Programming Learning Journal

Week 1:

This week we started back up the lectures, and we have dove straight into Programming which is something I am rather interested in learning and getting familiar with as it is essentially the groundwork for a video game. During the 2DG module from the first year, I was a sound designer, so I had never seen the inside of the Unity engine properly until IPP which even then was vastly lacking in requirement to Unity. Over the Summer I had attempted on multiple occasions to learn C# coding for video games and wrap my head around it but I didn't feel the urgency to do it. Fast forward to now, I immediately had the urgency and incentive to learn how to code because of the ability it will give me to freely create demos and mechanics.

That being said I decided to watch a few YouTube videos breaking down the basic components of Unity which is more aimed at beginners but I found it rather useful as a refresher. However, I am a practical learner so I know simply watching videos was going to be the answer in the end. So I went and took note of all the things I personally wanted to create in Unity and in games to help motivate me and learn specifically what I want. These are all followed up in Programming lectures as well as outside of lectures to help my progression.

Week 2:

This week I followed Brackey's tutorial on how to create a third-person movement and camera script using the Cinemachine add-on. It was very simple to just copy what was happening on screen however I think it is important that I understand what I am writing just so I know and can wrap my head around it, and for my future projects, reuse the codes and knowledge have learned. Overall didn't have much difficulty using and making this script as the tutorial was very self-explanatory.

Week 3:

The Unity Particle System has always been something I had heard whispers about being extremely fun and creative. These comments are very true, I watched a single video on the details of each of the functions of the particle system and after that, I took it all into my own hands. I decided to just play around within the lecture with the different shapes and emissions I could create. After the lecture was done I had a fairly decent fire particle system which I transferred over to my 3D Level Design game, I then continued to play around with the particle system and even had a look at using 3D shapes from Maya and then also adding sub-emitters. I now understand the use of the sub-emitters and know a few uses for using them. I really enjoyed spending loads of time learning how to use the particles system and I can confidently say that I can and will be using this system in the future because it adds a satisfying amount of polish to any game.

Week 4:

This week was a fairly simple week as I had been concentrating more on other modules but I decided to check out lighting within Unity and different ways it can be used in a scene such as URP and HDRP pipelines which also assisted me with my other modules this semester.

Week 5 *(Reading Week):*

This week I decided to take a step back and look into what I was going to make specifically for my submission, and I decided the best theme and genre for this was a horror game and that I would be looking into the different mechanics that come from this genre. Certainly, a flashlight mechanic comes to mind when thinking of this genre, so it would be interesting to see what else I can find.

Week 6:

Post-processing effects are incredibly useful and visually stunning, I took it upon myself to look into and research how to add and use these effects into a scene. The knowledge I obtained from my practices allowed me to really polish up my 3D Level Design game by adding bloom, motion blur, and vignettes. I now feel confident enough to add this to future projects and games to give it this added level of polish. I also had an idea of creating a simple black and white game with specific colours like red being available which would be done with the colour correction function.

Week 7:

This week I took my first step into creating the first mechanic of my horror package, which is the first-person movement. This was from a Youtube tutorial that I followed and this also allowed me to confidently understand how to analyze and explain the functions of lines of code.

Week 8:

This week I created the flashlight toggle system, which is a staple within horror games and was relatively easy to put together with a few if statements with true and false states.

Week 9:

This week I finished up the mechanics for the horror package, and one of the final mechanics was to add a flickering light to any light source game object in the scene with the script attached. This completes my submission requirement and has actually helped me this semester get to grips with Unity as a whole as well as C# coding for the basics. Ultimately I am confident to be able to put together movement mechanics for third-person and first-person characters.