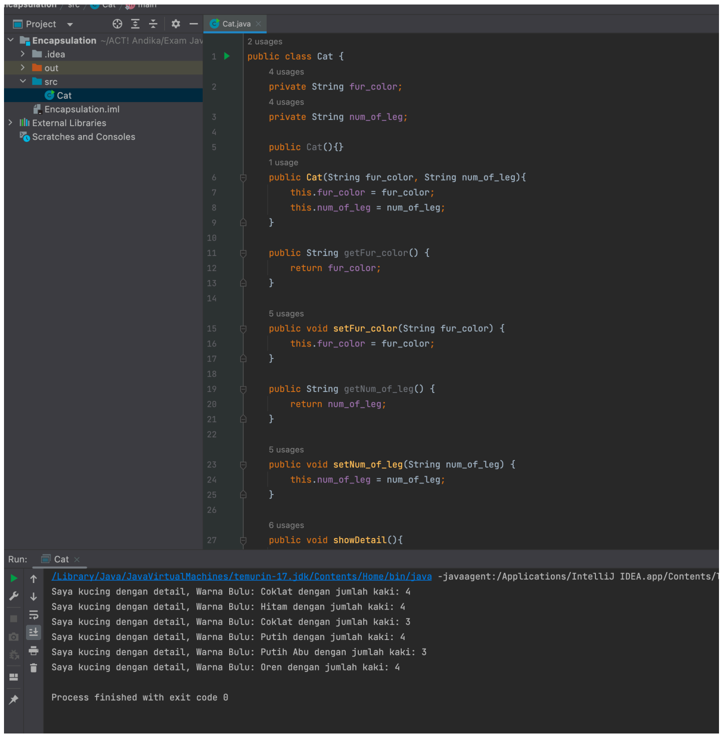
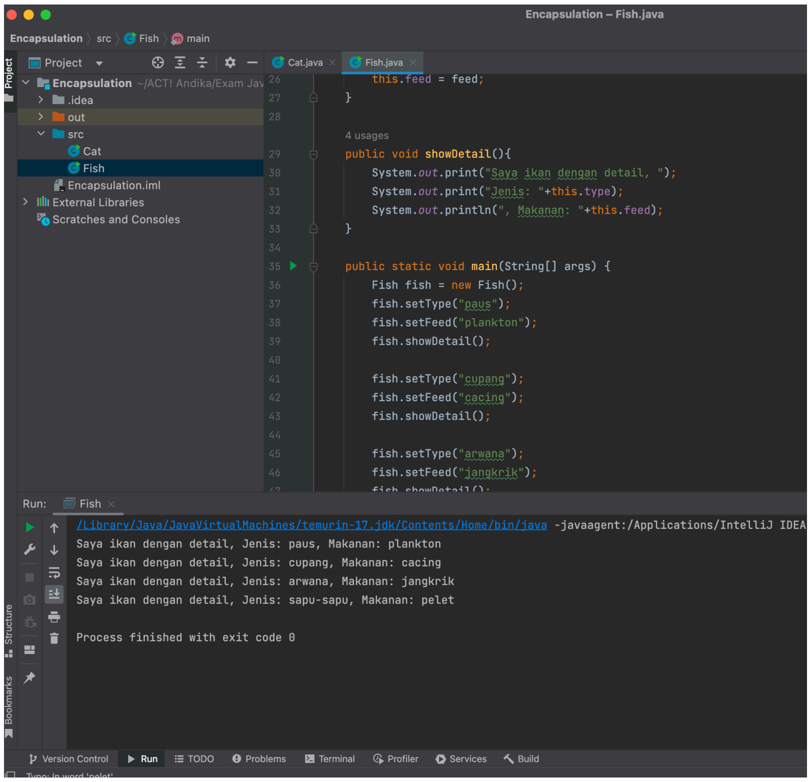
1. Encapsulation



