Team Progress Report

At the time of this report, you have organized your team, developed game strategies (and perhaps revised them), finished your RoboBoard, and built some trial robots.   The Progress Report will specify what functions you will need to implement in your robot, and your basic approach to doing so. Describe the outcomes you need to achieve in your final design, based on your strategies, rather than a detailed construction plan. For example, you can just state that your robot must include a mechanical means to block the net goal. Do not write, "We will build a 20 cm square frame using 22 beams, 7 2x2 plates, and 13 pegs. The square will be covered with green plastic net material having holes 1cm in diameter secured with 8 cable ties, and supported by a box-truss arm powered by a motor and gear box with a 37.523:1 ratio using 12 gears, 5 axles, and 13 axle stops." After all, your blocker may end up being a piece of cardboard on a stick. Design goals often conflict, so you may need to evaluate trade offs, e.g. speed is more important than strength. The report should be concise and provide someone who is not in the course with a reasonable understanding of what you are planning. See the grading rubric for information on how the report will be graded.

Content

Set the context with a very brief review of your game strategy, especially if it has changed. Then specify the functions you will need to implement in your robot, and your basic approach to doing so. Factors you probably need to comment on include:

- **Speed** requirement: is it important that your robot be very fast, or not?
- **Agility**: will it have to make sharp turns in minimum space to execute your strategy? How accurate do your turns need to be? How do you plan to meet your needs?
- **Power/Strength**: Does your robot need maximum power, for example because you plan to push your opponent around. Or are going to avoid contact?
- **Traction** on the board. Do you need a lot of rubber on the road to push your opponent, to avoid being pushed, or for stability? See Power/Strength. It is OK to give some detail, as in, "Our strategy requires maximum traction, so we plan to use 12 wide tires."
- **Navigation**: Does your strategy allow you to follow lines, or the wall, or do you need to navigate across the open board? How are you going to do it?   Will you have bumpers?
- **Ball Handling**: What devices will your strategy require you to develop? Are you going to one or both ball dispensers? How are you going to sense the proper position to trigger it/them and catch balls? How many balls do you need to hold, and your approach (bin, net, tube, ?)? Do you need a shooter, a catapult, a dumping bin, a method to raise balls up, etc.?
- **Tracking**: Do you plan to locate or track the light beacons below the nets? How?
- **Special Features**: Mention anything special required by your strategy, perhaps some means of confusing the sensors of the opponent, or a device to block goals, or an extendable ramp to guide balls directly from the ball dispenser into a goal.
- **REQUIRED-- Overall Resource Check**: Does the RoboBoard have the capacity to do what you are planning? Make a table indicating all the inputs and outputs (and number of each) you will need: analog ports, digital ports, motor ports, LED ports, and anything else you plan on using.

Team Progress Report Grading Rubric

Aspect	+ Excellent (4)	✓ Acceptable (3)	− Deficient (1)
General	Clear, complete heading. Easy, and even enjoyable, to read; organized & concise. No grammar errors or misspellings. Contains no irrelevant material.	Complete heading information. Organized, reasonably concise. Minimal usage & spelling errors. Very little extraneous material.	Incomplete heading information. Poor organization, difficult to follow, long &/or rambling. Many usage &/or spelling errors. Includes excessive construction details and unnecessary material.
Introduction	Quickly provides the reader with the information needed to easily understand the rest of the report.	Gives an adequate summary of the team's strategies to establish the context.	Summary is incomplete, confusing, or too long; fails to explain the context.
Function Specifications	Considers all relevant functions, mentions options, and gives reasons for choices. Comments on design trade offs as appropriate. Describes plans for innovative special features.	Lists relevant functions and gives reasons for most choices. Some design choices mentioned. Special features described.	Some functions not considered, or reasons for choices not clear. Little or no consideration of design trade offs. No special features.
Resources Check	Table provided showing all required resources. Notes any changes made to match resources to needs.	Accurate table provided showing all required resources. All needs met.	Resource table incomplete or incorrect. Some needs not considered, or resources exceeded.