PERSISTENT OBJECT

LAPORAN PRAKTIKUM 9

PEMROGRAMAN BERORIENTASI OBJEK LAB B1

Disusun untuk Memenuhi Tugas Individu Praktikum Kesembilan

pada Mata Kuliah Pemrograman Berorientasi Objek Semester Empat

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PROGRAM STUDI INFORMATIKA

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UNIVERSITAS DIPONEGORO

SEMARANG

2023

A. Menggunakan Persistent Object sebagai model basis data relasional

PersonDAO.java

```
/**
* File      : PersonDAO.java 31/05/2023
* Penulis   : Hana Shabrina/24060121130077
* Deskripsi : Interface untuk person access object
* Lab       : B1
*/

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

Person.java

```
/**
* File      : Person.java 31/05/2023
* Penulis   : Hana Shabrina/24060121130077
* Deskripsi : Person database model
* Lab       : B1
*/

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;
      }
}
```

MySQLPersonDAO.java

```
/**
* File      : MySQLPersonDAO.java 31/05/2023
* Penulis   :
* Deskripsi : Implementasi PersonDAO untuk MySQL
* Lab       : B1
*/

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.jdbc.Driver");
            Connection con = DriverManager.getConnection(
                          "jdbc:mysql://localhost/pbo","root","");
            //kerjakan mysql query
            String query = "INSERT INTO person(name)
VALUES('"+name+"')";
            System.out.println(query);
            Statement s = con.createStatement();
            s.executeUpdate(query);
            //tutup koneksi database
            con.close();
      }
}
```

DAOManager.java

```
/**
* File      : DAOManager.java 31/05/2023
* Penulis   : Hana Shabrina/24060121130077
* Deskripsi : Pengelola DAO dalam program
* Lab       : B1
*/

public class DAOManager{
      private PersonDAO personDAO;

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

      public PersonDAO getPersonDAO(){
            return personDAO;
      }
}
```

MainDAO.java

```
/**
* File      : MainDAO.java 31/05/2023
* Penulis   : Hana Shabrina/24060121130077
* Deskripsi : Main program untuk akses DAO
* Lab       : B1
*/

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();
            }
```

```
            }
}
```

Hasil run program

```
C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>javac MySQLPersonDAO.java

C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>javac MainDAO.java

C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>java -classpath .\mysql-connector-j-8.0.33.
jar;. MainDAO
Loading class 'com.mysql.jdbc.Driver'. This is deprecated. The new driver class is 'com.mysql.cj.jdbc.Driver'. The drive
r is automatically registered via the SPI and manual loading of the driver class is generally unnecessary.
INSERT INTO person(name) VALUES('Indra')
```

Tampilan tabel person pada database pbo pada MySQL CLI

```
mysql> use pbo;
Database changed
mysql> select * from person;
+----+-------+
| id | name  |
+----+-------+
|  1 | Indra |
+----+-------+
1 row in set (0.00 sec)
```

B. **Menggunakan Persistent Object sebagai model basis data relasional**

SerializePerson.java

```
/**
* File      : SerializePerson.java 31/05/2023
* Penulis   : Hana Shabrina/24060121130077
* Deskripsi : Program untuk serialisasi objek Person
* Lab       : B1
*/

import java.io.*;

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

      public String getName(){
            return name;
      }
}

//class SerializePerson
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();
            }
        }
}
```

Hasil run program

```
C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>javac SerializePerson.java

C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>java SerializePerson
selesai menulis objek person

C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>
```

ReadSerializedPerson.java

```
/**
* File      : ReadSerializedPerson.java 31/05/2023
* Penulis   : Hana Shabrina/24060121130077
* Deskripsi : Program untuk serialisasi objek Person
* Lab       : B1
*/

import java.io.*;

public class ReadSerializedPerson{
      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("serialized person name =
"+person.getName());
            }catch(Exception ioe){
                    ioe.printStackTrace();
            }
        }
}
```

Hasil run program

```
C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>javac ReadSerializedPerson.java

C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>java ReadSerializedPerson
serialized person name = Panji

C:\Users\ASUS\Documents\File Hana\KULIAH HANA\SEMESTER 4\PRAK PBO\Praktikum9>
```