LAPORAN PRAKTIKUM 9

MATA KULIAH PEMROGRAMAN BERBASIS OBJEK

Disusun oleh:

Ananda Rizky Pratama

24060121140118

PROGRAM STUDI INFORMATIKA

FAKULTAS SAINS DAN

MATEMATIKAUNIVERSITAS

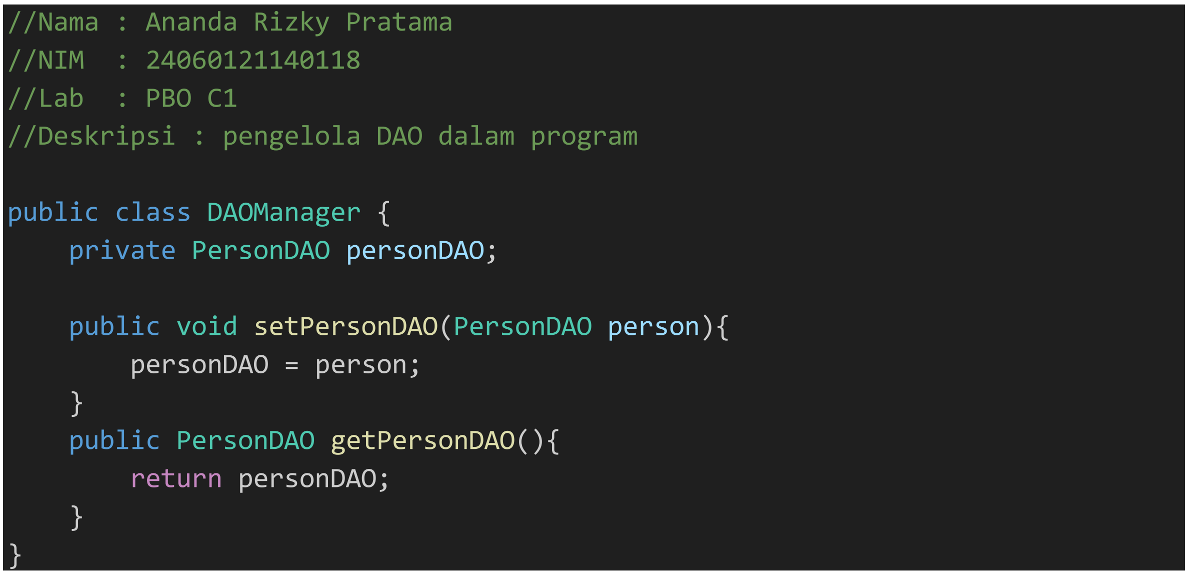
DIPONEGORO SEMARANG

2023

Tugas Praktikum 9

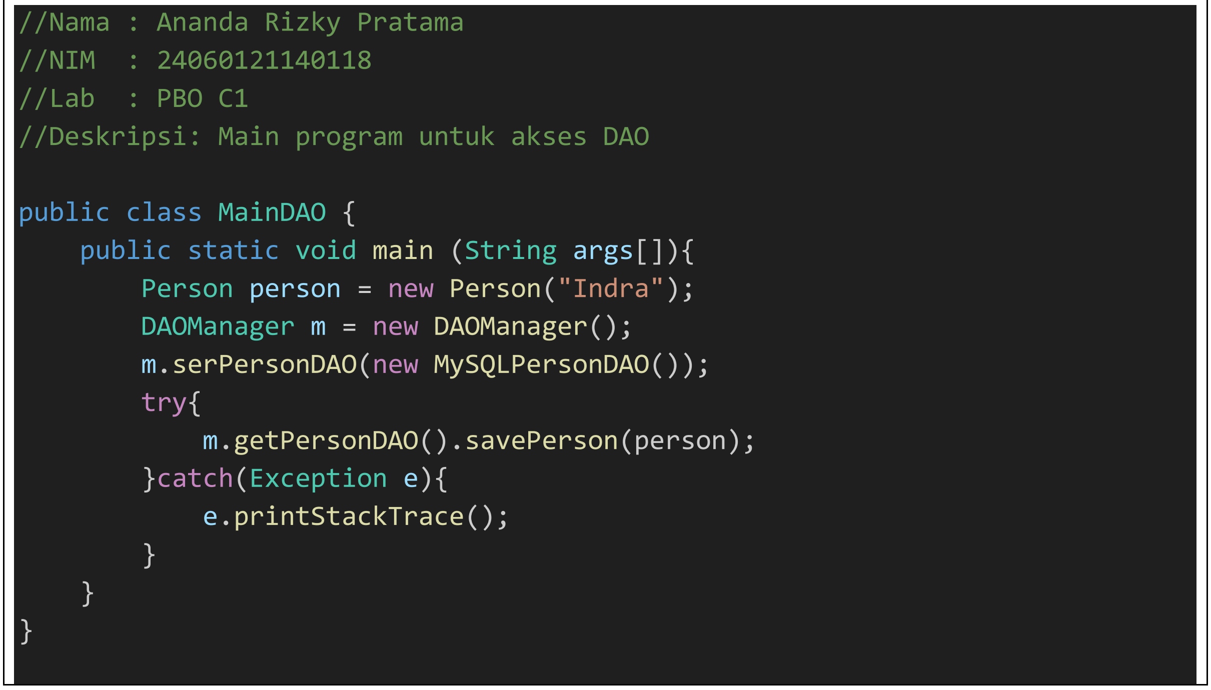
3.1 Dasar Ekspresi Lambda

1. DAOManager.java



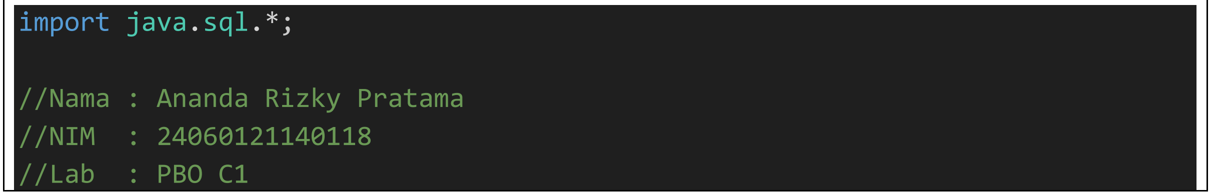
```java
//Nama : Ananda Rizky Pratama
//NIM  : 24060121140118
//Lab  : PBO C1
//Deskripsi : pengelola DAO dalam program

public class DAOManager {
    private PersonDAO personDAO;

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

2. MainDAO.java



```java
//Nama : Ananda Rizky Pratama
//NIM  : 24060121140118
//Lab  : PBO C1
//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.serPersonDAO(new MySQLPersonDAO());
        try{
            m.getPersonDAO().savePerson(person);
        }catch(Exception e){
            e.printStackTrace();
        }
    }
}
```

3. MySQLPersonDAO.java



```java
import java.sql.*;

//Nama : Ananda Rizky Pratama
//NIM  : 24060121140118
//Lab  : PBO C1
```

```java
//Deskripsi: implementasi 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 =
DriveManager.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. Person.java

```java
//Nama : Ananda Rizky Pratama
//NIM  : 24060121140118
//Lab  : PBO C1
//Deskripsi : Person database model

public class Person {
    private int id;
    private String name;

    public Person(String n){
        name = n;
    }
    public Person(String n){
        id = I;
        name = n;
    }

    public int getId(){
        return id;
    }

    public String getName(){
        return name;
    }
}
```

