



Development Software 3

Projects 2024

Introduction

The software development project is by far the most important single piece of work in the Information Technology Diploma programme. It aims to integrate the skills and knowledge acquired and apply these skills in order to solve a workplace or societal ICT problem.

Selection of the project

The project should be an implementation of an information system APP as a business solution for an organization and or a societal problem. Research type projects will be accepted, however, they should meet specified requirements [See project scope and requirements section].

Students will work on a topic of interest(s) which may have originated from the students' work place, community based projects, organization's requirement(s) or solves a societal problem

Students should verify from the client whether they had previously given such a project to any other students, as implementing a similar project for the same client is not allowed. If students do not have a specific client, a thorough research with traceable references should be done to ensure that a similar project has not been done before.

Project Scope and Requirements

For a project to be accepted and approved, it should meet real world current demands and trends be well researched, and meet the minimum following requirements:

- Mobile application
- Web application
- Distributed (in any form) database Management System
- Appropriate GUI
- Employ cloud computing
- Use of Appropriate Architecture

Project Proposal

A project proposal summarizes the intended work to be carried out during the project period. Prior to commencing with the project work, the proposed project must first be discussed with the Project Mentor and Subject Coordinator. Research into the areas of interest and evidence of the research needs to be formulated. The group should then register and submit their project proposal to the subject coordinator / lecturer. The Project can ONLY commence once the project has been accepted and approved by the Lecturer/ Subject coordinator!

Time

Students have a period of 6 (SIX) months to work on this project (February – July)

Project procedures

After the project has been approved, your group will be responsible to:

- Plan and monitor the project.
- Discover, understand, and document the details of the problem.
- Design the system components that solves the problem or satisfy the need.
- Build, test and integrate system components.
- Complete system tests and then deploy the solution.

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Technical Software and hardware requirements

- You are allowed to use the appropriate / any software language of your choice (for Coding)
- Any Project Management Software Application
- Cloud storage of your choice for artefacts or a central repository.
- MsTeams, Github or Discord for Group Meetings.

Coordination and mentorship

Students will have regular meetings with their supervisor and or mentor to discuss project work and produce a formal (report) in a structured way along the suggested guidelines.

Students should submit a progress report on a regular basis or as instructed, to the project coordinator. These reports should indicate the progress group is making with regards to the project, details of meetings with mentor(s), decisions taken, problems encountered etc., and be signed off.

A consultation schedule will be posted on weekly basis in which you are required to book your consultation slots. Please note that the onus is on you to check if the consultation is approved or not. Please ensure that you adhere to the times and ensure you honor your appointments timeously. Failure to honor these appointments will result in penalties being applied.

Assessments and scoring

Each member of the team is expected to contribute equally to the project. **Note that project grades will be given on an individual basis.** If a member does not contribute substantially to the project, his/her grade will be significantly reduced. A peer evaluation and a self evaluation report is required by all members of the group.

The Group Presentation of the final product will be done by ALL members of the group, using the following method(s):

- a) **Physical group presentations**
- b) **Video presentations**
- c) **Showcasing**

Students / Groups will have to :

- identify and present their idea so that it will be approved and registered. (See table 1 for presentation dates)
- compile and submit document at each of the phases of their project. (See Table 1 for submission dates)
- do an oral report (presentation) for the Design and Implementation of the system. See Table 1 for presentation.
- Present / showcase the system. The presentation should include:
 - Full description of the system accompanied by user manual and supporting documentation
 - Full printed report on:
 - The background and the definition of the project. Aims and objectives of the project.
 - Brief definition of functional and non-functional requirements. Justifications on the choice of the development life cycle approach used.
 - Implementation environment used and the motivation behind the selection of that environment. Description of testing approach and plan.
 - IT tools used, Challenges encountered, Lesson learned, Future enhancements of the deployed system, and Limitations of the developed solutions.

Table 1

Phase	Activities	Deliverable	Submission Date
Project registration	App Proposal	App Approval document Mentor agreement Form	1 March 2024
Project Planning	Feasibility Analysis & Research	Project feasibility report	15 March 2024
System Planning	Perform Preliminary investigation and Plan the project	Project Initiation document (PID)- Project Plan (MS Project)	05 April 2024
System Analysis	logical model of the system.	System Requirements Document (SRS) including: UML – Use Cases SSD	26 April 2024
System Design	Develop a physical model that will satisfy all documented requirements.	System Design Specification (SDD) including: GUI DBMS Test plan	31 May - 07 June 2024
System Implementation	Construct and deploy the system. Test Documentation & Certification	Product Output User manual. Client Certificate Project report Presentations Video submission	22 – 31 July 2024
Rework And Artefacts archived			TBA