Document the final status of your project. Clearly state the actual performance of your prototype. Compare the actual performance to the desired performance and predicted performance. Address your prototype’s ability to meet the originally stated functional requirements and objectives.

**Formatting and Submission**

Due *Thursday, May 11, 2023 by 8:00 a.m.* Submit an electronic version of your report by email or Laulima as directed by your section instructor. Format MS Word or PDF as directed by your section instructor.

Formatting should follow the same instructions you have used all year. Specifically, refer to the CDR report formatting instructions for guidance on recommended charts, numbering of pages, font type and size, etc. Note that there is no page limit specified for the Final Report. We want you to be as thorough as possible and write a professional engineering report (note that this is a full engineering technical report and NOT a journal paper like your Mid-Term report). Remember that this report will be used as an essential reference by the next team that works on this or a similar project.

Below is a very generic outline that should be adapted appropriately for your team:

- Title page
- Executive Summary
- Table of Contents
- List of Figures
- List of Tables
- List of Acronyms
- Introduction and Problem Statement. Set up why your design is needed and what success looks like. (background, state-of-the-art, prior art, context, objectives, requirements)
- Final Design
  - Justification of all design considerations: cost, weight, function, performance, social impact, environmental concerns, ethical considerations.
  - Engineering analysis: stress, fatigue, weight, volume, power, energy, thermal, kinematic, etc.
  - Manufacturing and assembly
  - Original contributions. Elaborate on creative or significant advancements
- Testing and Evaluation and results; compared to your models and analysis
  - Tests performed and results
  - Results of ability to meet functional requirements and objectives; as proven through testing.
- Technical suggestions for improvements
- Final budget and Final Schedule – specifically address margins and buffers
- Conclusion
- Appendices (Use appendix numbering)
- Provide an operator/user manual
- Reflections: Each team member must provide their own reflections (2 pages per person). Include the reflections in alphabetical order with a page break between each new reflection. Use this to close your personal “feed-back” loop. What did you do well? What did you personally learn? What would you change about the design technically? What about your project and time management? What would you like to tell yourself last August when you were just starting the project? How will you attack your next design project? Etc.

Rubrics

- **General Stuff**
  - Quality, Conciseness Effectiveness 10
  - Introduction/Background/Motivation/Big Picture (Make sure you tie your as-tested results to the big picture) 10

- **Technical Details**
  - Design, Analysis, Testing, and Comparison of the models and final prototype results 20
  - Manufacturing description and user manual 10
  - Technical suggestions for improvement (including identifying the limiting factors) 20

- **Project Management**
  - Final Budge vs originally proposed budget and reflections on any discrepancies. Time budget and reflections on scheduling discrepancies 10

- **Reflections**
  - Close your feedback loop. Make comments on how you would improve your design process, time management, team dynamics, etc. 20