**Lab 7 (ArrayList)**

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| **Vehicle** |
| - type : String - name : String-Price :int |
| + Vehicle(type : String, name : String, price :int) //setters getters + toString() : String  |

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| **Garage** |
| - vehicles : ArrayList<Vehicle>  |
| + Garage() + addVehicle(vehicle : Vehicle) : void + deleteVehicle(name : String) : void + getAllCars() : ArrayList<Vehicle> + getAllTrucks() : ArrayList<Vehicle> + getAllMotorcycles() : ArrayList<Vehicle> + hasVehicle(name : String) : Boolean - requestOrder(name : String) : void + printVehicles() : void  |

You have to implement the previous two classes. The class Vehicle has thre, private variables, a constructor, setters and getters, and a toString method. The class Garage has an ArrayList of vehicles and a couple of methods that apply operations on the ArrayList.

- AddVehicle(vehicle : Vehicle): takes a vehicle as parameter and adds it to vehicles

- deleteVehicle(name : String): deletes a vehicle from vehicles with the specified name

- getAllcars(): returns a ArrayList<Vehicle>that contains all the vehicle that have a type equal to car in vehicle

- getAllTrucks(): returns a ArrayList<Vehicle> that contains all the vehicles that have a type equal to truck in vehicles

- getAllmotorcycles(): returns a ArrayList<Vehicle>that contains all the vehicles that have a type equal to motorcycle in vehicles

-hasVehicle(name : String): returns true if the vehicle with the specified name is found in vehicles else, it returns false and calls requestOrder(name)

-requestOrder(name:string): prints “Request an order for” + name

-printVehicles(): prints the elements in vehicles

In the tester class, you are required to create an object of type Garage and add to its list a number of vehicles.

You should retrieve all vehicles that are cars, and print them ,retrieve all vehicles that are trucks and print them ,and retrieve all vehicles that are mototcycles and print them.

You should test the deleteVehicle method and ptint the vehicles list after deletion .

Finally, test the requestOrder method and verify that it is calling the requestOrder method if the vehicle is not found in the list.

Solution: <http://www.javaproblems.com/2013/12/creating-arraylist-application-in-java.html>