Thank you for taking part in the testing process. DISCLAIMER: Please be aware while you answer these questions:

The program is in Beta Testing. Bugs are present and are known. Please try to ignore obvious bugs as much as you can. There are a few graphical bugs/glitches which would be solved with the addition of animation, for example.

The focus on this project is the artificial intelligence (AI) systems. The program’s UI, art work, and other general program systems such as lack of animations are immensely underdeveloped. Please answer these questions with thought only on the AI and not on the artwork, or lack of other engaging systems which would otherwise be in place in a fully developed program.

1. General Concept Feedback

1.1) Imagining a fully developed, intelligent program which allows users to create very complex and fully customizable maps and scenarios, do you think that with enough development this program can be used as a good tool to train shop employees to allows them to experience unique scenarios and optimize their customer service skills? Please explain reasons for your response.

I believe that this would be a good tool to help users in the service industry get an understanding of the types of scenarios that they would face in day to day work life, however, I believe that there is a certain element of customer service that can only be learned through real life experience and interactions with customers on the sales floor. However, for the purposes of training basic jobs and responsibilities, I believe this tool (fully developed) could be very useful.

1.2) If you and think that both the concept is good, and this program can be used a good baseline, and you did not cover it above, please describe why.

See above

1.3) If you think that the concept is good, but this program is not a good baseline for further development, and you didn’t cover it above, please describe why.

See above

1.4) If you think that the main concept of this program is bad, and that this idea couldn’t be developed well, and you didn’t cover it above, please describe why.

See above

1. General Artificial Intelligence (AI) Feedback

2.1) Please describe your thoughts on the general AI used in the program? Please think about the decisions they made, and compare their decision to ones you would typically see in real life.

The types of foods that the customers were selecting seemed to be quite repetitive – I am not sure if this is because the project is still in early development and there weren’t many items of food to choose from. Also, the pathways that the characters took seemed a little random, not really true to life of how my experience of shopping is. However, some people may shop differently to me!

2.2) Did the AI seem simple, and not very smart? If so, please describe how you came to that conclusion, and maybe some suggestions for making the AI seem more realistic. If you think the AI was smart, and it did seem to make some good decisions, can you pin point why it seemed smart, and if there is anything that can improve it even more?

Yes, but I did not experience many interactions, so it may have just been that I was missing something.

2.3) If a trolley was in a character’s way, they were programmed to find the nearest free tile from the trolley that wasn’t in their way and then move the trolley there. Did you notice this behaviour? If you did, did you think it looked realistic?

I cannot say that I noticed this behaviour

1. Employee AI Feedback

3.1) Do you think that the employees made good, and realistic decisions? Please describe how you came to your conclusion.

Yes, they seemed to be alert when it came to restocking and being at the till. However, it is again hard to know what employees are doing other than just wandering around.

3.2) The employees were programmed to get out of the way of a customer if they were asked to move. Did you notice this? If you did, did you think it looked realistic?

I did notice this, and it was realistic – however, in my experience, shop assistants will just wait patiently for customers to move out of the way!

3.3) Could you describe any ways that the employee could be made more intelligent?

Sometimes there are duties off of the shop floor that require attending to – perhaps a phone call or an email to respond to?

1. Customer AI Feedback

4.1) The customers were programmed to pick up the items they needed and then head to the checkout. If another character was in their way, they would wait 5 seconds, and then try and find a way around the character, if both of those failed, they would ask the character to move. Did you notice this behaviour? If you did, did you feel that it looked realistic?

I noticed that they would try and go around, but did not notice them asking another customer to move. I thought that this was very realistic, however some people would not wait any length of time because they are impatient. Maybe something to put in the future?

4.2) Could you describe any ways that the customers could be made more intelligent?

See above

1. Relationship AI Feedback

Subtle relationship behaviour was programmed into the characters. If they found themselves next to another character they had a good enough relationship with they would say help to them, then they would choose to have a conversation with that character. Depending upon what they talk about, and the traits of the characters that are talking, the characters’ relationship with each other would either increase or decrease.

