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CS 457
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Final Project Proposal CS 457

For the final project for this class, I would be interested in applying a texture map to an object. This would involve reading in a series of texture maps to understand the normal, the height the roughness as well as the abelto that should be applied to the surface. After applying these items, I would then give a light on the shader slider panel for the user to control to try to show off the effect the map has on the texture. If all goes well, the texture should look like it has bumps and ripples in a realistic manner.

The current concept that I have for this project is modeling a brick wall, onto a cube or quad, or some shape with flat surfaces that will best display what is happening. I will map each of the textures, which I understand to represent:

Albedo = Diffuse Map
Normal = Normal bump / bump map
Roughness = 'gloss' - manages reflections
Height = displacement map

After Applying these textures, I will need to create a light that will highlight specific maps of the object, and make its xyz movements controllable by the user. After implementing both of these elements, and ensuring that they work correctly, I believe that the base project could be considered done, but I have a few extended goals that I'd really like to implement for the project if I have the time.

An extended goal for this project could be to implement a splatmap of some kind, and apply a second texture to make a more realistic scenario, like the bricks being adjacent to dirt or grass. I think this would be a great addition as it could extend my current system to be a more realistic display, where objects can appear overlayed on top of eachother. With this system I could also use Noise to create some spots of the second material nearby to make some imperfections within the splatmap. I hope Time permits me to reach this state.