

Nama : Rahmat Beny susanto

Nim : L200180079

MODUL 2

1. Pembuatan class

The screenshot shows the Visual Studio Code interface with two code editors open. The left editor contains the `Roti.java` file:

```
1 public class Roti{
2     String warna;
3     String rasa;
4     int berat;
5     double harga;
6
7     void beriWarna(String warnaRoti){
8         warna = warnaRoti;
9     }
10    void beriRasa(String rasaRoti){
11        rasa = rasaRoti;
12    }
13    void timbangBerat(int beratRoti){
14        berat = beratRoti;
15    }
16    void hagaJual(double hargaRoti){
17        harga = hargaRoti;
18    }
19    void infoRoti(){
20        System.out.println(
21            "\n" +
22            "Warna Roti :" + warna +"\n" +
23            "Rasa Roti :" + rasa + "\n" +
24            "Berat Roti :" +berat + "gr" + "\n" +
25            "Harga Roti :Rp. " + harga
26        );
27    }
28 }
```

The right editor contains the `RotiDemo.java` file:

```
1 public class RotiDemo{
2     public static void main(String[] args){
3         Roti roti1 = new Roti();
4         roti1.beriWarna("Hijau");
5         roti1.beriRasa("Pandan");
6         roti1.timbangBerat(30);
7         roti1.hagaJual(6000);
8         roti1.infoRoti();
9     }
10 }
```

The terminal window at the bottom shows the command prompt and the output of running the Java application:

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.18362.356]
(c) 2019 Microsoft Corporation. All rights reserved.

E:\Semester 2\praktikum OOP\keg2>color a
E:\Semester 2\praktikum OOP\keg2>javac Roti.java
E:\Semester 2\praktikum OOP\keg2>javac RotiDemo.java
E:\Semester 2\praktikum OOP\keg2>java RotiDemo
Warna Roti :Hijau
Rasa Roti :Pandan
Berat Roti :30gr
Harga Roti :Rp. 6000.0

E:\Semester 2\praktikum OOP\keg2>
```

2. Latihan

2.1 memodifikasi class RotiDemo dan menambah 3 object

The screenshot shows the Visual Studio Code interface with two code editors open. The left editor contains the `Roti.java` file, which is identical to the one in the previous screenshot.

The right editor contains the modified `RotiDemo.java` file:

```
1 public class RotiDemo{
2     public static void main(String[] args){
3         Roti roti1 = new Roti();
4         Roti roti2 = new Roti();
5         Roti roti3 = new Roti();
6
7         roti1.beriWarna("Hijau");
8         roti1.beriRasa("Pandan");
9         roti1.timbangBerat(30);
10        roti1.hagaJual(6000);
11        roti1.infoRoti();
12
13        roti2.beriWarna("black pink");
14        roti2.beriRasa("bekonang");
15        roti2.timbangBerat(60);
16        roti2.hagaJual(7000);
17        roti2.infoRoti();
18
19        roti3.beriWarna("Hitam");
20        roti3.beriRasa("Arang");
21        roti3.timbangBerat(30);
22        roti3.hagaJual(6000);
23        roti3.infoRoti();
24    }
25 }
```

The terminal window at the bottom shows the command prompt and the output of running the Java application, which now includes three objects:

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.18362.356]
(c) 2019 Microsoft Corporation. All rights reserved.

E:\Semester 2\praktikum OOP\keg2>color a
E:\Semester 2\praktikum OOP\keg2>javac Roti.java
E:\Semester 2\praktikum OOP\keg2>javac RotiDemo.java
E:\Semester 2\praktikum OOP\keg2>java RotiDemo
Warna Roti :Hijau
Rasa Roti :Pandan
Berat Roti :30gr
Harga Roti :Rp. 6000.0

Warna Roti :black pink
Rasa Roti :bekonang
Berat Roti :60gr
Harga Roti :Rp. 7000.0

Warna Roti :Hitam
Rasa Roti :Arang
Berat Roti :30gr
Harga Roti :Rp. 6000.0

E:\Semester 2\praktikum OOP\keg2>
```

