Assignment 0408
Take some time over spring break to read up, calculate some transformation matrices, play with battleballs, and make some headway into your project.

Not for Submission
Chapter 4 and Appendix B in the Angel book, as well as Appendices E and F in the red book, round out the material covered in class so far.

For Submission
Matrix Mastication
Perform the following sequence of transformations on the vertices (0, 0, 0), (0, 1, 5), and (2, 1, 1):
1. Translate by <5, 2, –3>
2. Rotate about the x-axis by 45°
3. Scale by 2
4. Rotate about the y-axis by –30°
Show your matrix calculations and the final transformation matrix product. Handwritten is fine, LaTeX is better; if you do use the LaTeX option for this, commit your LaTeX source to homework/cmsi371/more-than-meets-the-eye.

Battleball Bonanza
An incomplete version of the battleballs sample program seen in class has been committed to your respective homework/cmsi371 directories in CVS. This version does not include collision detection code — the assignment is to figure out collision detection between the balls and the inner wall of the spherical “room.”

Figure out the appropriate algorithms for the parts of the code marked TODO, and implement them accordingly. Commit your modified code to CVS.

Project Progress
Make appreciable progress in your gallery object. Recommended milestone: render a static version of your object, as closely as possible to what you envisioned. Commit your on-going changes to CVS.