Design Exercise #4. Assessment of Design Process
Assigned: 4/28/14, Due: 5/5/14

Grading:
15 points (style, grammar, organization)
17 points (self-assessment: personal improvements)
17 points (self-assessment: personal contributions)
17 points (bottlenecks and remedies)
17 points (team organization and management)
17 points (resource assessment (manpower, facilities, parts, ...))

After a design is completed, it is important to assess both the design as well as the process that produced it. Where possible, improvements in the process should be effected to produce better results at the next iteration.

Because this year's design fell short of making schedule, we cannot assess the performance of the final design. However, we can assess the process.

There are two components to a team's performance: individual successes and failures, team successes and failures.

It is not beneficial to you to criticize your team-mates (i.e., all you're doing there is assigning blame, which does not help you improve your own deficiencies). It is not useful to criticize things which cannot be changed (e.g., we should have picked a different due date) since these things cannot be improved.

Write a report (hopefully not more than two pages) responding to the following challenges.
1. Assess your contribution to the team. What did you do that contributed to the possible success of the effort? Almost everyone made a significant contribution, so this is a chance for you to trumpet your successes.

2. Assess areas where your contribution fell short of what was needed. What could you improve in your engineering contribution or your team skills to make a team function more effectively? Don't dwell on this bullet too much and get you to the point where you need therapy. However, everyone could find one thing which s/he could improve to yield better results. Sample things which everyone can improve: Were you on time and ready to go at the start of the day? Did you follow instructions or ask for clarification when the instructions didn't make sense? Did you deliver your part of the project on time and to spec? If you observed some part of the project other than your responsibility going haywire, did you intervene? Did you communicate effectively?

3. There were a number of bottlenecks in the project. Identify one or two and recommend correction.

4. Were there aspects of the team organization and management that could have been improved. For instance, put you in charge of the project and all would have been well. Could all of the people involved in the project have been used more effectively (again remembering the constraints imposed by other class schedules, work/life schedules, etc). In this part of the report, you should not point to Johnny and say, “He's entirely to blame. Get rid of Johnny and we coulda been a contender.”

For instance, perhaps we should have assigned someone to compliance checking to determine whether

parts were in spec or not. Or, we could have broken the team down into a hierarchy to improve communication and resource management (we actually did a little bit of this at the end with the team assigned to the battery holder and the team assigned to the skirt).

5. Perform a resource assessment. Estimate how many man hours would have been required to complete a project of this complexity (based on number of parts and complexity of fabrication). How many man hours did we have? How much machine time? Were materials a limitation? We missed schedule by three weeks. Did we have enough manpower to accomplish the task?