

## Introduction to Programming Project

### ***Problem***

A car rental company hires you to develop their reservation system. The system should deal with customers' queries providing a quote for the given dates and type of car. It should check for availability and make/cancel reservations.

### ***Types of vehicles and their characteristics:***

- cars: make/model, km/l, numPassenger, num\_doors, plate number, daily cost, weekly cost, weekend cost, available
- vans: make/model, km/l, numPassenger, plate number, daily cost, weekly cost, weekend cost, available
- caravans: make/model, km/l, num\_beds, plate number, daily cost, weekly cost, weekend cost, available

### ***Company side***

The program will have a company username that will allow the staff in the company to enter/delete vehicles. A basic set of vehicles should be created in the code.

### ***Customer side***

The program must be able to:

- a) Display the specific vehicles available for rent by vehicle type.
- b) Display cost associated with a given vehicle including daily, weekend and weekly rate.
- c) It must also allow the user to determine the cost of a particular vehicle for a given period of time.
- d) The program must allow for a particular vehicle to be reserved and cancelled.

### ***Technical requirements***

Object oriented approach: Instantiation, use of attributes and methods

Use of inheritance, use of lists/dictionaries as appropriate, use of GUI , efficient code, comments, error checking, string control for upper/lower case, etc...

## Questions

<b>MARKS BREAKDOWN</b>	<b>min</b>	<b>max</b>
1. Create the classes required to store all the vehicle data. Create the objects.	10	20
2. Create the structure for a customer to search the vehicles by type.	10	10
3. Create the structure for a customer to query the cost of renting a particular vehicle.		
a. Generic pricing	10	10
b. Specific to number of days.	10	20
4. Create the structure for a customer to rent a car (make available attribute =N) and return it (make available attribute=Y).	5	10
5. Create the structure for the admin user to add a new car to the fleet.	5	10
6. Create the structure for the admin user to delete a car from the fleet.	5	10
7. Create a functional GUI	5	10
<b>Total</b>	<b>60</b>	<b>100</b>