

**AY24/25 Semester 1**  
**C237 Software Application Development**  
**CAG1 Specification**

## **Introduction**

The purpose of this mini project is to understand and apply the knowledge of website development to **propose** a **NodeJS Web Application** that stores and retrieves data to/from a database server for development.

## **Task**

Write a proposal for the NodeJS Web Application you would like to develop. The proposal should outline the key aspects of the Web Application, including the sections listed below.

### **1. Application Idea**

- Brainstorm and include at least ONE distinct application idea suitable for the Web Application.
- Each idea should be accompanied by a brief description highlighting its purpose and potential impact.

### **2. Key Features and Functionalities**

- Identify and describe the essential features and functionalities envisioned for the Web Application.
- Ensure that the features encompass the fundamental CRUD operations expected in a web application.
- CRUD – Create, Retrieve, Update, Delete
  - Create: add new data entries to the database.
  - Retrieve: access and view existing data stored in database
  - Update: modify and update data entries within database
  - Delete: remove unwanted data from database

### **3. Database Fields**

- Define the necessary database fields for the proposed Web Application.
- Outline the tables, columns, and data types required to store relevant information effectively.

### **4. Target Audience**

- Identify the target audience demographics and interests for the proposed Web Application.

### **5. Potential Challenges**

- Anticipate potential challenges that may arise during the development and implementation of the Web Application. This could include technical hurdles, data security concerns, scalability issues, or any other relevant challenges.
- Discuss how to mitigate these challenges.

## 6. Timeline for Development

- Create a realistic timeline for the development of the Web Application, including milestones and deliverables for each stage.
- This should include planning, design, and development phases.

## 7. Additional Features for Future Enhancements

- Propose additional features or enhancements for future iterations of the Web Application.
- These could include advanced functionalities or improvements based on user feedback.

### Important note

This assignment constitutes the first part of a series of three assessments.:

1. **Part 1** is to write and submit the proposal for the Web Application you would like to create to LEO2.0 (**CAG1 – Week 5**)
2. **Part 2** is to develop and submit the Web Application with GUI, screen interactivity and database integration to LEO2.0. (**CAG2 – Week 10**)
3. **Part 3** is to present your work. (**CAG2 – To Be Advised**)

### Note:

- a. This is an individual mini-project
- b. In Part 2, you are to design, develop and implement the proposed NodeJS Web Application using only HTML, BOOTSTRAP, CSS, JavaScript and MySQL.
- c. You are free to be as creative as you can but do ensure that you can complete the Web Application within the specified timeframe.
- d. You are not allowed to use full website templates that are available on the internet. Significant marks will be deducted if you are discovered doing so.
- e. No marks will be given to features that are hardcoded.
- f. For this assessment, you may use artificial intelligence (AI) tools in your assessment task. If you do use AI-generated content in your assessment task, **you must acknowledge the use of the AI tool(s) in your work by clearly indicating the parts of the work that are generated by AI and including details such as the AI tool(s) used, the input prompts and how the generated response was used.** Failure to provide acknowledgement of the use of the AI tool(s) is tantamount to plagiarism and will be dealt with in accordance to RP's [Rules and Regulations pertaining to academic integrity](#).

## Submission Instructions

**FINAL SUBMISSION for CAG1 - Week 5, 20 May 2024, 2359hrs.**

**Written proposal outlining all aspects of the Web Application listed above**

Submit the word document into **LEO2.0**. Please ensure that you have a backup copy of your proposal in case there is a problem with the online submission.

Your zipped document file should be named according to the following format:

StudentID\_YourName\_YourClassCode\_CA1ProposalSubmission.docx  
E.g.: 20123456\_PeterLim\_C237\_2D\_W64A\_CA1ProposalSubmission.docx

## Penalty for late Submission

Do remember to upload and submit your assignment on time.

1. DO NOT wait till the last hour or minute to submit your work.
2. Make regular backups of your work.

## Appendix

**Mini Project Proposal Template – Download from LEO**



StudentID\_YourName  
\_YourClassCode\_CA1P

**Examples of Design Tools for prototyping (Optional)**

- Figma
- Canva