



Software Engineering and Testing. BSC Year 2, 2024/2025
(Assignment 2 - 20%)
(Demo 5%)

Assignment 3: Design and Draft Implementation

Outline: Assessment 3: Design and Draft Implementation:

20% Due date: (24th March 2025 - 9am)

5% Demo (In labs - Week of 25th March) TBA

Objective: To produce

- (a)** Design document that outlines the methodology and design choices towards implementing requirements (see CA2) from your project proposal and requirements.
- (b)** Implementation of a draft (untested) version of your group project.

To Complete:

(a) Design Document: (10%)

The purpose of your design document is to include all aspect of your project methodology, as well as design diagrams that were created from your original proposal and use case specs.

It should include:

- **Methodology Section:**
 - What methodology are you using (OOAD/CASE TOOLS)?
 - Why is this the best methodology for your project?
 - How has the design been created based on initial Use Cases?
- **Class Diagram** – with explanation of your process of creation
- **ERD** - with explanation of your process of creation

(b) Implementation: : (10%)

The implementation of your design (classes and database) should be implemented in PHP using an appropriate front-end interface based on HTML/CSS. The implementation should be demonstrated during the first lab you are required to attend after uploading assessment 3 (design and draft implementation)

It should include:

- **SQL Database Creation file**
- **All PHP files relevant to implementation of project.**

Implementation Checklist:

- Read and Write to Database via client browser on localhost. **CRUD**
- Read and Write to Database via client browser on localhost by using objects (RAM Data structure) from class design. **CRUD via Objects**
- Implementation (and class diagram) should include at least:
 - *1 generalisation (Inheritance)*
 - *1 partial composition (Aggregation), and*
 - *one full composition.*
- User interface should allow for demonstration of all checklist items.

****Your report should be typed 1.5 spacing in 12-point Times' font (or equivalent).

Upload your finished document on the relevant link on Moodle.

Include the team name in your file name and the names of all team members.

NB: Upload PDF, SQL and PHP format Only

Academic Honesty:

Any work that you submit for continuous assessment or assignments must contain a significant contribution by you. Any help you receive from someone must be acknowledged in the work submitted. Failure to acknowledge the source of a significant idea or approach is considered plagiarism and not allowed. Academic dishonesty will be dealt with severely. At a minimum, you will receive a mark of zero for the assignment

Marking Scheme

Design Document: (10%)

- Methodology Section: (1 marks)
- Conceptual and Logical OOD Class Diagrams + process (4 marks)
- Conceptual and Logical ERDs + process (4 marks)
- Updated Use Case Specs, Requirements, Justifications (1 marks)

Implementation: (10%)

- Physical Database Model Creation (3 marks)
- Objected Orientated Model of Classes Created
 - *Basic Encapsulation* (2 marks)
 - *1 Generalisation* (2 marks)
 - *1 partial composition* (1 mark)
 - *1 full composition* (1 mark)
- Updated Front End implemented (1 mark)

Demo (5%):

- Updated User Specs and Requirements Implemented and Demonstrated (2 marks)
- Quality of Website Interface in terms of potential further testing (2 marks)
- Team Cohesion and Individual Roles Demonstrated (1 marks)

(Total 25 marks)