A screenshot of a Windows desktop environment. In the center, a command prompt window titled 'cmd.exe' is open, showing Java code execution and output. The code includes imports for 'java.util.*', class definitions for 'Roti' and 'RotiDemo', and several instances of 'RotiDemo' with different properties. The desktop background is a dark blue landscape image. At the bottom, a taskbar displays various application icons, including Microsoft Office, Adobe Creative Suite, and social media apps.

```
cmd Select C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.18362.356]
(c) 2019 Microsoft Corporation. All rights reserved.

E:\Semester 2\praktikum OOP\keg2>color a
E:\Semester 2\praktikum OOP\keg2>javac Roti.java
E:\Semester 2\praktikum OOP\keg2>javac RotiDemo.java
E:\Semester 2\praktikum OOP\keg2>java RotiDemo

Warna Roti :Hijau
Rasa Roti :Pandan
Berat Roti :30gr
Harga Roti :Rp. 6000.0

Warna Roti :black pink
Rasa Roti :bekonang
Berat Roti :60gr
Harga Roti :Rp. 7000.0

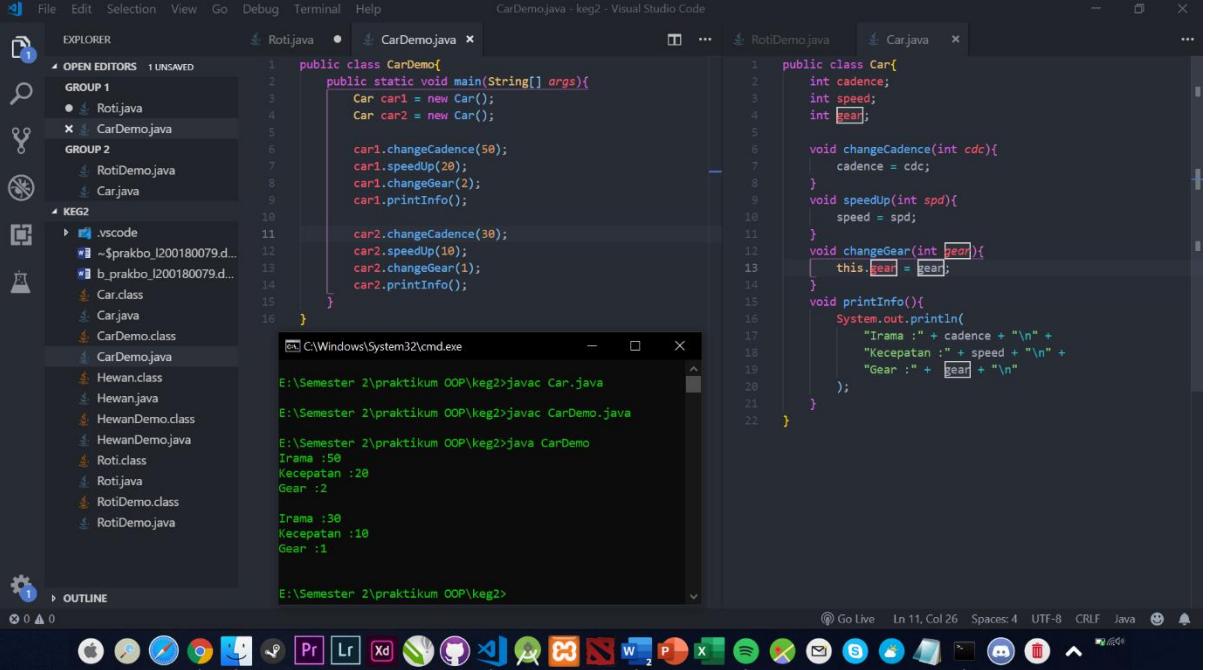
Warna Roti :Hitam
Rasa Roti :Arang
Berat Roti :30gr
Harga Roti :Rp. 6000.0

E:\Semester 2\praktikum OOP\keg2>
```