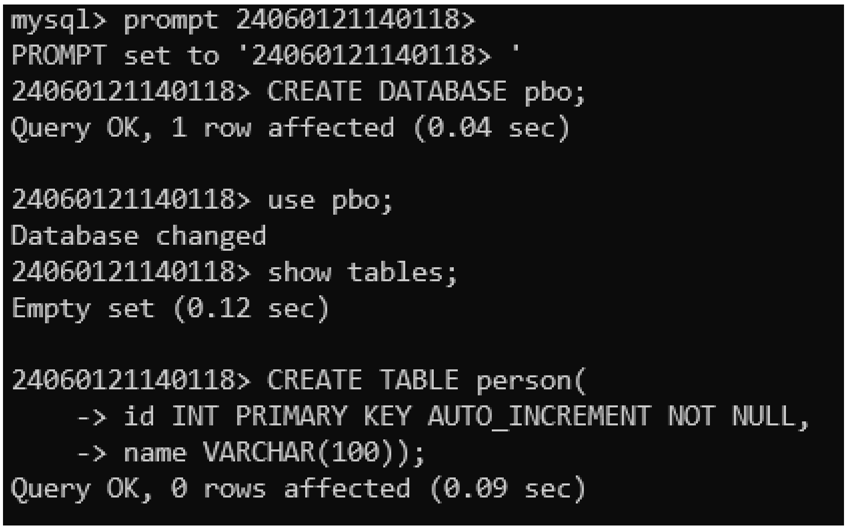
5. PersonDAO.java

```
//Nama : Ananda Rizky Pratama
//NIM  : 24060121140118
//Lab  : PBO C1
//Deskripsi : interface untuk person access object

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

6. Membuat database pbo dan tabel

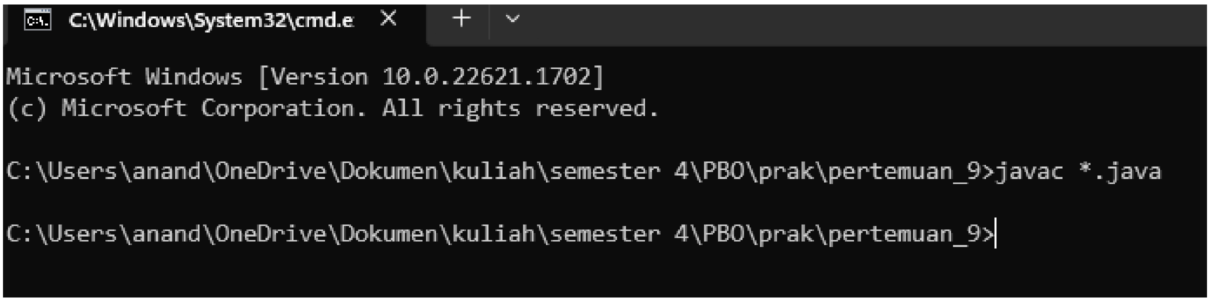
Sorce code:

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



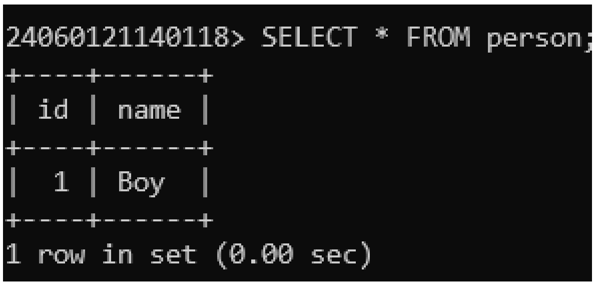
```
mysql> prompt 24060121140118>
PROMPT set to '24060121140118> '
24060121140118> CREATE DATABASE pbo;
Query OK, 1 row affected (0.04 sec)

24060121140118> use pbo;
Database changed
24060121140118> show tables;
Empty set (0.12 sec)

24060121140118> CREATE TABLE person(
    -> id INT PRIMARY KEY AUTO_INCREMENT NOT NULL,
    -> name VARCHAR(100));
Query OK, 0 rows affected (0.09 sec)
```

7. Kompilasi semua source dengan perintah : **javac *.java**



```
Microsoft Windows [Version 10.0.22621.1702]
(c) Microsoft Corporation. All rights reserved.

C:\Users\anand\OneDrive\Dokumen\kuliah\semester 4\PBO\prak\pertemuan_9>javac *.java

C:\Users\anand\OneDrive\Dokumen\kuliah\semester 4\PBO\prak\pertemuan_9>
```

8. Jalankan MainDAO dengan perintah : **java –classpath .\mysql-connectorjava-[versi].jar;. MainDAO**



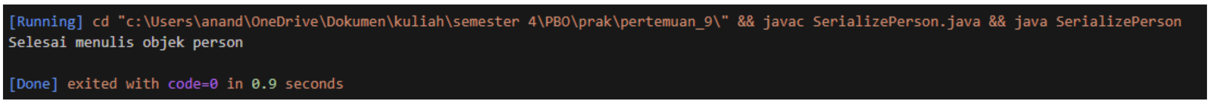
```
24060121140118> SELECT * FROM person;
+----+------+
| id | name |
+----+------+
|  1 | Boy  |
+----+------+
1 row in set (0.00 sec)
```

3.2. Menggunakan Persistent Object sebagai objek terserialisasi

1. SerializePerson.java

