

TUGAS PEMROGRAMAN BERORIENTASI OBJEK

“PRAKTIKUM 4”



Oleh :

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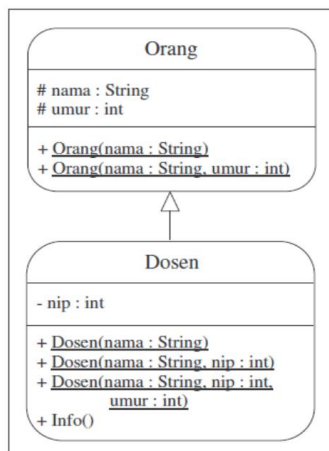
D4 Manajemen Informatika

Universitas Negeri Surabaya

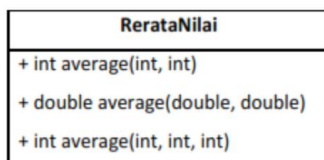
Tahun 2022

Soal :

1. Buat program berdasarkan UML berikut



2. Buat program berdasarkan UML berikut



Pemrograman :

```
import javax.swing.*;
import java.awt.*;

public class Main {
    public static void main(String[] args) {
        JFrame frame = new JFrame();
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        Dosen dosen_1 = new Dosen();
        Dosen dosen_2 = new Dosen();

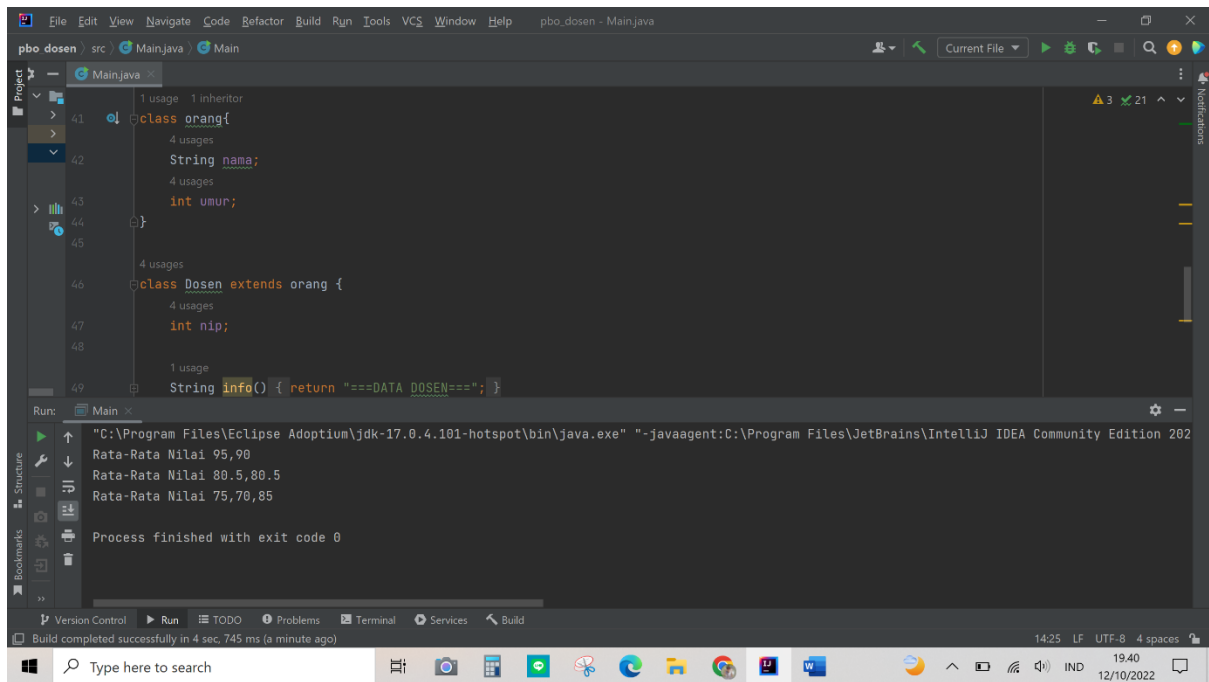
        dosen_1.nama = "Reiznu Ahmad";
        dosen_1.umur = 40;
        dosen_1.nip = 128956;

        RerataNilai rerata = new RerataNilai();
        rerata.average(dosen_1.umur, dosen_2.umur);
        rerata.average(dosen_1.nip, dosen_2.nip);
        rerata.average(dosen_1.nama, dosen_2.nama);
    }
}
```

The screenshot shows the code being executed in an IDE. The output window displays the following results:

```
Rata-Rata Nilai 95,90
Rata-Rata Nilai 80.5,80.5
Rata-Rata Nilai 75,70,85
Process finished with exit code 0
```

Baris 1 & 2 berfungsi untuk mengimport library tabel dari java. Kemudian pada baris 6 terdapat sintax untuk membuat tabel dan di baris 7 berfungsi untuk tabel agar bisa di close. Kemudian pada baris 9 & 10 berfungsi untuk menginisiasi class dosen. Kemudian pada baris 12 – 14 berfungsi untuk mengisi data.



