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CS 330

Reflection

My reasoning for choosing the image of the fountain is mostly because I felt it was complex enough to be challenging, but not too complex that it would be out of the scope of this class. That fountain brings great memories, and I was excited to attempt to recreate it for this class. In order to recreate it, the first step was breaking the image down into each shape and their placement. The code we were given already had all of the shapes required for this, including a half circle, for the fountain bowl.

Implementing movement within the scene was pretty straightforward. This is included in the ProcessKeyboardEvents method. In order to accomplish this, each key was an “if” statement, so if it was pressed, the assigned action would carry out. In this case, you could move forward (w), backward (s), left (a), right (d), up (q), and down (e). There was also a function added where using the mouse scroll would either speed up or slow down the movement. This function was implemented using delta time in order to keep the speed similar in every computer, despite any processing power inequalities.

Although the majority of this code had already been designed prior to our class, we did have to create a few functions in order to have the full functionality required for the assignment. Among the functions created were LoadSceneTextures and DefineObjectMaterials to name a few. These functions, in addition to functionality, also help increase readability within the code. It allows you to load textures and materials, name them, and then call on each name when building the scene. This helps with minimizing redundancy. It’s also much easier to see when you’re building the scene that one shape was assigned the material glass or clay, instead of looking through each value that creates the look of each material. It also helps keep a sense of uniformity, since all glass shapes can be modified by changing the source, rather than each shape individually. In the long run, this can help save time when it comes to maintaining and editing your code.