

**LAPORAN PRAKTIKUM PEMROGRAMAN  
BERORIENTASI OBJEK**

**“Persistent”**



**Disusun Oleh :**

Zenit Laena Fathonah

24060121120006

LAB C

**DEPARTEMEN ILMU KOMPUTER / INFORMATIKA**

**FAKULTAS SAINS DAN MATEMATIKA**

**UNIVERSITAS DIPONEGORO**

**SEMARANG**

**2023**

## 1. class PersonDAO.java

```
PersonDAO - Notepad
File Edit Format View Help

/**
 * File : PersonDAO.java 31/05/2023
 * Nama : Zenit Laena Fathonah
 * NIM : 24060121120006
 * Deskripsi : interface untuk person access object
 */

public interface PersonDAO{
    public void savePerson(Person p) throws Exception;
}
```

Ln 10, Col 2 200% Windows (CRLF) UTF-8 23:30 06/06/2023

## 2. class Person.java

```
Person - Notepad
File Edit Format View Help

/**
 * File : Person.java 31/05/2023
 * Nama : Zenit Laena Fathonah
 * NIM : 24060121120006
 * Deskripsi : Person database model
 */

public class Person{
    private int id;
    private String name;

    public Person(String n){
        name = n;
    }

    public Person(int i, String n){
        id = i;
        name = n;
    }

    public int getId(){
        return id;
    }

    public String getName(){
        return name;
    }
}
```

Ln 2, Col 4 130% Windows (CRLF) UTF-8 23:36 06/06/2023

### 3. class MySQLPersonDAO.java

```
MySQLPersonDAO - Notepad
File Edit Format View Help

/**
 * File : MySQLPersonDAO.java 31/05/2023
 * Nama : Zenit Laena Fathonah
 * NIM : 24060121120006
 * Deskripsi : implementasi PersonDAO untuk MYSQL
 */

import java.sql.*;

public class MySQLPersonDAO implements PersonDAO{
    public void savePerson(Person person) throws Exception{
        String name = person.getName();
        //membuat koneksi, nama db, user, password menyesuaikan
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection con = DriverManager.getConnection(
            "jdbc:mysql://localhost/PB0","root","Sewotbae9");
        //kerjakan mysql query
        String query = "INSERT INTO person(name) VALUES (?)";
        PreparedStatement statement = con.prepareStatement(query);
        statement.setString(1, name);
        System.out.println(query);
        statement.executeUpdate();
        //tutup koneksi database
        statement.close();
        con.close();
    }
}

Ln 20, Col 32 120% Windows (CRLF) UTF-8 23:36 06/06/2023
```

### 4. class DAOManager.java

```
DAOManager - Notepad
File Edit Format View Help

/**
 * File : DAOManager.java 31/05/2023
 * Nama : Zenit Laena Fathonah
 * NIM : 24060121120006
 * Deskripsi : pengelola DAO dalam program
 */

public class DAOManager{
    private PersonDAO personDAO;

    public void setPersonDAO(PersonDAO person){
        personDAO = person;
    }

    public PersonDAO getPersonDAO(){
        return personDAO;
    }
}

Ln 3, Col 5 160% Windows (CRLF) UTF-8 23:37 06/06/2023
```

## 5. class MainDAO

```
MainDAO - Notepad
File Edit Format View Help
/**
 * File : MainDAO.java 31/05/2023
 * Nama : Zenit Laena Fathonah
 * NIM : 24060121120006
 * Deskripsi : main program untuk akses DAO
 */

public class MainDAO{
    public static void main(String args[]){
        Person person = new Person("Indra");
        DAOManager m = new DAOManager();
        m.setPersonDAO(new MySQLPersonDAO());
        try{
            m.getPersonDAO().savePerson(person);
        }catch(Exception e){
            e.printStackTrace();
        }
    }
}
//Lihat apakah terjadi penambahan record pada tabel?
// Ya, pada database pbo dengan tabel Person di MYSQL yang sebelumnya adalah empty set,
// terdapat penambahan record yaitu Indra dengan id 1
```

