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KELAS : B  
BAB : 8 - Abstract Class & Method  
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## 1. Tugas Praktikum

### 2.1 Source code

```
package tugas;

public abstract class Vehicle {

    String nama;

    int tahun;

    double rpm;

    public abstract void carDetails();

}

package tugas;

public class Car extends Vehicle {

    Owner o;

    Car(Owner o, String nama, int tahun, double rpm) {

        this.o = o;

        this.nama = nama;

        this.tahun = tahun;

        this.rpm = rpm;

    }

    public void carDetails() {
```

```
        System.out.println("Car name\t: " + this.nama);

        System.out.println("Car owner\t: " + this.o.getName());

        System.out.println("Output year\t: " + this.tahun);

        System.out.println("RPM\t\t: " + this.rpm);

    }

}

package tugas;

public class Owner {

    private String name;

    public Owner(String name) {

        this.name = name;

    }

    public String getName() {

        return name;

    }

}

package tugas;

public class App {

    public static void main(String[] args) {

        Owner owner1 = new Owner("Arsyad");

        Owner owner2 = new Owner("Ardhan");

        Owner owner3 = new Owner("Budhi");
```

```
Owner owner4 = new Owner("Galuh");

Car[] cars = new Car[4];

cars[0] = new Car(owner1, "Toyota GR Yaris", 2022, 6500);

cars[1] = new Car(owner2, "Jeep Wrangler", 1972, 6000);

cars[2] = new Car(owner3, "Mazda RX 87", 1967, 10500);

cars[3] = new Car(owner4, "Mercedes Benz 220", 1958, 5500);

for (Car instCar : cars) {

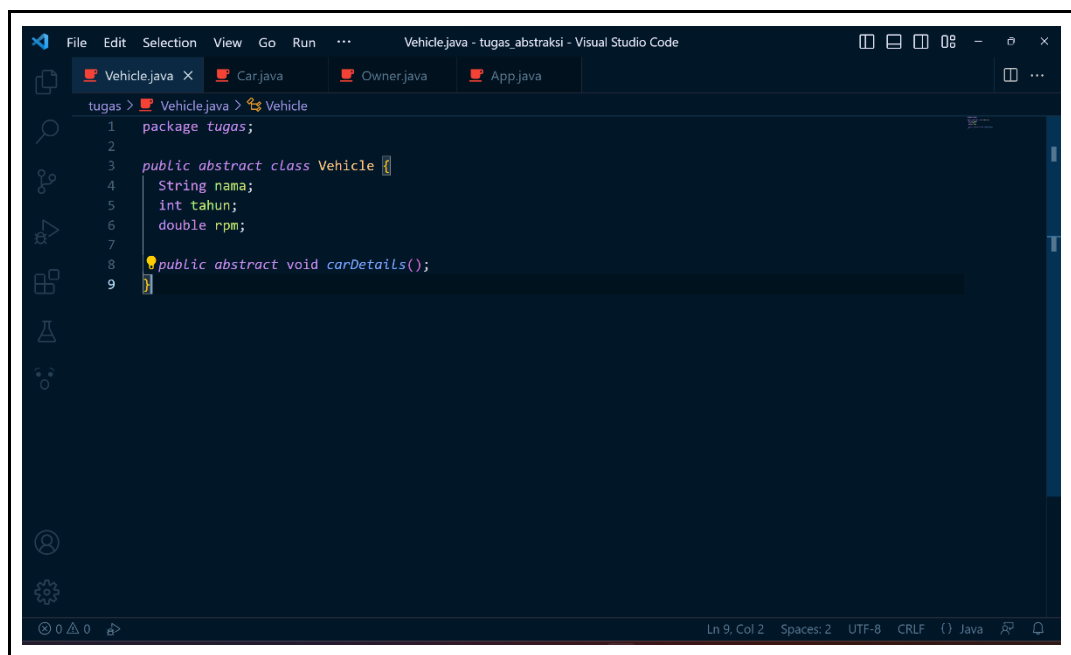
    instCar.carDetails();

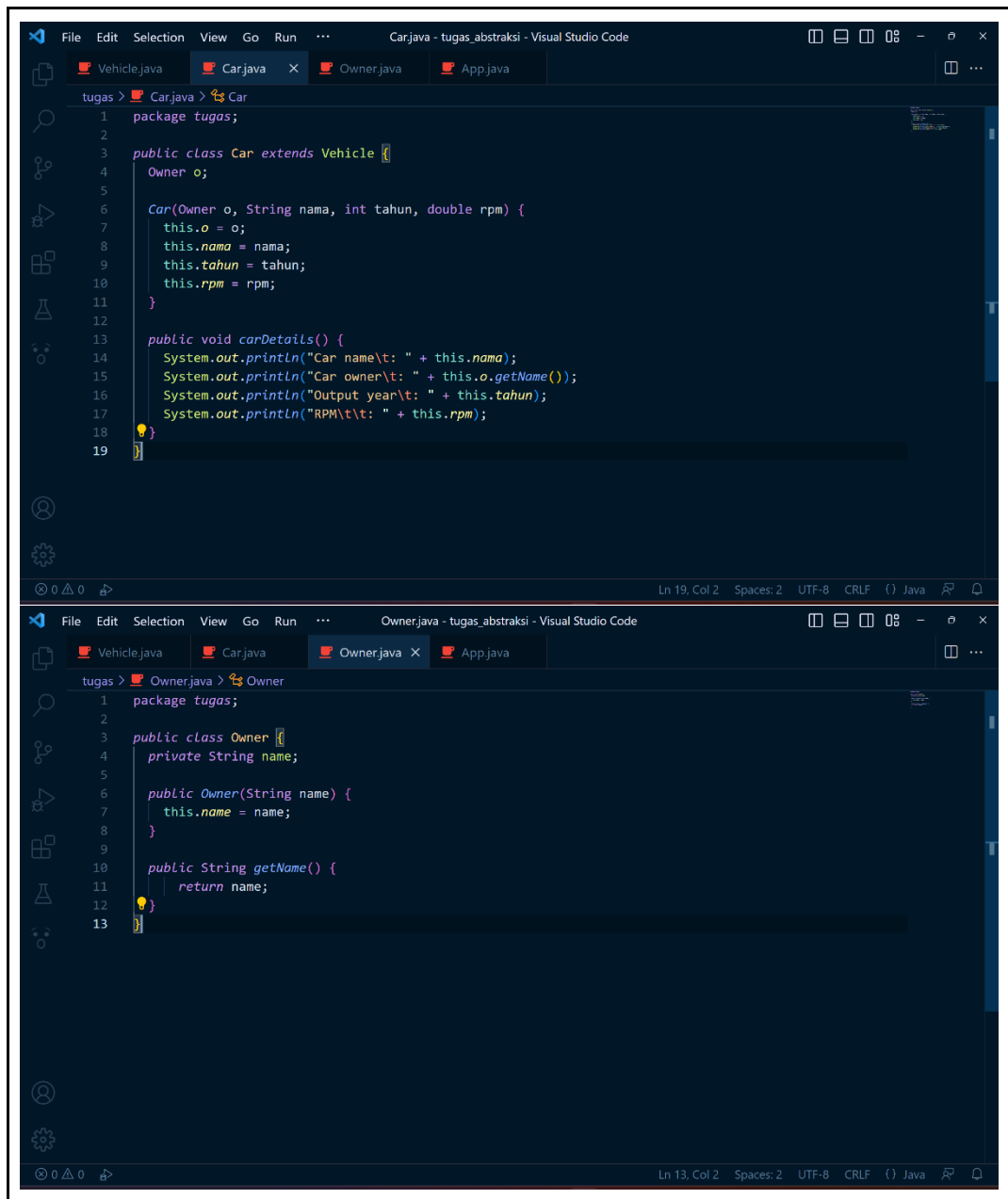
    System.out.println();

}

}
```

