}
```

```
Source History
MahasiswaService.java [-A] X
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.pert6_yogi.Service;
6
7  import com.mycompany.pert6_yogi.Model.ModelMahasiswa;
8  import com.mycompany.pert6_yogi.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  * @author ASUS
16  */
17 @Service
18 public class MahasiswaService {
19     @Autowired
20     private MahasiswaRepository repository;
21
22     public void addMhs(ModelMahasiswa mhs) {
23         repository.save(mhs);
24     }
25
26     public ModelMahasiswa getMhs(int id) {
27         return repository.findById(id).orElse(null);
28     }
29
30     public void updateMhs(ModelMahasiswa mhs) {
31         repository.save(mhs);
32     }
33
34     public void deleteMhs(int id) {
35         repository.deleteById(id);
36     }
37
38     public List<ModelMahasiswa> getAllMahasiswa() {
39         return repository.findAll();
40     }
41
42 }
43
```



```

MahasiswaView.java [-A] X
Source Design History
/*
 * 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
 */
package com.mycompany.pert6_yogi.View;

import com.mycompany.pert6_yogi.Controller.MahasiswaController;
import com.mycompany.pert6_yogi.Model.ModelMahasiswa;
import com.mycompany.pert6_yogi.Model.ModelTabelMahasiswa;
import java.util.List;

/**
 *
 * @author ASUS
 */
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.");
    }

    private MahasiswaView() {
        throw new UnsupportedOperationException("Not Supported yet.");
    }

    public void loadMahasiswaTable() {
        List<ModelMahasiswa> listMahasiswa = controller.getAllMahasiswa();

        ModelTabelMahasiswa tableModel = new ModelTabelMahasiswa(listMahasiswa);

        dataTable.setModel(tableModel);
    }

    /**
     * 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")
    Generated Code

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

    private void btnSimpanActionPerformed(java.awt.event.ActionEvent evt) {
        String npm = npmField.getText();
        String nama = namaField.getText();
        int semester = Integer.parseInt(semesterField.getText());
        float ipk = Float.parseFloat(ipkField.getText());

        ModelMahasiswa mahasiswa = new ModelMahasiswa(0, npm, nama, semester, ipk);
        System.out.println(mahasiswa.getIpk());
        System.out.println(mahasiswa.getNama());
        System.out.println(mahasiswa.getNpm());
        System.out.println(mahasiswa.getSemester());

        controller.addMahasiswa(mahasiswa);
        loadMahasiswaTable();
        // TODO add your handling code here:
    }

    private void btnHapusActionPerformed(java.awt.event.ActionEvent evt) {
        JTextField idField = new JTextField(5);

        // Membuat panel untuk menampung JTextField
        JPanel panel = new JPanel();
        panel.add(new JLabel("Masukkan ID yang ingin dihapus:"));
        panel.add(idField);

        // Menampilkan dialog box dengan JTextField, tombol OK, dan Cancel
        int result = JOptionPane.showConfirmDialog(null, panel,
            "Hapus Mahasiswa", JOptionPane.OK_CANCEL_OPTION, JOptionPane.PLAIN_MESSAGE);

        // Jika tombol OK ditekan
    }

```

```

211 if (result == JOptionPane.OK_OPTION) {
212     try {
213         // Mengambil input ID dan memanggil metode deleteMhs
214         int id = Integer.parseInt(idField.getText());
215         controller.deleteMahasiswa(id);
216         JOptionPane.showMessageDialog(null, "Data berhasil dihapus.", "Sukses", JOptionPane.INFORMATION_MESSAGE);
217     } catch (NumberFormatException e) {
218         // Menangani error jika ID yang dimasukkan bukan angka
219         JOptionPane.showMessageDialog(null, "ID harus berupa angka.", "Error", JOptionPane.ERROR_MESSAGE);
220     }
221 }
222 // TODO add your handling code here:
223
224
225 /**
226  * @param args the command line arguments
227  */
228 public static void main(String args[]) {
229     /* Set the Nimbus look and feel */
230     Look and feel setting code (optional)
231
232     /* Create and display the form */
233     java.awt.EventQueue.invokeLater(new Runnable() {
234         public void run() {
235             new MahasiswaView().setVisible(true);
236         }
237     });
238 }
239
240 // Variables declaration - do not modify
241 private javax.swing.JButton btnHapus;
242 private javax.swing.JButton btnRefresh;
243 private javax.swing.JButton btnSimpas;
244 private javax.swing.JTable dataTable;
245 private javax.swing.JTextField ipkField;
246 private javax.swing.JLabel jLabel1;
247 private javax.swing.JLabel jLabel2;
248 private javax.swing.JLabel jLabel3;
249 private javax.swing.JLabel jLabel4;
250 private javax.swing.JScrollPane jScrollPane1;
251 private javax.swing.JTextField namaField;
252 private javax.swing.JTextField npmField;
253 private javax.swing.JTextField semesterField;
254 // End of variables declaration
255 }

```

localhost/phpmyadmin/index.php?route=/sql&db=db\_pert6&table=mahasiswa&pos=0

Server: 127.0.0.1 • Database: db\_pert6 • Table: mahasiswa

Showing rows 0 - 0 (1 total. Query took 0.0003 seconds)

SELECT \* FROM `mahasiswa`

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

	ID	ipk	nama	npm	semester
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	4	yogi	51422648	7

☐ Check all | With selected | ☐ Edit ☐ Copy ☐ Delete ☐ Export

Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

☐ Print ☐ Copy to clipboard ☐ Export ☐ Display chart ☐ Create view

Bookmark this SQL query

Label:  ☐ Let every user access this bookmark

localhost/phpmyadmin?url=http://dev.mysql.com/doc/refman/8.0/en/select.html

—

□

×

NPM

51422648

Nama

YOGI

Sem...

7

lpg

4

Simpan

Refresh

Hapus

ID	NPM	Nama	Semester	IPK
4	51422648	YOGI	7	4.0
5	51422648	YOGI	7	4.0



NPM

51422648

Nama

YOGI

Sem...

7

Ipk

4

Simpan

Refresh

Hapus

ID	NPM	Nama	Semester	IPK
4	51422648	YOGI	7	4.0
5	51422648	YOGI	7	4.0

Hapus Mahasiswa

Masukkan ID yang ingin dihapus: 5

OK

Cancel

ng He

—

□

×

NPM

51422648

Nama

YOGI

Sem...

7

Ipk

4

Simpan

Refresh

Hapus

ID	NPM	Nama	Semester	IPK
4	51422648	YOGI	7	4.0