More Lighting in OpenGL

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1 Administrivia

Announcements

Collect exams.

Assignment

For Monday: Read 7.1–7.6 (texturing mapping).

From Last Time

Light lab.

Outline

1. Walk-through code.

2. Lab.

Coming Up

Exam.
2 Code Walk-Through

1. Lines 13–24: The experiments.

2. Lines 76–78: Disable all lighting to render the sphere representing the moving light as a 2-D object.

3. Lines 143–144: Disable and enable the fixed spotlight.

4. Lines 210–216: Specifying GL_LIGHT1’s position here, before the call to gluLookAt() results in the light being positioned in eye coordinates.

5. Line 227: glLightModel*(pname, param):
   
   (a) This call correctly computes specular reflections by correctly determining the viewer angle. Otherwise, the viewer is assumed to be at infinity and the view angle will be along the -z axis.

   (b) Other pnames:

      i. GL_LIGHT_MODEL_AMBIENT: Set global ambient parameters.

      ii. GL_LIGHT_MODEL_TWO_SIDE: Set to !0 to enable two-sided lighting using back material parameters.

      Translucence?

      For details, RTFM.

6. Lines 228–230: Note that lighting and individual lights are enabled separately.

3 Lab

Refer to source code.