**Higher National Diploma in Computing**

# Assignment Brief

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| Student Name /Cinec Reg No | |
| Edexcel No | |
| **Unit Number and Title** | Unit 34: Systems Analysis & Design |
| Academic Year | 2018/2019 |
| Unit Assessor | Buddhini Samarakkody |
| Branch | |
| **Assignment Title** | Evaluation and application of analysis & design methodologies |
| Issue Date | 10/09/2018 |
| Submission Date | |
| Internal Verifier Name | |

**Student Declaration**

I hereby, declare that I know what plagiarism entails, namely to use another's work and to present it as my own without attributing the sources in the correct form. I further understand what it means to copy another's work.

1. I know that plagiarism is a punishable offence because it constitutes theft.
2. I understand the plagiarism and copying policy of Pearson Edexcel UK.
3. I know what the consequences will be if I plagiarise or copy another's work in any of the assignments for this program.

4. I declare therefore that all work presented by me for every aspect of my program, will be my own, and where I have made use of another's work, I will attribute the source in the correct way.

5. I acknowledge that the attachment of this document signed or not, constitutes a binding agreement between myself and Pearson Edexcel UK.

6. I understand that my assignment will not be considered as submitted if this document is not attached to the assignment.

**Student's Signature:**                                                    **Date:**
(*Provide E-mail ID*)                                                       (*Provide Submission Date*)

## General Guidelines

1. A cover page or title page should be attached to your assignment. Use page 1 of this assignment brief as your cover page and make sure all details are accurately filled.
2. The entire assignment brief should be attached as the first section of your assignment report.
3. The assignment report should be prepared using a word processing software. (A4 Sized paper)
4. Allow 1" margin on top, bottom and right sides of the paper and 1.25" on the left side (for binding).

## Word Processing Rules For the Assignment report.

1. The font size (Body text) should be **12** point, and should be in the style of **Time New Roman**.
2. Set line spacing to **1.5.**
3. Justify all paragraphs.
4. Ensure that all headings are consistent in terms of size and font style.
5. Use **footer function on the word processor to insert your name, unit, assignment no, and page number on each pag**e. This is useful if individual sheets get detached from the submission.
6. Use the spell check and grammar check function of the word processing application to review the use of language on your assignment.

**Important Points:**

1. Carefully read the  instructions given with the assignment.

2. Ensure that sufficient time is spent to complete the assignment by the due date.

3. Do not wait till the last minute to get feedback on the assignment. Such excuses will not be accepted for late submissions.

4. You must be responsible for efficient management of your time.

5. If you use other people's work or ideas in your assignment, it must be properly referenced, using the HARVARD referencing system, in your text or any bibliography. Otherwise, you'll be found guilty of committing plagiarism.

| Learning Outcomes and Assessment Criteria  of the Module | | |
|---|---|---|
| **Pass** | **Merit** | **Distinction** |
| **LO1** Evaluate the strengths and weaknesses of the traditional and agile systems analysis methodologies | | |
| **P1** Discuss the strengths and weaknesses of the traditional and agile systems analysis methodologies. | **M1** Compare and contrast the strengths and weaknesses of the traditional and agile systems analysis methodologies. | **D1** Critically evaluate the strengths and weaknesses of the traditional and agile systems analysis methodologies, including the transition problems faced by organizations that move from the traditional to the agile approach. |
| **LO2** Produce a feasibility study for a system for a business-related problem. | | |
| **P2** Produce a feasibility study for a system for a business related problem. | **M2** Evaluate the relevance of the feasibility criteria on the systems investigation for the business related problem. | **D1** Critically evaluate the strengths and weaknesses of the traditional and agile systems analysis methodologies, including the transition problems faced by organizations that move from the traditional to the agile approach. |
| **LO3** Analyze their system using a suitable methodology | | |
| **P3** Analyze a system using a suitable methodology for a business-related problem. | **M3** Evaluate the effectiveness of the analysis in the context of the methodology used. | **D2** Justify the choice of the analysis methodology used in the context of the business problem. |

| LO4 Design the system to meet user and system requirements | | |
|---|---|---|
| **P4** Design a fully functional system to meet user and system requirements for the business related problem. | **M4** Assess the effectiveness of the system design with particular reference to the methodology used and how the design meets user and system requirements | **D2** Justify the choice of the analysis methodology used in the context of the business problem. |