5.1) Did you notice any conversations taking place? If you did, did they look realistic? Is there anything that would make it look more realistic?

I can’t say that I noticed any conversations taking place, I don’t know if I was just missing something but all the characters seemed to do is just wander around and buy stuff.

5.2) Can you think of anyways to make it more clear when characters are conversing? Such as speech bubbles above their heads, or happy and sad faces appearing when they gain or lose relationship.

Speech bubbles would have been perfect, or even some indication that they needed to be clicked on to see conversation. Plus and minus signs towards positive and negative relationship advancement would have also been useful.

1. Traits AI Feedback

6.1) All the characters have their own personal traits such as friendly, and lazy. These traits were used to affect how characters interacted with each other, as well as certain attributes associated with the characters such as their maximum speed etc. Did you notice these traits? If you did, did you feel like they were used in a realistic way? Is there anything that could be further developed with the traits to make the character more realistic and interact with each other in a more realistic way?

I saw the traits, and noticed that the people with negative traits such as lazy seemed to take longer to shop, perhaps because they were walking slower? Other than this, I am not sure of any further impact that they had on the actions of the individuals.

1. Pathfinding Feedback

The pathfinding is the first step in any advanced AI system. The system in this program uses the A\* pathfinding algorithm which is the fastest and more optimal algorithm currently developed.

7.1) Do you think that the characters took realistic paths to their destinations? Sometimes if the AI takes the most optimal path, it may look unrealistic so keep that in mind. Please explain your answer with examples of why or why not you agree.

Yes, most of the characters moved efficiently to their next destination – I noticed a few of the characters moving backwards and forwards in the same space from time to time but I am not sure if this was deliberate to show indecisiveness, etc.

1. Additions added to AI in possible further development

There were a few systems that could have been added into this program given more time to fully develop them. After describing them, please give your feedback on whether these systems would advance the AI and make the character more realistic.

8.1) Line-Of-Sight was the first thing to be implemented given more time. Currently all the characters have a full awareness of the entire world, they can find any item on any shelf, and find any character in the world even if they are very far away. With line-of-sight, systems could be developed and added which allows characters to need to walk tile by tile and search for their needs. They would also be able to ‘see’ other character that are not next to them and engage with them in a more realistic way. Do you agree that line-of-sight would advance the realism and intelligence of the AI considerable? If you do not agree, please explain why, and perhaps suggest your own ways the AI could become more realistic in terms of knowing things about their environment.

I agree that this would be a logical step to take in developing the AI to act more realistically – in the real world people often have conversations with people that are not directly next to them.

8.2) Linked closely with line-of-sight; partially explored pathfinding algorithms could be developed. The idea behind this is that currently, a character can make a perfect path from any tile to any other tile, even if it is 100s of tile away. This is because they can ‘see’ the entire map. Partially explored pathfinding would mean that characters would have a blank view of the map and only know about other characters and furniture if they see them using their line-of-sight. This would create a realistic looking pathfinding system which could take characters down dead-ends and non-optimal paths, which is impossible with full map awareness. Do you agree that partially explored pathfinding algorithms would create a more realistic looking pathfinding AI? If not, why do you disagree, and can you think of any ways to create a more realistic pathfinding system?

I do yes, as sometimes situations arise in which a current pathway becomes blocked and the individual must find a way around.

8.3) Please think about other ideas and concepts that could be added into the program to create a more realistic AI. Maybe talk about it at a general level and if you can, go into details about possible ways to implement the ideas. The box is a lot larger than the other. Please do not feel like you must fill the entire box. Any amount of feedback here is fine.

I am not particularly knowledgeable about AI systems but I definitely think that having some visual indication that makes it clear what the individuals are doing (talking in speech bubbles, thought bubbles to show indecisiveness or contemplation) would make the experience better. Also, a greater variety of situations in which the employee/customer has to deal with situations unexpectedly – an angry customer, a phone call from head office, etc.