## Reflection Meeting Summary

**Project:** 3D Molecule Visualization Game

**Team:** The RIsoTopes (Andrew Popovich, Justin Cotner, Chris Timmons, and Forrest Shooster)

### Final Product

Our meeting started off with a discussion of the final product being delivered and our thoughts about it. The team thought that overall there was a good amount of progress that was made throughout the year with the exception of the game since we were unable to add an artist to the team. However, we did prioritize building the groundwork for the game so that future teams will have an easier time implementing new gameplay mechanics and molecules.

### Overall Process

In addition, we also discussed our process and what the team thought about it. The general consensus what that we were a little too informal for what we probably should’ve done. For instance we didn’t formally capture our metrics (velocity and defect density), and instead we used the raw data from Trello and our bug tracking to give us a general idea of our progress and problem areas. In addition, we also didn’t follow Scrum to the exact detail either since we had in-person standups every senior project meeting day instead of everyday. We tried to be more formal in that regard by using our Slack for standups but we ended up giving up on it since not everyone was working on senior project every day.

### Project Resources

Another main topic that we talked about during our meeting was project resources, and whether or not the team felt that they could find adequate resources and documentation to guide them with the project. Unfortunately, at the beginning of the project we didn’t have a lot of documentation from last year’s team which meant that we needed to spend a bit of time determining how we should progress with the project. In addition, the available documentation for the Unity game engine was subpar since Unity 5 is a relatively new technology and most of the resources online are video tutorials that the team felt that these tutorials were lengthy and didn’t contain the information necessary to work with the game. However, there were plenty of resources available for the server and deploying to AWS so next year’s team shouldn’t have much of an issue working with the server.

### Documentation and Project Handoff

Documentation was one of the important highlights of the meeting because we still needed to discuss how to handoff the project for the next team to work on it. In that regard, we determined that it would be best to give our sponsor and Professor Vallino admin access to our source code repository so that it remains in a private repository. In addition, we also determined that for the rest of the documentation that we should give a digital copy of everything to our sponsor, the SE department, and host everything on our project website (which we haven’t updated since fall). This documentation includes a setup and deployment document, a game design document, and a features document. The purpose of these three documents is to help next year’s team get the ground running when it comes to figuring out what needs to be done, since we barely had any documentation to guide us.

### Customer and Team Satisfaction

Overall satisfaction was also a key highlight from the meeting. In terms of customer satisfaction, our sponsor was very satisfied with the amount of progress overall. However, he was a little disappointed to not see a lot of progress with the game, but he was understanding that working on a game is outside the team’s expertise and that the team was not able to get a artist to help work on assets for the game. In terms of the team satisfaction, the team is mainly just glad that the project is over since this was a fairly difficult project. Part of the reason why we felt that this project was difficult was because the team felt that there was not enough people working on the project since there only had one game design student and three software engineering students on the team. In addition, the team was also a little frustrated that they couldn’t make a lot of progress with the game since Unity was not easy to learn and since there was no artist to make their improvements look nice.

### Last Year’s Team

During our reflection meeting, we also touched on some points about how last year’s team compared to us, which gave us some perspective on the difficulty of the project. For example, in the fall semester we made more progress than the previous team did since that team was just prototyping ideas at that point, despite the fact that we felt like we were not making a lot of progress at the time. However, in the words of our sponsor we didn’t have the ‘burst’ of progress on the game that last year’s team had. But on the other hand, that burst of progress was mainly due to the fact that one of the game design students took lead on the project, and the two game design students on that team storyboarded the game and hired a graphic artist themselves.

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### Future Plans and Advice to the SE Department

Finally, we concluded our meeting by talking about future plans for the project and what our advice is for the Software Engineering Department when it comes to forming teams for this project in the future. The main area of concern for the project is that there is still has plenty of work that needs to be done with regards to the game. In addition, our expertise as software engineers only went so far with regards to the game’s development since we had to learn a whole new domain (game design) as well as its associated tools and technologies. Therefore, our advice to the Software Engineering Department was as follows:

* Plan for a 5-6 person team composed of 3-4 software engineering students, 1 game design student, and 1 artist or game design student with 3D modelling and UI design skills. This larger team size is recommended because we felt like we were undermanned due to the difficulty of this project, especially with regards to the game.
* Ensure that any game design student working with the team is enrolled in the course for both semesters. We had issues in the spring in which our game design student was not enrolled in the class, and therefore wasn’t able to work with us as often as we would have liked.
* Help the team find an artist with 3D modelling skills and UI design skills. We were not able to find one this year, and quite frankly we weren’t sure of how to advertise that we would’ve liked to add one to the team.