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Cst 325

Shadow Mapping

The first thing that I took away from this assignment was how shadows can add an extra layer or reality to a scene, if an object is static the shadow is static unless the light source or object moves. I also thought it was interesting to learn that there were 2 different methods of creating shadows, volume based and image based. Volume based shadowing has been used until the mid 2010's whereas image based shadowing was created in 2006. By comparing the tw0 it appears that volume based shadowing uses more system memory than image based shadowing because it has to store the geometry of the shadows to be cast, whereas image based shadowing is a texture that is applied and uses significantly less memory.

Something else that I found interesting was the use of the spector add-on along with our assignment which allowed us to simulate light and shadows as we developed our code. It was challenging at the beginning to set the app up because I was running firefox, but once I switched to chrome I had less issues. My group and I worked together, got stuck and even had some interesting results. Sometimes the teapot was completely covered in the dark, other times the shadow appeared as a large rectangle above the scene.

To combat these issues we reviewed the lecture video about shadow mapping and also attended office hours to seek tutoring advice. We would ask Jaden questions and he would go over key concepts that we may have missed and ask us questions on those concepts which helped us gain a better understanding. I would also say that some of my biggest challenges with the assignment were trying to visualize the math and why it was doing what it did.

For example when I was getting a different result than the rest of my group mates we compared files. While they all looked the same, I came to find out that I forgot to put a parenthesis around part of an equation. It was this small piece of information that caused my scene to look drastically different. To conclude I do think it is interesting how a small detail like shadows which have so much math behind them can add depth and detail to an image, and make them seem more realistic.