Final Team Report

Imagine that next semester, in ELEC 202, a new team will be given your robot and charged with taking it to the next level of performance. Your Final Report should tell them what they need to know. Your report should document your design process and experience, what you did, why you did it, why you made the decisions you did, and what you learned. Focus on the process and your reasoning. The report should be concise and make clear points. There is no required length and the report should be no longer than necessary to convey the required information; no rambling text. Write it for an audience who has some technical skills, like you, but who is not familiar with the details of your specific work.

The report may be either on paper (not just an electronic document) or consist of a web site. There is no rigid required format, but it should contain the following sections and/or information. Some of this can be taken from your previous reports and can be written before the contest. See the grading rubric for information on how the report will be graded.

- **Executive Summary**. No more than one page summarizing your report. This page should include your team number, robot name, and team member names. If you create an electronic final report, turn in this summary with the URL of the complete report.

- **Strategy.** How you planned to win the game. Include the revisions you made and the reasons you made them.

- **Functional Requirements.** Describe the functionality you sought to build into your robot to implement your strategy. Which characteristics were essential, which beneficial, which optional? Did you have to make changes as work developed; why? Were you limited by the capabilities of the hardware, e.g. the number of motor ports?

- **Implementation and Reality.** Describe what you really did and the final product. Pictures (labeled) are an efficient way to do this, but you will need some text as well. Describe the features of the end product in enough detail that the new team could confidently work on your robot. Also include the reasons for your choices, such as running out of time or LEGO. What happened in the contest; what went right and what went wrong; what was unexpected?

- **Reflections.** What would be the next steps to improve your robot and its performance? What did you learn in this course about team projects, team management, and the design process? Optional: give your suggestions for future teams.

- **Code.** A copy of the entire code used for the contest (Required). I will look for good programming practices (no numbers in the code, etc.) and comments. If you think your code or approach to controlling your robot has unique features, point them out. A block diagram of the program structure and control flow could be helpful.

Final Team Report Grading Rubric

Aspect	+ **Excellent (5)**	✓ **Acceptable (3)**	− **Deficient (1)**
General	Excellent, informative summary. Organized, concise, fun to read. No grammar errors or misspellings. Contains no irrelevant material.	Complete heading information and appropriate summary. Organized, reasonably concise. Minimal usage & spelling errors. Very little extraneous material.	Incomplete heading information. Summary incomplete or too long. Poor organization, difficult to follow, long and/or rambling. Many usage &/or spelling errors.
Strategy & Functionality	Unique or adaptive strategies, or clever application of game rules. Thoughtful consideration of functional goals & tradeoffs. Excellent justification of changes.	Good description of strategies. Describes functional goals. Describes most changes made and gives reasons.	Incomplete strategy description and little reasoning. Some important functional goals not considered. Little mention of changes.
Implementation & Reality	Complete and concise description of the final robot, sufficient to build. Design process is detailed, clear, and choices justified. Details contest performance and issues encountered.	Workable description of final robot and the design-development process. Describes final performance, good and bad characteristics.	Robot description inadequate, or missing aspects. Little mention of the development process. Minimal description of the robot's contest performance.
Reflections	Provides clear, concrete guidance for robot improvement. Comments on many aspects of learning in the course.	Lists steps to improve the robot. Describes some aspects of learning in the course.	No significant suggestions for robot improvement. Little reflection on learning achieved in the course.
Code	Code easy to read and has some unique aspects; conforms to all good programming practices.	Includes entire control code; code generally conforms to good programming practice.	Incomplete code provided; code clearly deviates from good practice: lacks comments, includes numbers, hard to follow, etc.