

**Credit Name:** CSE 3130 Object-Oriented Programming 2

**Assignment Name:** Vehicle, Car, Truck, Minivan

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### **Reflection Log**

#### **Understanding the Problem**

To understand the challenge, I first read the instructions carefully to see what classes I needed (a parent abstract class and three subclasses: Car, Truck, and Minivan). I also asked ChatGPT for some vehicle attributes for each one. This helped me decide which variables and methods belong in the parent class and which belong in the children.

#### **Planning the Solution**

Before coding, I made a simple plan: create the abstract Vehicle class with shared variables (make, model, year) and an abstract method displayInfo(). Then I created three subclasses (Car, Truck, Minivan) that each have their own unique attributes and override displayInfo() to show information specific to their type. I chose this structure because I needed inheritance, polymorphism, and abstract classes for the assignment.

#### **Implementation**

I wrote the code in small pieces. First, I created the Vehicle abstract class, then the Car subclass, followed by Truck and Minivan. Finally, I wrote the MainVehicle class to create objects and display information. Writing it step by step helped me make sure each class worked before moving on to the next.

#### **Overcoming Challenges**

I initially had a problem when I capitalized the T in toString(), which caused the program to not recognize the method correctly. It took me a long time to figure out the error because eclipse doesn't underline those in red, but I remembered Mr. Abdullah said something about that during one of our skillbuilders which helped me recognize the spelling issue.

#### **Learning**

I learned more about how subclasses interact with parent classes and how the information is actually transferred between classes.

Some resources I used

<https://www.youtube.com/watch?v=HvPIEJ3LHqE>

[https://www.w3schools.com/java/java\\_polymorphism.asp](https://www.w3schools.com/java/java_polymorphism.asp)

<https://www.geeksforgeeks.org/java/overriding-in-java/>