### **Title of Capstone Project**

by

First Author (243014001) Second Author (243014002) Third Author (243014003)

Capstone project report (CSE 4098B) submitted in partial fulfillment of the requirements for the degree of

#### Bachelor of Science in Computer Science and Engineering

Under the supervision of

Supervisor's Name



# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING UNIVERSITY OF LIBERAL ARTS BANGLADESH

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Department of Computer Science and Engineering University of Liberal Arts Bangladesh 688 Beribadh Road, Mohammadpur Dhaka - 1207

#### APPROVAL OF THE COMMITTEE

This is to certify that the CSE 499B capstone project report entitled **Title of Capstone Project**, submitted by **First Author** (243014001), **Second Author** (243014002) and **Third Author** (243014003) are undergraduate students of the **Department of Computer Science and Engineering** has been examined. We hereby accord our approval of it as the presented work is satisfactory.

Place: Dhaka

Date: February 02, 2029

Supervisor's Name
Supervisor's Position
First Examiner's Name
First Examiner's Position
Second Examiner's Name
Second Examiner's Position
Third Examiner's Name

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### **ABSTRACT**

In approximately 100-150 words, summarize the rationale for your project, the methodology, anticipated results, and conclusions you will draw from your work.

**Keywords**: keyword1, keyword2

### Introduction

Introduce a brief project description here.

#### 1.1 Problem statement

State the problem to be solved as indicated by the need (Supervisor, industry sponsor, or self-proposed). Present the objectives and expectations of the need and constraints given to the problem.

### 1.2 Aims, objectives & Motivation

Objectives must be identified and written in bullet points and motivation < 150 words)

#### 1.2.1 Aims

#### 1.2.2 Objectives

Objectives go here. Objectives must be identified and written in bullet points.

#### 1.2.3 Motivation

Motivation should be clearly state within 150 words.

### 1.3 Project Specification

- Give a clear set of design specifications for the project. The design specifications should be clear concise statements with a specific metric and an appropriate value.
- The specifications should provide a specific measure of the success of the final design in meeting the need and constraints associated with the design problem.
- Problem Requirements Specifications is a dynamic process. Although it is
  desirable to freeze a set of requirements permanently, it is rarely possible.
  Requirements are likely to evolve through an iterative process that involves
  communication between customer specifying the need and the technical community. The impact of proposed requirements must be evaluated to ensure
  that the initial intent of the requirements baseline is maintained or that changes
  to the intent are understood and accepted by the customer.

### 1.4 Expected Outcomes

A description of the final product or products to be completed. What is the format of the outcome of this work? What will be the beneficiary industry/sector? How do you expect to share the results of your project? An exhibition? An international conference? Journal submission?

### Literature Review

Relevant to your chosen topic, including citations. Give a brief summary of the key literature that has been researched and used in the design effort. This includes text-books, handbooks, technical papers, reports, web sources, codes, and regulations. A summary of similar designs, processes, or techniques can also be discussed to show the strengths and weaknesses of your design compared to others. Indicate whenever the design process was supported by previous coursework.

You must analyze the literature critically and have to report the research gaps within the literature that you will address in your project.

## Methodology

- Concept Generation: Show that design methods were used to generate several conceptual solutions to the design problem. Draw sketches or tree diagrams to describe the alternatives that were produced by this effort.
- Concept Reduction: Show that a judicial decision-making process was used to reduce the number of possible conceptual solutions to a single (optimal) solution that is to be implemented and verified and/or validated by the end of the project. Discuss why alternative solutions were rejected/chosen over other solutions. Describe the criteria used to evaluate potential solutions. Substantiate that the proposed final concept is the optimal choice in providing the functionality necessary while best meeting the specified constraints of the design problem. Document in detail the decision-making process.
- Present and discuss the proposed design concepts which have been used to solve the design problem. Although this section should be supported by a text discussion it should be strongly supported by a detailed solid model and engineering analysis and design methods. Be sure to discuss the major subsystems in the design and the purpose and features of each subsystem.
- Thoroughly present and discuss all engineering analysis used in the design process. Present all formulations, assumptions, and parameters used. Show results of the analysis. The discussion must be clear enough for reviewing the process as well as repeating the design. You should be able to prove that the design will not fail and will perform as required solely through analysis.
- Justification and novelty 'what is new' (< 50 words)

### Conclusion

Write a short conclusion remarks here.

### 4.1 Social, Legal, Ethical, and Environmental Issues

It is the ethical responsibility of the engineer to ensure that the solution to the design problem is safe to the public and the environment. This is substantiated by showing that Design for Safety methods was employed in the design process and documented through a Hazards and Failure Analysis. Discuss the results of the analysis and how the safety was incorporated into the design. Also, whether the product addresses local/international legal requirements needs to be described.

### 4.2 Expected Final Product

Give a brief summary of the expected project's outcomes, what to be accomplished etc.

## References