



## CSE 210 Digital Logic Design

### Project proposal template

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Academic year 1446 – 2024/2025



## Project title

Click here to add text .. ( C      Temperature Sensor with Alarm System

## Problem statement

The problem statement provides a clear and concise description of the issues that need to be addressed -

What is the specific problem in that research area that you will address .

In various environments such as homes, hospitals, and laboratories, it is essential to monitor temperature to prevent it from reaching dangerous levels. High temperatures can damage equipment or pose risks to human safety. This project aims to develop an alarm system using an LM35 temperature sensor connected to an Arduino to alert users when the temperature exceeds a predefined threshold. This will help in preventing potential hazards.

## Project goals

Objectives provide a list of goals that will be achieved through the proposed research – What are the benefits/impact (e.g. better understanding, improved productivity ...) that will be generated if the research problem is answered?

- Develop an alarm system that notifies users when the temperature exceeds a safe limit.
- Improve practical understanding of reading sensor data and using it for automated decision-making.
- Enhance programming skills using Arduino and circuit simulation in Tinkercad.
- Provide a simple and effective solution for temperature monitoring in different environments.



## Project tools and methods

Write down all the tools and methods you will use to implement the project.

- Tools: Arduino Uno, LM35 temperature sensor, Buzzer, LED, resistors, jumper wires.
- Methods:
  1. Read temperature data from the sensor using Arduino.
  2. Compare the measured temperature with a predefined threshold.
  3. Activate the Buzzer or LED if the temperature exceeds the limit.
  4. Test the system using Tinkercad