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Final Project Proposal

**Idea**

The idea for my CS 457 final project is to “simulate” a section of ocean. This would entail starting with a rectangular prism, which above a certain height would transition from ocean floor to water. So any vertex with a y-value below some threshold will be sand, the alpha value for which would be 1. Vertices with y-values above this threshold would become water, with the alpha value being lower to create the illusion of transparency. The y-value threshold would vary across the ocean floor, looking somewhat similar to the perturbed pleat from Project #3. Finally, the surface of the water would also be “perturbed” using noise to simulate waves, also making use of glman’s timer. The user would be able to adjust the y-threshold, wave amplitude, and wave frequency. There would also be a checkbox that would swap the “animation” from waves to ripples emanating from the center of the prism.