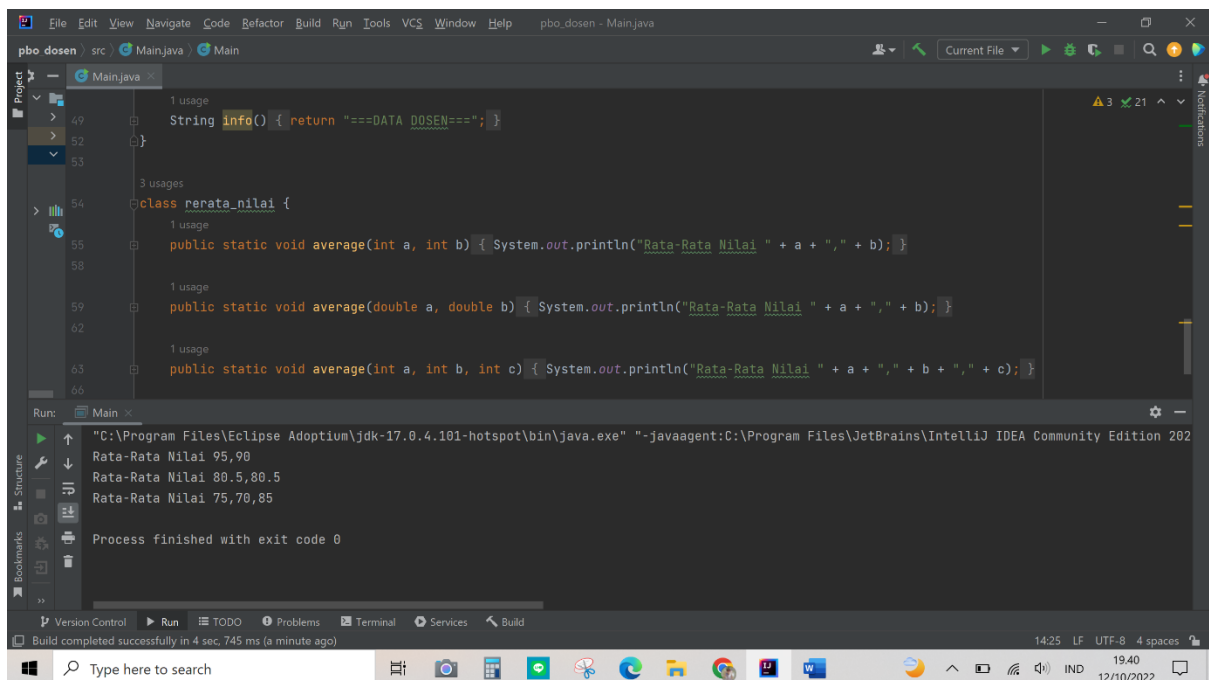
```
41 class orang {
42     String nama;
43     int umur;
44 }
45
46 class Dosen extends orang {
47     int nip;
48
49     String info() { return "===DATA DOSEN==="; }
```

Run: Main x

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.4-hotspot\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022\lib\idea_rt.jar=2022:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022\bin" -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022\bin\idea.exe
Rata-Rata Nilai 95,90
Rata-Rata Nilai 80.5,80.5
Rata-Rata Nilai 75,70,85

Process finished with exit code 0
```

Pada class orang terdapat 2 buah variabel yaitu nama yang tipe datanya string dan umur yang tipe datanya int. Pada class dosen mewarisi class orang dimana class dosen memiliki 1 variabel nip yang bertipe data int dan 1 buah metode info yang mengembalikan string.



