8.Write a program in Java to demonstrate the uses of classes, objects, and the object-oriented pillars in Java

```
// Parent class
class Vehicle {
    private String brand;
    private int year;

    // Constructor
    public Vehicle(String brand, int year) {
        this.brand = brand;
        this.year = year;
    }

    // Getter methods
    public String getBrand() {
        return brand;
    }

    public int getYear() {
        return year;
    }

    // Polymorphic method
    public void displayInfo() {
        System.out.println("Brand: " + brand);
        System.out.println("Year: " + year);
    }
}

// Child class inheriting from Vehicle
```

```
class Car extends Vehicle {
    private int numberOfDoors;

    // Constructor
    public Car(String brand, int year, int numberOfDoors) {
        super(brand, year);
        this.numberOfDoors = numberOfDoors;
    }

    // Polymorphic method overridden from parent class
    @Override
    public void displayInfo() {
        super.displayInfo();
        System.out.println("Number of doors: " + numberOfDoors);
    }
}

public class Main {
    public static void main(String[] args) {
        // Creating objects
        Vehicle vehicle = new Vehicle("Generic Vehicle", 2020);
        Car car = new Car("Toyota", 2022, 4);

        // Accessing object properties using getter methods
        System.out.println("Vehicle brand: " + vehicle.getBrand());
        System.out.println("Vehicle year: " + vehicle.getYear());

        // Calling polymorphic methods
        vehicle.displayInfo();
        System.out.println();
```

```
        car.displayInfo();
    }
}
```

OUTPUT:

```
Vehicle brand: Generic Vehicle
Vehicle year: 2020
Brand: Generic Vehicle
Year: 2020

Brand: Toyota
Year: 2022
Number of doors: 4
```