**ASSIGNMENT 2 BRIEF**

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| **Qualification** | **BTEC Level 5 HND Diploma in Computing** | | |
| **Unit number and title** | Unit 2: Advanced Programming | | |
| **Assignment title** | Application development with class diagram and design patterns | | |
| **Academic Year** | 2018-2019 | | |
| **Unit Tutor** | Doan Trung Tung | | |
| **Issue date** | 30 April 2019 | **Submission date** | 11 May 2019 |

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| **Submission Format:** |
| *Format:* The submission is in the form of an individual written report. This should be written in a concise, formal business style using single spacing and font size 12. You are required to make use of headings, paragraphs and subsections as appropriate, and all work must be supported with research and referenced using the Harvard referencing system. Please also provide a bibliography using the Harvard referencing system.  *Submission* Students are compulsory to submit the assignment in due date and in a way requested by the Tutors. The form of submission will be a soft copy in PDF posted on corresponding course of <http://cms.greenwich.edu.vn/> together with zipped project files.  *Note:* The Assignment *must* be your own work, and not copied by or from another student or from  books etc. If you use ideas, quotes or data (such as diagrams) from books, journals or other sources, you must reference your sources, using the Harvard style. Make sure that you know how to reference properly, and that understand the guidelines on plagiarism. *If you do not, you definitely get fail* |
| **Assignment Brief and Guidance:** |
| **Scenario**: (continued from Assignment 1) Your team has shown the efficient of UML diagrams in OOAD and introduction of some Design Patterns in usages. The next tasks are giving a demonstration of using OOAD and DP in a small problem, as well as advanced discussion of range of design patterns.  **Tasks:**  Your team is now separated and perform similar tasks in parallel. You will choose one of the real scenarios that your team introduced about DP in previous phase, then implement that scenario based on the corresponding class diagram your team created. You may need to amend the diagram if it is needed for your implementation. In additional, you should discuss a range of DPs related / similar to your DP, evaluate them against your scenario and justify your choice.  In the end, you need to write a report with the following content:   * A final version of the class diagram based on chosen scenario which has potential of using DP. * Result of a small program implemented based on the class diagram, explain how you translate from design diagram to code. * Discussion of a range of DPs related / similar to your DP, evaluate them against your scenario and justify your choice (why your DP is the most appropriate in that case). |
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| Learning Outcomes and Assessment Criteria | | |
| Pass | Merit | Distinction |
| **LO3** Implement code applying design patterns | | |
| **P3** Build an application derived from UML class diagrams. | **M3** Develop code that implements a design pattern for a given purpose. | **D3** Evaluate the use of design patterns for the given purpose specified in M3. |
| **LO4** Investigate scenarios with respect to design patterns | | |
| **P4** Discuss a range of design patterns with relevant examples of creational, structural and behavioral pattern types. | **M4** Reconcile the most appropriate design pattern from a range with a series of given scenarios. | **D4** Critically evaluate a range of design patterns against the range of given scenarios with justification of your choices. |