2.2 gambar class diagram dari class RotiDemo

RotiDemo
#nama : String
#rasa : String
#berat : integer
#harga : integer
#beriWarna()
#beriRasa()
#timbangBerat()
#hargaJual()

2.2 membuat satu class baru yang bisa digunakan sebagai template/blueprint dari class CarDemo, tidak memiliki fungsi main



```
CarDemo.java - keg2 - Visual Studio Code
File Edit Selection View Go Debug Terminal Help
RENDERER 1 UNSAVED
OPEN EDITORS
GROUP 1
• Roti.java
X CarDemo.java
GROUP 2
RotiDemo.java
Car.java
KEG2
.vscode
~$prakbo_l200180079.d...
b_prakbo_l200180079.d...
Car.class
Car.java
CarDemo.class
CarDemo.java
Hewan.class
Hewan.java
HewanDemo.class
HewanDemo.java
Roti.class
Roti.java
RotiDemo.class
RotiDemo.java
OUTLINE
E:\Windows\System32\cmd.exe
E:\Semester 2\praktikum OOP\keg2>javac Car.java
E:\Semester 2\praktikum OOP\keg2>javac CarDemo.java
E:\Semester 2\praktikum OOP\keg2>java CarDemo
Irama :50
Kecepatan :20
Gear :2

Irama :30
Kecepatan :10
Gear :1
E:\Semester 2\praktikum OOP\keg2>
Go Live In 11, Col 26 Spaces: 4 UTF-8 CRLF Java

```

```
Car.java - keg2 - Visual Studio Code
File Edit Selection View Go Debug Terminal Help
RENDERER 1 UNSAVED
OPEN EDITORS
GROUP 1
• Roti.java
X CarDemo.java
GROUP 2
RotiDemo.java
Car.java
KEG2
.vscode
~$prakbo_l200180079.d...
b_prakbo_l200180079.d...
Car.class
Car.java
CarDemo.class
CarDemo.java
Hewan.class
Hewan.java
HewanDemo.class
HewanDemo.java
Roti.class
Roti.java
RotiDemo.class
RotiDemo.java
OUTLINE
E:\Windows\System32\cmd.exe
E:\Semester 2\praktikum OOP\keg2>javac Car.java
E:\Semester 2\praktikum OOP\keg2>javac CarDemo.java
E:\Semester 2\praktikum OOP\keg2>java CarDemo
Irama :50
Kecepatan :20
Gear :2

Irama :30
Kecepatan :10
Gear :1
E:\Semester 2\praktikum OOP\keg2>
Go Live In 11, Col 26 Spaces: 4 UTF-8 CRLF Java

