Object Oriented Software Development 2 Due: Sunday 8/5/16, 23:55

*Assessment #3 30%*

Create a GUI similar to that below which is a reservation system for car rental. The user can select the type of car – Small, Medium, Large or All Types from a dropdown. The user then selects a date range for rental of the car and clicks on search. The list of available cars (Make and Model) is shown in the Listbox at the bottom left. The query should only return cars that are available to rent within this date range. When a user selects a car from this list the car details are shown in the TextBlock on the bottom right. The user can then click on the Book button to complete the reservation after which a confirmation Message Box is displayed. The details on the screen are then reset and the user can book another car.

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You are required to create a database in SQL Server. This will have 2 tables, Car and Booking.

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| --- | --- | --- |
| **Car** |  | **Booking** |
| ID |  | ID |
| Make |  | CarID |
| Model |  | StartDate |
| Size |  | EndDate |

You then need to populate the Car table with your own data – enter 10 cars. Once the database is created you need to link this to your Visual Studio application. You need to use LINQ to query and update the database from your application.

For the application you will need to extend the Car class that is created for you and add a ToString method and also a GetCarDetails method. Most of the functionality has been covered in class although there are some aspects where you are expected to conduct some research yourself.

Marking scheme

|  |  |
| --- | --- |
| Create database | 5 |
| Create tables - car and booking | 5 |
| Link tables | 5 |
| Attach database to Visual Studio | 5 |
| GUI - Elements | 5 |
| GUI - Combo Box | 5 |
| GUI - Image | 5 |
| GUI - Colour/Style | 5 |
| GUI - Layout | 5 |
| Communicate with database | 5 |
| Retrieve available cars | 20 |
| Display in listbox | 10 |
| Extend Car class | 5 |
| ToString method | 5 |
| GetDetails method | 5 |
| Display Booking Details | 10 |
| Booking confirmation | 5 |
| Insert to database | 15 |
| Reset screen | 5 |
| Comments/Readable Code | 10 |
| Progam compiles and runs | 10 |
|  |  |
|  | 150 |

**Note:**

Name your database CarRental\_StudentNumber and place it in the following directory C:\Temp\Data.

E.g CarRental\_s1234567

You will also need to ensure your database is uploaded with your zipped solution. I will then move it to C:\Temp\Data to run the application.