Jack Tsui

Dr. Mahmoud

CMPS-4213
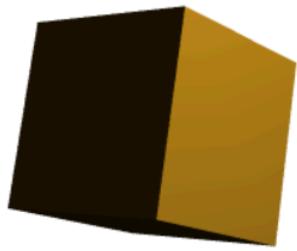
Estimated time: 5 hours


I enjoyed doing the 4th graphics assignment. The first thing I did was replace the old color array with attribute and uniform light variables in the shader. Then I calculated the normals and the light. The calculated normals are stored in an array, which will be used to pass to the buffer. Then the next thing I did was set the property of the object that will be rendered like the geometric shapes, like cubes, tetrahedra, spheres, octahedron, dodecahedron, and icosahedron. After calculating and implementing the variables for all of these new components, I updated my render() and init() functions with them. With this, I have completed parts 1 and 2, having rendered a cube and other geometric shapes with lighting and material. For the last part, I decided to make my scene be of Wall-E spinning in space. The first thing I did was change the canvas to have a black background by changing the RGBA values of gl.clearColor() to have all 0.0s besides the alpha value. Then the next thing I did was to proceed with rendering the body parts of Wall-E. I did this with mostly cubes and spheres. I used transformations to shrink and stretch the size of the cube to make slabs and rectangles for forming the image of Wall-E. After this was done, I just needed to make sure all of the objects would rotate with each other to make a scene of Wall-E spinning in space.

Sources: Class example 12, WebGL Documentation
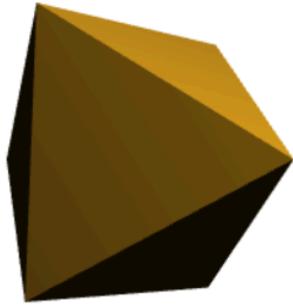
https://developer.mozilla.org/en-US/docs/Web/API/WebGL_API/Tutorial/Lighting_in_WebGL

# Part 1
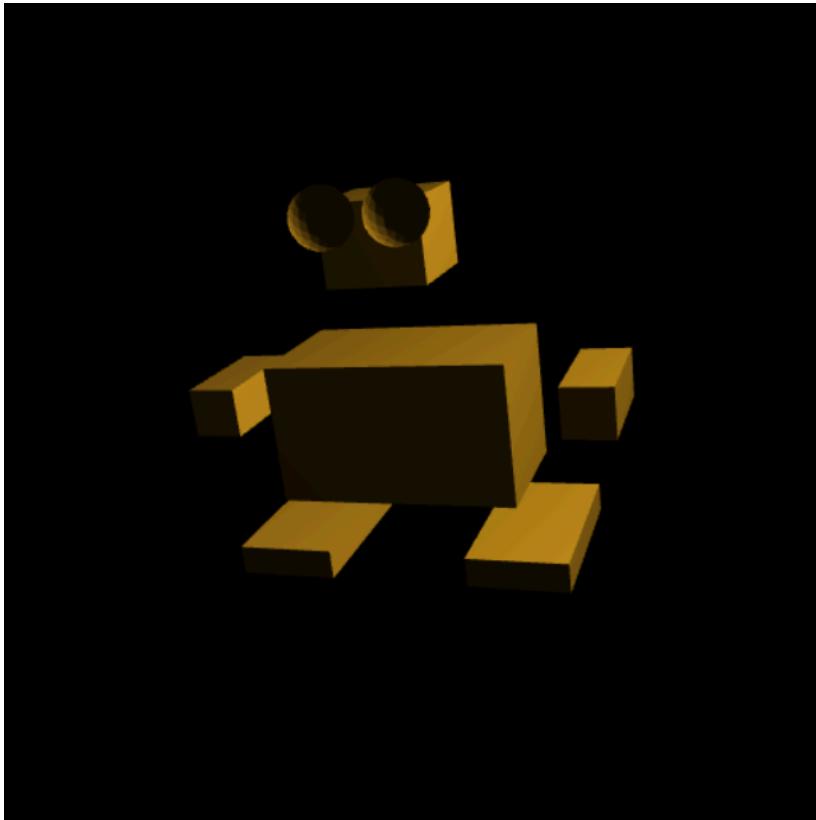


Stop | Rotate X | Rotate Y | Rotate Z

Press 1 for Tetrahedron, 2 for Cube, 3 for Octahedron, 4 for Icosahedron

# Part 2



Stop | Rotate X | Rotate Y | Rotate Z

Press 1 for Tetrahedron, 2 for Cube, 3 for Octahedron, 4 for Icosahedron

# Part 3



Press 1 for Tetrahedron, 2 for Cube, 3 for Octahedron, 4 for Icosahedron