```

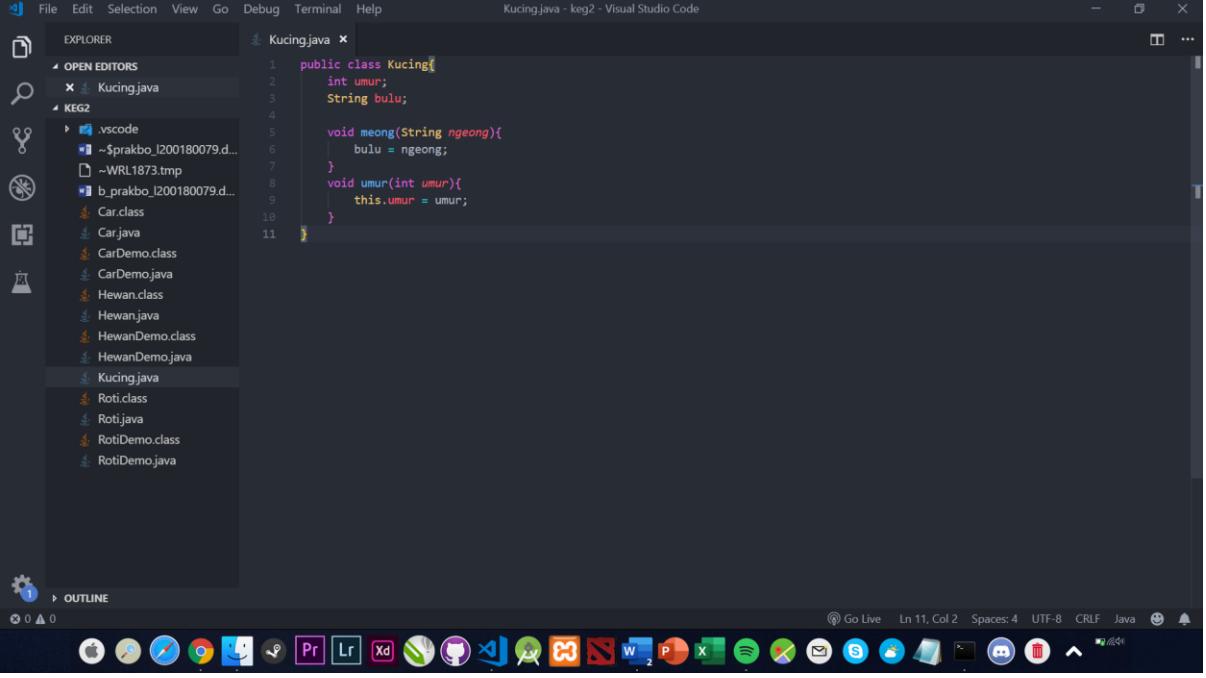
```
public class CarDemo{
    public static void main(String[] args){
        Car car1 = new Car();
        Car car2 = new Car();

        car1.changeCadence(50);
        car1.speedUp(20);
        car1.changeGear(2);
        car1.printInfo();

        car2.changeCadence(30);
        car2.speedUp(10);
        car2.changeGear(1);
        car2.printInfo();
    }
}

public class Car{
    int cadence;
    int speed;
    int gear;
    void changeCadence(int cdc){
        cadence = cdc;
    }
    void speedUp(int spd){
        speed = spd;
    }
    void changeGear(int gear){
        this.gear = gear;
    }
    void printInfo(){
        System.out.println(
            "Irama :" + cadence + "\n" +
            "Kecepatan :" + speed + "\n" +
            "Gear :" + gear + "\n"
        );
    }
}
```

2.3 membuat suatu class yang dapat merepresentasikan sifat-sifat dari object Kucing



```
Kucing.java - keg2 - Visual Studio Code
File Edit Selection View Go Debug Terminal Help
RENDERER 1 UNSAVED
OPEN EDITORS
X Kucing.java
KEG2
.vscode
~$prakbo_l200180079.d...
-WRL1873.tmp
b_prakbo_l200180079.d...
Car.class
Car.java
CarDemo.class
CarDemo.java
Hewan.class
Hewan.java
HewanDemo.class
HewanDemo.java
Kucing.java
Roti.class
Roti.java
RotiDemo.class
RotiDemo.java
OUTLINE
E:\Windows\System32\cmd.exe
E:\Semester 2\praktikum OOP\keg2>javac Kucing.java
E:\Semester 2\praktikum OOP\keg2>java Kucing
Meong
E:\Semester 2\praktikum OOP\keg2>
Go Live In 11, Col 26 Spaces: 4 UTF-8 CRLF Java

```

```
public class Kucing{
    int umur;
    String bulu;

    void meong(String ngeong){
        bulu = ngeong;
    }
    void umur(int umur){
        this.umur = umur;
    }
}
```

