Development Journal – Dated by Week of   
Week start = Thursday

7th October 2021

* Ill most of the week so no technical work done
* Formulated the TDD

14th October 2021

* I created a basic AI script so the AI would move to a point in the level and re familiarised myself with the Navmesh and Navmesh agents
* Create a movement script and a generic mouse look script so that I could walk around in the scene.
* Merged Ellen's subtitles project into the main project so that we had everything in one place as well as Merging Dillon's branch into my branch.
* Change the mouse look script to use cinema machine cameras using POV

21st October 2021

* Created waypoint class that allows people to create waypoints in runtime. And started the script to allow the AI to move between the set waypoints.
* I realised that it was quite difficult to understand where the waypoints were in world space so I created an editor script that created handles so that the designers could see where they were placing their waypoints.
* I also created a property draw so the waypoints in the inspector were easier to understand.

28th October 2021

* Mapped out the getters and setters that I would need for the characters AI and started to create the functionality for the AI moving to a randomly selected waypoint.
* Moving to the next waypoint in order as well as randomly selecting a waypoint and moving to it happens. However, the at destination bool is a bit finicky and I would like to find out a way of making it more reliable.
* Moved the waypoint functionality out of the core AI script and moved it into its own task script.

4th November 2021

* Managed to get the radius working on the way points so that the AI doesn't always go directly to the centre of the waypoint and has some variation.
* Try to use which statements too switch between whether the enemy was going after the player or randomly patrolling ultimately I can get it to work so I have moved back to just using if statements.

11th November 2021

* Created the audio object script that plays an audio file
* Found out after our presentation that gravity wasn't working as expected and that the player was falling incredibly slowly So I made some changes to how the player moves which ended up fixing that problem.
* Started working on the kinetic battery to enable us to turn on and off the lights which turned out to be quite a simple task and after a bit of bug fixing managed to get it working. For the player this required me to create a raycast hit so that I could interact with the generator
* Originally I was going to use a percentage bar to turn the lights on however that didn't seem ideal so instead I ended up using a for loop and that went through a list of lights to turn them on and off.

18th November 2021

* After a discussion with my team, we realised that we would have to switch from baked lighting to real time lighting due to the lights being turned on and off this in the short term would make the level look not as well left as we wanted but we are currently exploring ways to fix that.
* Finish the initial scripting for the kinetic battery I was using a for each loop however I have now changed to a normal for loop as it allows me to loop backwards through an array as well as forwards. I also changed them from being voids to coroutines as it allowed me to use the WaitForSeconds variable.
* Started work on the audio manager so that when we get round to it we can split the audio into designated volume controllers.
* Also got rid of some of the obsolete warning errors that I was getting from the standard assets brought in from the subtitles project to clear up the console.

25th November 2021

* We decided to give DirectX 12 and ray tracing a try with the project which greatly improves the look of the project just from a lighting standpoint.
* Expanded the player audio script that I had started a week earlier so that when we get footstep sounds they can be put straight in and will work.
* I found a problem with the AI that it can pick a spot within the radius of a waypoint that is off of the NavMesh so I started to try and fix this with NavMesh sample position which cheques whether the imported position is on the NavMesh and if it is true I can just use the calculated position as before and if it's false I can use the NavMesh hit position.
* I also removed the waypoint start function that I had created as I found out I didn't need it anymore.
* Properly started on the sound perception as it's a very core component that still had developed yet. So I added a heard bool that would be triggered if anything tagged player entered the vicinity however this isn't exactly how I would like it to be as I would like it to only be when an object has made a noise.

2nd December 2021

* I began work on the handyman the games main user interface I managed to get some buttons to work (which then didn't work) that changed what text was on the canvas. Also gave the handyman some fade in fade out animations just to make it look a little nicer.
* With the introduction of new corridors came a new light solution meaning that I had to refactor the entirety of the kinetic battery which wasn't immensely difficult it was more tedious than anything else. I had to work out the order of when the lights turned off and on and when the material changed over and I think I did a decently good job with this.
* Spent a little bit of time cleaning up code and writing comments just so I understood what it written while also using a Visual Studio extension to clean up the code.
* Made an update to the move to target script so now it works out if a path is too long It will give up and not take that path otherwise it will go straight to the target.
* I also re enabled sprinting as I hadn't realised I'd broken it two months ago.

9th December 2021

* Due to the increased number of hallways I changed how the kinetic battery script would detect the lights. To start with I got an array of GameObjects named hallways Unchanged all of the arrays for the lights that I had to lists this would allow me to add items to the lists in runtime which is not something you can do with an array. I then used a for loop to find the lighthouse objects, and then doing another for loop to find the actual lights. This worked much better than I expected.
* I then tried to add player pickups so that I could create our decoy objects however this currently seems very broken as the “hand” object seems to get detached from its original position and floats off with the picked up object.