

**Department of Information Technology**

**Higher Diploma in Software Engineering (IT114105)**

**PBL Project Brief:**

**Management System for Smile & Sunshine Toy Co. Ltd.**

**Integrated Project**

**For**

**ITP4915M System Development Project**

**ITP4510 Data Structures & Algorithms: Concepts & Implementation**

**ITP4522 Software Project Management & Quality Assurance**

**ITP4523M Internet & Multimedia Applications Development**

Information Technology Discipline

**AY2024-25**

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| **Academic Year:** | AY2024/25 |
| **Name of Department:** | Department of Information Technology |
| **Code of Programme:** | IT114105 |
| **Name of Programme:** | Higher Diploma in Software Engineering |
| **Code/ Name of Module:** | ITP4915M/ System Development Project  ITP4510/ Data Structures & Algorithms: Concepts & Implementation  ITP4522/ Software Project Management & Quality Assurance  ITP4523M/ Internet & Multimedia Applications Development |
| **Semester/ Class:** | Semester 2-3 |

# PBL Project Title[[1]](#footnote-1)

**Design and develop a central computerized management system for Smile & Sunshine Toy Company.**

# Driving Question

How can an organization get benefit from a central computerized management system?

# Project Objective

To enhance the efficiency of the daily operation of an organization, including enhancing the day-to-day operation routine, effective the managing issues and the customer satisfaction.

# Project Structure

The project team is recommended to work with the following steps to enhance the efficiency of the operation corresponding to the driving question:

* Step 1:

Understanding the business operations

* Step 2:

Finding the current operation problems

* Step 3:

Planning and designing the computerized management system, data structure, web pages, and proposing the required functions of the system to fulfill the business needs

* Step 4:

Writing a technical report to analyze the system requirement, the system architecture, and the proposed system technical analysis and design

* Step 5:

Implementing and testing the system

* Step 6:

Compiling the reports for the system

# Project Path and Milestones

This is to be delivered in Semester 2-3. The project development is divided into four stages as shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| **No. of Week** | **No. of Stage** | **Learning activities** | **Submission** |
| Week  1-4 | Stage 1: Launch Project | 1. Conduct the preliminary study to define the problem to be solved, outline the proposed solution | 1.Requirement Specification Report |
| Week  5-13 | Stage 2:  Build Knowledge | 1. Produce System analysis and System design for proposed system, such as   analysis the system architecture, hardware and software requirement, the detailed system design and database design   1. Develop a program to adopt different data structure techniques 2. Adopt different system development techniques 3. Compile testing plan including unit test, integration testing, etc. | 1. Design Specification Report  2. Prototype of program to adopt different data structure techniques  3. Prototype for the proposed business  4. Draft of Testing plan |
| Week  14 - 24 | Stage 3: Develop and Critique | 1. Develop the proposed system 2. Develop a website to adopt different web technologies | 1. Final prototype for the proposed business  2. A complete functional website |
| Week  25 - 26 | Stage 4: Present Products Publicly | 1. Finalize the project report, testing plan 2. Present the final product | 1.Final report  2.Project presentation and demonstration |

# Professional Ethics

Professional ethics are principles that they guide you on how should one work for the PBL project. There are some universal ethical principles such as Confidentiality, Intellectual Property and Plagiarism, though ethical principles may sometimes differ depending on the professions involved in the project.

**Non-disclosure Agreement/ Confidentiality**

Students should observe absolute confidentiality in all matters concerning a client’s technology, strategy, organization and business practices and / or any other matter which is defined as confidential by the client, unless permitted to disclose such information by the client.**Intellectual Property**

Whilst a student will maintain ownership of the Intellectual Property in the materials he / she created, each student irrevocably grants VTC a perpetual, royalty-free, world-wide and non-exclusive right to reproduce or use any Intellectual Property materials created by the student during his / her course of study. Such right to use will include but not limited to i) sub-license the Intellectual Property, ii) showcase the award-winning works for publicity or display purpose; and iii) refer to and use the works created by student in seminars, symposia, lectures and professional meetings while VTC will acknowledge the materials as the student’s Intellectual Property.

**Plagiarism**

Plagiarism is strictly prohibited in this PBL project. It is broadly defined as intentionally or unintentionally failing to acknowledge the source of ideas or quoted text in a creative work. It can take many forms, from deliberate cheating to accidentally copying from a source without proper acknowledgement. Plagiarism is an academic offence, but also being recognized as violations of Copyright law when the act of plagiarism involves others’ Intellectual Property.

# Assessment

The below table summarizes a break-down of assessment:

|  |  |  |
| --- | --- | --- |
| **Integrated Assessment** | **Assessment Components** | **Module** |
| Initial Study | Requirement Specification Report | ITP4522 (CA) |
| ITP4915M (CA) |
| Design & System Specification | Design Specification Report | ITP4522 (CA) |
| ITP4915M (CA) |
| Program prototype | ITP4510 (EA) |
| Draft prototype for the proposed business | ITP4915M (CA) |
| Draft Testing plan | ITP4522 (CA) |
| Product & Development | Final prototype for the proposed business | ITP4915M (EA) |
| ITP4523M (EA) |
| Final documentation | ITP4915M (EA) |
| Project presentation and demo | ITP4915M (EA) |

1. This project brief should comprise 5 concepts to facilitate students’ learning in the PBL project or module. The 5 concepts include i) Real-world Problem-solving, i.e.: the Driving Question; ii) Interdisciplinary Learning, iii) Professional Ethics, iv) Safety Precaution and v) Assessment on the Student-led Learning. As regards the Essential Project Design Elements of PBL, please also refer to the Gold Standard PBL at <https://www.pblworks.org/blog/gold-standard-pbl-essential-project-design-elements> [↑](#footnote-ref-1)