Graphics Assignment 2 Report - John

The scene I ended up deciding to make was a spacecraft hanger with a spaceship inside. I looked around for assets and found a lot of Star Wars themed objects on sketchfab so decided to use those to try and make the scene more consistent. I chose to have my scene in an enclosed room, I had ideas for the door to be able to be opened and that you would be able to see space outside with other ships, but I didn't have time to add it.

I started by using the files from my last assignment which already had fragment lighting and added the functions necessary for importing objects and texturing. I had to update the shaders to use the textures and managed to get the lighting working with the textures. I did have some issues with the lighting on the tie fighter in the center of the scene. Some of the polygons that should be getting more light are darker than they should be. I didn't have any issues with applying the textures to the objects.

For the user controls I decided to use key presses for the movement and mouse controls for the viewing direction. I used a tutorial which I have linked below to implement the mouse controls. I had plans to animate one of the droids but only got around to giving it transformations that can be controlled to sort of make it look like it is moving around naturally.

Video: https://www.youtube.com/watch?v=3SZ_pa0E_Fs&ab_channel=John

Controls:

W = Forward

A = Left

S = Back

D = Right

Mouse = Change camera looking direction

T = Move droid positively on the x-axis

G = Move droid negatively on the x-axis

H = Move droid positively on the z-axis

F = Move droid negatively on the z-axis

1 = Move light position negatively on x-axis

2 = Move light position positively on x-axis

3 = Move light position negatively on y-axis

4 = Move light position positively on y-axis

5 = Move light position negatively on z-axis

6 = Move light position positively on z-axis

, = change draw mode

Assets Used:

Light: https://sketchfab.com/3d-models/scifi-light-11-ba0baa5f0f514726ae81436674eddac1

Droid: https://sketchfab.com/3d-models/bb-9e-b7c9cde2a0884be491ab07e123631d24

Droid: https://sketchfab.com/3d-models/battle-droid-b1-3ee39289d86a45cd894f61e269ea10ed

Droid: https://sketchfab.com/3d-models/d-o-droid-c2c239b547824d6f9e4c2d38fa11bbda

Ship: https://sketchfab.com/3d-models/low-poly-tie-fighter-star-wars-4cf6cb507ba54533a50e608f2aadb47c

Chair: https://sketchfab.com/3d-models/folding-chair-low-poly-54bd0acd7c524d678128367a25a0f504

Ladder: https://sketchfab.com/3d-models/ladder-5fdd2647427b4543bd299acff008bc3f

Garage: https://sketchfab.com/3d-models/car-garage-8993d2084de440eead0a1fe43f3cfa0f

Links for the camera movement tutorial I used: https://learnopengl.com/Getting-started/Camera