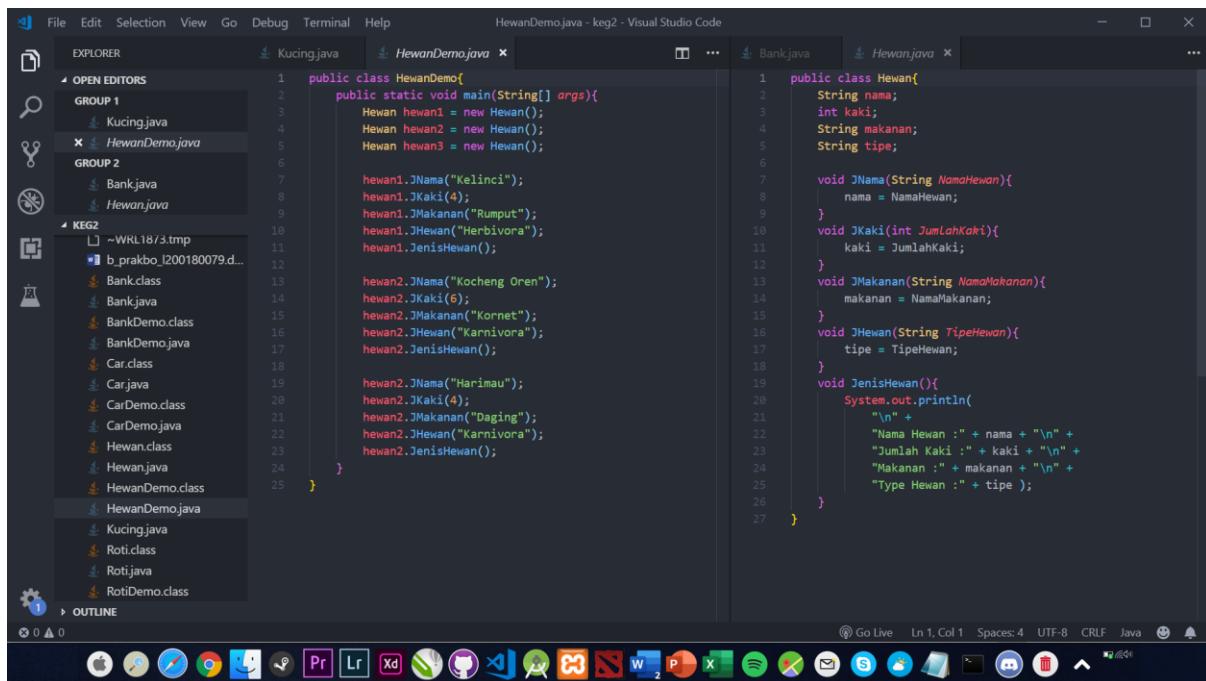
The screenshot shows the Visual Studio Code interface with two code editors and a terminal window.

- Left Editor:** Contains the `Kucing.java` file. The code defines a class `BankDemo` with a static main method. It creates a `Bank` object, calls `cek_saldo`, deposits 2000000, withdraws 500000, and transfers 500000 to another account.
- Right Editor:** Contains the `Bank.java` file. This is the implementation of the `Bank` class. It includes methods for checking balance (`cek_saldo`), depositing (`menabung`), withdrawing (`tarik`), and transferring (`transferan`).
- Terminal:** Shows the command-line output of running the `BankDemo` class. It displays the initial balance (12042000), the balance after deposit (13000000), the balance after withdrawal (12500000), and the balance after transfer (13000000).

Daftar variable dan fungsi/method yang dimiliki oleh Class String

- `String dataString = "Data didalam String"`
- `codePointAt(int)` = mengembalikan code ASCII dari sebuah char yang di ambil dari String yang bersangkutan
- `charAt(int)` = mengembalikan Karakter yang ada di sebuah string bersangkutan sesuai dengan index yang di masukkan.
- `codePointBefore(int)` = mengembalikan code ASCII dari karakter yang di ambil dari sebuah String

