

CMD2223 2.4 | Elective EL1 Game Art Document

Steliyan Stoychev 402403



Introduction

This is a document that thoroughly describes the design & reskin process of the FPSMicroGame in Unity.

Choosing a theme

In the beginning I was sure that I wanted to create all the assets in a Borderlands style or a style often referred as “Cel Shaded” , with hand painted textures, dark outlines and excessive dark colors. On top of that I wanted to create a unique skin line, which is what most FPS and in general games nowadays do. A popular example of skin lines are the Asiimov and Redline in CS:GO. With that in mind I decided to create a skin line with a Cyberpunk Theme, using vibrant colors such as light neon blue, green and pink. With that theme in mind, I started creating the 3D models of the weapons in Blender, but since I was lacking experience in Substance Painter, I found it hard to imitate the same art style of the weapons I was going for. Thus, I decided that I’ll have it even worse when creating the UI and Level (Environment) assets for the level, so in the midway I decided to switch to a Synthwave theme, which I thought was the most fitting option when I saw how the first 3D gun turnout out to be after I was finished with texturing them.

UI

When I started redesigning the UI elements I quickly figured out that some of the elements of the UI are missing in my project, such as the Ammo Counter. I tried fixing it in several ways but to no avail. I thought it might be because of the version of Unity I’m using so I changed it, but the problem still remained. I decided to move on and focus on the other elements such as the main menu. There I first changed the background to a Synthwave themed image that I found on the internet (yes, it is royalty free). Then I was debating between which text font to choose from. I decided to go with a pixelated one, because the Synthwave theme reminds me of old-school arcade games, that were pixelated back in the days. Another reason for that was I saw the animations of the beams. Once they collide with the ground they explode, making large pixels splash, which I thought goes well with the pixel font. Another two reasons I went with it was, firstly the fact that the guns, enemies and level environment were all low poly, and secondly the Synthwave theme uses a lot of cubes as, which I thought is fitting with this font. After choosing the font I moved on to the coloring of the buttons and the text. I analyzed the color palette of my theme, coming into a conclusion that there were a lot of pinks, blues, purples and sometimes yellows and greens. With that in mind I choose the right colors for the buttons and text. After that I change the size of the buttons, because to me aesthetically it didn’t make sense that one of the buttons was twice the size of the other. Then I changed the title to my names game, which is “SAGA”(inspired by SEGA, company well known for creating one of the best pixel & arcade games back in the 70’s), and moved it a bit upper to fit the screen perfectly. I followed the same steps when changing the other UI elements. For the in-game menu the only extra I did was to change the sensitivity scroller to be at the bottom, in order to be visible, because it was causing a cluster when it was at the top of the menu. I also adjusted the spacing between each setting and changed the checkbox from a rounded box, to a diamond, which fits better with the style of the game, since almost everything in the game is “pointy” and there are no rounded objects.

Enemies

I was doing my research on what kind of enemies I should be using in my game to match my theme and I found out that a lot of the retro games use spaceships and robots, so I decided to go with that. I quickly found a reference and started doing my 3D models in Blender. I inserted the image as a reference into blender, and started using it as a guideline. I always start by blocking out the models, and if needed later I'd add more details, although in my case since I was aiming for a low poly, this didn't occur much. I do all of my models using the same workflow, which is to start with a cube, and extrude the sides accordingly to the reference until I'm happy with the result. After that I go to the shading panel, and attach a UV texture material to the object, so I can see if there are problems with the UV unwrapping. For the UV unwrapping I use smart unwrap, because I tried several times to unwrap the model by myself using mark seam, but to no avail. After that if there are no problems with the models, I export them into Substance painter, and bake the textures. After which I use a smart material (metal) and apply it to the object. Then I adjust the colors to fit the theme and add finishing touches with symbols(which I use a lot on the weapon 3D models, because otherwise they look boring) and adding the outline of the model by hand, using a brush. After which I export the textures back in blender, and if everything is working fine I then export them as a fbx, and then put them in the Unity project. Then all that's left is to create a collision mesh and create the model as a prefab.

Weapons

For the weapons I also use the same techniques, methods and workflow as the one when creating the enemies. I decided to go with the classic AWP, pistol and assault rifle, because there are tons of references I can use online, since I'm not good with 2D art and I cannot create my own concepts.

Environment

Creating the Level prefabs was a bit tricky, so I had to use a tutorial to achieve the same effect as the Synthwave theme(Malta By Drone,2019). After I successfully achieved the effect, I adjusted the colors and added some bloom, emission and changed the colors to ones that fit the theme. Then I created several assets that I could use when building the level in Unity. This time I didn't use Substance painter so I exported the assets as fbx file and imported them in Unity, after which I adjusted the colors & the emission, added a collision mesh and then made them as prefabs.

Level Design

For the level I wanted to introduce the player to all the mechanics this game provides. So firstly I started with crouching, then the player is forced to fight an enemy, which teaches him how to fire, and what happens when you kill an enemy (you get a "plus" that if picked up heals you). Then the player is presented with a second weapon that he can pick from the ground (the sniper rifle). After which another battle awaits him, and if he wins it he has to battle the spaceship enemy (which is the boss). If the player successfully kills it, he can see the third gun on a small platform right behind the boss. In order to reach the platform, he has to jump (which teaches him that he can jump in that game). Of course if he doesn't make the jump he falls from the map and dies but if he somehow manages to make it he is rewarded with the 3rd gun (the pistol). Then the player is forced to use the newly thought mechanic (jump) to continue the level. After reaching the top the player can see a jetpack waiting to be picked. This jetpack then can be used to reach the next platform, which is in a perfect distance for the amount of fuel the jetpack has. On the next platform an enemy is going to await the player and if the player somehow doesn't die by using the jetpack wrongfully, and manages to kill the enemy then he is

presented with the final boss, which upon getting killed will result in the player getting a Victory screen.

Skybox

I tried doing a skybox on my own, but the corners ended up being too visible, so it broke the immersion in the game. That's why instead I decided to just buy a ready skybox from a tutorial(Malta By Drone,2019). Another factor was that I was running low on time already.

Process of creating the 3D models

The whole process can be seen in the folder "Process" I've attached in the zip file. I didn't want to include that many pictures in a word file, because I thought it would become too clustered when mixed with a text.

Bibliography

Malta By Drone (2019) Blender Tutorial : Vaporwave Scene, Youtube. Malta By Drone. Available at: https://www.youtube.com/watch?v=8-PvN2qXcM4&t=407s&ab_channel=MaltaByDrone (Accessed: May 15, 2019).