LAPORAN PRAKTIKUM

PRAKTIKUM 9:

PERSISTENT OBJECT

Disusun Oleh:

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PRAKTIKUM PEMROGRAMAN BERORIENTASI OBJEK

LAB B1

DEPARTEMEN ILMU KOMPUTER / INFORMATIKA

FAKULTAS SAINS DAN MATEMATIKA

UNIVERSITAS DIPONEGORO

SEMARANG

2023

================================ 3.1 ===========================

1. Interface PersonDao.java

```
/*
Nama File   : PersonDAO.java
Pembuat    : Angga Syaputra - 24060121140137
Deskripsi   : Interface untuk person access object
*/
public interface PersonDAO{
    public void savePerson(Person p) throws Exception;
}
```

2. Class Person.java

```
 /*
Nama File   : Person.java
Pembuat    : Angga Syaputra - 24060121140137
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 MySQLPersonDao.java

```
/*
Nama File   : MySQLPersonDAO.java
Pembuat    : Angga Syaputra - 24060121140137
Deskripsi   : Implementasi PersonDAO untuk MySQL
*/
```

```
/*
Nama File   : MySQLPersonDAO.java
Pembuat    : Angga Syaputra - 24060121140137
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.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

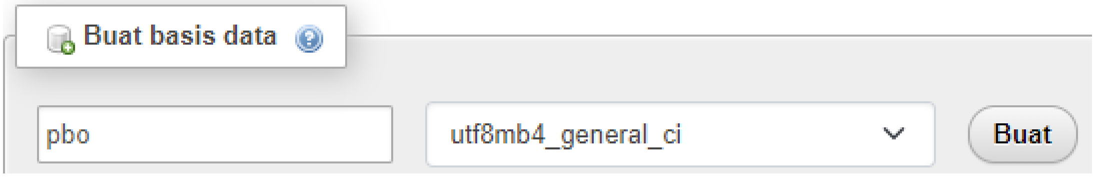
```
/*
Nama File   : DAOManager.java
Pembuat    : Angga Syaputra - 24060121140137
Deskripsi   : Pengelola DAO dalam program
*/

public class DAOManager{
    private PersonDAO personDAO;

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

5. Class MainDao.java

