# Deliverable #2: System Overview

Team Name:
Team Members:
Date:

## 1. Executive Summary

(Provide a concise description of your system, emphasizing its functionality and significance without diving into implementation details. This should be around 100 words.)

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## 2. System Description

### 2.1 Software Overview

- Describe the main software components of your system.
- Specify how your system will process data and interact with hardware.
- Detail the communication protocol(s) used (e.g., Bluetooth, Wi-Fi, LoRa, Zigbee).
- Explain how the software will interface with different hardware components.

### 2.2 State Machine Diagram

- Include a diagram generated using Visio, Graphviz, OmniGraffle, Google Draw, or another tool.
- Clearly label states, transitions, and conditions.
- If applicable, include multiple state machines for different system components.

### 2.3 Hardware Overview

- Describe the necessary hardware components (e.g., sensors, actuators, microcontroller).
- Explain the purpose of each component in your system.
- Discuss how components will interact to achieve system functionality.

### 2.4 Table of Parts (BOM)

| Part Name | Part Number | Supplier | Price | Purpose |
|---|---|---|---|---|
| **Example MCU** | ESP32-WROOM-32 | Digi-Key | $5.99 | Main controller for the system |
| **Temperature Sensor** | TMP36 | Adafruit | $2.00 | Measures environmental temperature |
| **LED Indicator** | WS2812B | SparkFun | $0.50 | Displays status |
| **(*Ensure at least 5 parts are listed with justifications.*)** | | | | |

### 2.5 Final Demo Description

- Write a step-by-step script for the demo.
- Explain what the audience will see and how you will showcase system functionality.
- Describe how you will demonstrate that the system is working as intended.

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# 3. Resources

List at least 5 resources, including:

- Software libraries
- Hardware datasheets
- Online tutorials, blog posts, or research papers
- Open-source code repositories
  (*Cite URLs or sources appropriately.*)

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# 4. Presentation Preparation

- Identify the key points for your 5-minute presentation.
- List expected questions and potential challenges.
- Mention what visuals (slides, diagrams, code snippets) will be included.

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# 5. Submission Instructions

- **Deadline:** March 7th by 11:59 PM (No late submissions accepted).
- **Format:** PDF only (other formats will not be accepted).
- **Submission:** Upload to Moodle
- **One submission per team:** A single team member should submit the document, listing **all team members' names** at the top.