

**LAPORAN PRAKTIKUM
DATA ACCESS OBJECT (DAO) JAVA**



Disusun Oleh :

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**PEMROGRAMAN BERORIENTASI OBJEK
LAB B1**

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SEMARANG
2023**

A. Kode Sumber DAO

1. PersonDAO.java

```
/* Nama File      : PersonDAO.java
   Tanggal Pembuatan: 29 Mei 2023
   Nama Praktikan  : Safril Isnaini
   Laboratorium    : B1
   NIM Praktikan   : 24060121130057
   Deskripsi       : Interface untuk Person Access Object
*/

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

2. Person.java

```
/* Nama File      : Person.java
   Tanggal Pembuatan: 29 Mei 2023
   Nama Praktikan  : Safril Isnaini
   Laboratorium    : B1
   NIM Praktikan   : 24060121130057
   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

```
/* Nama File      : MySQLPersonDAO.java
   Tanggal Pembuatan: 29 Mei 2023
   Nama Praktikan  : Safril Isnaini
   Laboratorium    : B1
   NIM Praktikan   : 24060121130057
   Deskripsi       : implementasi PPersonDAO 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.jdbc.Driver");
        String url = "jdbc:mysql://localhost/pbo";
        Connection con = DriverManager.getConnection(url, "root",
"0000");
        //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 Pembuatan: 29 Mei 2023
   Nama Praktikan  : Safril Isnaini
   Laboratorium    : B1
   NIM Praktikan   : 24060121130057
   Deskripsi       : Pengelola DAO dalam program
*/

public class DAOManager {
    private PersonDAO personDAO;

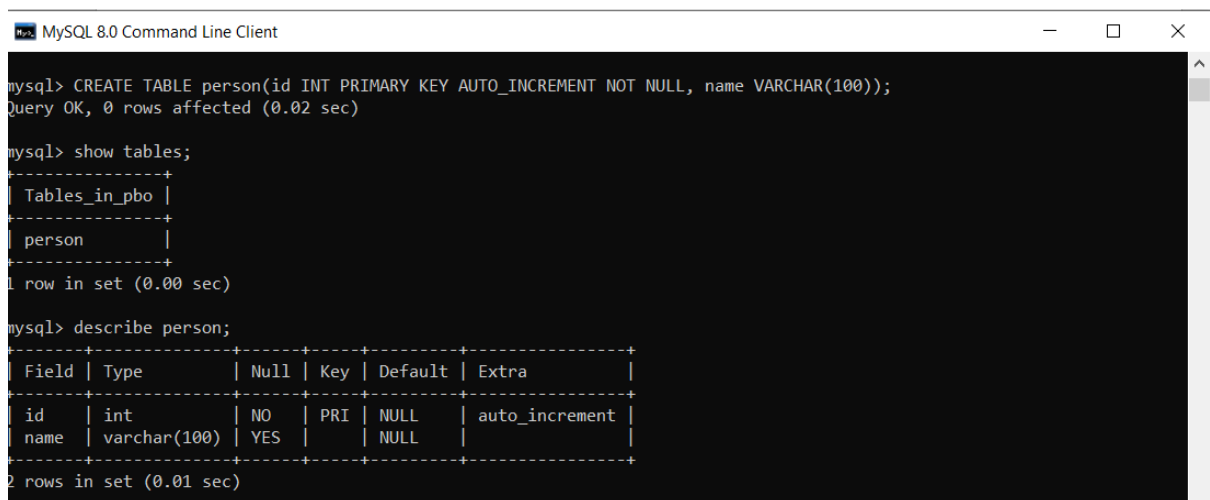
    public void setPersonDAO(PersonDAO person) {
        personDAO = person;
    }
    public PersonDAO getPersonDAO(){
        return personDAO;
    }
}
```

