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CMPM 163 – Homework 1 – Part D

Very recently, a beta was launched for a new game called “Sea of Thieves”. I chose this game because the water it uses looks absolutely amazing. The water has ripples and waves that are “organic” and not “robotic”. In other words, it’s not just a couple of tiles copied and pasted many times or a simple water texture with predictable waves that don’t really interact with the environment. In this game, the waves actually crash into the ships and rocks splashing water everywhere.

In this screenshot, one can see that the waves have all these crazy shapes and detail. I would have liked to put a gif instead since a screenshot won’t do it justice. Whoever came up with the method to creating the water in this game is a genius. I honestly have no idea how this was achieved, but it is something to aspire to create one day and implement it into a game. Again, I’ll

be honest again and say that I am a complete novice when it comes to this kind of stuff. I can make wild and vague guesses such as using shaders, reflections, refraction, caustics, ambient occlusion, etc. Unfortunately I can't go into any details, but if I could, I probably wouldn't be struggling with the assignments and examples.

The water effect changes when your camera is in the water. Unfortunately I don't have a screenshot looking up when underwater, but the waves look different when looking from below. Lights can heavily change the water effect as shown with the two screenshots I have. One is in a storm which has dim lighting and the other one has a calm weather which has great lighting. The dim lighting makes the water look murky and sinister while the bright lighting makes the water clear and majestic. The effect probably does update the geometry as the waves makes the players float up and down dynamically along with the water wave effects. Again, the color of the pixels probably change depending on the weather.

In conclusion, I can't exactly analyze how the water was created besides vague guesses that probably don't even scratch the surface of how the visual effect was produced. What I did

get though is inspiration and motivation to learn more about visual effects so that maybe one day I can create visual effects that are equal in quality or perhaps even surpass this level of quality.