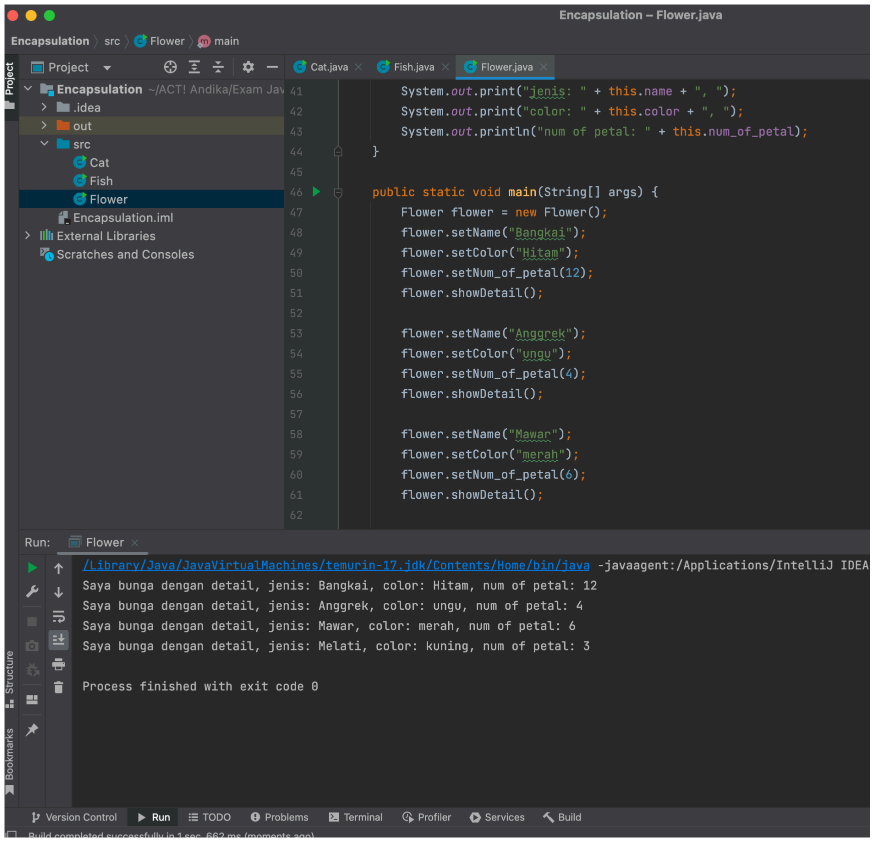
```java
2 usages
public class Cat {
    4 usages
    private String fur_color;
    4 usages
    private String num_of_leg;

    public Cat(){}
    1 usage
    public Cat(String fur_color, String num_of_leg){
        this.fur_color = fur_color;
        this.num_of_leg = num_of_leg;
    }

    public String getFur_color() {
        return fur_color;
    }

    5 usages
    public void setFur_color(String fur_color) {
        this.fur_color = fur_color;
    }

    public String getNum_of_leg() {
        return num_of_leg;
    }

    5 usages
    public void setNum_of_leg(String num_of_leg) {
        this.num_of_leg = num_of_leg;
    }

    6 usages
    public void showDetail(){
```

```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA.app/Contents/
Saya kucing dengan detail, Warna Bulu: Coklat dengan jumlah kaki: 4
Saya kucing dengan detail, Warna Bulu: Hitam dengan jumlah kaki: 4
Saya kucing dengan detail, Warna Bulu: Coklat dengan jumlah kaki: 3
Saya kucing dengan detail, Warna Bulu: Putih dengan jumlah kaki: 4
Saya kucing dengan detail, Warna Bulu: Putih Abu dengan jumlah kaki: 3
Saya kucing dengan detail, Warna Bulu: Oren dengan jumlah kaki: 4

Process finished with exit code 0
```



```java
        this.feed = feed;
    }

    4 usages
    public void showDetail(){
        System.out.print("Saya ikan dengan detail, ");
        System.out.print("Jenis: "+this.type);
        System.out.println(", Makanan: "+this.feed);
    }

    public static void main(String[] args) {
        Fish fish = new Fish();
        fish.setType("paus");
        fish.setFeed("plankton");
        fish.showDetail();

        fish.setType("cupang");
        fish.setFeed("cacing");
        fish.showDetail();

        fish.setType("arwana");
        fish.setFeed("jangkrik");
        fish.showDetail();
```

