EGM 180 Project 2

PROJECT DESCRIPTION:
Design and build a bot to compete in the sumo-bot competition.

PROJECT DOCUMENTATION:
Your complete project documentation must be submitted in hard copy on or before the final exam day, Monday May 6th. At completion, the documentation required for your project includes the following:

1. A project proposal including a schedule and a statement of your planned bot-esthetics.
2. A schematic of the breadboard.
3. A final project report.
4. Participation in the in-class competition.

Each item is discussed in greater detail below.

1. Project Proposal
Your design proposal describes your design strategy and your plan for implementing that strategy. Your proposal must include an English description of your proposed robot, including bot-esthetics, along with a sketch of your proposed bot. You must also include a schedule showing the order in which the major components of your design will be developed and tested. Your proposal should be submitted in hardcopy (or on Moodle) no later than the end of class on Wednesday, April 17.

2. Schematic
Your final project documentation must include a schematic of your breadboard layout. Although your breadboard should evolve incrementally, you are only required to document the final version of your breadboard. Your schematic may be hand-drawn or produced using computer software such as the free schematic software from ExpressPCB.
3. Final Report

Your project documentation must include a final report, and that report *must* include 2 sections: (1) a section on testing and evaluation, and (2) a section describing your final design including your bot-esthetics. The testing and evaluation section should discuss your development schedule and explain any deviations from the proposed schedule. The design description should contrast the final design with the design presented in your proposal and explain/motivate the differences. The final report should be completed by May 6th, the date of the in-class competition.

4. In-class competition

You are expected to participate in the in-class competition on the day of our final which is Monday, May 6th. The points that you earn in competition contribute directly to your grade for project 2 as indicated below.

**GRADING:**

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<tbody>
<tr>
<td>Proposal</td>
<td>10</td>
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<tr>
<td>Schematic</td>
<td>10</td>
</tr>
<tr>
<td>Bot-esthetics</td>
<td>5</td>
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<tr>
<td>Report</td>
<td>15</td>
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<tr>
<td>Competition Score</td>
<td>40*</td>
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<td><strong>Total</strong></td>
<td><strong>80+6 Bonus Pts</strong></td>
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*Extra points are awarded for placing in the tournament.

The project 2 grade will be assigned to the “team,” with each team member getting that same grade. Only one copy of all project documentation is required for each team.

**DUE DATES:**

**Project proposal: 4/17/13**
**In-class competition: 5/6/13**