THE DIFFERENCE BETWEEN VECTOR3.DISTANCE-BASED CODE AND A* PATHFINDING.

In A* pathfinding you will find the best path between points. It delivers fast updates and one can customize it to fit their own needs. A* pathfinding is optimized and does not take a lot of time to execute. It can also use 2D colliders. With Vector3.distance-based code, one would have to be coding the distances from one point to another, and if the points are changing this would make for bad performance and slow execution, as one would be returning the distance of the two points on an update.

EXPLAIN THE REASON WHY THE STORYBOARD SEQUENCE NEEDS TO BE SAVED AND IMPLEMENTED IN THIS WAY

The storyboard sequence was saved and implemented using PlayerPrefs. PlayerPrefs is easy to implement and all it does is stores data in a text file. Since the game does not need to save all the usernames and scores of all time, just using PlayerPrefs and overriding the text is completely fine and will not cause any hassle to backup since there is no need. This is the easiest way to save data; as creating a JSON file or XML file would be too much just to carry data from scene one to the last. PlayerPrefs is easier to hack into and steal information, but since this is a school project, protecting the data is not a priority.

EVALUATE AND JUSTIFY TECHNIQUES USED AND THE FINAL OUTCOME.

This evaluation was to be done on people who are not very technical. Explaining the game and how they'll play through took some repetitiveness. I explained that the goal was to beat a high score; that there shall be 3 levels each getting harder. I explained that they would have to use the arrow keys to move the snake around, not hitting the walls, picking up food and not hitting their own tail. It was abnormal for them to play a snake game with a grid/circuit at first. One person in particular took a few times to get used to the fact that hitting the walls lost you the game [1]. The first piece of criticism was that the circuit should have been wider, but it was only from one person who could not see that well. I noticed that it would have made their playing experiences easier if they did not have to spam the arrow keys to move the snake but holding down an arrow key would make the snake move as well [2].

When they got through the second level, I explained how now there shall be an enemy snake chasing you as you try to get to the other side and collecting as much food as you can. While coding the game I was skeptical whether or not to make the hitbox of the target snake on its head or the head and tail. I opted for head and tail as it wouldn't make sense for the enemy to hit your tail without consequences. Something I knew would happen while making the game was that they would try to eat the food that spawned the enemy snake [3]. I admit that if I had more time on the game, I would have made the food that spawned the enemy snake not visible until it's about to spawn the snake. This also could've been because the enemy snake had to spawn behind the player after 3 seconds, and the player might have not gotten far by those 3 seconds and spawning behind the player resulted in not having a lot of options. In the first run of the second level, I noticed that all of the tried to make it to the end as fast as possible, eating little food, so they won't get caught up by the enemy snake [4]. This, again, could have something to do with the fact that the snake spawns only after 3 seconds.

In the third level, they expected the enemy snake to be there so I noticed that they were less panicked when it spawned [5]. Since the obstacles had only 3 waypoints it wasn't as hard for them to dodge and they were quite small, since the map was small, I didn't want the obstacles to make it impossible to get through, as it would make the game boring.

 Overall, I was quite happy with their reaction and the playthrough went as expected mostly.

Video Link: https://youtu.be/Hn6GAHszaA4

REFERENCES

[1] Keeps dying to walls.

[2] Got tired of spamming the keys.

[3] Tried to eat enemy snake food.

[4] Made a run for it towards the end.

[5] Less hesitant.