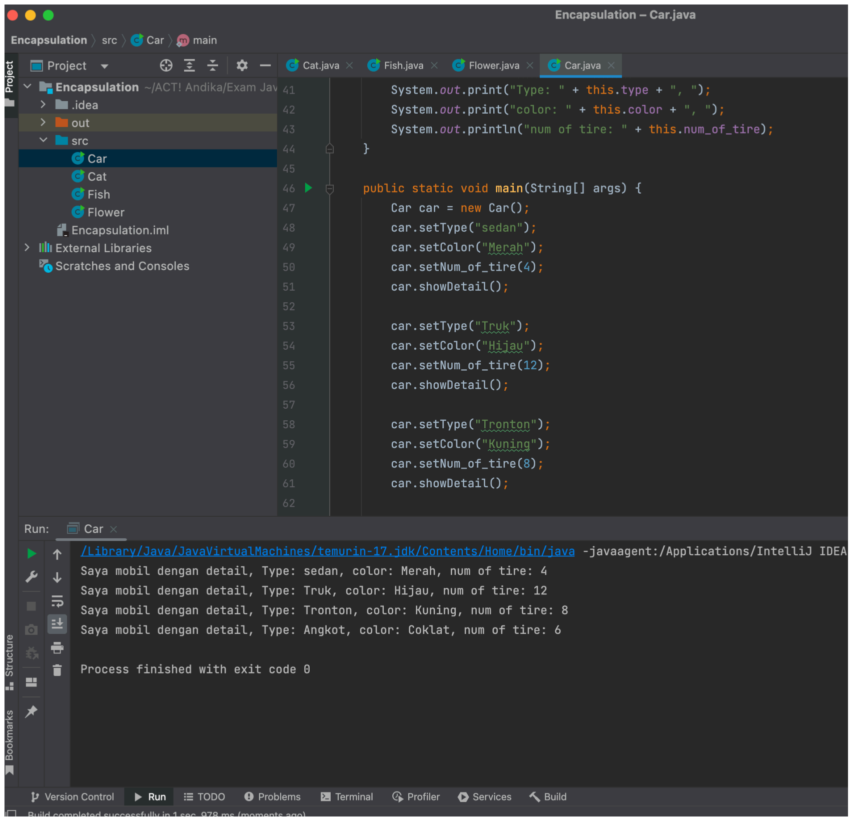
```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA
Saya ikan dengan detail, Jenis: paus, Makanan: plankton
Saya ikan dengan detail, Jenis: cupang, Makanan: cacing
Saya ikan dengan detail, Jenis: arwana, Makanan: jangkrik
Saya ikan dengan detail, Jenis: sapu-sapu, Makanan: pelet

Process finished with exit code 0
```



```java
        System.out.print("jenis: " + this.name + ", ");
        System.out.print("color: " + this.color + ", ");
        System.out.println("num of petal: " + this.num_of_petal);
    }

    public static void main(String[] args) {
        Flower flower = new Flower();
        flower.setName("Bangkai");
        flower.setColor("Hitam");
        flower.setNum_of_petal(12);
        flower.showDetail();

        flower.setName("Anggrek");
        flower.setColor("ungu");
        flower.setNum_of_petal(4);
        flower.showDetail();

        flower.setName("Mawar");
        flower.setColor("merah");
        flower.setNum_of_petal(6);
        flower.showDetail();

```

```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA
Saya bunga dengan detail, jenis: Bangkai, color: Hitam, num of petal: 12
Saya bunga dengan detail, jenis: Anggrek, color: ungu, num of petal: 4
Saya bunga dengan detail, jenis: Mawar, color: merah, num of petal: 6
Saya bunga dengan detail, jenis: Melati, color: kuning, num of petal: 3

Process finished with exit code 0
```

Build completed successfully in 1 sec, 662 ms (moments ago)

