Technical Assessment

BigFatBrainStorm -LuvBug Learning

Project Details:

A 2D game made with the Unity Engine and C#. The objective is to move the character (i.e. Shark) throughout a level, and the goal is to *'eat'* the correct fish within the fish pool. The objective fish is signified on the top left corner of the screen. Eating the right fish will grant the player 1 point and a new objective; however, eating the wrong one will result in a game over.

Game Mechanics:

The main mechanic of the game is the shark and fish movement. The shark follows the mouse when clicked and rotates towards it. The fish are spawned procedurally, with random starting speeds and move within the screen towards random points on the screen.

The game manager is responsible for 3 main features, spawning the fish, keeping track of the score and scene management. The fish are spawned based on a single prefab object and are assigned the type, sprite and position upon instantiation.

Motivation:

The main motive behind the game was to improve a growing child's hand-eye coordination and reinforce the idea of matching objects based on color and shape. Furthermore, when the player gets the correct fish, they receive positive reinforcement through a correct answer message and a score increment. While getting the correct fish is the objective, the player must also look out to avoid eating the wrong fish. This results in further movements with the mouse (or finger for touch controls) just to stay alive in the game. I believe a game of this type would greatly attract an audience between 7-8 years old because it also introduces skill-based gameplay. Since this age group allows rapid development of mental status, a bit of a higher skill-based gameplay would greatly motivate and attract them.

Improvements:

The major area for improvement would be the movement mechanic. I would love to implement a character rigging system to move parts of the shark separately and allow a biting animation whenever a fish was eaten. A more impactful UI would be more helpful for positive reinforcements. Overall I would love to make this game in 3D, but the time constraints did not allow me to do so.

In conclusion, the assessment was definitely challenging as managing assets, organizing code and creating a relatively scalable infrastructure was quite difficult. Regardless, I have enjoyed it and I hope it was able to give you an idea of my skill set and my ability to rapidly prototype games.