

CMSI 371-01

COMPUTER GRAPHICS

Spring 2016

Assignment 0428a Feedback

Due to time constraints, this feedback is being kept brief. If you would like a longer discussion of your 3D scene, please contact me and we can find some time for a review.

Christopher Dellomes

cjdellomes / cjdellomes@gmail.com

*Notes while running (high-priority notes are marked with ***):*

- Out of the box, a `glDrawArrays` error. Not encouraging, typically indicative of missing data.
- Diffuse lighting looks implemented but not specular. Code will show what's what.
- Basic camera-like interaction is there...or is it the same mouse rotation code from before, just used differently? Again the code will tell.
- Random shapes are fun. Pretty abstract and some nice potential.

Code review (refer to <http://lmucs.github.io/backing-guidelines/> for code-review abbreviations):

1. Array error culprit spotted: your arrays aren't all the right size. Note that the arrays all need to have a one-to-one correspondence with every vertex in the mesh. Not all of them do—some of your shapes have a smaller normal array (half the size) than the vertex array. Therein lies the problem.
2. Fake 2.0 scale was still lurking in the shader code...that was a necessity in the sample code, but not here.
3. Specular lighting code is present, but not well-demonstrated. You need to luck out on some random objects to see it. Ideally, at least one initial object already shows it off.
4. The choice for normals isn't great for all objects. Vertex normals are OK for spheres and cylinders, but not cubes and icosahedrons. Choose better.

1b — / ...Normals.

1c — +

2a — +

2b — / ...Some distortion on the edge there, which is odd because you aren't even using a frustum matrix. The orthographic matrix does not resize or scale objects at all, and thus such a distortion hints at something wrong somewhere.

2c — | ...Specular lighting.

3a — / ...Normals again.

3d — / ...Ditto. Sufficient shader understanding would have helped triage the error.

4a — / ...There is that error, and the not-immediately-apparent specular lighting.

4b — +

4c — +

4d — / ...I think we could have done more troubleshooting on this.

4e — +

4f — | ...Some work done after the due date.