

Final Project Milestone

For the first milestone, I have (as promised) made a tree on a hill, with the required addendum of a camera that moves. In the process of doing this, I also forgot that I originally said my hill would be premade, so my hill is also randomly generated at runtime (although with a good amount of restrictions, and just a basic randomization). The user can currently press enter to advance time, and the seasons will indeed change--although this does not yet impact the tree structure.

The tree is currently the super simple recursive algorithm where for some number of recursions, each branch makes two half sized branches.

I am happy with the current progress; getting color up and running was very exciting and the seasons changing is already very visually satisfying. My current tree growth code is barebones but I think it has a good foundation, and I can visualize how it will evolve in accordance with an L-system stored in the already made "Tree" object in the code. An issue I've run into is setting up rotation; this is mainly because I have yet to get the webgpu matrix math library working. Once I do, I think my tree will look significantly better as the branches grow 'out' of the previous branch at an angle instead of straight up.

A current bug is that if the tree has more than eight branches, all of the polygons go haywire. The branches somehow start connecting to the hill and the hill polygons are thrown out of wack too? I am working on solving it. Anywho, what a fun project so far.