```
49 String info() { return "===DATA DOSEN==="; }
50
51
52
53
54 class rerata_nilai {
55     public static void average(int a, int b) { System.out.println("Rata-Rata Nilai " + a + "," + b); }
56
57     public static void average(double a, double b) { System.out.println("Rata-Rata Nilai " + a + "," + b); }
58
59     public static void average(int a, int b, int c) { System.out.println("Rata-Rata Nilai " + a + "," + b + "," + c); }
60
61
62
63
64
65
66
```

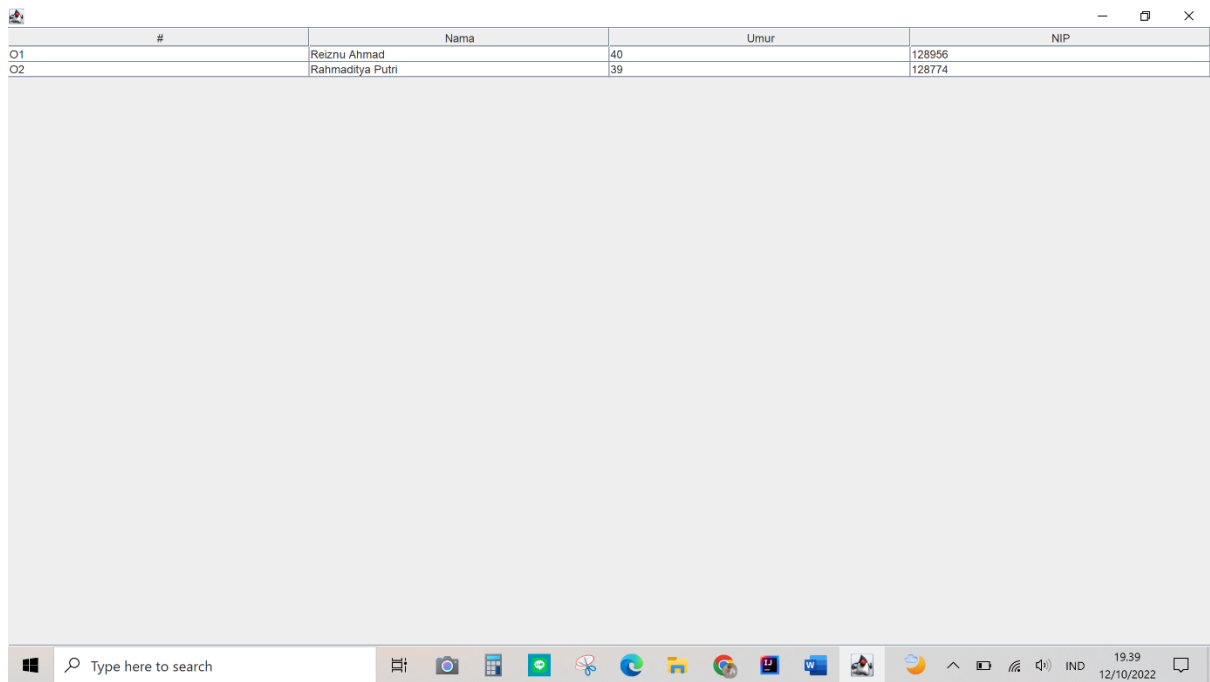
Run: Main x

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.4-hotspot\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022\lib\idea_rt.jar=2022:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022\bin" -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022\bin\idea.exe
Rata-Rata Nilai 95,90
Rata-Rata Nilai 80.5,80.5
Rata-Rata Nilai 75,70,85

Process finished with exit code 0
```

Pada class rerata nilai terdapat 3 metode average yang memiliki tipe data yang berbeda-beda.

Hasil :

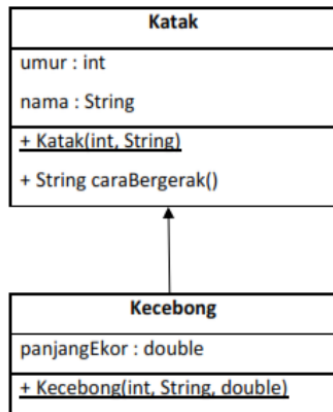


The screenshot shows a Windows 10 desktop. A window titled with a small icon and standard Windows window controls (minimize, maximize, close) is open. It contains a table with the following data:

#	Nama	Umur	NIP
O1	Reiznu Ahmad	40	128956
O2	Rahmaditya Putri	39	128774

The rest of the window is a large, empty gray area. The Windows taskbar is visible at the bottom, showing the Start button, a search bar with the text "Type here to search", and several pinned application icons including File Explorer, Camera, Calendar, Mail, Photos, Edge, File History, Settings, Word, and a small icon that matches the window's title bar icon. The system tray on the right shows the time as 19:39, the date as 12/10/2022, and the language as IND.

3. Buat program berdasarkan UML berikut



Dan buat objek dengan karakteristik seperti tabel dibawah ini

Obyek	umur	nama	panjangEkor	caraBergerak
O1	5	Froggy		melompat
O2	2	Junior Frog	10	berenang

Pemrograman :

```

1 import javax.swing.*;
2 import java.awt.*;
3
4 public class pbo_prak4 {
5     public static void main(String[] args) {
6         JFrame frame = new JFrame();
7         frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
8
9         Katak katak_1 = new Kecebong();
10        Katak katak_2 = new Kecebong();
11
12        katak_1.nama = "Froggy";
13        katak_1.umur = 5;
14        ((Kecebong) katak_1).panjangEkor = 0;
15
16        katak_2.nama = "JuniorFrog";
17        katak_2.umur = 2;
18        ((Kecebong) katak_2).panjangEkor = 10;
19    }
20 }
  
```

Run: pbo_prak4 x

"C:\Program Files\Eclipse Adoptium\jdk-17.0.4-hotspot\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022\lib\idea_rt.jar=12131:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022\bin" -Dfile.encoding=UTF-8

Process finished with exit code 0

Pada baris 1 & 2 terdapat syntax untuk mengimport tabel dari library java. Kemudian pada baris 6 & 7 berfungsi untuk membuat frame tabel dan tombol close pada tabel. Pada baris 12 – 18 berfungsi untuk mengirimkan data pada class yg sudah diinisiasi.

Hasil :

Obyek	Umur	Nama	Panjang Ekor	Cara Bergerak
O1	5	Froggy	0.0	Melompat
O2	2	JuniorFrog	10.0	Berenang