

# CSE360 Summer 2021 Assignment 3

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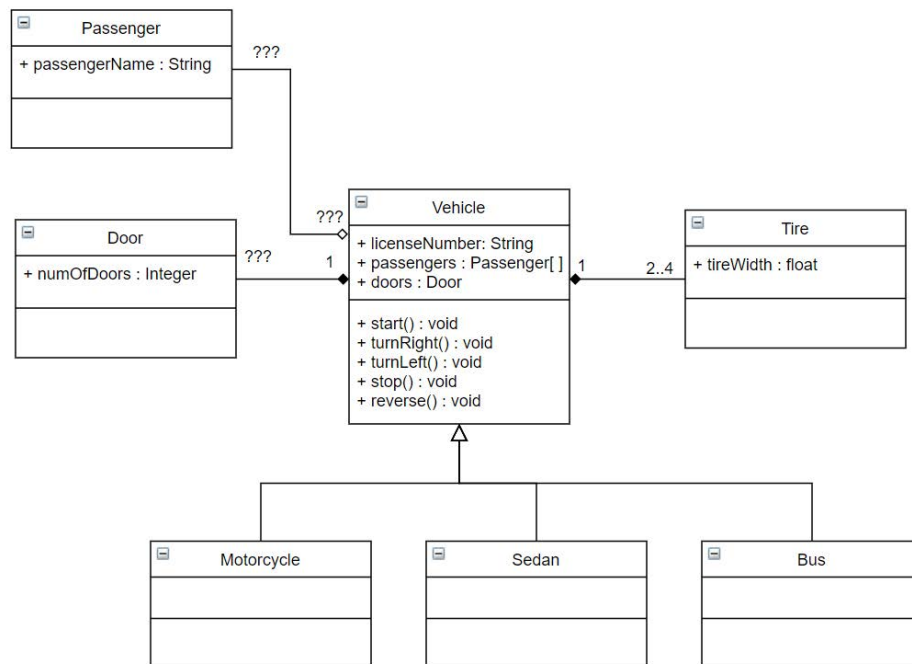
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A client wants you to create a system for their vehicle rental service. Below is a list of vehicles they currently have:

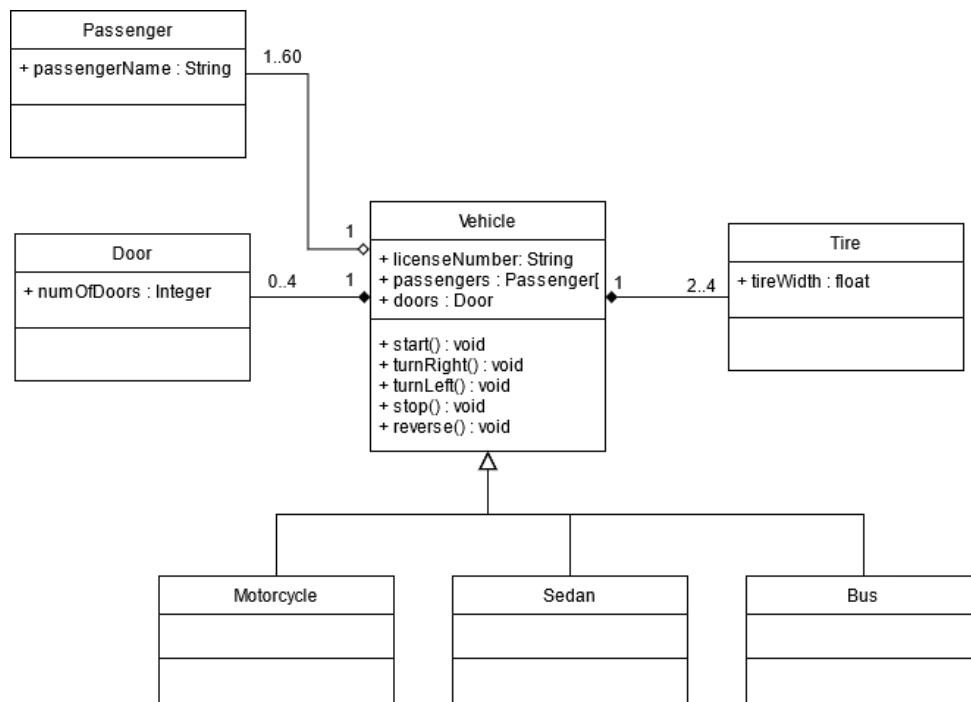
- Motorcycle
  - No doors
  - Can carry between one to two passengers
  - Two tires
- Sedan
  - Can have either two or four doors
  - Can carry between two to five passengers
  - Four tires
- Bus
  - One door
  - Can carry up to sixty passengers
  - Four tires

## Problem 1

Below is a UML class diagram that models some of the vehicles described above. Fill in the missing “???” parts to make the diagram fully match the above description.



