Cube Escape Brag Sheet

* **Trees**

Much of the time programming this was spent organizing the trees outside the windows. I modified the code from fractals.cpp from class. I use an array of points to generate each of the trees, with their location randomized in the setup function to generate that array. They are randomized in the x direction (parallel to the window) as well as in the z direction, which creates some depth in the image. The heights are also randomized by altering the max level of fractal generation that occurs.

I was also very proud of the shadows, which are the same tree objects created from the same array, then rotated to be flat on the ground. I also used blending to make the shadows semi see-through, which makes them read a lot more like shadows as well.

* **Sky box**

I spent a long time struggling with the skybox in the previous assignment and never got it to work out the way I wanted, so I’m really proud of how the skybox turned out in this assignment. I used a clipping plane so it would encompass the whole area outside the window but wouldn’t interfere with the room itself.

The spinning took a lot to figure out, as well, and I had to sacrifice aesthetics for the effect but I’m very glad it moves now! It’s an idle function that rotates the sphere that makes up the sky, with the texture bound to the sphere surface. This was the weird part, and I ended up not using sphere mapping – instead using GL\_OBJECT\_LINEAR – to ensure that the motion of the sphere would be visible.

* **Window**

The modelling of the window took a lot of time as well, including the curtains and the rod above it. The curtains in particular are the first foray into Bezier surfaces and I like how the waviness shows in their shape now.

The opacity of the window was also rather annoying to work out. It ended up being a simple solution of changing an alpha value, but the blending effect against the outside was really nice.

* **Lighting** (Overhead if applicable)

There isn’t anything super fancy about it, but I like how the lighting emphasizes the shapes in the room and creates gradients on the leaves of the trees.