Project 8 Report

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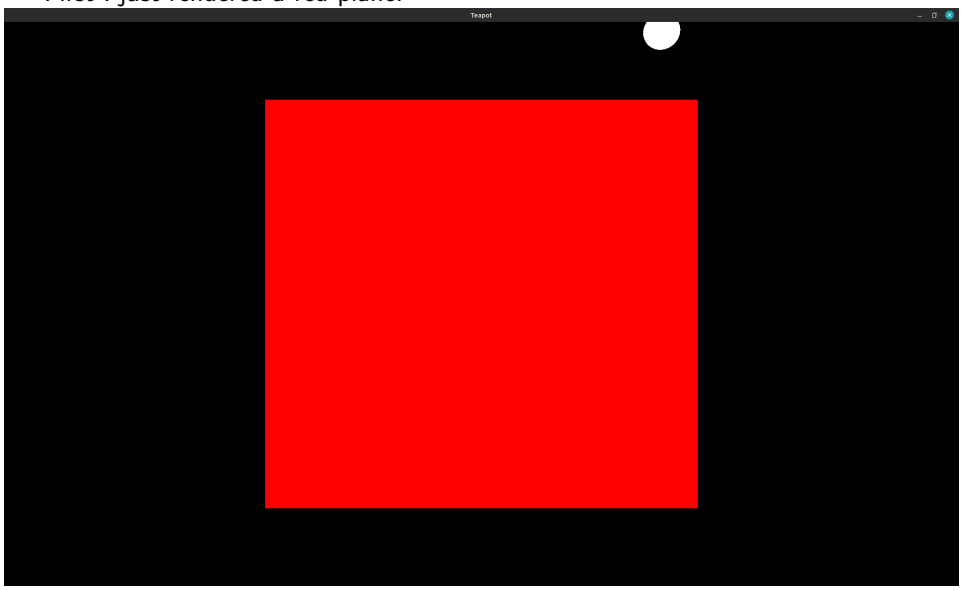
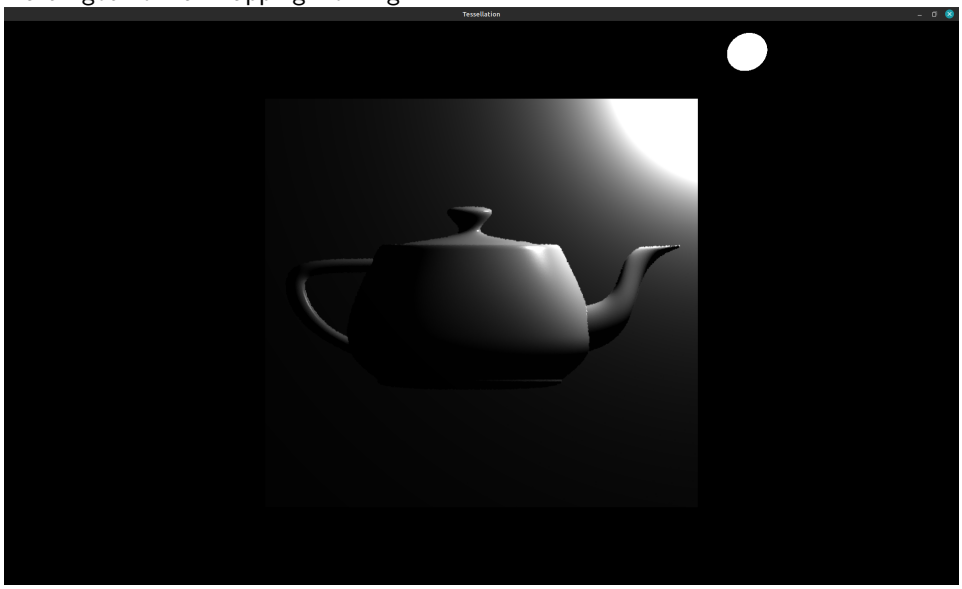
First I just rendered a red plane:

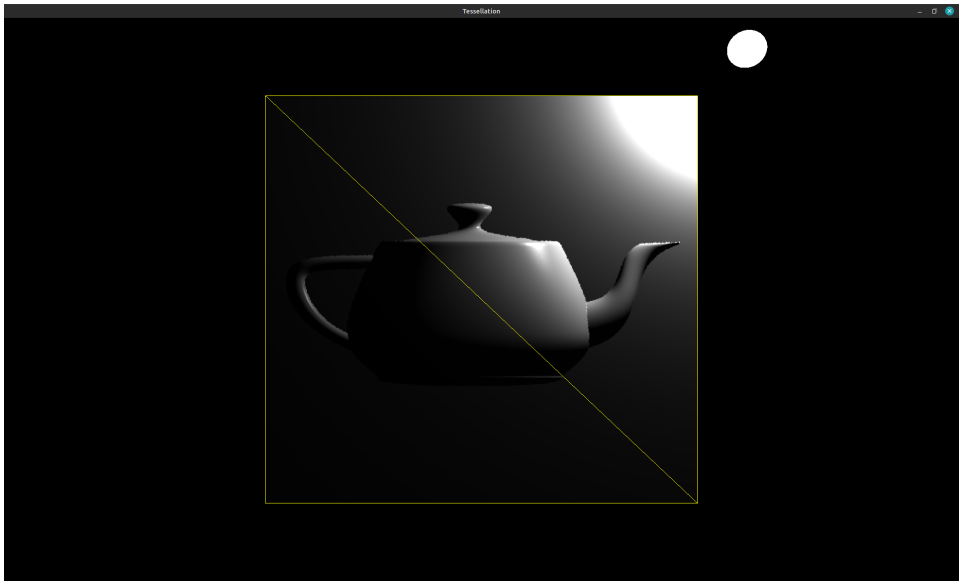


I kept the spotlight representation there for now since I'd need it later.

Next I got normal mapping working:

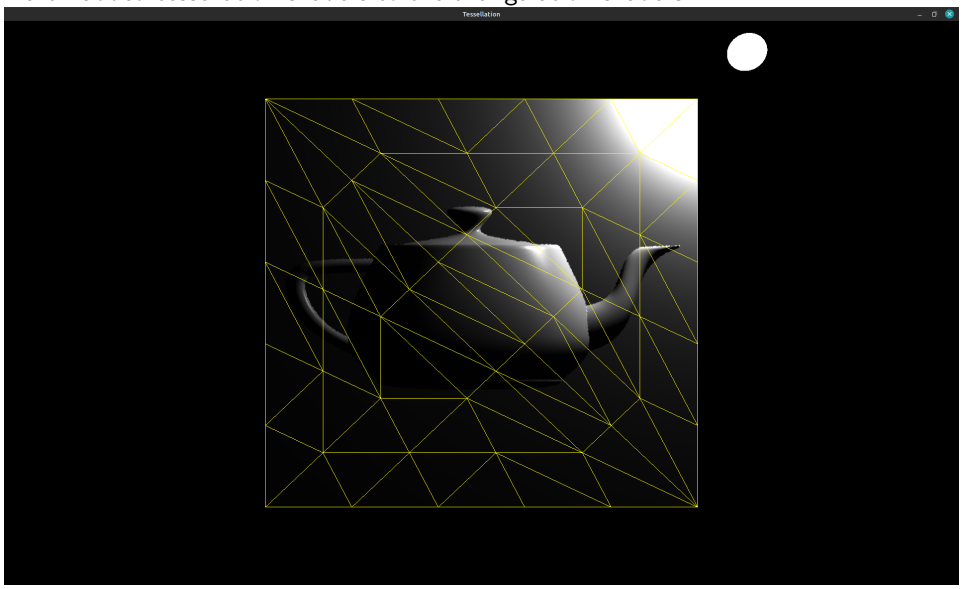


For some reason I needed to flip the y texture coordinate to get the teapot to not be flipped across the x-axis.
Next I did triangulation:

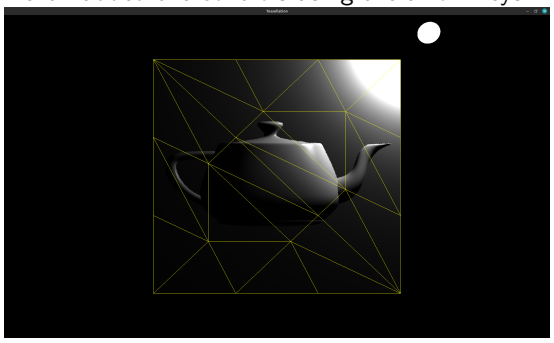


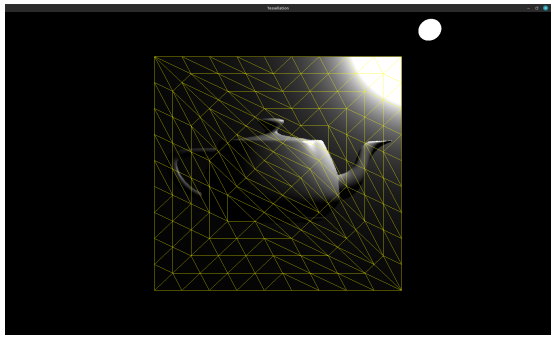
I didn't move the line segments closer to the camera, I just disabled depth testing.

Next I added tessellation shaders to the triangulation shaders:

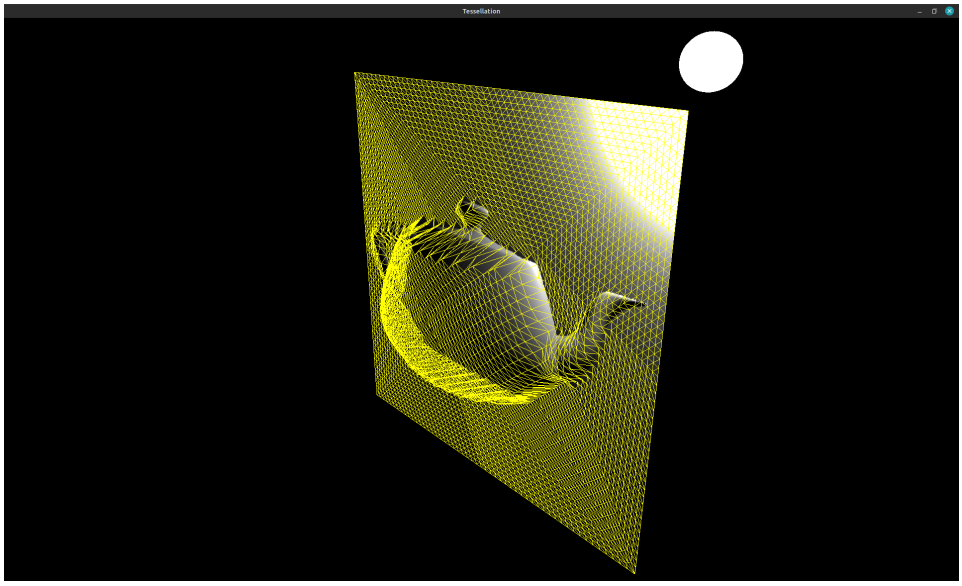


Next I added the controls using the arrow keys:

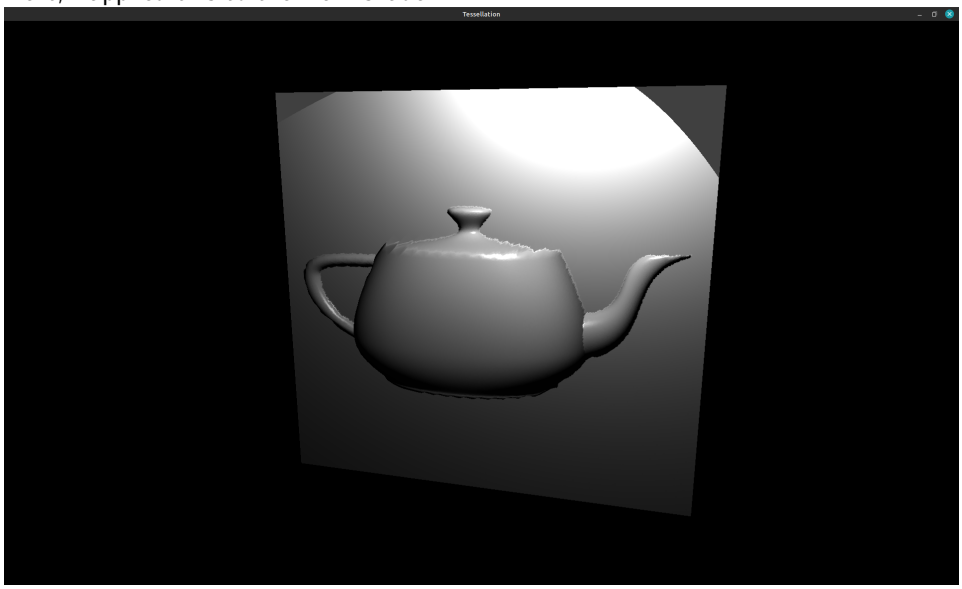




Next I got the displacement map working for just the triangulation since that seemed simpler to start with:

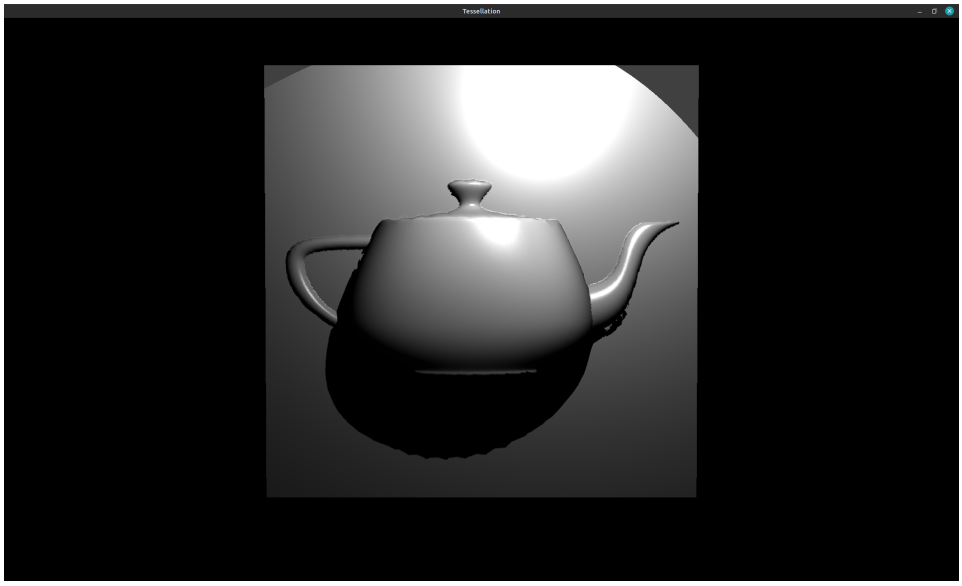


Next, I applied this to the main shader:

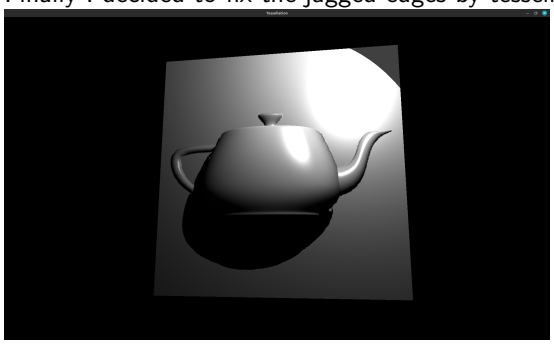


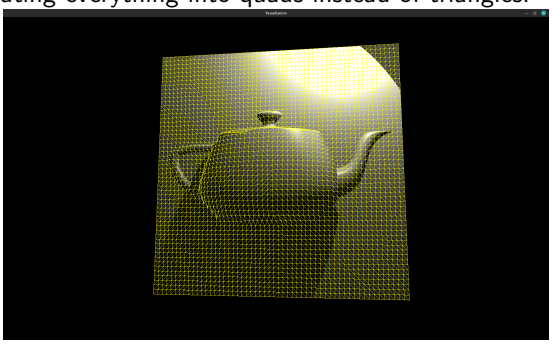
What I noticed is that the edges seem a little jagged.

Next I did the shadow mapping:



Finally I decided to fix the jagged edges by tessellating everything into quads instead of triangles:





6610 requirements and how to run

I run this on Linux Mint using `glfw`, `glew`, `cyCore`, and `lodepng`.
To run this, go into the build directory and run:
`cmake ..`
`make`
`./main ../assets/teapot_normal.png ../assets/teapot_disp.png`
or
`./main ../assets/teapot_normal.png`
if you just want to use normal maps.

You can also just run:
`./main`
Which is equivalent to `./main ../assets/teapot_normal.png ../assets/teapot_disp.png`
since I got tired of typing the command line arguments everytime.