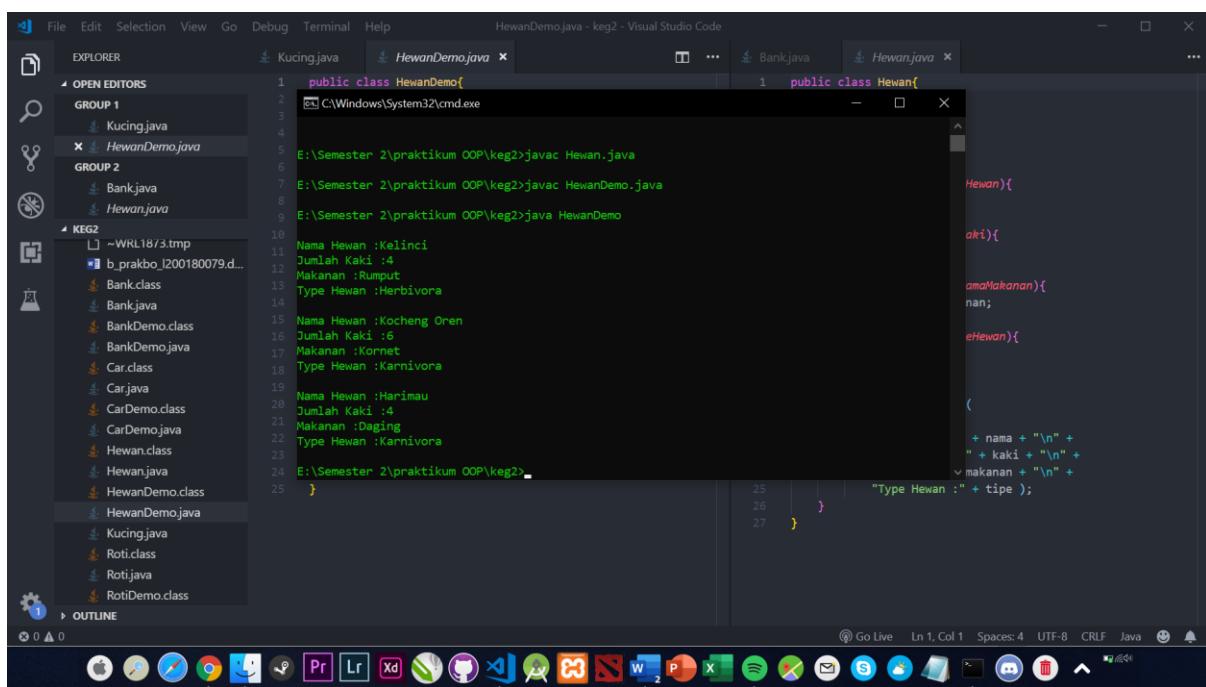
Pekerjaan Rumah



The screenshot shows the Visual Studio Code interface with two open files: Kucing.java and HewanDemo.java. The Kucing.java file contains code for a Cat class with methods like JNama, JKaki, JMakanan, and JHewan. The HewanDemo.java file contains code for a main method that creates three Cat objects and prints their details. The Explorer sidebar shows other files like Bank.java and BankDemo.java.

```
public class Kucing{  
    public void JNama(String Nama){  
        System.out.println("Nama Kucing : " + Nama);  
    }  
    public void JKaki(int Kaki){  
        System.out.println("Jumlah Kaki : " + Kaki);  
    }  
    public void JMakanan(String Makanan){  
        System.out.println("Makanan : " + Makanan);  
    }  
    public void JHewan(String TipeHewan){  
        System.out.println("Type Hewan : " + TipeHewan);  
    }  
}  
  
public class HewanDemo{  
    public static void main(String[] args){  
        Kucing kucing1 = new Kucing();  
        Kucing kucing2 = new Kucing();  
        Kucing kucing3 = new Kucing();  
  
        kucing1.JNama("Kucing");  
        kucing1.JKaki(4);  
        kucing1.JMakanan("Rumput");  
        kucing1.JHewan("Herbivora");  
  
        kucing2.JNama("Kucing Oren");  
        kucing2.JKaki(6);  
        kucing2.JMakanan("Kornet");  
        kucing2.JHewan("Karnivora");  
  
        kucing3.JNama("Harimau");  
        kucing3.JKaki(4);  
        kucing3.JMakanan("Daging");  
        kucing3.JHewan("Karnivora");  
    }  
}
```

```
public class Hewan{  
    String nama;  
    int kaki;  
    String makanan;  
    String tipe;  
  
    void JNama(String NamaHewan){  
        nama = NamaHewan;  
    }  
    void JKaki(int JumlahKaki){  
        kaki = JumlahKaki;  
    }  
    void JMakanan(String NamaMakanan){  
        makanan = NamaMakanan;  
    }  
    void JHewan(String TipeHewan){  
        tipe = TipeHewan;  
    }  
    void JenisHewan(){  
        System.out.println(  
            "\n" +  
            "Nama Hewan : " + nama + "\n" +  
            "Jumlah Kaki :" + kaki + "\n" +  
            "Makanan :" + makanan + "\n" +  
            "Type Hewan :" + tipe );  
    }  
}
```



