

## KOLEJ PROFESIONAL MARA BERANANG DIPLOMA IN COMPUTER SCIENCE

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| **COURSE NAME** | : | PROJECT DESIGN IMPLEMENTATION AND EVALUATION |
| **COURSE CODE** | : | CSC2764 |
| **ACADEMIC SESSION** | : | SESSION 1/2024-2025 |
| **TYPE OF ASSESSMENT** | : | FINAL PROJECT REPORT |
| **DURATION** | : | 6TH MAY 2024 – 17TH JUNE 2024 |

**CLO 3: Build a project according to the proposed plan and design (C3, PLO 6).**

**INSTRUCTION TO CANDIDATES:**

1. Late submissions after given due date will not be accepted.
2. Report should be written in using:

Font Type: Arial Size: 11 pts

Line Spacing: 1.5

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| **Section / Question No.** | **Marks** |
| 1 |  |
| 2 (a) |  |
| 2 (b) |  |
| 2 (c) |  |
| Total | 60 |
| **Total** | **/ 60** |

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| **Personal Details** | |
| **Name** | MUHAMMAD FAREEZ IZZUDDIN BIN ABD KARIM |
| **I/D Number** | BCS2207-038 |
| **Class** | DCS 6C |
| **Lecturer** | PN. NINI ANIZA ZAKARIA |

# SCENARIO:

System design, implementation, and testing phase are the most crucial and critical phase in ensuring all objectives set for the project are achieved as planned. Based on the agreed System Requirement Specification, all the system requirements must be converted into a proper system design. Apart from that, you are also required to proceed with the implementation of the system by using any appropriate software(s) that you have selected during the feasibility study that had been conducted in Phase 1. System testing also needs to be performed by using any appropriate testing methods . Successful testing is very important to make sure that your developed system meets all the user requirements and successfully functions without any error.

As a Project Manager, you are responsible in making sure that the activities specified in Project Plan is carried out according to schedule and meets all client’s requirements. Therefore, you are required to perform the following tasks:

## PROJECT DESIGN/STRUCTRE (24 Marks)

* + 1. Prepare a System Design Specification (SDS) by implementing the best practices of design aspects which include:
       - Use case diagram (6 marks)
       - Sequence diagram (6 marks)
       - Class diagram (6 marks)
       - Storyboard (6 marks)

## PROJECT IMPLEMENTATION (36 Marks)

* + 1. Construct an original working system based on the user requirements, which fulfills the following criteria: (30 marks)
       - Functionality
       - Usability
       - Security
       - Performance efficiency
    2. Prepare test cases by following the standard format to show verification of the project implementation. (6 marks)

# Assessment Rubrics:

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| **Task** | | **Mark** | | | **Marks Obtained** |
| **2** | **4** | **6** |
| 1(a) | Prepare a System Design Specification (SDS) byimplementing the best practices of design aspects  including: |  |  |  |  |
| i) Use Case Diagram | * Incomplete use case diagram for the system development which does not include any one of below:   + Correct actors   + Correct use cases   + Correct relationship between actors and use case. | * Complete use case diagram for the system development include:   + Correct actors   + Correct use case   + Correct relationship between actors and use case. | * Complete use case diagram for the system development include:   + Correct actors   + Correct use cases   + Correct relationship between actors and use case.   + Correct used of include and extend relationship.   + Cover all functionalities of the system and best practices of design |  |

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|  | ii) Sequence Diagram | * Incomplete sequence diagram produces which not include either obej ct, messages used, and the lifeline begin and ending. * Sequence diagram does not cover all the use case diagrams | * Complete sequence diagram produces which include object, messages used, and the lifeline begin and ending. * The number of sequence diagram produced is not consistent with the number of use cases in the use case diagram. | * Complete sequence diagram produces which include object, messages used, and the lifeline begin and ending. * The number ofsequence diagram produced is consistent with the number of use cases in the use case diagram. * The sequence diagram produced covers the alternative options of the specific use cases. * The steps provided in the sequence diagram produced are logic and includes the best practices of design |  |
|  | iii) Class Diagram | * Incomplete Class Diagram which does not include either correct classname, attributes and behaviors/ operations. * Partly correct relationship between class and symbol used of relationship and relationship naming. * Partly correct use of multiplicity | * Complete Class Diagram which includes correct class name, attributes, and behaviors/operations. * Partly correct relationship between class and symbol used of relationship and relationship naming. * Partly correct use of multiplicity. | * Complete Class Diagram which includes correct class name, attributes   and behaviors/operations.   * Correct relationship between class and symbol used of relationship and relationship naming. * Correct use of multiplicity.   The class diagram produced reflects the system implementation and includes the best  practices of design |  |

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|  | iv) Storyboard | * Incomplete storyboard of system development which does not include identifying symbols and naming label. * The story board produced not cover all forms/page of the system development | * Complete storyboard of system development which includes identifying symbols and naming labels. * The story board produced covers all the forms of the developed system. * The flow of the storyboard partly logic | | * Complete storyboard of system development which includes identifying symbols and naming labels. * The story board produced covers all the forms of the developed system. * The flow of the storyboard is logical. * The flow of the storyboard produced are consistent with the sequence of the processes in the sequence diagram and includes the best practices.   of design |  |
| **Task** | | **Mark** | | | |  |
| **15** | | **30** | |
| 2(a) | Construct an original working system based on the user requirements, which fulfills the following criteria:   1. Functionality 2. Usability 3. Security 4. Efficiency | * Some of the functions provided are working as expected. (2 M) * Only some of the functions provided in the system provide the correct result and output (2 M) * Only some of the functions are appropriate for the users to accomplish tasks. (2 M) * Only some of the functions provided are consistent with the user requirements. (2 M) * The flow of the processes of the system are complicated, hence not so user friendly and difficult to control the operation of the system (2M). * Links for navigation are not clearly labelled, making it difficult for the user to move from a form/page to related form/page (forward and back). (2 M) * The system’s forms/page layout is cluttered look (1 M) | | * All the functions provided are working as expected. (4 M) * All the functions provided in the system provide the correct result and output. (4 M) * All the functions provided appropriate with the users to accomplish task. (4 M) * All the functions provided are consistent with the user requirements. (4 M) * The flow of the processes of the system are organized and simple, hence very user friendly and easy to control the operation of the system. (4 M) * Links for navigation are clearly labelled, allowing the user to easily move from a form/page to related form/page (forward and back). (4 M) * The system’s forms/page have an attractive, usable layout (2 M) * Buttons placement is at a reasonable | |  |

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|  |  | * Buttons placement is not at appropriate place.(1 M) * The system provides a basic username andpassword for the user. (1 M) | place. (2 M)   * The system provides more secure security features by providing different levels of access for each user to access certain information based on their user type. (2 M) |  |
| **Task** | | **Mark** | |  |
| **3** | **6** |
| 2(b) | Prepare test cases by following the standard given format to show verification of the project implementation | * Produce incomplete test cases which might include only some of the components of the Test Case ID, Test Case Description, Input Data, Expected Result, Actual Result, Pass/Fail and Remarks. (1 M) * The test cases produced only cover part of the system’s functions. (1 M) * The case cases produced are not organized properly based on each function available in each form/page. (1 M) | * Produce a complete test case which contained all the components such as the Test Case ID, Test Case Description, Input Data, Expected Result, Actual Result, Pass/Fail and Remarks . (2 M) * The test cases produced cover all the system’s functions. (2 M) * The test cases are produced based on each function available in each form/page. (2 M) |  |
| **Total Marks Earned** | | | | /60 |
| **Total Percentage (50%)** | | | |  |