Problem 1: Inheritance in Java.

```java
class Vehicle {
    String model = "Nissan";
    int buildDate = 2015;

    public void displayCarInfo() {
        System.out.println("Model: " + model);
        System.out.println("Year: " + buildDate);
    }
}

class Toyota extends Vehicle {
    public void changeData() {
        model = "Prious";
        buildDate = 2022;
    }

    public void displayCarInfo() {
        System.out.println("Car Model: " + model);
        System.out.println("Year: " + buildDate);
    }
}

public class Car extends Toyota {
    public static void main(String[] args) {
        Toyota obj = new Toyota();

        obj.displayCarInfo();
        obj.changeData();
        obj.displayCarInfo();
    }
}
```

```
C:\Program Files\Eclipse Adoptium\jdk-17.0.13.11-hotspot\b
in\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-c
p' 'C:\Users\sobha\AppData\Roaming\Code\User\workspaceStor
age\15f2f91a8b2e3b4a714ad047854cab98\redhat.java\jdt_ws\La
b Report 5_177e2dd2\bin' 'Car'
Car Model: Nissan
Year: 2015
Car Model: Prious
Year: 2022
PS E:\@CODES\Academic\Java\Lab\Lab Report 5>
```

Problem 2: Java Inner Classes

```java
class OuterClass {
    int x = 10;

    class InnerClass {
        int y = 5;
    }
}

public class In {
    public static void main(String[] args) {
        OuterClass obj1 = new OuterClass();
        OuterClass.InnerClass ob2 = obj1.new InnerClass();

        System.out.println("Output is: "+(ob2.y + obj1.x));
    }
}
```

```
PS E:\@CODES\Academic\Java\Lab\Lab Report 5> ^C
PS E:\@CODES\Academic\Java\Lab\Lab Report 5>
PS E:\@CODES\Academic\Java\Lab\Lab Report 5>  e:; cd 'e:\@
CODES\Academic\Java\Lab\Lab Report 5'; & 'C:\Program Files
\Eclipse Adoptium\jdk-17.0.13.11-hotspot\bin\java.exe' '-X
X:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\sob
ha\AppData\Roaming\Code\User\workspaceStorage\15f2f91a8b2e
3b4a714ad047854cab98\redhat.java\jdt_ws\Lab Report 5_177e2
dd2\bin' 'In'
Output is: 15
PS E:\@CODES\Academic\Java\Lab\Lab Report 5>
```