

Final Project Tasks List

- 1) Easy: Added a blue sphere to the scene, shifting the cube to fit. (asst2.cpp)

- 2) Easy: Added the 'o' option to the keyboard callback to be able to switch the edited object. (asst2.cpp)

- 3) Moderate: Completed a fragment shader for the Phong lighting model and added it, permitting the user to switch between the three shader models (flat, diffusion-only, and Phong), via the 'f' key. (asst2.cpp, added diff-spec-gl2.fshader, added diff-spec-gl3.shader)

- 4) Hard: Added the necessary geometry information for a torus, and added a green torus to the scene. Used freeglut_geometry.c from the freeglut 2.8.1 source code distribution as a rough guide. (asst2.cpp, geometrymaker.h)

- 5) Moderate: Implemented the transFact and linFact functions in matrix4.h. Used them to ensure that object manipulations use the eye's axes, but take place at the object's origin. (asst2.cpp, matrix4.h)

- 6) Easy-Moderate: Added the capability of editing the camera's rbt matrix, using the 'v' key to toggle between the camera and the current object. Rearranged the order of the shaders. Added some text to the help menu. Added status messages helpful when toggling between objects and/or the camera as the active editable object. (asst2.cpp)

- 7) Really hard: Added the necessary geometry information for a cone, and added a magenta cone to the scene. Used freeglut_geometry.c from the freeglut 2.8.1 source code distribution as a VERY rough guide. (asst2.cpp, geometrymaker.h)