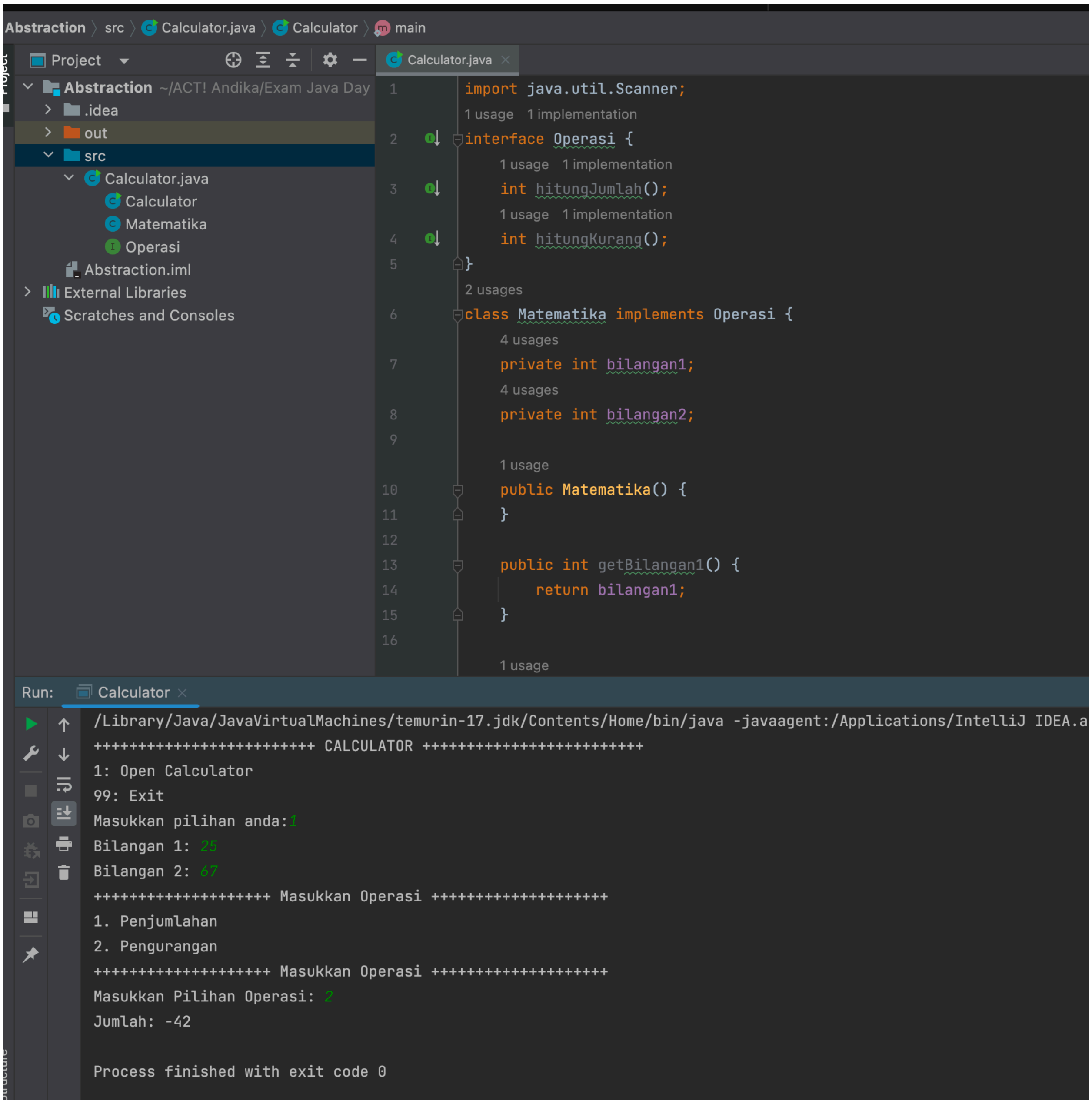


```java
        System.out.print("Type: " + this.type + ", ");
        System.out.print("color: " + this.color + ", ");
        System.out.println("num of tire: " + this.num_of_tire);
    }

    public static void main(String[] args) {
        Car car = new Car();
        car.setType("sedan");
        car.setColor("Merah");
        car.setNum_of_tire(4);
        car.showDetail();

        car.setType("Truk");
        car.setColor("Hijau");
        car.setNum_of_tire(12);
        car.showDetail();

        car.setType("Tronton");
        car.setColor("Kuning");
        car.setNum_of_tire(8);
        car.showDetail();

```

```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA
Saya mobil dengan detail, Type: sedan, color: Merah, num of tire: 4
Saya mobil dengan detail, Type: Truk, color: Hijau, num of tire: 12
Saya mobil dengan detail, Type: Tronton, color: Kuning, num of tire: 8
Saya mobil dengan detail, Type: Angkot, color: Coklat, num of tire: 6

Process finished with exit code 0
```