```java
//Nama : Ananda Rizky Pratama
//NIM  : 24060121140118
//Lab  : PBO C1

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();
        }
    }
}
```

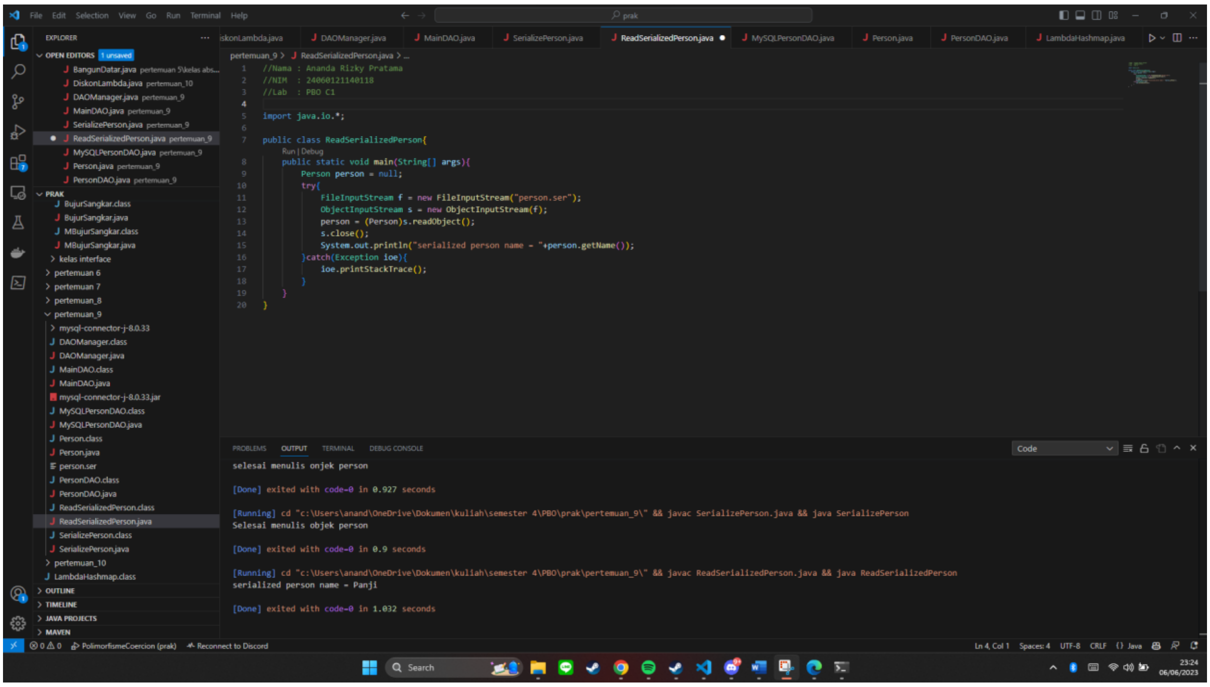
hasil output:



```
[Running] cd "c:\Users\anand\OneDrive\Dokumen\kuliah\semester 4\PBO\prak\pertemuan_9\" && javac SerializePerson.java && java SerializePerson
Selesai menulis objek person

[Done] exited with code=0 in 0.9 seconds
```

2. ReadSerializePerson.java

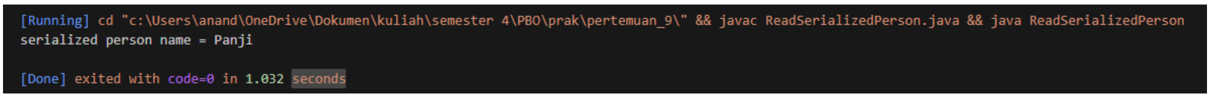
```java
//Nama : Ananda Rizky Pratama
//NIM  : 24060121140118
//Lab  : PBO C1

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();
        }
    }
}
```



```java
//Nama : Ananda Rizky Pratama
//NIM  : 24060121140118
//Lab  : PBO C1

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();
        }
    }
}
```

```
selesai menulis onjek person

[Done] exited with code=0 in 0.927 seconds

[Running] cd "c:\Users\anand\OneDrive\Dokumen\kuliah\semester 4\PBO\prak\pertemuan_9\" && javac SerializePerson.java && java SerializePerson
Selesai menulis objek person

[Done] exited with code=0 in 0.9 seconds

[Running] cd "c:\Users\anand\OneDrive\Dokumen\kuliah\semester 4\PBO\prak\pertemuan_9\" && javac ReadSerializedPerson.java && java ReadSerializedPerson
serialized person name = Panji

[Done] exited with code=0 in 1.032 seconds
```

Hasil output:



```
[Running] cd "c:\Users\anand\OneDrive\Dokumen\kuliah\semester 4\PBO\prak\pertemuan_9\" && javac ReadSerializedPerson.java && java ReadSerializedPerson
serialized person name = Panji

[Done] exited with code=0 in 1.032 seconds
```