CMSI 371-01
COMPUTER GRAPHICS
Spring 2016

Assignment 0329b Feedback

All caps are released with the outcomes in this assignment because a sufficient amount of functionality will have been reached here.

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

- Matrix unit test suite spotted and run without any problems.
- Not apparent in the demo: projection away from the default space.
- Also not seen: transforms applied to shapes and children at will, with children inheriting the current transform of the parent.

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

1. Most tests look OK, but aside from the usual "coverage can probably be improved" comment, note in particular your unit test for `toGL`—that isn't a great test case, because that matrix does not clearly convey whether `toGL` is expected to transpose the matrix as well (i.e., you clearly represent your matrices in row-major order, so you will need a function that converts to column-major order…which `toGL` does not do, but due to the chosen unit test, it is not clear whether it is *intended* to do this). (*4a*)
2. Your `Matrix` object is used in your `Shape` objects, and it turns out you do set a non-standard viewing volume now, but there is no use of `Matrix` beyond that. Why is that? All of the code appears to be there. Oh, here is a possibility: "I tried it, and it doesn't look right." My response: "Double-check your matrices. Make sure you are sending your matrices to WebGL in column-major order. Make small, isolated changes first to determine which transforms are working and which aren't." (*2a*, *3a*, *3d*, *4a*)
3. Try to switch from orthographic to frustum projection; it's cooler. And while you're at it, expand that viewport so that you use more of the page than that constrictive square. (*2b*)

2a — **/** …So near yet so far.

2b — **|** …Good enough, but can be so much better!

3a — **+** …Looks good, just use it more.

3d — **|** …Shader itself looks OK, but it isn't given much to show off.

4a — **/** …Flaunt that functionality better. And double-check that `toGL` function.

4b — **+**

4c — **+**

4d — **|** …Not bad, just need better application.

4e — **|**

4f — **+** …Same notes for *4e* and *4f* as in HW 0329a.