

ACTIVITY PERTEMUAN 5

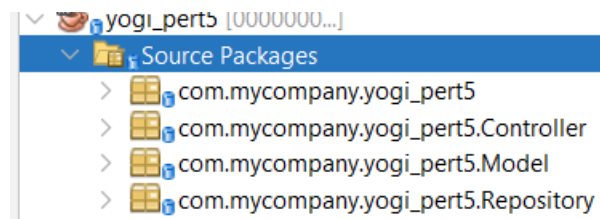
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KELAS : 4IA17

MATERI : Konsep Framework Spring, Pembuatan Project Spring dan Hibernate

MATA PRAKTIKUM : RPL 2



```
Yogi_pert5.java [-A] X
Source History
1  /**
2   * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
3   */
4
5   package com.mycompany.yogi_pert5;
6
7   import com.mycompany.yogi_pert5.Controller.MahasiswaController;
8   import org.springframework.beans.factory.annotation.Autowired;
9   import org.springframework.boot.CommandLineRunner;
10  import org.springframework.boot.SpringApplication;
11  import org.springframework.boot.autoconfigure.SpringBootApplication;
12
13  /**
14   *
15   * @author ASUS
16   */
17  @SpringBootApplication
18  public class Yogi_pert5 implements CommandLineRunner{
19
20      @Autowired
21      private MahasiswaController mhsController;
22      public static void main(String[] args) {
23          SpringApplication.run(Yogi_pert5.class, args);
24      }
25
26      @Override
27      public void run(String... args) throws Exception {
28          mhsController.tampilkanMenu();
29      }
30
31  }
32
MahasiswaController.java [-A] 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.yogi_pert5.Controller;
6
7   import com.mycompany.yogi_pert5.Model.MahasiswaModel;
8   import com.mycompany.yogi_pert5.Repository.MahasiswaRepository;
9   import java.util.List;
10  import java.util.Scanner;
11  import org.springframework.beans.factory.annotation.Autowired;
12  import org.springframework.stereotype.Controller;
13
14  /**
15   *
16   * @author ASUS
17   */
18  @Controller
19  public class MahasiswaController {
20      @Autowired
21      private MahasiswaRepository mahasiswaRepository;
22
23      public void tampilkanMenu() {
24          Scanner scanner = new Scanner(System.in);
25          int opsi;
26
27          do {
28              System.out.println("\nMenu:");
29              System.out.println("1. Tampilkan semua mahasiswa");
30              System.out.println("2. Tambah mahasiswa baru");
31          } while (opsi < 3);
32      }
33  }
```

```

31      System.out.println("3. Cek koneksi database");
32      System.out.println("4. Keluar");
33      System.out.print("Pilih opsi: ");
34      opsi = scanner.nextInt();
35      scanner.nextLine(); // menangkap newline
36
37      switch (opsi) {
38          case 1:
39              tampilkanSemuaMahasiswa();
40              break;
41          case 2:
42              tambahMahasiswa(scanner);
43              break;
44          case 3:
45              cekKoneksi();
46              break;
47          case 4:
48              System.out.println("Keluar dari program.");
49              break;
50          default:
51              System.out.println("Opsi tidak valid, coba lagi.");
52      }
53
54      } while (opsi != 4);
55  }
56
57  private void tampilkanSemuaMahasiswa() {
58      List<MahasiswaModel> mahasiswaList = mahasiswaRepository.findAll();
59      if (mahasiswaList.isEmpty()) {
60          System.out.println("Tidak ada data mahasiswa.");

```

```

61      } else {
62          mahasiswaList.forEach(mahasiswa -> System.out.println(mahasiswa));
63      }
64  }
65
66  private void tambahMahasiswa(Scanner scanner) {
67      System.out.print("Masukkan NPM : ");
68      String npm = scanner.nextLine();
69      System.out.print("Masukkan Nama : ");
70      String nama = scanner.nextLine();
71      System.out.print("Masukkan Semester : ");
72      int semester = scanner.nextInt();
73      System.out.print("Masukkan IPK : ");
74      float ipk = scanner.nextFloat();
75
76      MahasiswaModel mahasiswa = new MahasiswaModel(0, npm, nama, semester, ipk);
77      mahasiswaRepository.save(mahasiswa);
78      System.out.println("Mahasiswa berhasil ditambahkan.");
79  }
80
81  private void cekKoneksi() {
82      try {
83          mahasiswaRepository.findAll();
84          System.out.println("Koneksi ke database berhasil.");
85      } catch (Exception e) {
86          System.out.println("Gagal terhubung ke database.");
87      }
88  }
89
90  }
91

```

```
MahasiswaModel.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.yogi_pert5.Model;
7
8   import jakarta.persistence.*;
9
10  /**
11   *
12   * @author ASUS
13   */
14  @Entity
15  @Table(name="mahasiswa")
16  public class MahasiswaModel {
17      @Id
18      @GeneratedValue(strategy = GenerationType.IDENTITY)
19      @Column(name = "id")
20      private int id;
21
22      @Column(name = "npm", nullable = false, length = 8)
23      private String npm;
24
25      @Column(name = "nama", nullable = false, length = 50)
26      private String nama;
27
28      @Column(name = "semester")
29      private int semester;
30
31      @Column(name = "ipk")
32      private float ipk;
33
34      // constructor kosong untuk ORM
35      public MahasiswaModel() {
36      }
37
38      //constructor ada isinya untuk dipanggil di aplikasi
39      public MahasiswaModel(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      }
```

```

61         this.npm = npm;
62     }
63
64     public String getNama() {
65         return nama;
66     }
67
68     public void setNama(String nama) {
69         this.nama = nama;
70     }
71
72     public int getSemester() {
73         return semester;
74     }
75
76     public void setSemester(int semester) {
77         this.semester = semester;
78     }
79
80     public float getIpk() {
81         return ipk;
82     }
83
84     public void setIpk(float ipk) {
85         this.ipk = ipk;
86     }
87
88     @Override
89     public String toString() {
90         return "Mahasiswa{" +
91             "id=" + id +
92             ", nama=" + npm + '\'' +
93             ", nama=" + nama + '\'' +
94             ", nama=" + semester + '\'' +
95             ", jurusan=" + ipk + '\'' +
96             '}';
97     }
98
99 }
100

```

MahasiswaRepository.java [-A] X

Source History

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3 * Click <nbfs://nbhost/SystemFileSystem/Templates/Classes/Interface.java> to edit this template

4 */

5 package com.mycompany.yogi_pert5.Repository;

6

7 import com.mycompany.yogi_pert5.Model.MahasiswaModel;

8 import org.springframework.data.jpa.repository.JpaRepository;

9 import org.springframework.stereotype.Repository;

10

11 /**

12 *

13 * @author USER

14 */

15

16 @Repository

17 public interface MahasiswaRepository extends JpaRepository<MahasiswaModel, Long> {

18

19 }

