

**Name :** R Anush

**Date :** 10/10/2023

**Student Code :** AF0336714

**Batch Code :** Java\_ANP-C6315

### **Lab Assignment – 09**

**Q1:** Write a Java program to create a class called Vehicle with a method called drive().

- Vehicle should have attributes such as make (String), model (String) , year (int) and maximumSpeed (int).
- Create a constructor in Vehicle with all fields as constructor parameters.
- Create a subclass called Car and override constructor. Call super().
- Write a function that overrides the drive() method to print (make + “ ” + model + " Car is driving". )
- Also create another subclass Bike extending the vehicle class.
- Override the drive() method to print (make + “ ” + model + " Bike is driving". )
- Instantiate both Bike and Car class. Print their attributes.

## Input:

```
package CoreJava;
```

```
class Vehicle {
    private String make;
    private String model;
    private int year;
    private int maximumSpeed;

    public Vehicle(String make, String model, int year, int maximumSpeed) {
        this.make = make;
        this.model = model;
        this.year = year;
        this.maximumSpeed = maximumSpeed;
    }

    public void drive() {
        System.out.println(make + " " + model + " is driving.");
    }

    public String getMake() {
        return make;
    }

    public String getModel() {
        return model;
    }

    public int getYear() {
        return year;
    }

    public int getMaximumSpeed() {
        return maximumSpeed;
    }
}

class Car extends Vehicle {
    public Car(String make, String model, int year, int maximumSpeed) {
        super(make, model, year, maximumSpeed);
    }
}
```

```

    @Override
    public void drive() {
        System.out.println(getMake() + " " + getModel() + " Car is driving.");
    }
}

class Bike extends Vehicle {
    public Bike(String make, String model, int year, int maximumSpeed) {
        super(make, model, year, maximumSpeed);
    }

    @Override
    public void drive() {
        System.out.println(getMake() + " " + getModel() + " Bike is driving.");
    }
}

class Main {
    public static void main(String[] args) {
        Car car = new Car("BMW", "X7", 2023, 250);
        Bike bike = new Bike("Royal Enfeild", "Continental GT 650", 2019, 190);

        System.out.println("Car Attributes:");
        System.out.println("Make: " + car.getMake());
        System.out.println("Model: " + car.getModel());
        System.out.println("Year: " + car.getYear());
        System.out.println("Maximum Speed: " + car.getMaximumSpeed());
        car.drive();

        System.out.println("\nBike Attributes:");
        System.out.println("Make: " + bike.getMake());
        System.out.println("Model: " + bike.getModel());
        System.out.println("Year: " + bike.getYear());
        System.out.println("Maximum Speed: " + bike.getMaximumSpeed());
        bike.drive();
    }
}

```

## **Output:**

Car Attributes:

Make: BMW

Model: X7

Year: 2023

Maximum Speed: 250

BMW X7 Car is driving.

Bike Attributes:

Make: Royal Enfeild

Model: Continental GT 650

Year: 2019

Maximum Speed: 190

Royal Enfeild Continental GT 650 Bike is driving .