1. (10 marks) As you continue progressing with your project, do you believe you're making sufficient headway towards creating a software solution that aligns with supporting the selected UN Sustainable Development Goal(s) (SDGs)? If yes, rationalize your response. If not, explain and discuss alternative UN SDG(s) that might be more applicable? Furthermore, detail what specific measures or metrics could be utilized to gauge the effectiveness of your software solution in contributing to the selected UN SDG(s) (outline the “why,” “how,” and “what” of each measure/metric)

- As I continue working on my project there were some issues that had to be addressed relating to SDG 12 (Sustainable Consumption and Production), the structure and design of the game is based around the idea of recycling, and it's been hard to navigate the idea of recycling in a game as a lot of the facts surrounding how we currently handle recycling actually point towards the idea that it might not be the best or most sustainable thing for the environment. This being said, the downsides of recycling in some ways I think might actually make my project better. Teaching people about a topic involves showing them all sides of the issue no matter how bad they might be and I think my game can show the user about the good and bad of recycling through simple gameplay mixed in with interesting facts about the recycling process
- Figuring out the true impact my game could have on recycling awareness might be difficult but I think it could measure it in a couple of ways:
1) measuring the active player base of the game, getting metrics around how many people are playing the game and tracking stats and information within the application that could allow us to see how long users are keeping open things like the fact popup window. This could help us gage how many people are actually reading the educational facts during gameplay and see how much users are benefiting from the information in the game, so if we see that lots of players are not reading them we could implement ways of displaying the educational content to the users that is more effective or interesting
2) another important way of measuring the success of the educational portion of my game is asking the user, doing a survey on the player base to see if the methods we are using to teach our users about recycling are actually effective. We can ask for suggesting for better ways to convey to information, its important to remember the idea that we are not the user, getting genuine feedback is important to properly progressing a game in a direction that achieves our goals. Also a good way to ensure players fill out the survey could be to provide a form of incentive in the game for completing the survey such as a boost or upgrade of some sort
3) once the game has an established player base we would create things like a subreddit and discord server where people could discuss the game, this would be a good way to get real time feedback and discussion with the player base on what they like and what isn't working with regards to how we push forward the educational aspects of recycling within our game, this would allow us to measure active users in our discord and subreddit to see how many people are actively engaging in the game beyond the bounds

2. (30 marks) As you advance in your project identify and discuss two specific “ideas, topics, or concepts (ITCs)” derived from two different lectures between Week 8 and Week 11 (after the mid-point assessment/exam) that you have integrated or intend to integrate into your software solution. For each integrated ITC, state the lecture it is from and outline its “why,” “how,” and

“what” components, illustrating its relevance to your project and its contribution to the overarching goal of addressing the chosen UN SDGs (or new SDGs as discussed in question 1). It might also be good to mention specific measures/metrics in your response here as you did in question 1 as to how you would measure the success of the ITC. As well, outline two ITCs from two different lectures between Week 8 and Week 11 (again, after the mid-point assessment/exam) that have not been incorporated or are not planned for integration in your software solution. For each non-integrated ITC, state the lecture it is from and explain its “why,” “how,” and “what” aspects within the context of your envisioned software solution, emphasizing how these elements could potentially contribute to achieving the selected UN SDG(s). Again, it might also be good to mention measures/metrics as you did in question 1 as to how you would measure the success of the ITC in your response here as well.

For the first In class topic relating to my project I wanted to talk about Gamification, I really enjoyed Dr. Jane McGonigals talk, and being that my project is literally making a game I think there is no better topic to speak on than gamification. My game pushes to teach people about the nature of recycling through little tid-bits and facts scattered throughout a simple yet fun gameplay loop, in her talk she speaks a about optimism, in my opinion this is one of the big things that gives games an edge over traditional education, as she says "games give us optimism, if we can tackle the worlds problems with same optimism that we tackle games with we can accomplish so much" and this couldn't be more true, I'll tell you Tim if I could've tackled this end point exam with as much optimism as those 10 games of super smash bros I just played with my roommates then my marks would be through the roof! but such is life. In all seriousness though, As aspiring software engineers I think that moving forward in life the exponential importance of Gamification will become very clear to us and is something we should be considering in everything we design in the future

The second topic I wanted to speak about is from the lecture "Content And Information/Disinformation Design & Strategy" With regards to my project the topic of recycling has a lot of information and disinformation surrounding it, and over the years a lot of the statistics surrounding recycling have suggested that the way we are going about doing it might not be the best thing for the environment. This is an issue for my game because we want to ensure the facts we are providing for our players are accurate and we are not spreading disinformation, the lecture speaks a lot about the idea that the volume of information that people are confronted with keeps getting larger, but search is opaque and requires people to know what their searching for, and if people can't find what their searching for then it might as well not exist. Now in the lecture this was referring to why we use information structures, but I think it also applies in the sense of disinformation around recycling. If people can only find what they are searching for then people will easily seek out disinformation regarding things like recycling just by searching for information that validates their viewpoints. Having an abundance of unorganized, and unvetted information makes disinformation so much more damaging. This has been something that is difficult to navigate for my project, my attempt at combatting it has been to search for not only facts that promote recycling but facts that show the negatives of it as well.

A topic I didn't incorporate is from the Lecture "Creativity is Queen When Everyone is a Media Outlet" this lecture spoke on how the world is shifting to a mindset where one of the most valued traits in individuals in their ability to be creative and something that I feel really stuck with me from this lecture is that to be creative is to at times embrace failure, we need to follow the "fail forward fast" mentality. This is something that I didn't consider a lot when approaching my project, and I feel like its a large place for improvement for me. This idea can be incorporated in a way that pushes me to iterate on an idea and not attempt to have a perfect product on the first go around, I waste a lot of time trying to design something that makes sense and works exactly how I want on the first go that I often don't have the time to do that iterative design is required to end up with a good finished product, this is extremely important in the topic of recycling as feedback from potential users is what is going to ensure that the way we are presenting information and allowing players to learn throughout the game is actually effective

The last topic that I didn't incorporate was from the lecture "Supporting Learning & Collaboration with Gamification" This topic was more so talking about the learning shifts and sways of traditional education, throughout the lecture we talked about the old-school methodology of "Sage on the stage" this highly ordered structure of teaching where people come in one side different and out the other side all the same, now something important to take away from this is that people don't all learn in the same way, this is one of the reasons why our education system fails, because it doesn't accommodate people learn in different ways, similarly I feel like this is also where my project fails to teach, as its a very linear form presenting information. Some people will read these little fact popups and that information will stick with them like glue and they'll remember it next time someone brings up recycling but for others it's gone from their head 5 seconds after they read it, I think the way that the game could address this challenge is to present educational content in a variety of forms, mix the popup windows with things like quests where players collect an array of recyclables to solve a real world recycling issue, and this is where feedback is key, if players aren't receptive to that form of teaching then we need to get their feedback and add features that help get the information across to more users. the metrics for our success can be measured through surveys as people can actually provide us with valuable feedback on what we are doing right and wrong