Build completed successfully in 1 sec, 978 ms (moments ago)

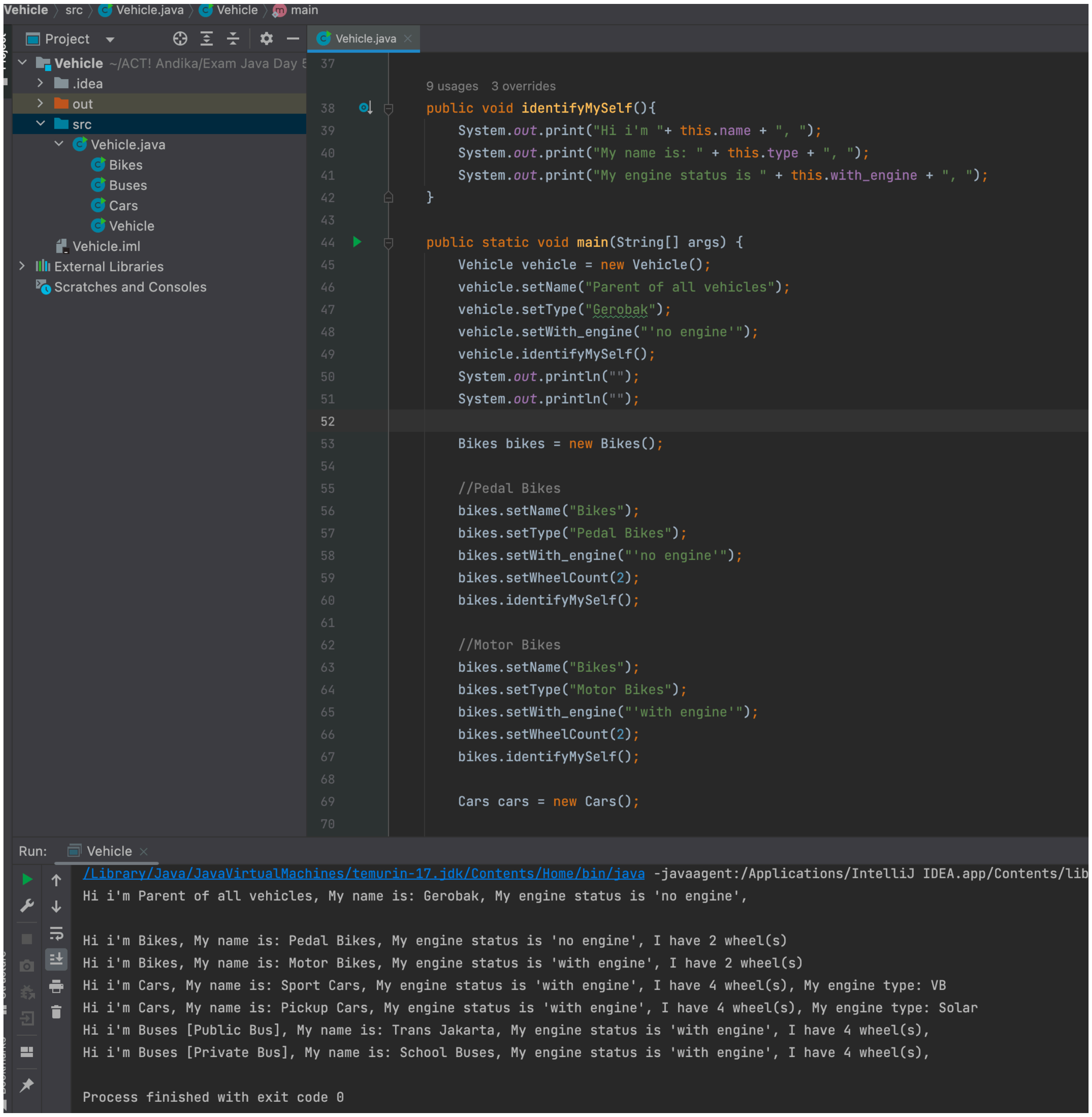
2. Data Abstraction



```java
import java.util.Scanner;
1 usage   1 implementation
interface Operasi {
    1 usage   1 implementation
    int hitungJumlah();
    1 usage   1 implementation
    int hitungKurang();
}
2 usages
class Matematika implements Operasi {
    4 usages
    private int bilangan1;
    4 usages
    private int bilangan2;

    1 usage
    public Matematika() {
    }

    public int getBilangan1() {
        return bilangan1;
    }

    1 usage
```

```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA.a
++++++++++++++++++++++++ CALCULATOR ++++++++++++++++++++++++
1: Open Calculator
99: Exit
Masukkan pilihan anda:1
Bilangan 1: 25
Bilangan 2: 67
++++++++++++++++++++ Masukkan Operasi ++++++++++++++++++++
1. Penjumlahan
2. Pengurangan
++++++++++++++++++++ Masukkan Operasi ++++++++++++++++++++
Masukkan Pilihan Operasi: 2
Jumlah: -42

Process finished with exit code 0
```