## 2.2 Screenshot hasil

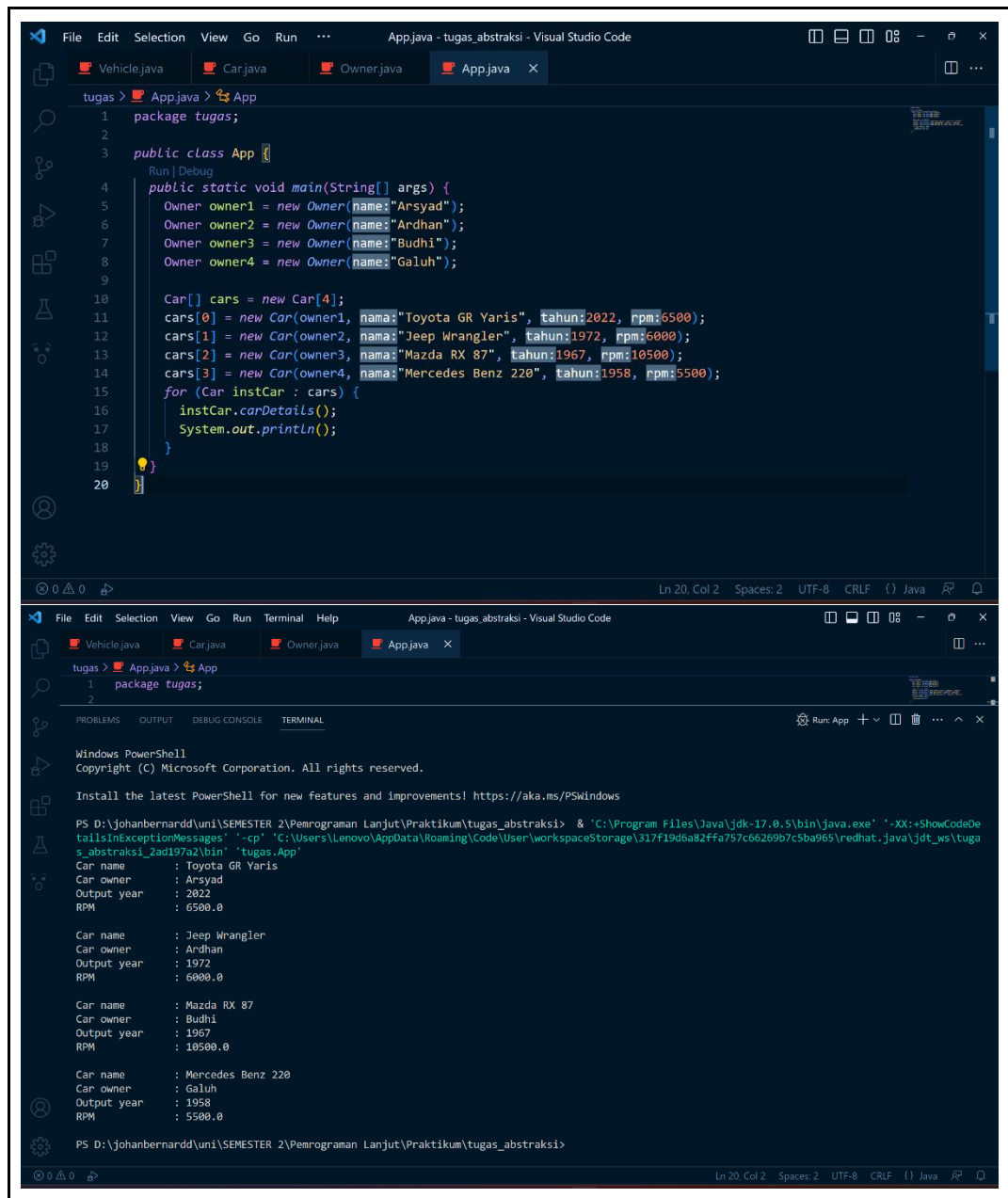




The image shows two screenshots of the Visual Studio Code editor. The top screenshot displays the `Car.java` file, which is part of the `tugas` package and extends the `Vehicle` class. It includes a constructor and a `carDetails()` method. The bottom screenshot displays the `Owner.java` file, also in the `tugas` package, which includes a private `name` attribute, a constructor, and a `getName()` method.

```
Car.java - tugas_abstraksi - Visual Studio Code
File Edit Selection View Go Run ...
tugas > Carjava > Car
1 package tugas;
2
3 public class Car extends Vehicle {
4     Owner o;
5
6     Car(Owner o, String nama, int tahun, double rpm) {
7         this.o = o;
8         this.nama = nama;
9         this.tahun = tahun;
10        this.rpm = rpm;
11    }
12
13    public void carDetails() {
14        System.out.println("Car name\t: " + this.nama);
15        System.out.println("Car owner\t: " + this.o.getName());
16        System.out.println("Output year\t: " + this.tahun);
17        System.out.println("RPM\t\t: " + this.rpm);
18    }
19 }
```

```
Owner.java - tugas_abstraksi - Visual Studio Code
File Edit Selection View Go Run ...
tugas > Ownerjava > Owner
1 package tugas;
2
3 public class Owner {
4     private String name;
5
6     public Owner(String name) {
7         this.name = name;
8     }
9
10    public String getName() {
11        return name;
12    }
13 }
```



The screenshot displays the Visual Studio Code editor with a Java project named 'tugas\_abstraksi'. The main file, 'App.java', contains the following code:

```

package tugas;