The screenshot shows the Visual Studio Code interface with the terminal window open. The terminal shows the command-line process of compiling the Hewan.java file and running the HewanDemo.java program. The output displays the details of the three cat objects created in the program.

```
E:\Semester 2\praktikum OOP\keg2>javac Hewan.java  
E:\Semester 2\praktikum OOP\keg2>javac HewanDemo.java  
E:\Semester 2\praktikum OOP\keg2>java HewanDemo  
Nama Hewan :Kelingi  
Jumlah Kaki :4  
Makanan :Rumput  
Type Hewan :Herbivora  
Nama Hewan :Kocheng Oren  
Jumlah Kaki :6  
Makanan :Kornet  
Type Hewan :Karnivora  
Nama Hewan :Harimau  
Jumlah Kaki :4  
Makanan :Daging  
Type Hewan :Karnivora  
E:\Semester 2\praktikum OOP\keg2>
```

The screenshot shows the Visual Studio Code interface with two code editors open. The left editor contains `Dosen.java` and the right editor contains `Mahasiswa.java`. Both files are part of a project named "KEG2". The code editors show Java class definitions with methods for displaying names, IDs, and other details.

```
1 public class Dosen{  
2     String nama;  
3     int nik;  
4     String pendidikan;  
5     Date tglahir;  
6  
7     void tampilkanNama(String name){  
8         nama = name;  
9     }  
10    void tampilkanNik(int nik){  
11        this.nik = nik;  
12    }  
13    void tampilkanTglLahir(Date tgl){  
14        tglahir = tgl;  
15    }  
16 }  
  
1 public class Mahasiswa{  
2     String nama;  
3     String alamat;  
4     int nim;  
5     int semester;  
6  
7     void tampilkanNama(String name){  
8         nama = name;  
9     }  
10    void tampilkanAlamat(String almt){  
11        alamat = almt;  
12    }  
13    void tampilkanNim(int Nim){  
14        nim = Nim;  
15    }  
16    void tampilkanSemester(int smtr){  
17        semester = smtr;  
18    }  
19 }
```

The screenshot shows the Visual Studio Code interface with the `Karyawan.java` file open in the right editor. The file is part of the "KEG2" project. The code defines a `Karyawan` class with methods for displaying name, address, position, and salary.

```
1 public class Karyawan{  
2     String nama;  
3     String alamat;  
4     String jabatan;  
5     int gaji;  
6  
7     void tampilkanNama(String name){  
8         nama = name;  
9     }  
10    void tampilkanAlamat(String almt){  
11        alamat = almt;  
12    }  
13    void tampilkanJabatan(String jbtn){  
14        jabatan = jbtn;  
15    }  
16    void tampilkanGaji(int gji){  
17        gaji = gji;  
18    }  
19 }
```