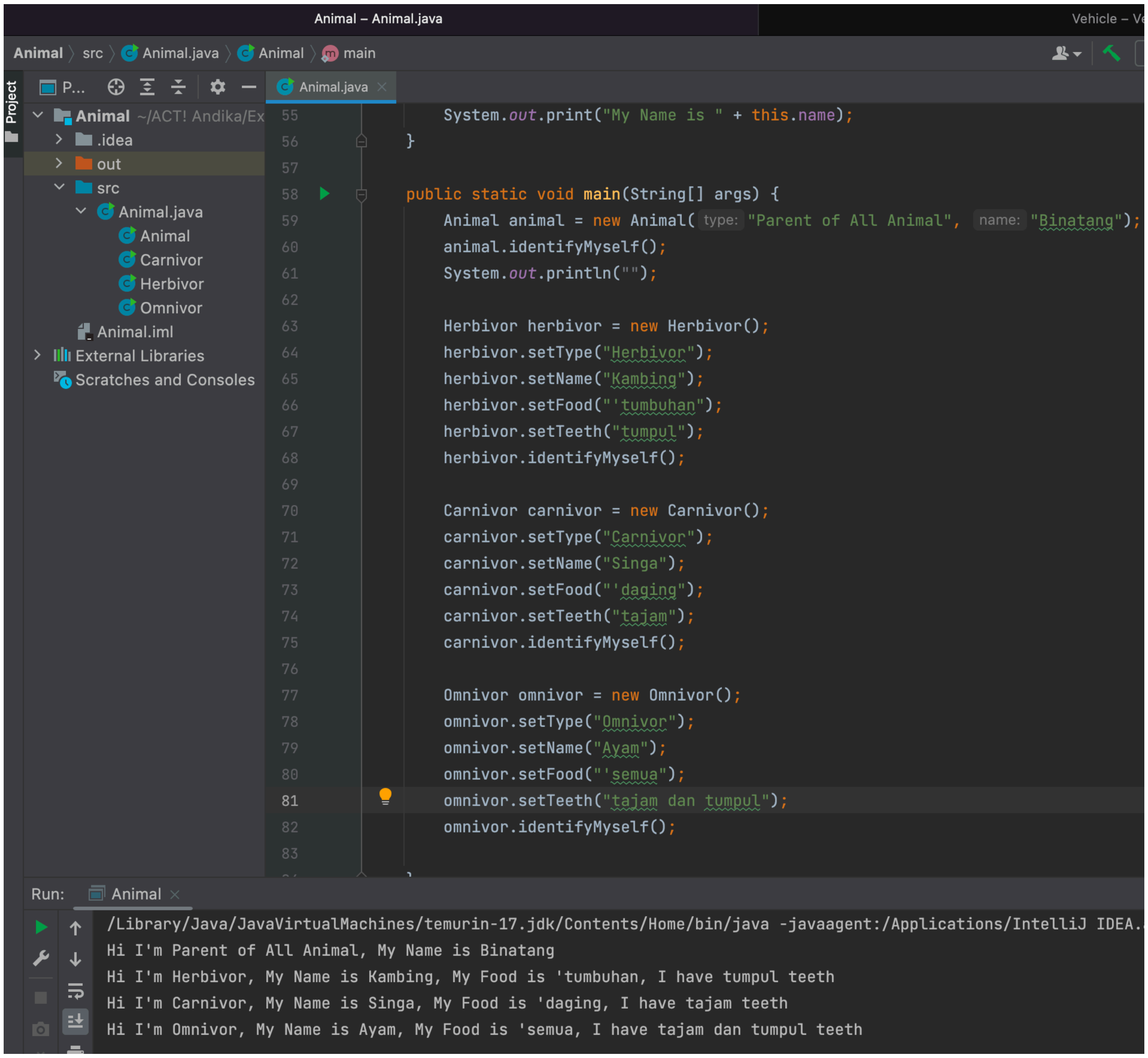
3. Inheritance & Polymorphism (Vehicle)



```java

public void identifyMySelf(){
    System.out.print("Hi i'm "+ this.name + ", ");
    System.out.print("My name is: " + this.type + ", ");
    System.out.print("My engine status is " + this.with_engine + ", ");
}

public static void main(String[] args) {
    Vehicle vehicle = new Vehicle();
    vehicle.setName("Parent of all vehicles");
    vehicle.setType("Gerobak");
    vehicle.setWith_engine("'no engine'");
    vehicle.identifyMySelf();
    System.out.println("");
    System.out.println("");

    Bikes bikes = new Bikes();

    //Pedal Bikes
    bikes.setName("Bikes");
    bikes.setType("Pedal Bikes");
    bikes.setWith_engine("'no engine'");
    bikes.setWheelCount(2);
    bikes.identifyMySelf();

    //Motor Bikes
    bikes.setName("Bikes");
    bikes.setType("Motor Bikes");
    bikes.setWith_engine("'with engine'");
    bikes.setWheelCount(2);
    bikes.identifyMySelf();

    Cars cars = new Cars();

