Exercise 4: Vehicles

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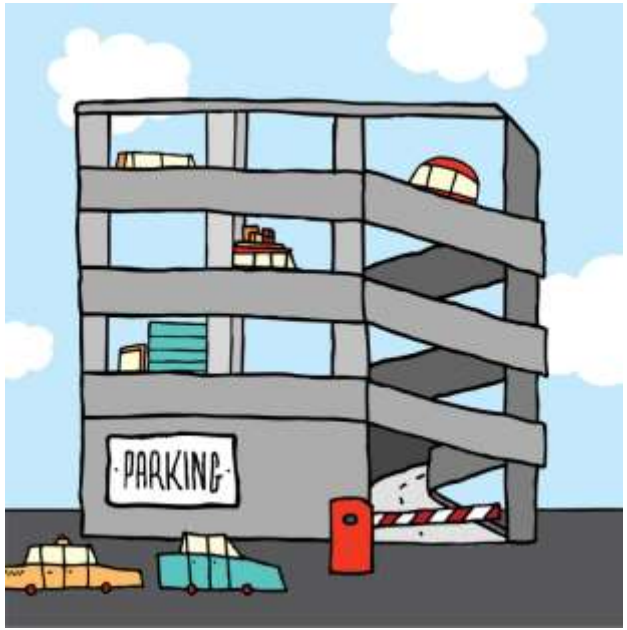
Meet Tom, Dick, and Harry!

Tom makes vehicles. Dick parks vehicles. Harry washes vehicles. They have all agreed to use the Vehicle interface you will find in the "Vehicle.jar" file on your virtual desktop.

Be Tom: create a car that implements the Vehicle interface. Create a static function "mainOne" and test-drive the object.

Be Dick: create a "Garage" class with a "parkVehicle" method. This method should take any vehicle and move it to location "100" (where the garage is). In "mainTwo" "New" one of your cars and park it.



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Be Harry: create a “Carwash” class with a “washVehicle” method. This method should take any vehicle and move it to location “200” (where the carwash is). Then set the vehicle to “clean” and move it back to wherever it was.

In “mainThree” “New” one of your cars and wash it.

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Add “smarts” to your Car implementation. It must be started or the “move” function should do nothing. Test several cases in “mainFour”.

Create a “RustyCar” class. It takes five washes to get it clean. How does your Carwash class handle that? Show me in “mainFive”.

Create the “Junker” class. It is basically a “RustyCar”, but you have to call “start” three times to get it to start. Show me in “mainSix”.

“New” the Vega vehicle in the JAR file. How do your Garage and Carwash handle these new objects? Tweak your Carwash and Garage code until you can wash and park a Vega instance. This should be “mainSeven”.

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The Garage and Carwash have similar code – code to move a vehicle from place to place. Factor this code out into something they can share. Pick one of these solutions:

- Common baseclass (inheritance)
- Use a “Driver” object (composition)

Have the Garage use the Carwash before every park. This is “mainEight”.

Strategy

Start with a clean project. Make a “lib” directory and drag/drop the jar file into it.

Modify Eclipse’s build path to include the jar.

Create the mains one at a time. Rename them from “main” to “mainWhatever” after every task.