```
/*
Nama File   : MainDAO.java
Pembuat    : Angga Syaputra - 24060121140137
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();
       }
    }
}
```

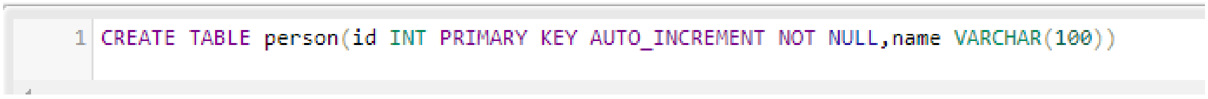
6. Buat database dengan nama ‘pbo’



pbo

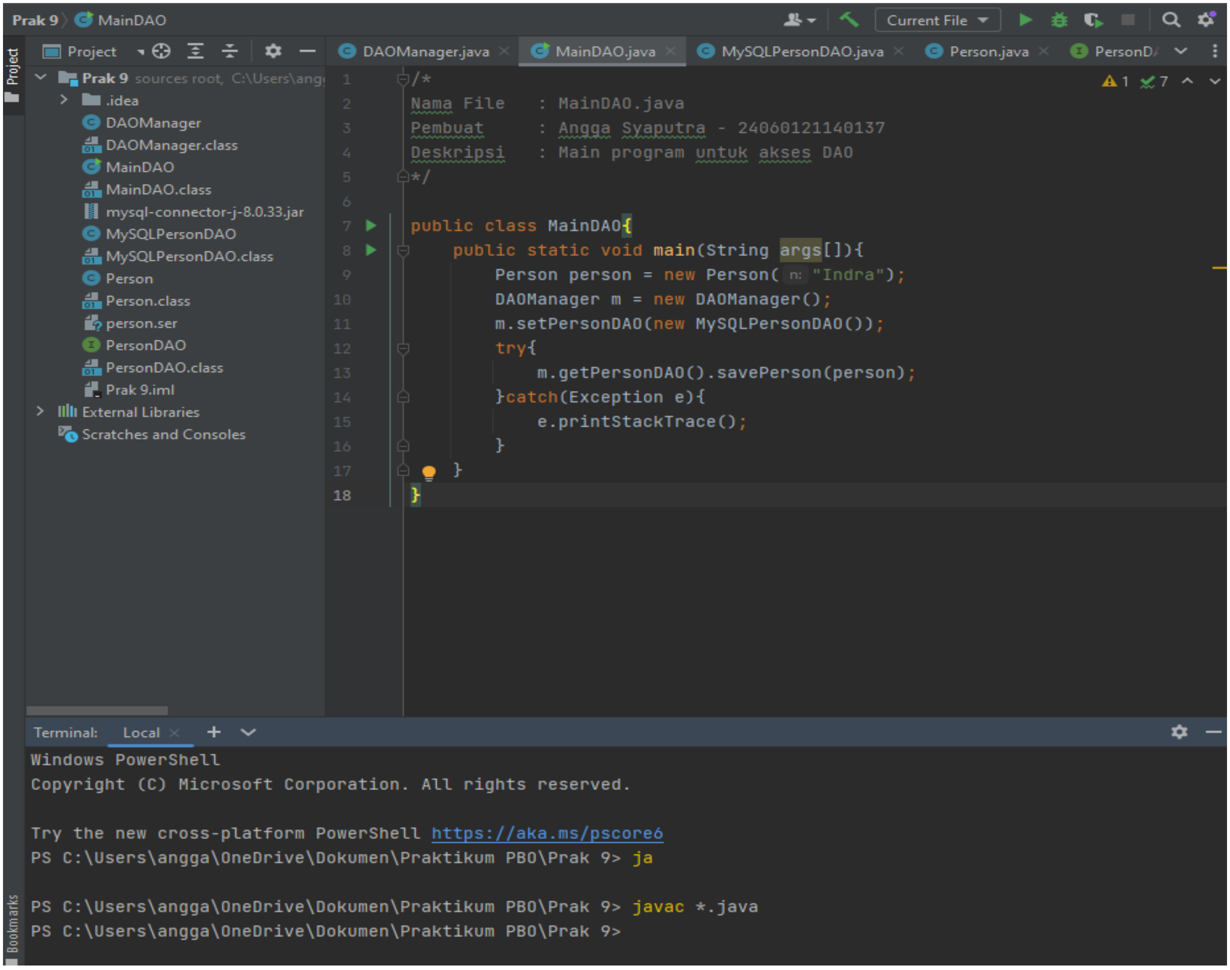
utf8mb4_general_ci

Buat tabel Person dengan query yang ada di modul:



```
CREATE TABLE person(id INT PRIMARY KEY AUTO_INCREMENT NOT NULL,name VARCHAR(100))
```

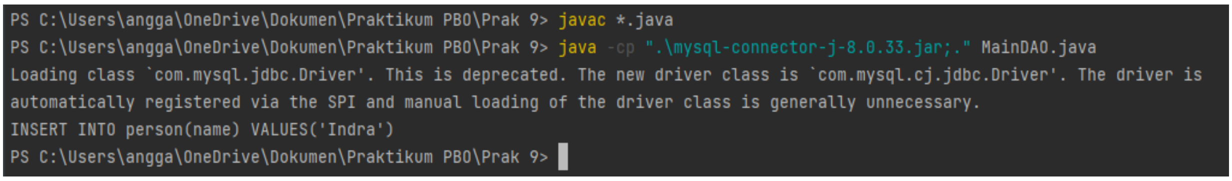
7. Kompilasi semua source code



```
/*
Nama File   : MainDAO.java
Pembuat     : Angga Syaputra - 24060121140137
Deskripsi   : Main program untuk akses DAO
*/

