

I haven't done much that's interesting yet for my project. Since I'm making a Rubik's cube, I took a look at the rotating cube example from chapter 4 for inspiration for my starter code. Of course, I'm going to need to figure out how to make a cube made of 27 mini cubes (for your typical 3x3 cube) where you can rotate sections (of 9 mini cubes each). I'm hoping to make the vertices actually rotate, not just change the colors. Right now I just have a program with a colored cube that rotates and a black background. It currently rotates using the range buttons but I would like to do as much rotation with "trackball" input as possible to make it feel more like a real cube. I have started planning my approach to making the separate cubes and getting the rotation of sections to work. I'm unsure whether I'll be able to keep all of the vertices in the same array yet. I think I can, but I'll have to see. The task I assigned myself this week was finding all of the coordinates I will need initially for the miniature cubes, which took a while since there's $9 \times 6 = 54$ visible faces. Below you can see that I've got the coordinates for each face. I may need to organize the coordinates in the array so that I can easily access sections of the cube. If I want my program to extend to cubes of different dimensions, I will have to find a formula or algorithm for generating all of these vertices.

