Programming Coursework 2 Game Idea and brief explanation of components

Explanation Of Components

For my programming assessed coursework 2 I have created four gaming mechanic components on the game engine Unity and script software Visual Studio. I have made a rolling, collectible, respawn and teleporting mechanic. I will combine these four components and create a game with them all being used in tandem. I used basic shapes in Unity to help me display the mechanics in question. For the rolling component I created a ball from a sphere and a floor beneath for the ball to roll on by adjusting a cube into the said floor. I then applied the script to the ball. This script then enables the ball to be controlled by horizontal and vertical keys and for it to be moved on the floor. For my second component I made collectibles in the shape of coins to be collected by the player. I created a similar foundation as with the rolling component but added collectible coins. When the player collides with the collectible coin it disappears and is collected. This is done by the coin having a collider that is set to trigger. For the respawn component I made it so when the player falls of or dies the player respawns in the starting position. This was similar with the other components using Unity and scripting in visual studio. I had to add triggers, colliders and other similar facets on Unity. For the final component I created a teleportation system. For this I made the player hit a certain invisible area and when it hits and triggers this area the player teleports to another destination. This required specific code.

Game Idea

I want to combine all the components mentioned to create a racing boulder marble game. The marble will roll down and up with momentum using the roll mechanic. On the way there shall be collectible tokens throughout the level using my collectible mechanic. There will be a respawn mechanic when you fall of the stage and come back on the track as seen in Mario Kart. Some parts of the level you will need to go to a certain area that will teleport you to the next area of the level, here I will use the teleportation component. I think all these components working together could make a great racing game, which I would call Marble Run.

Programming Journal

I have learnt many facets of programming this term in my discovery of video game components and mechanics. I feel more comfortable now using software such as Unity and Visual Studios to create games. These skills will help me in my AGP next year. Creating game mechanics and components in class with Paul has increased my confidence. I have still found areas of coding difficult and I am not an expert with using all the tools and what Unity as software provides. There are certain specific things I have learnt in Unity. For example in Unity 2019 you cannot use GUITTexture class. Instead you have to delete those lines of code on scripting software like visual studio or back and use an earlier version of Unity. I have also learned how to create a respawn mechanic using triggers and colliders and specific code. The respawn mechanic I made with the help of Paul and also online sources that provide support with coding C# in UNITY. Other specific mechanics I have learned along the way this term in programming class are teleportation, which Is similar to the respawn. I found the teleportation mechanic hard to do but eventually I studied and with help made it work. I have also learnt how to make collectibles which is useful for many types of games so I was happy with this. I have made basic movement mechanics such as rolling C# scripts and unity. Every week I attended the programming classes and in these classes I created my four final components. The Unity website and online YouTube tutorials provided a lot of help and contributed to my learning of programming. I have a long way to go but have been quietly surprised with my progress this term in programming.