LAPORAN PRAKTIKUM

PRAKTIKUM 9:

"PERSISTENT OBJECT"

Disusun Oleh:

Nama   : Ajeng Nurhaliza Ar Rachman

NIM   : 24060121140109

PRAKTIKUM PEMROGRAMAN BERBASIS OBJEK

LAB B1

DEPARTEMEN ILMU KOMPUTER / INFORMATIKA

FAKULTAS SAINS DAN MATEMATIKA

UNIVERSITAS DIPONEGORO

SEMARANG

2023

A. Program pada Java

1. PersonDAO.java

```
/*
* Nama file : PersonDao.java
* Tanggal   : 31 Mei 2023
* Pembuat   : Ajeng Nurhaliza Ar Rachman
* NIM/Lab   : 24060121140109 / B1
* Deskripsi : Interface untuk person access object
*/

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

2. Person.java

```
/*
* Nama file : Person.java
* Tanggal   : 31 Mei 2023
* Pembuat   : Ajeng Nurhaliza Ar Rachman
* NIM/Lab   : 24060121140109 / B1
* 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. MySQLPersonDAO.java

```
import java.sql.*;
```

```
/*
* Nama file : MySQLPersonDAO.java
* Tanggal   : 31 Mei 2023
* Pembuat   : Ajeng Nurhaliza Ar Rachman
* NIM/Lab   : 24060121140109 / B1
* Deskripsi : Implememtasi PersonDAO untuk MySQL
*/

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(
                    "jbdc: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. DAOManager.java

```
/*
* Nama file : DAOManager.java
* Tanggal   : 31 Mei 2023
* Pembuat   : Ajeng Nurhaliza Ar Rachman
* NIM/Lab   : 24060121140109 / B1
* Deskripsi : Pengelola DAO dalam program
*/

public class DAOManager{
    private PersonDAO personDAO;

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

5. MainDAO.java

```
/*
* Nama file : MainDAO.java
* Tanggal   : 31 Mei 2023
* Pembuat   : Ajeng Nurhaliza Ar Rachman
```

```
* NIM/Lab  : 24060121140109 / B1
* 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();
        }
    }
}
```

B. Pembuatan *Database* "PBO" dan Tabel "Person" di MySQL Command Line Client

1. Membuat *database* dan tabel

```
24060121140109> CREATE DATABASE PBO;
Query OK, 1 row affected (0.02 sec)
```

```
24060121140109> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| inventory          |
| mydb               |
| mysql              |
| organisasi         |
| pbo                |
| performance_schema |
| praktikum1         |
| sys                |
| tugasmbd02         |
+--------------------+
10 rows in set (0.00 sec)
```

```
24060121140109> USE PBO;
Database changed
24060121140109> SHOW TABLES;
Empty set (0.03 sec)

24060121140109> CREATE TABLE Person(
    -> id INT PRIMARY KEY AUTO_INCREMENT NOT NULL,
    -> name VARCHAR(100));
Query OK, 0 rows affected (0.07 sec)
```

```
24060121140109> show tables;
+---------------+
| Tables_in_pbo |
+---------------+
| person        |
+---------------+
1 row in set (0.02 sec)
```

```
24060121140109> SELECT * FROM Person;
Empty set (0.02 sec)
```

2. Kompilasi semua *source code* dan jalankan MainDAO

```
D:\UNDIP\Semester 4\PBO\Praktikum\Praktikum 9>javac *.java

D:\UNDIP\Semester 4\PBO\Praktikum\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 driver is
 automatically registered via the SPI and manual loading of the driver class is generally unnecessary.
INSERT INTO person(name) VALUES ('Indra')

D:\UNDIP\Semester 4\PBO\Praktikum\Praktikum 9>
```

3. Hasil Akhir

```
24060121140109> select * from person;
+----+-------+
| id | name  |
+----+-------+
|  1 | Indra |
+----+-------+
1 row in set (0.00 sec)
```