## Buat database :

```
MySQL 8.0 Command Line Client
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE PBO;
Query OK, 1 row affected (3.35 sec)

mysql> USE PBO;
Database changed
mysql> CREATE TABLE person(id INT PRIMARY KEY AUTO_INCREMENT NOT NULL, name VARCHAR(100));
Query OK, 0 rows affected (2.96 sec)

mysql> show table
-> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 1
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| inventory |
| mysql |
| org2 |
| pbo |
| performance_schema |
| perpustakaan |
| prak_basdat5_zenit |
| sakila |
| sekolah |
| sys |
| world |
+-----+
12 rows in set (1.03 sec)

mysql> SELECT * FROM PERSON;
Empty set (0.21 sec)

mysql>
```

## Table Person :

```
mysql> SELECT * FROM PERSON;
Empty set (0.21 sec)

mysql> describe table person;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | SIMPLE | person | NULL | ALL | NULL | NULL | NULL | NULL | 1 | 100.00 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set, 1 warning (0.19 sec)

mysql>
```

## Kompilasi semua source code dengan perintah : javac \*.java

```
Command Prompt
D:\Pertemuan9_Persistent>javac *.java
D:\Pertemuan9_Persistent>
```

## Jalankan MainDAO dengan perintah : java -classpath .\mysql-connector-java-8.0.33.jar;. MainDAO

```
D:\Pertemuan9_Persistent>java -classpath .\mysql-connector-java-8.0.33.jar;. MainDAO
java.lang.ClassNotFoundException: com.mysql.cj.jdbc.Driver
    at java.base/jdk.internal.loader.BuiltinClassLoader.loadClass(BuiltinClassLoader.java:581)
    at java.base/jdk.internal.loader.ClassLoaders$AppClassLoader.loadClass(ClassLoaders.java:178)
    at java.base/java.lang.ClassLoader.loadClass(ClassLoader.java:522)
    at java.base/java.lang.Class.forName0(Native Method)
    at java.base/java.lang.Class.forName(Class.java:315)
    at MySQLPersonDAO.savePerson(MySQLPersonDAO.java:14)
    at MainDAO.main(MainDAO.java:14)
D:\Pertemuan9_Persistent>
```

## 1. class SerializePerson

```
SerializePerson - Notepad
File Edit Format View Help
/**
 * File : SerializePerson.java 31/05/2023
 * Nama/NIM : Zenit Laena Fathonah/24060121120006
 * Deskripsi : program untuk realisasi objek person
 */

import java.io.*;

class Person implements Serializable{
    private String name;
    public Person(String n){
        name = n;
    }
    public String getName(){
        return name;
    }
}

public class SerializePerson{
    public static void main(String[] args){
        Person person = new Person("Panji");
        try{
            FileOutputStream f = new FileOutputStream("person.ser");
            ObjectOutputStream s = new ObjectOutputStream(f);
            s.writeObject(person);
            System.out.println("selesai menulis objek person");
            s.close();
        }catch(IOException e){
            e.printStackTrace();
        }
    }
}
```

Ln 1, Col 1 110% Windows (CRLF) UTF-8 31°C 11:54 06/06/2023

## Hasil compile dan jalankan kode program :

```
D:\Pertemuan9_Persistent>cd D:\Pertemuan9_ReadSerialize
D:\Pertemuan9_ReadSerialize>javac SerializePerson.java
D:\Pertemuan9_ReadSerialize>java SerializePerson
selesai menulis objek person
D:\Pertemuan9_ReadSerialize>
```

25°C 23:43 06/06/2023

## 2. class ReadSerializePerson

```
ReadSerializePerson - Notepad
File Edit Format View Help
import java.io.*;

/**
 * File : ReadSerializePerson.java 31/05/2023
 * Nama/NIM : Zenit Laena Fathonah/24060121120006
 * Deskripsi : program untuk serialisasi objek person
 */

public class ReadSerializePerson{
    public static void main(String[] args){
        Person person = null;
        try{
            FileInputStream f = new FileInputStream("person.ser");
            ObjectInputStream s = new ObjectInputStream(f);
            person = (Person)s.readObject();
            s.close();
            System.out.println("serialize person name = "+person.getName());
        }catch(Exception ioe){
            ioe.printStackTrace();
        }
    }
}
```

## Hasil compile dan jalankan kode program :

```
D:\Pertemuan9_ReadSerialize>javac ReadSerializePerson.java
D:\Pertemuan9_ReadSerialize>java ReadSerializePerson
serialize person name = Panji
D:\Pertemuan9_ReadSerialize>
```