

**Software Engineering and Testing. BSC Year 2, 2024/2025**

**(Assignment 3 - 20%)**

**Assessment 3: Design and Draft Implementation**

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**Submission date**

**Declaration**

I herby certify that this material, which I now submit for assessment on the programme of study leading to the award of Ordinary Degree in Computing in the Institute of Technology Blanchardstown, is entirely my own work except where otherwise stated.

Author: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dated: \_\_\_\_\_\_\_\_\_\_\_\_\_

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**Table of Contents**

# Title:

# *Abstract / Executive Summary (200 Words max)*

# Project Definitions

The purpose of the document is to outline the all the methodologies, requirements as well as the progression of the project completed so far. The project is about developing an online website that sells electronics that is computers, phones etc. The functional specification of the website includes, register and login pages, view history of transactions, search bar for searching products, as well as a form for customers to use to sell their products through the website. The website will have a very friendly user interface and also have a product page with almost all the items on sale. The website will have a database consisting of tables that will store data. The website will develop in the PHP programming language as well as HTML and CSS. Technophile (people interested in electronics) is the target market for the website.

# Document Revision

Rev. 1.0 date – initial version

Rev. 2.0 – 21/02/2025

Rev. 3.0 – 24/02/2025

Rev. 4.0 – 03/03/2025

Rev. 5.0 – 10/03/2025

Rev. 6.0 – 17/03/2025

This is the current status of the project. The project is done by the use of version control system that is every version is an upgrade of the previous version.

# Methodology

System models – UML

Use of, and necessity of OOAD

Purpose of using classes / What is a class diagram?

Static Versus Dynamic Case Diagrams?

What is an ERD?

Purpose of using classes?

Volatile versus Persistent storage – Object Instances / Database?

User Interface template chosen and how it can aid in executing the functional specification of the project.

The project is designed with the use of ERD, class diagrams, use case specifications, the type of user interface designed for the website to incorporate. We created conceptual ERD and logical ERD as well as class diagram.

1. **Requirements**

4.1 Use Cases

4.2 Use Case Specifications

(Specifically – how use case specifications have been used as a means to develop the ***classes/attributes/methods*** and database ***tables***)

1. **Case Diagrams**

**Class Diagram** – Show all relationships, multiplicities, associations, generalisations (inheritance), aggregations (compositions) - See lecture 4.

Paragraph to explain ALL design decisions.

**Entity Relationship Diagram** – Show all relationships, multiplicities,

Paragraph to explain ALL design decisions.

# Conclusions

Your conclusions and recommendations as to how far the project has progressed.

Your changes to the original proposal that the design has revealed and necessitated.

Additional sections: Table of Contents, Table of Figures, References, Index

Checklist: Is your document complete and correct?

*Content:*

* Does the design include all requirements from the customers’ needs
* Are you satisfied with all parts of the document?
* Do you believe all parts have been implemented?
* Have you explained your methodology and design choices?
* Have you clearly articulated your understanding of the purpose of all diagrams created ?
* What are these diagrams? Why you need them? How were they developed?
* Is each part of the document in agreement with all other parts?
* Does the design create a solution for the initial proposal?

*Completeness*:

* Are all the necessary components specified?
* Are the design specifications precise enough?
* Are all sections from the document template included – if changed, why?

*Clarity*:

* Is the design reasonable?
* Is the level of details for each design section appropriate?
* Is the design written in a language appropriate to the intended audience of software engineering teams?
* Are all items clear and unambiguous?