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

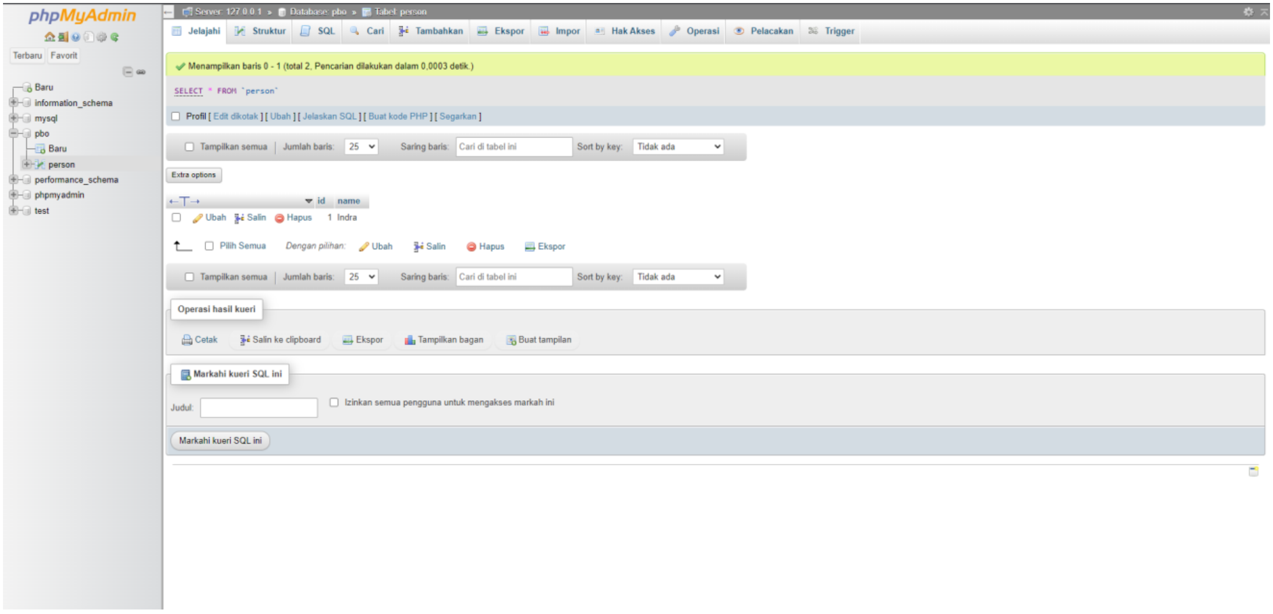
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6
PS C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9> ja

PS C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9> javac *.java
PS C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9>
```

8. Jalankan MainDAO



```
PS C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9> javac *.java
PS C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9> java -cp ".\mysql-connector-j-8.0.33.jar;." MainDAO.java
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')
PS C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9>
```

9. Terjadi penambahan record pada tabel



Server: 127.0.0.1 » Database: pbo » Tabel: person

✓ Menampilkan baris 0 - 1 (total 2, Pencarian dilakukan dalam 0,0003 detik.)

```
SELECT * FROM `person`
```

□ Tampilkan semua | Jumlah baris: 25 | Saring baris: Cari di tabel ini | Sort by key: Tidak ada

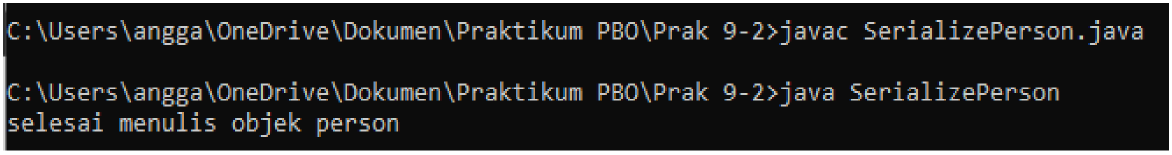
id	name
1	Indra

==

1. Class SerializePerson.java

```
/*
Nama File   : SerializePerson.java
Pembuat     : Angga Syaputra - 24060121140137
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("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. Compile dan jalankan program

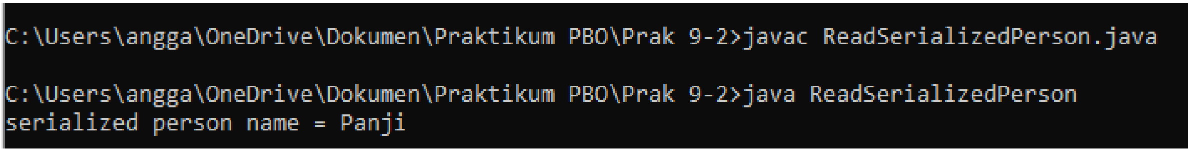


```
C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9-2>javac SerializePerson.java

C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9-2>java SerializePerson
selesai menulis objek person
```

3. Class ReadSerializedPerson.java

```
/*
Nama File	: ReadSerializedPerson.java
Pembuat		: Angga Syaputra - 24060121140137
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();
		}
	}
}
```

4. Compile dan jalankan



```
C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9-2>javac ReadSerializedPerson.java

C:\Users\angga\OneDrive\Dokumen\Praktikum PBO\Prak 9-2>java ReadSerializedPerson
serialized person name = Panji
```