5. MainDAO.java

```
/* Nama File      : MainDAO.java
   Tanggal Pembuatan: 29 Mei 2023
   Nama Praktikan  : Safril Isnaini
   Laboratorium    : B1
   NIM Praktikan   : 24060121130057
   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 DAO



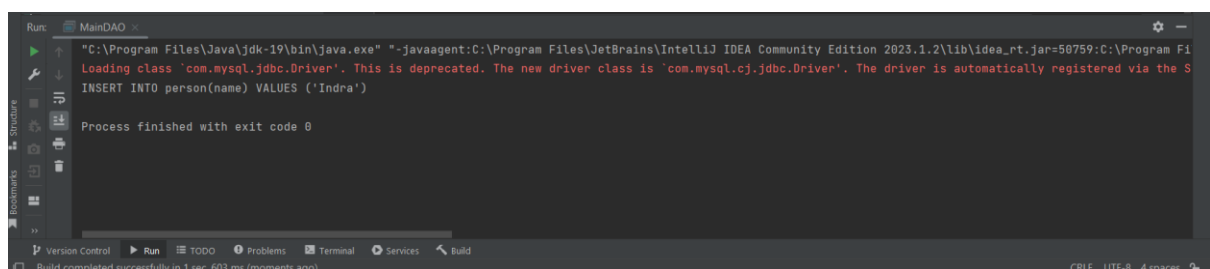
```
mysql> CREATE TABLE person(id INT PRIMARY KEY AUTO_INCREMENT NOT NULL, name VARCHAR(100));
Query OK, 0 rows affected (0.02 sec)

mysql> show tables;
+-----+
| Tables_in_pbo |
+-----+
| person        |
+-----+
1 row in set (0.00 sec)

mysql> describe person;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| id    | int       | NO   | PRI | NULL    | auto_increment |
| name  | varchar(100) | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

C. Output DAO

1. Output Program



```
Run: MainDAO
"C:\Program Files\Java\jdk-19\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.1.2\lib\idea_rt.jar=50759:C:\Program Files\Java\jdk-19\bin" -Dfile.encoding=UTF-8
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 ServiceLoader mechanism.
INSERT INTO person(name) VALUES ('Indra')
Process finished with exit code 0

Build completed successfully in 1 sec, 603 ms (moments ago)
```

2. Perubahan pada Database

```
MySQL 8.0 Command Line Client
mysql> SELECT * FROM person;
Empty set (0.01 sec)

mysql> SELECT * FROM person;
+-----+
| id | name |
+-----+
| 3 | Indra |
+-----+
1 row in set (0.00 sec)
```

D. Serializable

1. SerializablePerson.java

```
/* Nama File      : SerializePerson.java
   Tanggal Pembuatan: 29 Mei 2023
   Nama Praktikan  : Safril Isnaini
   Laboratorium    : B1
   NIM Praktikan   : 24060121130057
   Deskripsi       : Program untuk menulis Serializable
*/
import java.io.*;
//class Person
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();
        }
    }
}
```

2. ReadSerializePerson.java

```
/* Nama File      : ReadSerializePerson.java
   Tanggal Pembuatan: 29 Mei 2023
   Nama Praktikan  : Safril Isnaini
   Laboratorium    : B1
   NIM Praktikan   : 24060121130057
   Deskripsi       : Program Membaca Serialized
*/

import java.io.*;

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("Serialized person name = "+
person.getName());

        } catch (Exception ioe) {
            ioe.printStackTrace();
        }
    }
}
```

3. Output Program

```
PS C:\Users\ASUS ROG\OneDrive\Documents\Sapril\praktikum\pbo\Praktikum9> cd "c:\Users\ASUS ROG\OneDrive\Documents\Sapril\praktikum\pbo\Praktikum9\" ; if ($?) { javac SerializePerson.java } ; if ($?) { java SerializePerson }
selesai menulis objek person
PS C:\Users\ASUS ROG\OneDrive\Documents\Sapril\praktikum\pbo\Praktikum9> cd "c:\Users\ASUS ROG\OneDrive\Documents\Sapril\praktikum\pbo\Praktikum9\" ; if ($?) { javac ReadSerializePerson.java } ; if ($?) { java ReadSerializePerson }
Serialized person name = Panji
```