

The project report should include the following contents in order:

- **Title Page** (team name, members, class number and name, submission date)

- **Table of Contents** (TOC)

- **Introduction**

What do you want to do, what applications can be implemented by your project, how important is that, briefly explain what you have done and what you have not done, what problems you have faced, how you solved them, provide a brief functional description of your project, give overview to the rest of the report.

- **Project Specifications and Description:**

Describe the project, draw a block diagram and explain how it works.

- **Detailed implementation:**

Use pseudocode and flowcharts explaining overall program structure, modularity, and algorithms

Interface design: Describe any external interfaces utilized (e.g., switches, LEDs, sensors),

Microcontroller resource utilization: describe how the microcontroller's peripherals (timers, A/D, PWM, I/O ports) as well as its other on-chip resources (Interrupts, SRAM, flash memory, etc.) were utilized including the mode(s) in which they were programmed to operate, provide rationale for the choices made.

Software: Describe what the software does and how it is organized/structured. Submit your complete code (**comments are mandatory**).

Illustrations/pictures of your project hardware.

- **Analysis:**

Functionality, and testing results. **How did you test the proper operation of the project.** You can add illustrations/pictures of your project tests. You should also answer these two questions:

- (1) Explain how the design of the system considers public health, safety, and welfare. Also, make suggestions to modify the system's design to better consider these elements.
- (2) Explain how the design of the system considers global, cultural, social, environmental, and economic factors. Also, make suggestions to modify the system's design to better consider these factors.

- **Description of the Teamwork Experience**

Explain the nature of the collaboration of the team's members by addressing these points:-

- (1) How you created a collaborative and inclusive environment and meet objectives
- (2) How the team members were able to provide leadership, establish goals, and plan tasks.

**Demo:** Each team will demo the project functionality on allotted day and time. From the discussion we will:-

- List what works and what does not work
- Ensure that the project has been done by you not by someone else or copied. **We will ask about the details.**

## **2- Grading**

- Projects will be graded on the documentation, functionality, and understanding the project.

- **Demo 50%**

Functionality 30%

Answering questions 20%

- **Final report 50%**

**[10%]** Writing/organization: Writing style, professionalism, technical content, succinctness of report, professional documentation, proper English, good grammar and clear writing style, etc.

**[25%]** Project Specifications and Description, Detailed algorithms and Detail implementation

**[5%]** Analysis

**[10%]** Description of the Teamwork Experience