public class App {

    public static void main(String[] args) {
        Owner owner1 = new Owner(name:"Arsyad");
        Owner owner2 = new Owner(name:"Ardhan");
        Owner owner3 = new Owner(name:"Budhi");
        Owner owner4 = new Owner(name:"Galuh");

        Car[] cars = new Car[4];
        cars[0] = new Car(owner1, nama:"Toyota GR Yaris", tahun:2022, rpm:6500);
        cars[1] = new Car(owner2, nama:"Jeep Wrangler", tahun:1972, rpm:6000);
        cars[2] = new Car(owner3, nama:"Mazda RX 87", tahun:1967, rpm:10500);
        cars[3] = new Car(owner4, nama:"Mercedes Benz 220", tahun:1958, rpm:5500);
        for (Car instCar : cars) {
            instCar.carDetails();
            System.out.println();
        }
    }
}

```

The terminal window shows the output of the program, which prints the details of four cars:

```

PS D:\johanbernardd\uni\SEMESTER 2\Pemrograman Lanjut\Praktikum\tugas_abstraksi> & 'C:\Program Files\Java\jdk-17.0.5\bin\java.exe' '-XX:+ShowCodeDe
tails;-Xmx1024m' -cp 'C:\Users\Lenovo\AppData\Roaming\Code\User\workspaceStorage\317f19d6a82ffa757c66269b7c5bd965\redhat.java\jdt_ws\tuga
s_abstraksi_2ad197a2\bin' 'tugas.App'
Car name      : Toyota GR Yaris
Car owner     : Arsyad
Output year   : 2022
RPM           : 6500.0

Car name      : Jeep Wrangler
Car owner     : Ardhan
Output year   : 1972
RPM           : 6000.0

Car name      : Mazda RX 87
Car owner     : Budhi
Output year   : 1967
RPM           : 10500.0

Car name      : Mercedes Benz 220
Car owner     : Galuh
Output year   : 1958
RPM           : 5500.0

PS D:\johanbernardd\uni\SEMESTER 2\Pemrograman Lanjut\Praktikum\tugas_abstraksi>

```