UQ MARS System Project:
[Project Title] v0.1

Project Overview

Subsystem: [Subsystem Name]
Authors: Oscar Lloyd (2025), [Other Names (2025)]
Mentor(s): [Mentor Name(s)]
Discord Help: Projects Channel
Time Estimate: 1-2 Months

Project Difficulty:

Mechanical - ★☆☆☆☆
Electrical - ★☆☆☆☆
Software - ★☆☆☆☆

Project Context

Brief description of the project background, its purpose, and why it is relevant. Should include some motivating factors or inspiration for the project.

Getting Started Resources

- [Include a link(s) to the most relevant UQ MARS Individual Projects.]
- [Link to the UQ MARS recommended video tutorial series on using a given tool.]
- [Recommended tools with links or licence keys required to access and download software.]
- [Information on collection and returning of physical resources.]
- [Any other relevant resources such as examples or guides.]

Project Objective

By the end of this project, you will:

- Gain [specific skills or knowledge, e.g., CAD design, soldering, etc.].
- Learn [specific concepts or tools, e.g., engineering processes, problem-solving techniques, etc.].
- Complete [specific deliverable, e.g., a functional prototype, a documented design, etc.].

Project Requirements

In Scope:

- [List clear and specific tasks or components of the project that are in scope.]

Out of Scope:

- [List elements explicitly not covered in the project, to clarify boundaries.]

Functional Requirements and Constraints

Functional Requirements:

- [List the features or capabilities the project must have.]

Specifications/Constraints:

- [List specific technical or design constraints, e.g., weight limits, dimensions, cost considerations, etc.]

Project Workflow and Phases

Phase 1: Planning and Conceptualisation:

- Break down the project into smaller tasks or milestones.
- Create initial designs or schematics for individual components.

Phase 2: Subsystem Development:

Complete individual learning projects for each subsystem:

- [Subsystem Name]: [Description or task, e.g., "Design and assemble the chassis."]
- [Subsystem Name]: [Description or task, e.g., "Develop the motor controller circuit."]
- [Subsystem Name]: [Description or task, e.g., "Program the basic drive code."]

Phase 3: Integration and Assembly:

- Combine completed subsystems into a unified system.
- Test subsystem interactions and address compatibility issues.

Phase 4: Testing and Optimization:

- Perform functional tests on the entire system.
- Refine components or code based on testing feedback.
- Document findings and create a troubleshooting guide.

Phase 5: Finalisation and Presentation:

- Produce the final deliverable (e.g., functional robot base or prototype).

Additional Considerations

- **Cost Efficiency:** Aim to minimise project costs while meeting requirements.
- **Manufacturability:** Ensure the design can be realistically manufactured with available tools.
- **Aesthetics:** Consider how the final product will look and align with the project goals.

Deliverables

- [List the specific items to be delivered at the end of the project, e.g., working prototype, design documentation, etc.]

Mentor Notes

- [Include any additional advice or important information for the project team.]