| Criteria Reference | To achieve the criteria the evidence must show that the student is able to: | Task No | Evidence Page No |
|---|---|---|---|
| P1 | Discuss the strengths and weaknesses of the traditional and agile systems analysis methodologies. | 1.1,1.2 | |
| P2 | Produce a feasibility study for a system for a business related problem. | 2.1,2.2 | |
| P3 | Analyse a system using a suitable methodology for a business-related problem. | 3.1 | |
| P4 | Design a fully functional system to meet user and system requirements for the business related problem. | 4.1 | |
| M1 | Compare and contrast the strengths and weaknesses of the traditional and agile systems analysis methodologies. | 1.3 | |
| M2 | Evaluate the relevance of the feasibility criteria on the systems investigation for the business related problem. | 2.3 | |
| M3 | Evaluate the effectiveness of the analysis in the context of the methodology used. | 3.2 | |
| M4 | Assess the effectiveness of the system design with particular reference to the methodology used and how the design meets user and system requirements | 4.2 | |
| D1 | Critically evaluate the strengths and weaknesses of the traditional and agile systems analysis methodologies, including the transition problems faced by organizations that move from the traditional to the agile approach. | 1.4,1.5,2.2 | |
| D2 | Justify the choice of the analysis methodology used in the context of the business problem. | 3.3, 4.3 | |

| Submission format |
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| The submission is in the form of an individual written report. This should be written in a concise, formal business style using 1.5 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. |

Assessment Scenario 1

You are selected to work as an intern for an IT Consultancy firm. One of their clients who currently use traditional analysis & design methodologies and intending to go for agile methodologies, have requested the firm to conduct a study on Evaluating the strengths and weaknesses of both approaches and **produce and present a written report** to them. Your manager has selected you for this assignment.

You are required to carry out the following task (along with its sub tasks) in terms of completing this assignment.

**Task 1**

1.1 Describe the different traditional and agile methodologies available and their features.

1.2 Discuss the strengths and weaknesses of each methodology.

1.3 Compare and contrast the strengths and weaknesses of these traditional and agile systems analysis methodologies that you identified.

1.4 Critically evaluate (give your own opinion on) the strengths and weaknesses of the traditional and agile systems analysis methodologies

1.5 Discuss typical transition problems faced by organizations that move from the traditional to the agile approach.

Assessment scenario 2

Consider a business related problem of your choice and interest. You may select the business problem that you want to study, from your area of specialization i.e. Software, Networking.

Carryout the following tasks based on the business problem that you selected and **document your work**.

**Task 2**

2.1 Explain the background to your business problem and propose a potential solution for it.

*Note: You may come up with more than one alternative solution if required and applicable.*

2.2 Carryout a feasibility study for your proposed solution to the business problem.

- Assess at least the Technical Feasibility, Economic Feasibility (Cost-Benefit analysis) and Operational Feasibility.

  *Note: You may perform Legal & Schedule feasibility as well if applicable.*

- In your feasibility study, critically evaluate how the strengths & weaknesses of traditional and agile methodologies apply to your business problem and any transitional problems that could arise if the organization (i.e. the organization you have selected) is currently using the traditional approach.

2.3 Justify the importance and relevance of the feasibility criteria you assessed above, in terms of your business problem.

**Task 3**

3.1 Perform Systems Analysis for your proposed solution (system) using a suitable methodology.

- Use suitable fact finding techniques to investigate and identify user and system requirements.

*Note: You may draw Use Case diagrams if required.*

- Identify any constraints/limitations including any security issues.

3.2 Explain how effective your analysis was in terms of the methodology that you used.

3.3 Explain what criteria you used to select the methodology and justify your choice in terms of your business problem.

**Task 4**

4.1 Design the system to meet user and system requirements that you identified in the previous task.

- Draw Data Flow Diagrams, Flow Charts, UML models as appropriate for the system you are designing.
- Depending on the methodology that you are using (Traditional or Agile), describe design aspects specific to your selected methodology. (i.e. any special aspects with regard to database designing, UI designing, architectural designing)
- Depending on the nature of the system that you are designing (i.e. database application, web or mobile application or any other type of application) describe specific tools & techniques that you use for designing it.

4.2 Assess the effectiveness of your design, paying attention to the methodology you used and how the design meets user and system requirements.

4.3 Justify your design decisions in terms of your business problem.

# :End of Tasks

**Assignment Feedback**

| Formative Feedback: Assessor to Student |
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| Action Plan |
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| Summative feedback |
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| Feedback: Student to Assessor |
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| Assessor Signature | | Date | |
|---|---|---|---|
| Student Signature | | Date | |

**END OF   THE ASSIGNMENT**