LAPORAN PRAKTIKUM
PRAKTIKUM 9:
“PERSISTENTS OBJECT”

Disusun Oleh :

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PEMPROGRAMAN BERORIENTASI OBJEK
LAB B

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A. Menggunakan Persistent Object Sebagai Model Basis Data Relasional

1. Interface PersonDAO.java

```
/* File   : PersonDAO.java
Penulis   : Puti Dhiya Salsabila Rahman / 24060121140173
Deskripsi : interface untuk person access object*/

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

2. Class Person.java

```
/* File   : Person.java
Penulis   : Puti Dhiya Salsabila Rahman / 24060121140173
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;
    }
}
```

3. Class MySQL.PersonDAO.java

```
import java.sql.Statement;

/* File   : MySQLPersonDAO.java
Penulis   : Puti Dhiya Salsabila Rahman / 24060121140173
Deskripsi : program penggunaan objek ArrayList sebagai
Collection class */

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();
    }
}
```

4. Class DAOManager.java

```
/* File   : DAOManager.java
Penulis   : Puti Dhiya Salsabila Rahman / 24060121140173
Deskripsi : pengelola DAO dalam program */

public class DAOManager {
    private PersonDAO personDAO;

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

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

5. Class mainDAO.java

```
/* File   : ArrayListTest.java
Penulis   : Puti Dhiya Salsabila Rahman / 24060121140173
Deskripsi : Main program untuk akses DAO */

public class MainDAO {
    public static void main(String args[]) {
        Person person = new Person("Puti");
        DAOManager m = new DAOManager();
        m.setPersonDAO(new MySQLPersonDAO());
        try {
            m.getPersonDAO().savePerson(person);
        }catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

6. **Database pbo dengan tabel person id(PK) dan name VARCHAR(100)))**

```
mysql> prompt 24060121140173>
PROMPT set to '24060121140173>'
24060121140173>create database pbo;
Query OK, 1 row affected (0.08 sec)

24060121140173>use pbo
Database changed
```

```
24060121140173>create table person(
    -> id INT PRIMARY KEY AUTO_INCREMENT NOT NULL,
    -> name VARCHAR(100));
Query OK, 0 rows affected (0.09 sec)

24060121140173>SELECT * FROM person;
Empty set (0.02 sec)
```

7. **Compile All Code With javac *.java**

```
C:\Puti Dhiya\UNDIP\sem4\prak PBO\Praktikum 9>javac *.java

C:\Puti Dhiya\UNDIP\sem4\prak PBO\Praktikum 9>
```

8. **Run MainDAO dengan java -classpath .\mysql-connector-j-8.0.33.jar;. MainDAO**

```
C:\Puti Dhiya\UNDIP\sem4\prak PBO\Praktikum 9>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('Puti')
```

Perintah java -classpath .\mysql-connector-j-8.0.33.jar;. MainDAO digunakan untuk menghubungkan program dengan MySQL. Ketika berjasil dijalankan akan muncul pesan INSERT INTO person(name) VALUES(‘Puti’) yang menunjukan bahwa program MainDAO berhasil dijalankan dengan memasukkan data kedalam tabel person.

9. **Hasil penambahan record tabel**

```
24060121140173>SELECT * FROM person;
+----+------+
| id | name |
+----+------+
|  1 | Puti |
+----+------+
1 row in set (0.00 sec)
```

B. Menggunakan persistent object sebagai objek terealisasi

1. Class SerializePerson.java

```
/* File   : SerializePerson.java
Penulis   : Puti Dhiya Salsabila Rahman / 24060121140173
Deskripsi : Program untuk serialisasi objek Person*/

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("Dhiya");
        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();
        }
    }
}
```

```
C:\Puti Dhiya\UNDIP\sem4\prak PBO\Praktikum 9>javac -cp "." SerializePerson.java

C:\Puti Dhiya\UNDIP\sem4\prak PBO\Praktikum 9>java SerializePerson
selesai menulis objek person
```

2. Class ReadSerializePerson.java

```
/* File      : ReadSerializePerson.java
Penulis      : Puti Dhiya Salsabila Rahman / 24060121140173
Deskripsi    : Program untuk serialisasi objek Person*/

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();
        }
    }
}
```

```
C:\Puti Dhiya\UNDIP\sem4\prak PBO\Praktikum 9>javac -cp "." ReadSerializedPerson.java
```

```
C:\Puti Dhiya\UNDIP\sem4\prak PBO\Praktikum 9>java ReadSerializedPerson
serialized person name = Dhiya
```