08/02/22

As one of my 4 packages I would like to make an NPC dialogue system as dialogue is something I will want in my AGP so at the very least learning what I need to do to familiarize myself with dialogue is essential. I am going to watch a tutorial that goes over multiple-choice dialogue.

After finishing the tutorial and discussing it with people who know more about programming, I have decided to start from scratch which is not the worst and means I have only lost a few hours compared to if I continued with the tutorial and its bad code ending up causing problems in a future project. I found another tutorial which while it doesn't have multiple choices in the dialogue it is coded better also while I don't think I will attempt this now as I will change my package to a simple dialogue system I am thinking of revisiting this and potentially using bools to detect if the player has multiple choices to continue the dialogue.

I just finished the NPC dialogue package however at the moment the NPC only reacts to a button press so eventually I will alter it so that it reacts to a player if they get in range and press a button.

15/02/22

For my next package I want to create a 1st person shooter package as I feel this will both be convenient when I need it since a shooter-based script would be very handy to have but also it will allow me to become more familiar with creating character controllers which is needed when making pretty much any game. I am planning to take create a movement script, mouse camera script and finally reuse the projectile shooter script from my 3DL however I will change the bullets to not be affected by gravity so bullets act more like a gun than a ball getting thrown.

I decided to use a tutorial to help me stitch the scripts together however in the video they talk about having the player detect if they are grounded and if they aren't increase the player velocity so they accelerate faster. Since I plan to add a jump to a 3rd person character for my RCR project I will look into adding this.

This took slightly longer than I thought because I had forgotten to assign the ground to the same layer as what the player detects to work out if they are grounded, at the very least now I know that when I am dealing with layer masks I need to remember to assign my GameObjects. Along with this I also added a jump to the 1st person, even if I remove it later on at least I have done the coding once and have it saved for later reference. Finally for this FPS package I need it to shoot bullets, this is also something that I feel is common enough that I need a good grip on how to do it. Luckily I have some code I can repurpose so I don't think this should take long at all to do, I am going to add a prediction path much like I did for my 3DL but more obvious and with easily adjustable movement speeds.

So the shooter ended up taking longer than I expected mainly due to the prediction bullet that I wanted to implement, the problem was/is that the bullets don't have physics but I want them to somewhat ricochet off walls, the predicting is fine enough by shooting another projectile that's identical apart from the fact that its invisible and has a trail following it which creates the prediction effect however it means that the trail lingers and if the player moves even slightly between the prediction and the actual bullet the prediction will be wrong. I recognise this is a bandage solution but I think I will just get rid of the ricochet as for an FPS it is a not often used so I don't think it needs to be in a quick and easy FPS package. If I had to guess a solution for the ricochet I would say that instead of firing a bullet that bounces of walls it would be easier to detect where the bullet impacted and then create a new bullet from the exact location.

22/02/22
Moving onto the third package I want to create a system where the player can flip up a camera system and see stuff they otherwise wouldn't be able to, essentially the camera and main mechanic system from the FNAF franchise. In my own brainstorm I think I worked out what I need to do, I have created mini maps before using render textures so I could reuse them furthermore I have made pause menu's so I know how to create buttons. I think the way to have the camera's change would be to create a public integer which the player can increase or decrease and the integer would affect which camera is shown. This way the package can be increased or decreased without editing the code.

I got all the camera's working and the package can be expanded upon like I thought, originally the cameras were stuck to the screen however I fixed that by having the player press a key. The only problem I had was the on-screen buttons not working which I fixed by adding an event system so I need to make sure to remember that for the future.

08/03/22
For my final package I just want a simple pause menu so that I can save time on future projects, I have done this several times before so I am confident I can do it without problem.

Ok I mostly did it without problem, it took slightly longer than expected as I was trying to find old code to help lock the mouse but other than that it was fine.

29/03/22
I am updating my NPC dialogue package so that it is triggered when the player approaches the NPC and presses a key as that is more helpful than a big button that is always on screen, since this package does not have a 3d character controller I am just going to use a capsule with a ridged body falling from the sky to test this, I understand this isn't the best way to test this but it works so it should be fine. I think next time I do something like this I will just invent a small movement system for easier testing and also will probably just do this all at once rather than having the big button on screen at the start.

15/04/22
Finally for the individual packages I need to create README files of what to do for each of my packages to set them up, I will create an empty project and add the packages in so I can go through them and see exactly what I need to do.

I defiantly should have done these as I was making the packages as I have forgotten some things so some stuff like the velocity for the FPS I had forgotten how to set up. This is something I need to remember for next time.

19/04/22
I'm starting to assemble 4 packages into one however I am not using my NPC and am instead using a Pixelated shader. I am planning to create a maze that has the packages interacting with each other, I want the player to run around and shoot flares to work out where they are in a maze to get to the end. I know for a fact the FPS package will be the heart of this project as it has interactions with every other package, as for the cams I need to sort out how it interacts with the pause menu since otherwise the cams could be used while paused and they UI could overlap. The cams will also be made to NOT show the player and instead just show the maze which should be easy finally while the cams won't be pixelated the FPS camera will so I need to make that work. I plan on adding each package one by one and fixing all the problems before adding the next package.

I currently have added 3 packages which are the FPS, Camera and Pause menu packages. Originally I thought I could get the bool called IsPaused from the pause menu through code and

reference it in the Cams to disable them but that ended up not working however I found that I can change the transparency of the cameras from the pause menu script which means technically the cameras can be used while paused but you cannot see them which defeats the whole purpose which in other words means that the problem is fixed. As for the FPS all I needed to do was make the Cams only able to see stuff on the layers dedicated to the maze and the flares. Also, while I didn't need to edit this because I implemented this when creating the package but the pause menu will freeze time so the player cannot move around.
22/04/22 The last thing I have to do is just add the pixel shader, this doesn't interact with the UI so the pause menu is fine, the FPS and cams will however be pixelated so I need to add them using the attached script and shader. The maze doesn't have any functionality other than the flares that can be shot so the end point does not do anything however since this is supposed to be a demonstration of the packages and not an actual game I think it is fine.

Despite my programming log featuring entry's for both RCR and Programming, this only has entries for programming as I did not think of including the RCR entries at the time. That is definitely something I would change if I did this again as more entries means more experiences to learn from.