COMP 371 – Computer Graphics
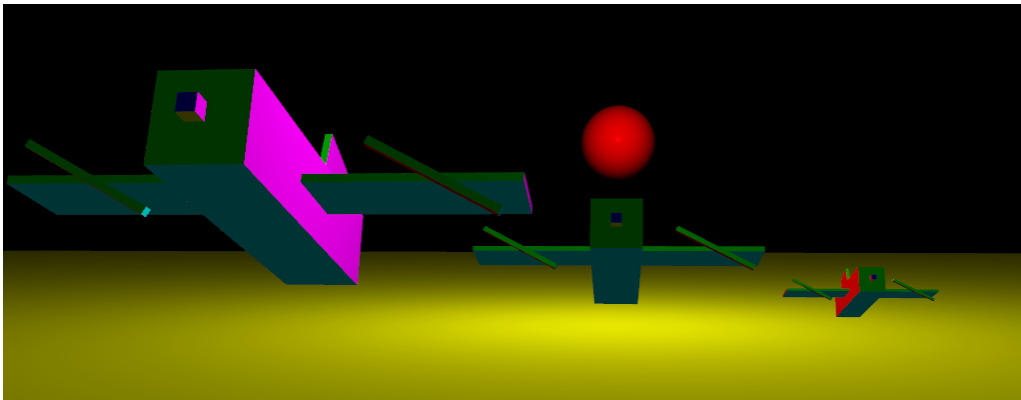
Assignment 2: Lighting

Due: **Monday, August 4th, End of Day**

Worth: **10% of your final grade**

Topics

- OpenGL/GLSL Programming
- Lighting (Per-Vertex Gouraud Shading / Per-Fragment Phong Shading)

Programming Assignment [10 points]

Tasks to Do:

- Implement Phong Shading **[4 point]**
    - o You can implement this within the Test Framework provided. All the rendering context is setup, all the shader constants are sent to the shaders. All you need is to implement the Vertex and Fragment Shader. This should work for both point lights and directional lights. Spotlights are NOT required.
- Implement Gouraud Shading **[2 points]**
    - o Gouraud Shading is the same as Phong Shading, except everything is implemented within the Vertex Shader. We also call it per-vertex Shading.
- Assignment 1 Framework Integration **[4 point]**
    - o Add at least one light source in the world (with Phong Shading Properties)
    - o Replace the previous shaders with your Phong and Gouraud Shaders
    - o Add the Phong Material properties to your Models
    - o Add a SphereModel class to the framework
    - o **BONUS: If you want a challenge, you can add support for multiple light sources**

Submission Guidelines

- You need to submit your assignment on Moodle by Monday, August 4th, midnight.
- You should delete the Bin and Build folder before submitting your completed assignment.
- You should also print, sign, scan and include the Concordia's Honor Code available [here](http://www.ciise.concordia.ca/currentstudents/forms/expectation.pdf) (http://www.ciise.concordia.ca/currentstudents/forms/expectation.pdf).
- Everything must be submitted within a single ZIP file on Moodle.
- Anything missing from the Submission will result in grade deductions.