Interactive Computer Graphics Project 3

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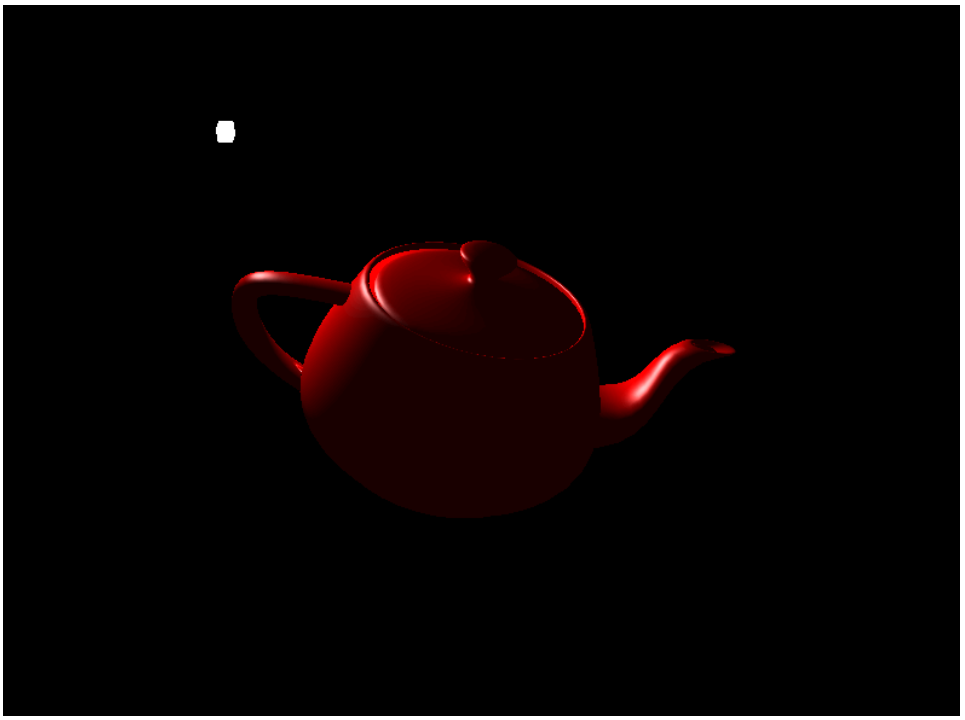
Features Implemented

- Teapot model rendered with GL_TRIANGLE using glDrawElements
- Normal buffer created and transformed in vertex shader, then passed to fragment shader for light calculation
- Blinn-phong shading implemented in fragment shader for teapot
- Light is displayed as a separate object
- Using CTRL key, light can be rotated around the teapot

Screenshots:

From another angle:

Rotate light to a different position:



How to use

- “Esc” closes the window.
- “P” switches between perspective and orthographic projection
- Left mouse button (and drag) controls camera angles
- Right mouse button (and drag) controls camera distance
- Drag left mouse button while holding CTRL key rotates the light object
- “F6” recompiles shaders

Operating System and Compiler notes

Operating System: Ubuntu 22.04.1 LTS (through WSL on windows)
Compiler: I used a Cmake build, which uses gcc to compile.

The project files can be built by running the script ./build.sh.
./run.sh then runs the program from the build folder.

External libraries:

GL, glut and GLEW are linked as specified in the cmakelists.txt file:

```
target_link_libraries(project3 GL)
target_link_libraries(project3 glut)
target_link_libraries(project3 GLEW)
```