

## **CpE/EE 391 – Hwk 4**

The following questions should be done with your project groups. Each group only has to turn in one group assignment. Please put the name of all group members at the top of the assignment.

1. In the last homework each of you came up with several problem statements for the product your groups will design. Using the “best” problem statement that your group came up with, conduct a brainstorming session to generate ideas for how to solve the problem. Get together in a group, assign a single person as a “recorder”. Generate ideas as fast as possible for 15-20 minutes. Perform a critical appraisal of those ideas. Where appropriate, conduct miniature brainstorming sessions around individual ideas. Turn in a) the “best” problem statement, b) the first list of ideas generated by your session (this does not have to be neat – I want to see what you generated during your brainstorming session), c) Your “first cut” of ideas with merit (you can simply cross out ideas on your original list), d) the list of ideas generated during the miniature brainstorming sessions, and e) your final list of ideas with merit. Your final list should not be the “end” of your design process – I just want you to show that you know how to use and apply the brainstorming process to your group project. (Note: if you are a group of 1 or 2, please try to get others to help you with this brainstorming session).
2. With the product your group is going to design in mind, answer the “checklist trigger questions” listed in Table 7.2 on page 253 of your textbook.
3. Apply “inversion” to your project or, at least, to one part of your project. As a group, generate ideas to do the opposite of what you want your product to accomplish, then use these ideas to help generate new ideas that allow your product to accomplish its goal. Turn in a) the “inverted” problem statement, b) the list of ideas for this inverted problem, and c) a list of ideas you were able to generate to solve the true (non-inverted) problem.