

The goal of the project was to create a line launcher that could shoot a ball into a barrel between 2-6 meters away, in the end our group was successful in creating a line launcher that would fire however it could not reach the maximum distance asked and there were some issues in the design. From the beginning our group made sure we had a way to contact each other and soon had a group chat created to keep everyone informed, at first we checked with each member of the group when we had free time in our timetables so we could meet up in person to discuss the project however we soon found it was easier to do this over the group chat as it allowed any members not able to attend meetings to stay updated on the project.

One of our first decisions was to split apart the group into the roles and I was assigned the leader role and the other parts involved with that role (designing the frame, creating the CAD assembly model and making sure the parts worked together), however while I was able to cover the other parts one of the other members ended up acting more like the leader than I did as they knew better what they were doing. Each member of the group researched their parts and came up with designs bar one member of the group. The group discussed the ideas they came up with and when someone completed their work they would post it into the group chat so the others could comment and any necessary design changes could be made for the project to be a success.

Our group discussed a couple of different designs using diagrams to explain to each other our ideas, we decided on creating a platform (our frame) on which our firing mechanism and return reel would sit, we would be able to adjust the angle of the platform through holes in side parts which would be placed at different angles and the platform would be attached to these holes with nuts and bolts to hold it in place.

When we were collecting the materials to create our prototype we did not discuss any particular method of separating the budget and so this caused a few issues with purchasing everything we needed while staying within budget so in the end some of our members created their prototype parts from cardboard. The cardboard parts of the prototype did not function anywhere near as well as we wanted so after the prototype testing we decided to make them from better materials. From some comments during our prototype testing there were some small changes we could make to improve our design, however when making these changes I did not check the sizes of my changes and just made assumptions and this caused some issues in our design that meant not everything would fit the way we intended. When the member of our group did not provide us with any part designs we did not do any research into his part ourselves this caused issues with our design that we did not foresee leaving us rushing to fix it approaching the end of the project.

At the start of the project the group communicated well and worked together at the meetings to create our project, however towards the end we separated to create our own parts and communicated through the group chat. I believe that if the group had continued to meet in person and had perhaps put our design together at an earlier point in time this would have allowed us to see the flaws sooner and we could have had more time to address them than we left ourselves. If we had done this I believe we would have been able to complete a design that was able to fully meet the challenge we had been given. I also believe if I had taken a more active role in the leader position I was assigned I could have been able to make this happen however I did not leading to the issues we encountered.

James Elliott 1903653

I would tell myself to continue the group meetings. I would also tell myself that creating the design should be done earlier than the deadline to look for any flaws or issues. I would also tell myself to take a different role than the leading role as I'm not good at it.