

# Introduction

**CS6004ES –Application Development Individual Coursework –(2023/24)**

This individual coursework requires developing and documenting a small application in C# using an object oriented approach and Visual Studio. Your software artefact must be submitted as a Visual Studio project. It will be assessed using Visual Studio 2015 or any higher version and any features not working in the standard installation of Visual Studio 2015 or any higher version will not be assessed.

The coursework carries 30% of the module mark.

**Set:**

**Submission Deadlines: 16/06/2024**

**Coursework Submission in-class Demo: 23/06/2024**

This individual coursework has 2 parts, both of the soft copies which are to be submitted before 11.59pm on

**16/06/2024.**

1. **The software application to be developed in C#**
2. **The documentation in MS Word format.**

*Please note the rules on plagiarism*

The application should be implemented individually. This is not a group/team effort. Any material which is a direct copy from someone else (student or other source) or a close paraphrase/code must be indicated where it is quoted i.e., it must be made clear what material is a quotation or close paraphrase e.g. by showing the text in italics or in quotation marks. It is not sufficient to show the source in a list of references or bibliography. If you are unclear, please discuss your examples with your seminar tutor or the module leader. Plagiarism is a serious offence and conviction for plagiarism may lead to suspension from the University, even for a first offence (please see the section on Academic Misconduct in the Student Handbook).

# Software Development Task

ABC Car Traders have been in the journey to keep the long-lasting goodwill and trust of their customers as a supplier of high-quality vehicles and a transport solutions provider.

Their service centers are exclusively created to give a better service

to their customers and make their vehicle dream come true. Their experienced team will help customers to select the right product and service from their range of vehicles, spare parts, and services.

Their mission is to be the Number One Preferred Supplier for High Quality Motor Vehicles and related services with Profitable Growth through Superior Customer Service, Innovation, Quality and Commitment.

To achieve their goal, they plan to develop a software with following functionalities.

Admin

->Login

->Manage Car Details

->Manage Car Parts Details

->Manage Customer Details

->Manage Customer Order Details

->Generate Reports

Customer

->Register

->Login

->Search Car Details

->Search Car Parts Details

->Order Car/Car Parts

->View Order Status

***Note****: You may add extra features - both data and functionality to the application, if you wish.*

***Your software implementation should demonstrate/provide the following features***

1. Use of appropriate data types (built-in and programmer-defined) to handle the application data
2. Define and use your own class or classes
3. Provide window-based user interface for your application
4. Store the data related to the application

**Deliverables**

Your submission should include the software project and a reflective essay as described below.

1. Your software artefact in the form of a Visual Studio 2015 project, which should include the program’s source code, compiled classes, the executable file and data file (if any).
2. A reflective essay (1000 or more words), which concisely documents:
   1. Detailed instructions to run the program
   2. The architecture of your software in terms of software classes, clearly indicating which classes to be of your own work and which classes from other sources (e.g. From textbooks, online sources such as MSDN etc.).
   3. Detailed description of the classes’ properties and methods
   4. Your reflection of own experience of using c# and visual studio for the development task, which feature you like and why, what issues you experienced and your solution to overcome it.

**Marking Scheme for the CS6004ESIndividual Coursework**

This individual coursework counts for 30% of the module mark. The following are guidelines for marking. Mark each item listed below on a scale 0 to 5 where the marks correspond. Then multiply the mark by the weighting indicated, total and divide by 2 to get the total mark.

|  |  |
| --- | --- |
| Mark | Characterised by |
| 0 | No work or work totally irrelevant |
| 1 | Work started on right lines but no result |
| 2 | Some result, with major lack and/or errors |
| 3 | Acceptable result but incomplete, or some good result with minor errors |
| 4 | Good result but can be further polished |
| 5 | Excellent result |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Item** | **Weight** | ***Mar to 5)*** | ***Weight x Mark*** |
| **Implementation** | |  |  |  |
| 1 | The application user interface | 3 | 5 | 20 |
| 2 | Task1: Customer, Admin Login functionality | 2 | 5 | 10 |
| 3 | Task2: New Customer Registration | 2 | 5 | 10 |
| 4 | Task3: Only Admin can manage Car details | 3 | 5 | 10 |
| 5 | Task4: Only Admin can manage Car Parts details. | 2 | 5 | 10 |
| 6 | Task5: Only Admin can manage Customer Order details. | 3 | 5 | 10 |
| 7 | Task6: Customer can be able to search Car, Car Parts details | 3 | 5 | 10 |
| 8 | Task7: Only Customer can be able to order Car, Car Parts | 2 | 5 | 10 |
| 9 | Task8: Customer Can track their order status | 2 | 5 | 10 |
| 10 | Task9: Only Admin can generate various reports | 2 | 5 | 10 |
| 11 | Task10:Admin Dashboard |  |  | 10 |
| **Documentation** | |  |  |  |
| 1 | Detailed instructions to run the program | 1 | 10 | 10 |
| 2 | The software architecture | 3 | 5 | 15 |
|  |  |  |  |  |
| 4 | Detailed description of the classes’ properties and methods | 2 | 5 | 10 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 5 | Explanation about search algorithms used in the project | 2 | 5 | 10 |
| 6 | Own reflection of own experience | 2 | 5 | 10 |
| **Programming style** | |  |  |  |
| 1 | Clarity of code which shows the underlying algorithm | 1 | 5 | 5 |
| 2 | Sensible naming of programmer-defined variables, classes, properties and methods | 1 | 5 | 5 |
| 3 | Useful comments in code | 1 | 5 | 5 |
| 4 | Data validation and exception handling | 1 | 5 | 5 |
| 5 | Interface design and usability of the system | 1 | 5 | 5 |
|  | **Total** |  |  | **200/2** |