

CMSC 435 / 634 Introduction to Computer Graphics

Project Assignment 4: Lighting and Texture

Goals of this project: Understand lighting and texture setup in computer graphics. Once this project is completed, you will understand how materials and lights are placed and generated.

Introduction

In this assignment, you will write an OpenGL program which renders a lit teapot. To make your teapot as cute and interesting as possible, you could render the teapot by applying different textures to patches. In your scene, your code must include at least

- One ambient light source
- One specular highlight source (you need to make sure your teapot has shining material as well in order to see the highlight).
- One diffuse light source

Your code must render the following scene:

- Using a uniformed texture like the image below (image courtesy online). Note that you can select any image of your own. Checker-board kind is not allowed though.



643 only:

- Rendering the teapot using different textures (image courtesy of siggraph)



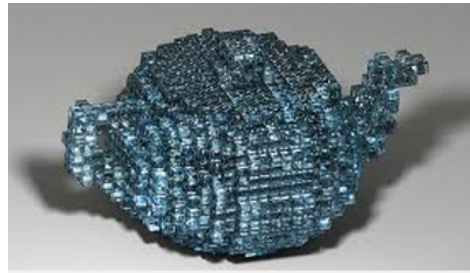
Extra credits

For those taking 435, for 15 points, implement the 634 version.

For 15 points, render the teapot using bump map.

For 15 points, generate some interesting geometries or material or texture. (here each novel one is worth 15 points).

I randomly grabbed some pictures online:



What to turn in

Source code only by email to TA. Please do not include any .o files. Please include:

- A README with your handin containing basic information about your design decisions and any known bugs or extra credit;
- How to compile and run your code as if you are telling a colleague that is to continue the development.

Note: Please comment on your code. The better Alisa understands your code, the higher your grade is likely to be.