

# Shader Final Project: Isolated Island

Zoe Wu

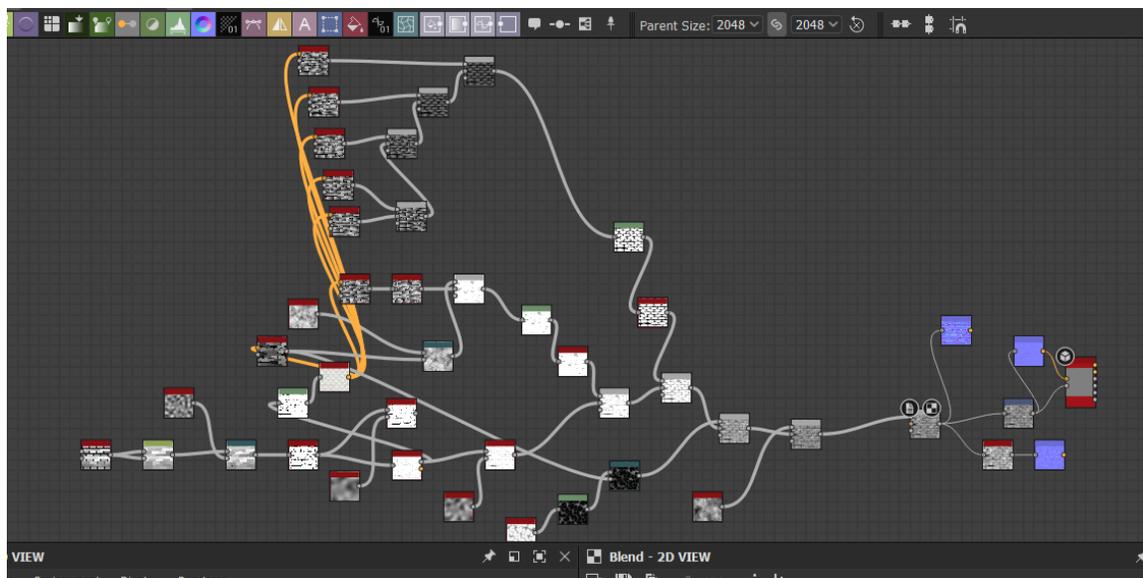
One inspiration for this final project is the following picture I saw from Pinterest, a very cozy looking cartoon style 3d environmental. Since the course material is largely focused on photo realistic materials making, I decided to make a scene closer to real environment instead of a cartoon style. In this project, I made a total of two materials in Substance Designer, one of them had added a looping animation effect in Unity animation tool to create a dynamic effect, and I also built up a similar floating island environment scene in Unity based on the picture.

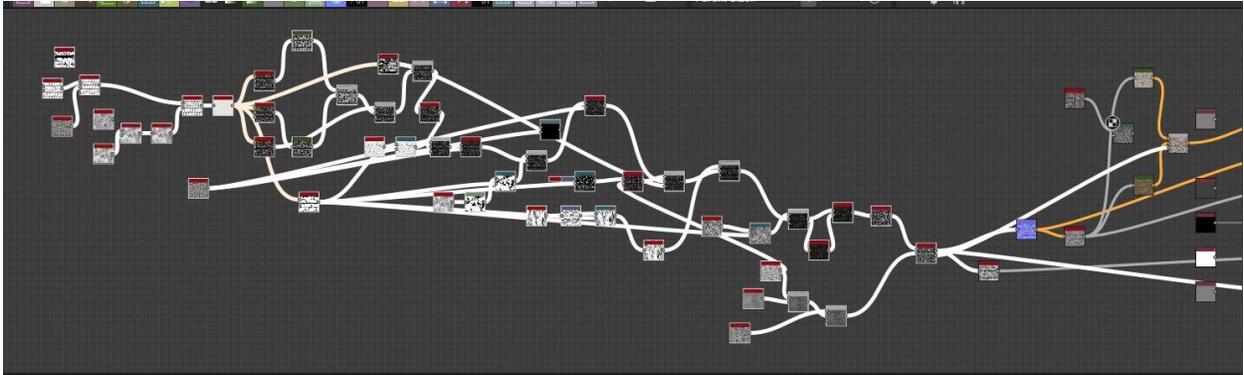


## Material Making in Substance Designer

### Brick Material

I spent quite a lot of time searching and making the materials. It was the main part of this project. I wanted to create a stone house look, so the first material I made is a medieval style brick pattern for the house. I tried to implement the material twice, and the result of the first attempt was not very satisfactory. So, I stopped in the middle and tried another tutorial.



