Assignment 0315
Time to start building your very own personal 3D graphics library!

Outcomes
This assignment will affect your proficiency measures for outcomes 2b, 2c, 2d, 3c–3e, and 4a–4f.

For Submission
For the following tasks, start by copying the hello-webgl/sample code into homework/pipeline on your git repository.

Not for Submission
By March 6
Read the following sections in Angel: 1.1–1.9 (pages 1–40). Yes, this was in the previous assignment, and is intentionally restated here.

By March 13
Read the following sections in Angel: 2.1–2.4 (pages 43–67).

By March 15
Read the following sections in Angel: 3.1–3.12 (pages 116–180).

Approximating a Sphere
Adapt Angel’s “Approximating a Sphere” code (Section 2.4.3, pages 60–62) so that it works as a sphere function within the Shapes module. Show off your sphere by implementing a demonstration web page that displays it.
Commit and push your work to your git repository under homework/pipeline.

Enter the Matrix
Implement the beginnings of a computer graphics math library, matrix4x4.js. Start with:
• A basic Matrix4x4 object
• A multiply function which multiplies two Matrix4x4 objects and returns the result (as a Matrix4x4 object, of course)
• A translate function which takes three parameters dx, dy, and dz, returning a Matrix4x4 object that accurately represents this transformation
• A scale function which takes three parameters sx, sy, and sz, returning a Matrix4x4 object that accurately represents this transformation
Show off your library by using it in a demonstration web page. Commit and push your work to your git repository under homework/pipeline.