B) Following the tutorial that was in the slides and the visual guide posted on slack, I replicated the ray marching up to the point where I learned about transforming and rotating SDF objects. Phong lighting and basic CSG functions were implemented following these tutorials. After that, I started experimenting with various shapes, union/differences/intersects, and time functions. I tried out many shapes from the modeling with distance functions article trying to create a somewhat decent looking shape. In the end I stuck with a union of a sphere and cylinder with a difference of a pair of torus rings as a primary shape that becomes a cube over time.

References:

http://jamie-wong.com/2016/07/15/ray-marching-signed-distance-functions/https://www.shadertoy.com/view/4dSfRc http://iquilezles.org/www/articles/distfunctions/distfunctions.htm