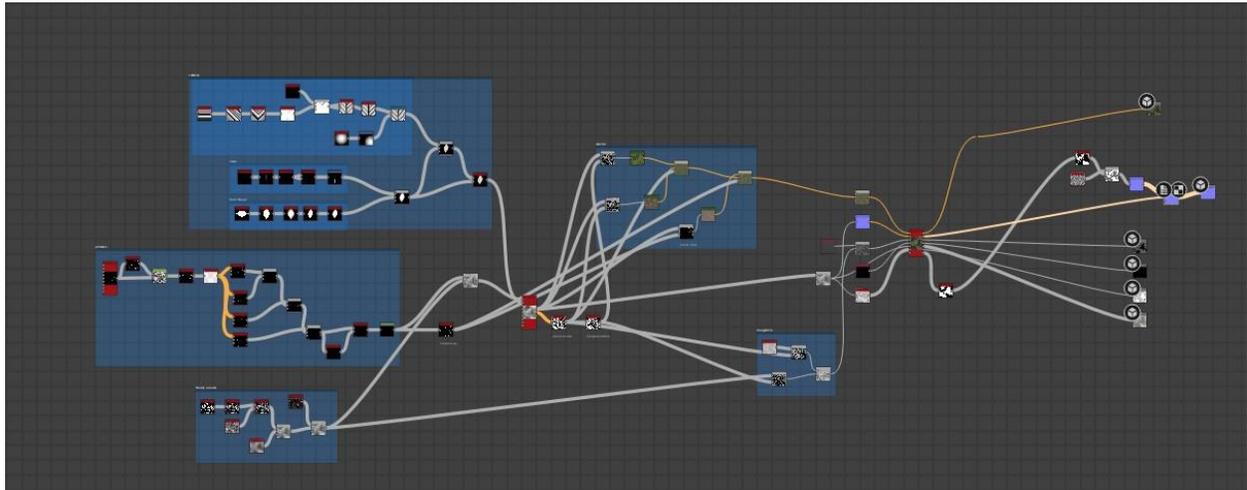


The second attempt started from the tile generator node, the material gradually takes shape by adding noises/cloud textures and randomness to it. The main nodes I used were directional wrap, perlin noise, levels, blend, flood fill to gradient. There are many possible changes in the details of the nodes. The production process was very difficult since it was the second material I had made in Substance, and the tutorial I found is not very clear, I had to spend more time to figure out some steps by myself.

Reference: <https://youtu.be/nCSJTKjwOng>

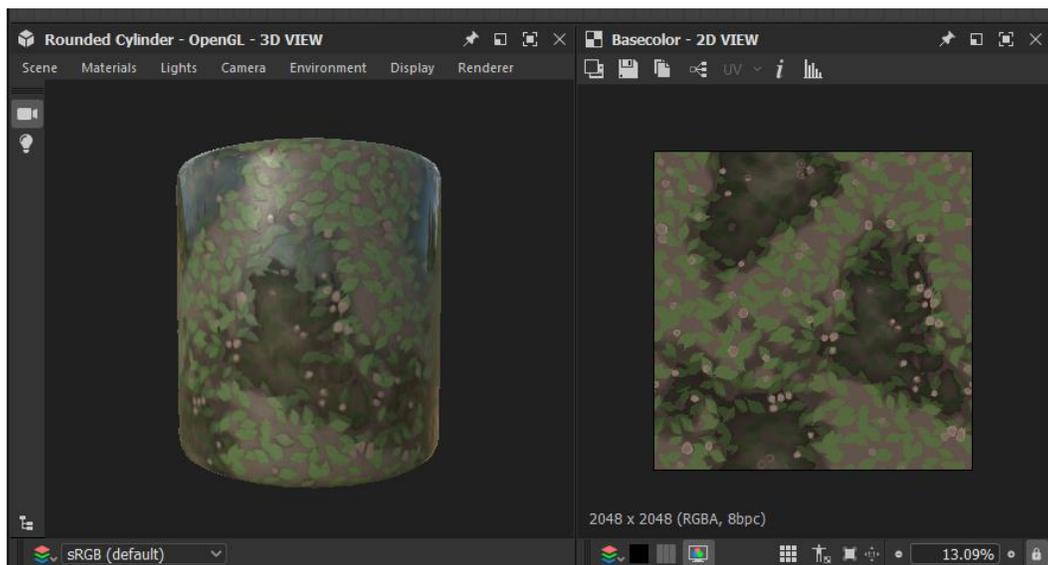


## Leafy Pond Material



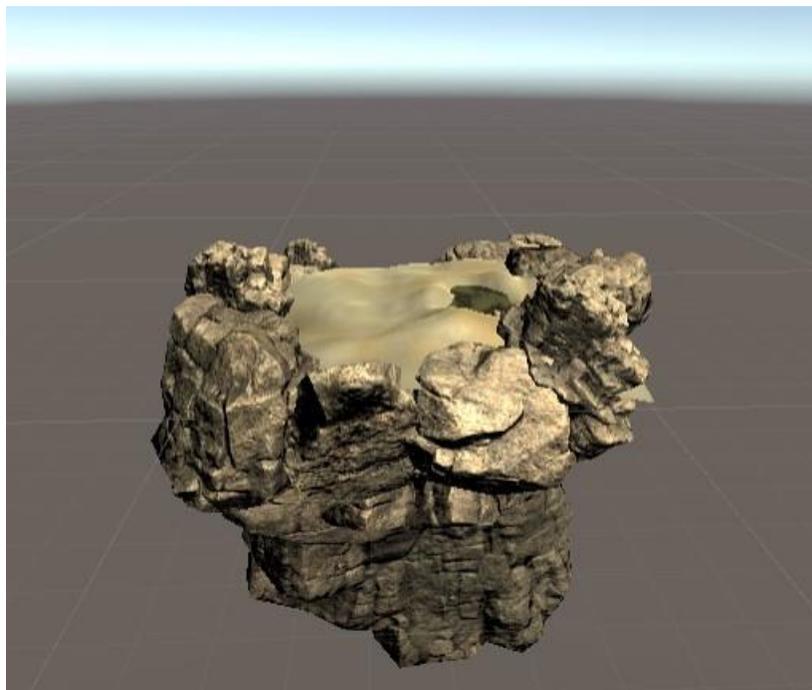
This one is more interesting than the brick material. It uses an oval plus a rectangle shape to form the basic look of a leaf. One of the most powerful nodes is water level, which controls the darkness, depth, wetness, etc. I'm satisfied with the final outcome. The randomness of the leaves scattered at different heights, the reflection of the water surface, and the fragmented mud spots, the whole effect exceeded my expectations.

