
Milestone 03 Description

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Milestone 03 Description

Milestone 03 Overview

Milestone 3 is a big step where we set up the main hardware for the project. This means getting and putting in all the specific parts we need on the project body. We're paying close attention to connecting sensors and actuators to the right microcontrollers. After that, we're working on creating simple and well-explained code that makes sure all parts of the project work together at the same time. The main goal is to make sure the project does what we planned in the proposal. We're also making sure that the hardware looks neat and organized, not just working well. Milestone 3 is super important because we need everything to come together smoothly, both in how the parts are set up.

This milestone includes:

1. Hardware Task

- In this milestone, make sure that all specified hardware components mentioned in the project proposal are working.
- Physically install the obtained hardware onto the project body, ensuring secure and proper placement.
- Connect all sensors and actuators to their respective microcontrollers using organized and reliable wiring.
- Configure a stable and suitable power supply for all hardware components to guarantee consistent and reliable operation.
- Implement the Structural design such that it is relevant to your project functionality.
- Make the modifications told by the Tas in the past milestones .

Note: Feel free to Include/use any additional libraries to access the LCD display or any of the components. The code can include embedded **C / C++ / Micro-Python**.

2. Software Task

- Develop a comprehensive code that establishes connections between all hardware components. Ensure that the code is written in a clear and organized manner, facilitating ease of understanding and modification.
- Design and implement a testing code specifically focused on assessing the functionality of the overall system. This code should execute the predefined functions outlined in the project proposal, thoroughly evaluating the project's ability to meet its intended objectives.

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- Write a code that tests different scenarios, simulating various input conditions to assess the robustness and adaptability of the system. This involves creating test cases that cover a range of potential situations the project might encounter.
- Document the code comprehensively, providing explanations for key functions, variables, and decision points.
- Make the modifications told by the Tas.

Evaluation

There will be evaluation and it will be scheduled later.

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Submission Guidelines

- The deadline for submission is **Thursday 7th of December, 2023 at 11:59 PM**
- You are requested to submit the following documents:
 1. A 2-minute video showing the project body/mechanism and all the connected hardware components. Sensors and actuator should be activated during the video to guarantee the full grade.
name the Video (MS_03_Team_m_Video.mp4)
 2. All developed project files (workspace folder) containing all the .c and .uf2 files and any extra libraries/directives needed to run the developed code of all sensors/actuators.
name the Code (MS_03_Team_m_Code.zip)
Note: file names should be self-explanatory of the content for example Ultrasonic_sensor.C , servomotor's, etc....
 3. The required project description report
name the report (MS_03_Team_m_Report.pdf)
Note: the report should include a scanned pdf document of the labelled State flow model and any explanatory notes of your system.
- Please upload your milestone documents to your drive as a .zip file with the following naming format:

(Ex.: CSEN701_W23_MS_03_Team_m.zip)

where **m** is your team number
- Submit **ONLY** the sharing link through the below form and **Make sure that you give permission to access :**

https://docs.google.com/forms/d/e/1FAIpQLSdWS9N4qJN-_iQK9bCbAA0CZQwuA5n2UlvYuSNleH0str9eVQ/viewform

Good Luck 😊