## Solution

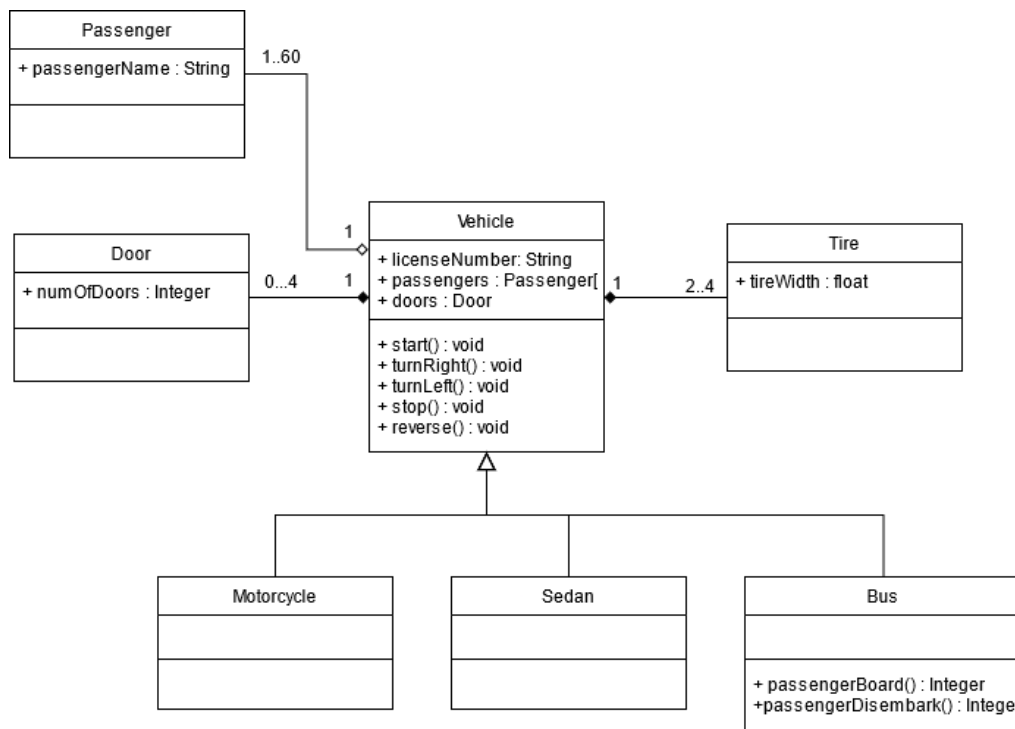


## Problem 2

Passengers get on and off a bus frequently. Modify the UML class diagram from problem 1 so that the “Bus” class has two methods:

- passengerBoard()
  - The method is given an integer with the number of passengers getting onto the bus
- passengerDisembark()
  - The method is given an integer with the number of passenger getting off the bus

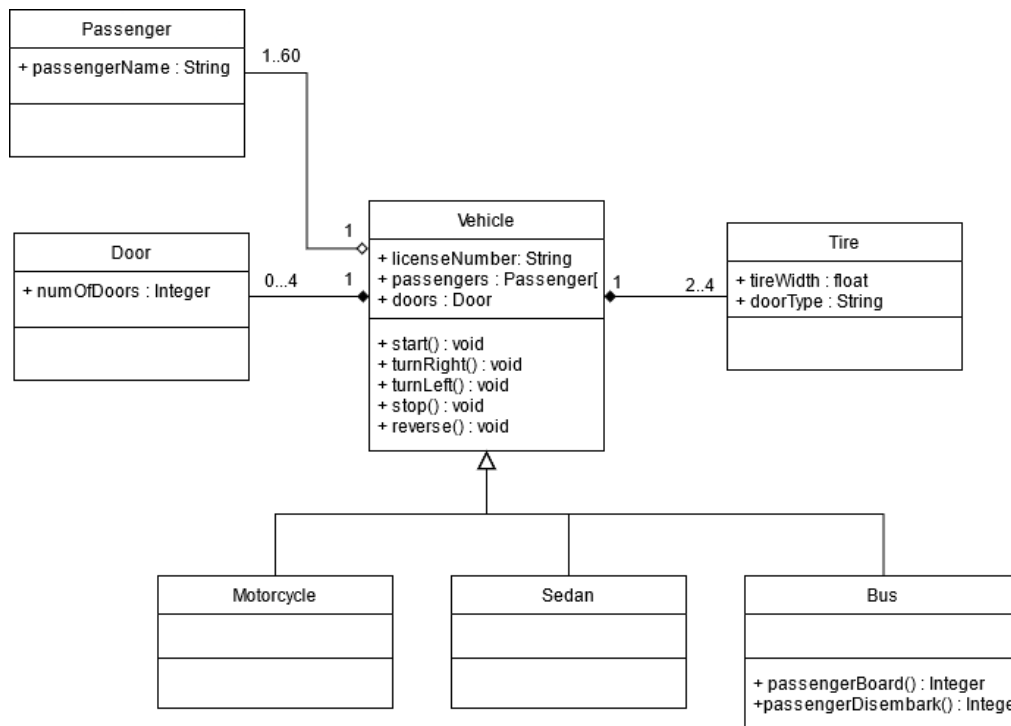
## Solution



## Problem 3

The client wants to search for a vehicle using the door type. Modify the UML class diagram from problem 2 so that the “Door” class has an attribute called “doorType” of type “String”.

## Solution



## Problem 4

The client has started to incorporate semi-trucks into their business. These vehicles typically have:

- Two doors
- Can carry up to two passengers
- Can have between six to ten tires

Modify the UML class diagram from problem 3 to include this new vehicle type in the model.

## Solution

