**Assignment 2 tasks - Building an application - stage 1.**

*P3 Build an application derived from UML class diagrams.*

*M3 Develop code that implements a design pattern for a given purpose.*

For assignment 2 you are required to build an application according to a UML diagram that implements a set of design patterns. Over the next few weeks we will work on building such a program.

You should aim to have the tasks on this sheet completed by Tuesday 7th April.

*Scenario*

Build an in house sales system for a car rental company.

The program will be a command line application that implements the process of recording a rental of multiple vehicles. The rental agreement will need to accommodate multiple customer names (so the system will need to be able to add a number of customers on a single rental agreement).

The program you are writing will need to achieve the following:

1. Allow the user to add new customer information for multiple customers on a rental agreement.
2. Allow the user to add multiple vehicles to the rental agreement.
3. Allow the user to print out the full rental agreement containing all customers details on the agreement and all information about the vehicles they have rented.

We will implement the program in various stages.

1. Creating a user interface, database and adding customers to the database.
2. Creating the vehicles and storing them in the database.
3. Creating a rental agreement and adding customers and vehicles to it.
4. Storing rental agreements in the database.

Stage 1: Creating a database and adding customers to it.

Study the following [UML diagram](https://drive.google.com/file/d/1GJ2OtXgG9-_wRk_45I3mIS5OtY3u58gi/view?usp=sharing). Which design pattern is being used?

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Study the [video of the working program](https://drive.google.com/file/d/1wlk4Cv7kerSD41sD1TN_HoeZ6KjDTaDd/view?usp=sharing), then write the code. Follow the UML diagram as a guide. Paste screenshots of your code in the space below.