For the project, I created the neighborhood from SpongeBob that included Patrick’s house squid wards house and SpongeBob’s house. I chose this for my project because the houses seemed to be made from simple shapes and didn’t look to difficult to recreate. I used a plane with a sand texture to create the floor for the entire scene.

Patrick’s house was the simplest, it consisted of a hemisphere, and an antenna. I was not sure hoe to create a hemisphere, so I made a sphere and had half of it under the plane. This gave it the look of a hemisphere. For the antenna, I used multiple cylinders and arranged them to make it look like the antenna. A dark brown shader was used for the rock and a bamboo color shader for the antenna.

Squid wards house was made with multiple cylinders and elongated cubes. The house resembles a face and for this face, I used the elongated cubes for the nose, eyebrows, and ears. The door used a cylinder on its side halfway though the plane similar to Patrick’s house. I needed a rounded door, and this seemed like the simplest approach. The same sort of technique was used for the eyes or windows. The same texture was used for the entire house except for the door. The way the windows were created, it gave a lighter shade than the rest of the house and it was the perfect color, so I chose not to change it.

SpongeBob’s house was made with all cylinders. The windows and door were made with the same technique as sidewards house. The chimney was made with cylinders as well. The windows, door and chimney are all the same color, so the same texture was used which is a light steel blue color. The leaves of the pineapple were made with a cylinder and thanks to how the cylinder took the texture, it gives it the look of multiple leaves.

To navigate the scene, we would use the keyboard and the mouse. The mouse controls the direction that you are looking in. It gives you the possibility of 360-degree side view, but you cannot see past straight up or down to avoid the world looking upside down. With the keyboard. You use the standard adws leys for directional movement as in most pc games. One additional feature would be the use of the q and e keys for up wards and downward movement. This allows you to move up and down with out changing the camara. This movement function is very useful can be used for any 3D scene and could be incorporated into other things like a videogame. It can even be modified to add additional key bindings for other actions. For example, A game I like to play has an action called dodge that allows you to move in a certain direction very quickly. The movement function could be modified to recreate that by binding to a certain key, say f. we would program f to move you a certain distance at once in whatever direction you are looking in. A jump feature in a game would be very similar also. Where pressing a button moved you very quickly in the upward direction. The dodge function in the game is much more complicated since it includes animations and sound effects, but this would be a very simple and easy version to implement with what we have learned in the course.