From left to right: Greg Kutys, Jake Rosnack, Zach Mihalov, Nik Anthony

Roles (respectively): Costing analysis, Prototype design, Web report, Pitch lead

Problem Statement: To design an affordable, aesthetically pleasing, storable, stable piece of furniture.

Concept Development:

1. Met with the team, collected ideas for what our personal dorm furniture needs were. Examples included: table, chair, drying rack, etc.
2. Surveyed our friends to expand the idea list to get a better handle on what objective, non-biased needs were in dorm rooms.
3. We compiled the ideas into a master list.
4. We scored each idea based on practicality, popular appeal, stability, and ease of assembly.

Testing: We built an X-shaped support leg, eight inches in length. On average the leg support was able to hold 188.2 pounds before crushing to failure. After comparing to research of other designs, we

noticed that the square design seemed to be the strongest support system and decided to use that in our design.

Final Design: The final CFP has unique features that make it a practical choice for a dorm room setting. It has a cup holder for keeping drinks steady and safe. Extra wide legs ensure stability and increase its ability to hold loads of weight. It is simple to assemble and disassemble, fitting easily under a dorm room bed. See the attached file CFP Design for our table design. The final price of the table was forty dollars using machinery to help.

Lessons Learned: We learned a lot of things about teamwork. Mainly that a team cannot work efficiently if not all the team members make a significant effort to arrive at class. Another important lesson we learned is scaling. It can be difficult to imagine the true dimensions, so it is good to take a little extra time to ensure that the drawn dimensions make sense. If we had more time to complete the project, we would double check measurements in the workshop. A few times, we had trouble getting pieces to fit together as perfectly as we designed it. Despite our best efforts, the drawing did not translate into real material as well as it could have. As good engineers, we simply adapted to what we had and made it work correctly. However, with more time we would have double and triple checked measurements to be sure it would fit perfectly. The team worked well overall. We adapted and worked hard with each other to finish the project. Determination was the mood of the group. The roles of the team worked out perfectly. Nik was funny and creative as pitch lead, and Greg excelled at computing the difficult costing. Jake was instrumental in building parts in the wood shop and Zach had the time and ability to focus on the web report.

Figure 1: Greg and Nick working on the table

Figure 2: Gluing pieces together for strength

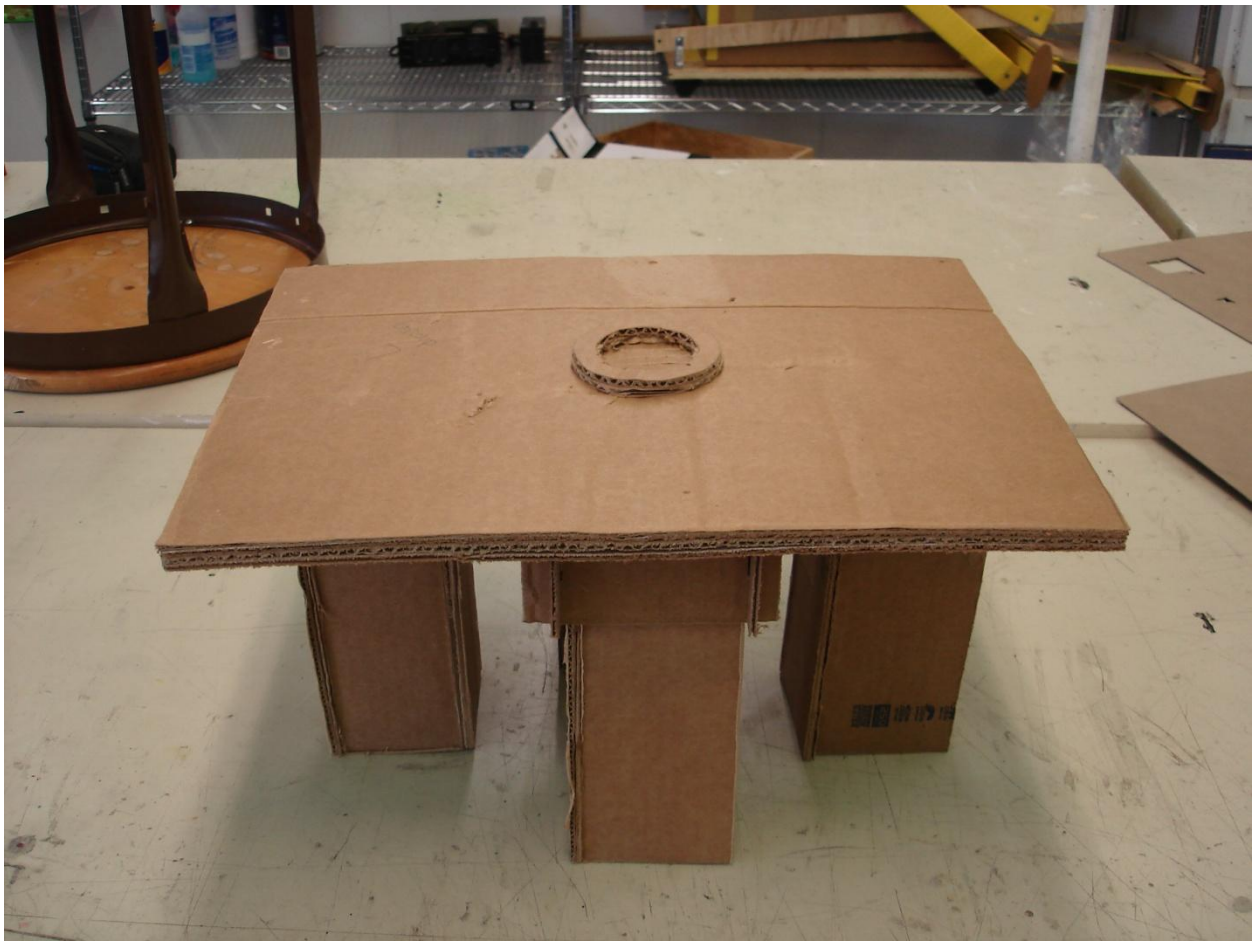

Figure 3: The StorTable