Developer test

Scenario

You are part of a team at Saab AB who will build a system that will handle car rental. The system will be adapted to several different customers, each having different requests for how to store data and the type of user interface to use.

Your task is to implement a small part of business logic with associated test cases that verify that the logic works according to the specification below.

Specification

Rental cars are divided into three categories: Small car, Van and Mini bus. More categories may be added later. A reservation is identified by a unique reservation number. Each rental refers to a car at one time.

Rental rates

Rental price is calculated according to formulas depending on the category. The price for baseDayRental and kilometer price (kmPrice) is the same for all categories.

Small car

Price = baseDayRental * numberOfDays

Van

Price = baseDayRental * numberOfDays * 1.2 + kmPrice * numberOfKm

Mini bus

Price = baseDayRental * numberOfDays * 1.7 + (kmPrice * numberOfKm * 1.5)

Use case

You should implement the following usage cases:

A1. Rental registration

When a customer rents a car it should get registered in the system.

The following should get registered

•Booking number

•Custmers date of birth

• Car category

• Time and date for the rental

• Current car milage (km)

A2. Car return

The system should be able to handle car return with the following details

• Booking number

• Time and date for the return

• Current milage of the car (when returned) (km)

When return is complete, the system calculates the price for the rental period according to the formulas above

Your task

Your task is to implement the use cases above and the associated test cases. The automated tests cases can be written with any test framework. You do not need to implement any GUI if you do not want to. The task should be implemented with Microsoft .NET and C#.

We prefer that your application is connected to a database via an ORM mapper.

If there is something unclear in the specification, you make your own interpretation.

Presentation

You will present and describe your solution to a skilled developer. Please send us the source code before the meeting so we can be prepared.

Good luck