Reference: <https://youtu.be/ozZlHo-5Ek8>



## Environment

The scene of the floating island is built by a terrain with a pile of stones wrapped around and underneath covering it. In order to achieve the desired effect, it is necessary to first build a high in the middle and round on both ends ground with undulations. It can be very well implemented by using the Unity's Terrain Tool Sample Assets Pack. It has very useful built-in brushes that can raise or lower terrain to get a customized result, and ground textures can be painted on directly by texture paint brush. Then, I downloaded the Rock and Boulders 2 package from unity assets store and used the stone prefabs to build the island.

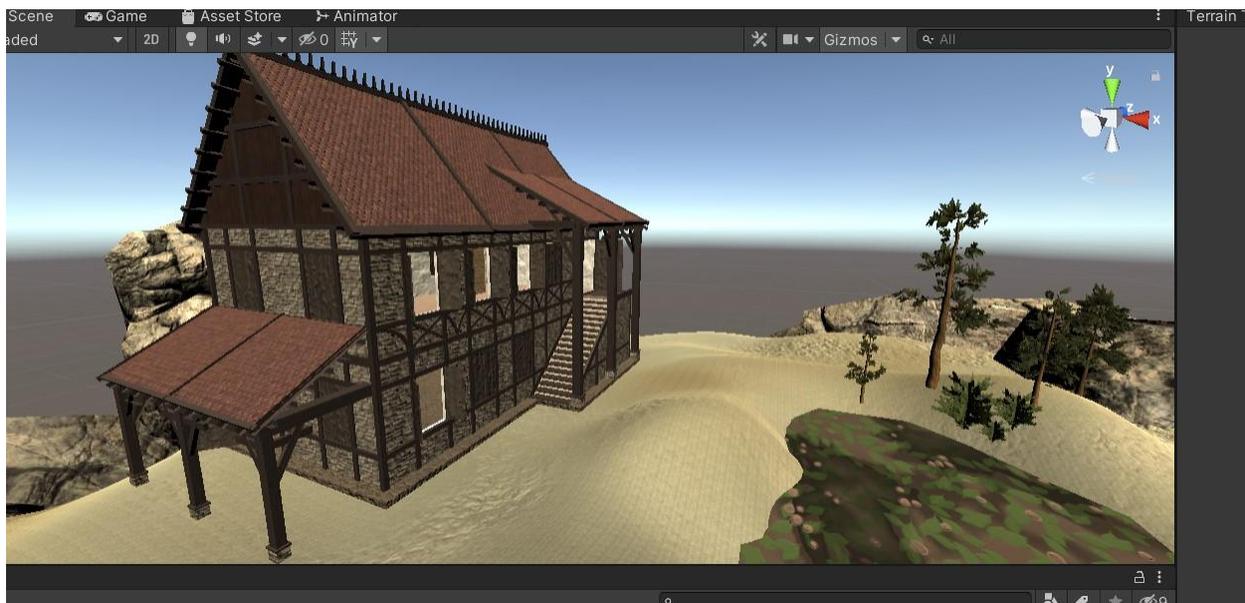


## Result

Since I mainly put my efforts on material making and environment building, I didn't have much time left for modelling the house. So, I decided to use the asset 'Free Medieval House' from unity assets store and replace the original white wall by the stone material I made. The

pond next to it was built by a plane with the leafy pond material, and the loop dynamic effect was done in Unity using Unity's animation tools. Finally, I tried to use the FPS Controller to add a first-person view camera that can move and walk along with the perspective, so that I could have a more immersive effect. Unfortunately, I kept getting script error when it's compiling.

Overall, this project has been very challenging for me. There were a lot of difficulties that I encountered and couldn't carry on. Adjusting the parameters in substance was struggling, because there were so many options that I was not familiar with, so I had no clue about what result it was going to provide. I struggled a lot through this process, but I'm really happy with the scene building skills I have learned from this project, and I believe that after this class, I will be able to complete some works that I am interested in by using Substance Designer and Unity.



Screen Capture: <https://youtu.be/e1VKPE3YzFA>