```

```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA.app/Contents/lib
Hi i'm Parent of all vehicles, My name is: Gerobak, My engine status is 'no engine',

Hi i'm Bikes, My name is: Pedal Bikes, My engine status is 'no engine', I have 2 wheel(s)
Hi i'm Bikes, My name is: Motor Bikes, My engine status is 'with engine', I have 2 wheel(s)
Hi i'm Cars, My name is: Sport Cars, My engine status is 'with engine', I have 4 wheel(s), My engine type: VB
Hi i'm Cars, My name is: Pickup Cars, My engine status is 'with engine', I have 4 wheel(s), My engine type: Solar
Hi i'm Buses [Public Bus], My name is: Trans Jakarta, My engine status is 'with engine', I have 4 wheel(s),
Hi i'm Buses [Private Bus], My name is: School Buses, My engine status is 'with engine', I have 4 wheel(s),

Process finished with exit code 0
```

4. Inheritance & Polymorphism (Animal)



```java
        System.out.print("My Name is " + this.name);
    }

    public static void main(String[] args) {
        Animal animal = new Animal( type: "Parent of All Animal", name: "Binatang");
        animal.identifyMyself();
        System.out.println("");

        Herbivor herbivor = new Herbivor();
        herbivor.setType("Herbivor");
        herbivor.setName("Kambing");
        herbivor.setFood("'tumbuhan");
        herbivor.setTeeth("tumpul");
        herbivor.identifyMyself();

        Carnivor carnivor = new Carnivor();
        carnivor.setType("Carnivor");
        carnivor.setName("Singa");
        carnivor.setFood("'daging");
        carnivor.setTeeth("tajam");
        carnivor.identifyMyself();

        Omnivor omnivor = new Omnivor();
        omnivor.setType("Omnivor");
        omnivor.setName("Ayam");
        omnivor.setFood("'semua");
        omnivor.setTeeth("tajam dan tumpul");
        omnivor.identifyMyself();

```

```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA.
Hi I'm Parent of All Animal, My Name is Binatang
Hi I'm Herbivor, My Name is Kambing, My Food is 'tumbuhan, I have tumpul teeth
Hi I'm Carnivor, My Name is Singa, My Food is 'daging, I have tajam teeth
Hi I'm Omnivor, My Name is Ayam, My Food is 'semua, I have tajam dan tumpul teeth
```

5. Mohon maaf belum bisa dikerjakan karena keterbatasan waktu