Write Up

Assignment 07 - GAMES6320

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Controls: WASD - Move Mesh, Arrow Keys - Move Camera

Assignment 07 was a great insight into working with plugins and integrating a content creation tool with a game engine. During this assignment, I learned a lot about setting up a pipeline for Maya to work seamlessly with the Graphics engine that I have been working on. I also discovered some interesting things about how SDKs and plugins work in general.

Default State Of Game

MayaMeshExporter Project

After importing the MayaMeshExporter project into my Visual Studio solution, I initially thought there would be a lot of steps and dependencies that I would have to set up for it to work. However, I realized that this project was not really dependent on the engine itself. Rather, it was a tool that connected the Maya software and SDK with my game engine.

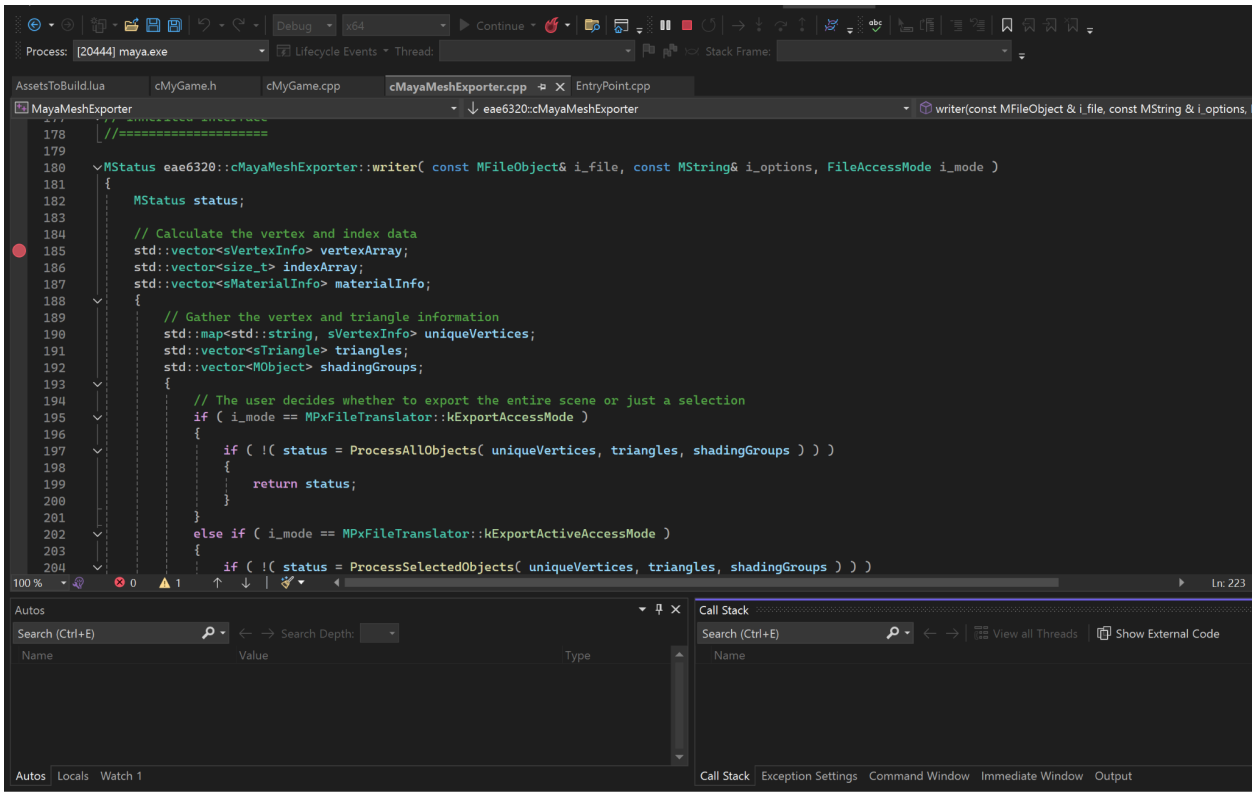
The only reference that I added to the MayaMeshExporter project was the Windows project. This was needed for it to build correctly on the platform. Other than that, there were no other dependencies or other projects that depended on the MayaMeshExporter. As mentioned before, I think of this project simply as a tool to generate the plugin, get data from Maya and pass it on to the Graphics engine, rather than an integral part of the engine itself.

Data Exporting

The data that Maya exports is obviously much larger than what we need, as it includes various details like normals, tangents, and texture coordinates. However, our primary goal is to simply draw a mesh. Hence, we only need to export the vertex data and index data of the geometry.

In my implementation, I did not export the unused data and simply ignored it. Although it may have been more future-proof to export it, I believe it would have been a waste of work and space. One of the most important things I have learned from the class discussions that we had is to always implement features based on the requirements and goals of the program. I have learned that having a minimalistic design is always better, since requirements change all the time.

Debugging MayaMeshExporter



Engine Limitations

When trying to load a mesh that has too many vertices, my program just stops drawing them when it reaches the maximum vertex count. Ideally, I would like to display a warning/error message to let the user know that the limit has been exceeded. I would also like to learn how we can increase this vertex limit and how large of a mesh the engine could support.

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