

## The Calcoholics - Group Reflection

My contributions were parts of two roles, as I started off as a researcher and then moved to the coder position. As a researcher, I gathered ALL of the non hand-timed data (experiments 3-7). This means that the entirety of the in-game research was conducted by me, and the redstone and command blocks were all my brain children. I worked in and out of group meetings making sure we had an adequate amount of research, which really helped propel our project along from early in the semester. I then transitioned to the coding role, as there was a lot of code that I was writing to execute the proper minecraft experiments, and I was capable of working with mathematica. With the help of a variety of sources, I wrote a very long mathematica script that performed calculations for various constants and values. This was done with the help of the internet, GPT, Dr. Sell's COPY-PASTE, and a MATLAB script I wrote to generate mathematica inputs for me. I came up with the ideas for the graphics and literally made some of them come to life with their animations. Although I did not contribute to the paper, as that was not my end role, I provided almost the entire backbone for the project.

I was surprised by the fact that our models could not accurately describe the game's physics. Despite our best efforts, there was not really anything that could describe the arrows motion without a noticeable amount of error. The complexity of the calculations that we had to do was particularly shocking, but it makes sense that a game like minecraft would have a complex engine running it.

From this topic I definitely know not to be so open to allowing someone that none of us have met or worked with to so freely join our group. As accommodating as we all tried to be, we simply did not click, as Junity was, from the very beginning, not fully invested in our topic. This led to a great amount of disconnect as we would be trying to get things done and meet deadlines, but Junity either did not understand the urgency of the requests at first, or simply chose to completely ignore them all together. He did end up helping more towards the final week of the project, but by that time, the majority of the heavy lifting had been done and all he really could do was compile our document into a LaTeX sheet. I definitely won't go into future projects allowing random people in, but at the same time, this was a good learning experience and I understand that you sometimes have to work with less than favorable group mates.

As I alluded to in the previous paragraph, Junity was simply not invested in the project, to the point of going completely MIA and not making any significant contributions. He was infrequently attending the meetings that we made MORE THAN CLEAR throughout the semester, and that caused him to be a deer in headlights when it came to the graphs he had to make. Because of this and the deadline drawing nearer, I ended up taking the coding position from him, giving him the new role of researcher. He made slightly more contributions to the group work, though it truly was too little too late. Apart from Junity, the rest of us worked beautifully together. We all were positive around each other and put in exceptional work and effort in the project. Andrew was a great group leader, expertly communicating with the rest of the group, setting up meetings outside of class, and communicating what he was looking for in certain aspects of our project and research. Charlotte was an excellent researcher, nicely writing a paper and being professional about the description of our topic. April was very organized when it came to the presentation. She clearly loved what she was doing and that made the presentation and group feel better all together.

I want to reiterate that Junity did such a minimal amount of work that the group would have been just as successful without his contributions. I understand that you stated that this feedback should not be 'flaming' a group member, and that the previous two paragraphs, at times, may be violating that request, but Junity really did so little that it would be unfair to the rest of the group to make up contributions that he didn't even consider doing.