Computer Graphics PA2
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Instructions for Running

In order to run my PA2, cd into “pa2_starter”. My code takes one or two arguments. The first argument is the path to an .obj file, and the second (optional) argument is a .png texture file. To run my code with only one argument, do the following:

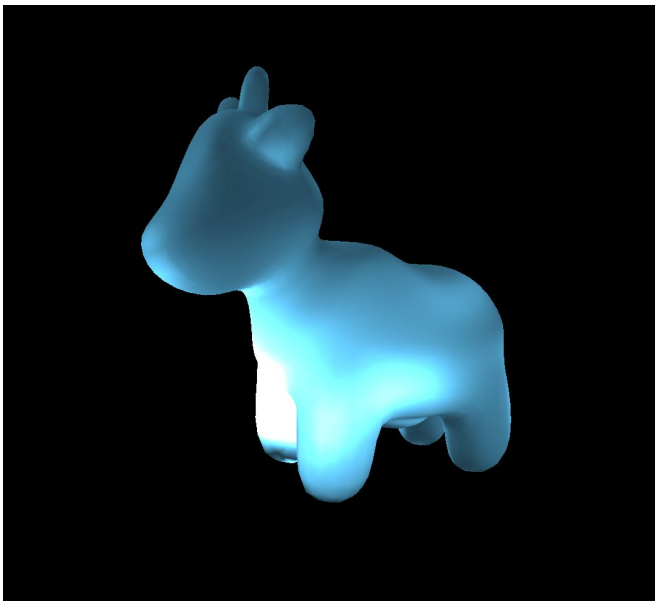
ant -Dargs=src/resources/models/bob/bob.obj

In order to run my code with two arguments, enclose both arguments in quotes to make them one long string like the following:

ant -Dargs="src/resources/models/bob/bob.obj src/resources/models/bob/bob_tex.png"

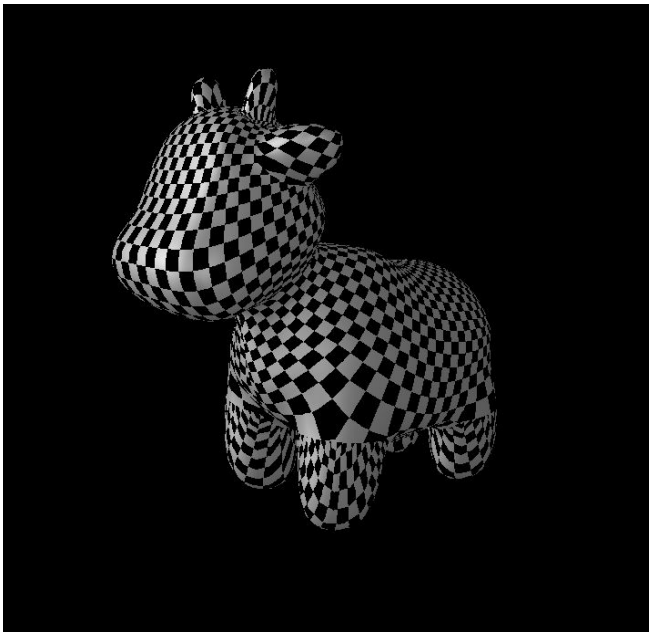
Gouraud

This is my Gouraud shader, which looks a bit more dull than the Phong shader. There is some sort of highlight that appears on the bottom of objects with this shader. Mandeep said it was alright, and I suspect that this is happening because the lights in the scene are close to the mesh. It does not need a texture argument to run correctly.



Checkerboard

This is my checkerboard shader. It uses a Phong shading model, allowing it to have smooth shading as well as the Checkerboard effect. It does not need a texture argument to run correctly.



Texture-Modulated Smooth Shader

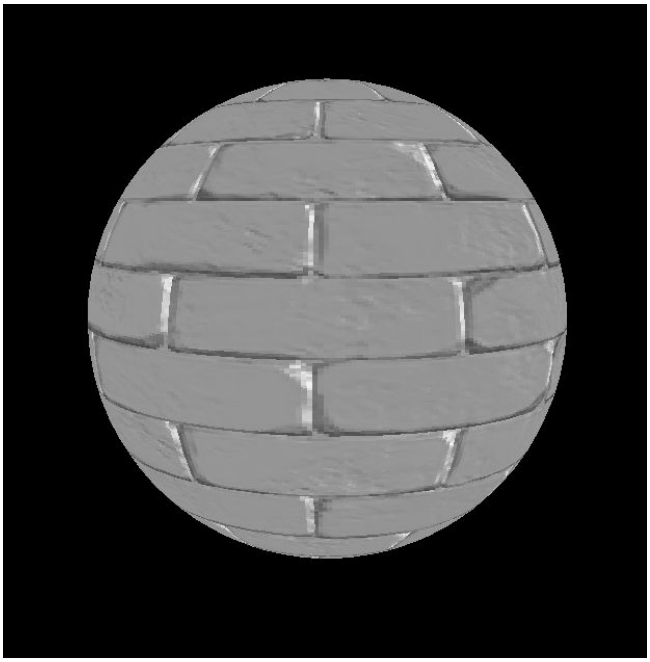
This is my texture-modulated smooth shader. It needs a texture argument to run correctly, so I recommend either of the following commands:

ant -Dargs="src/resources/models/spot/spot.obj src/resources/models/spot/spot_texture.png"

or

ant -Dargs="src/resources/models/bob/bob.obj src/resources/models/bob/bob_tex.png"

Normal Map



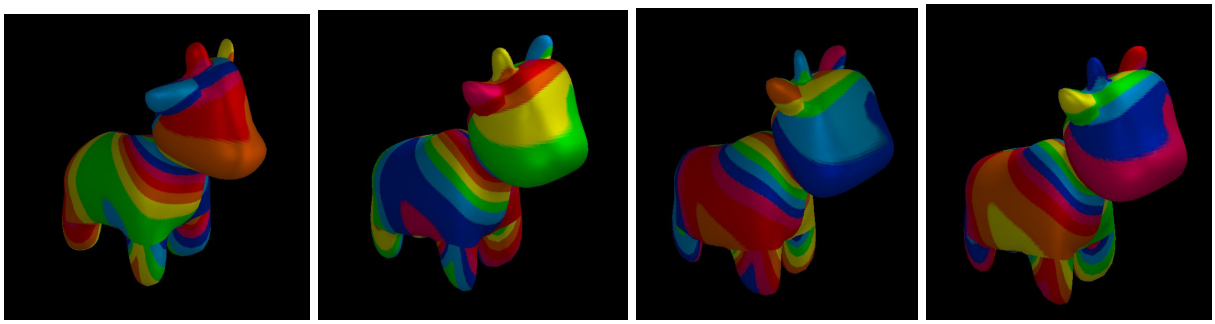
This is my normal map shader. It takes a normal map texture as input and perturbs the object's normals to achieve this effect. The actual color of the object is given by whatever color is placed in the material struct by the program. It needs a texture argument to run correctly, so I recommend the following command for best results:

ant -Dargs="src/resources/models/sphere.obj src/resources/textures/brick_texture.png"

Cel (Toon) Shader

This is my cel (toon) shader, which gives objects a cartoonish effect. The effect is achieved by only using discrete intensity values for the lighting in the scene. It can be used with a texture argument or not.

Rainbow Psychedelic Shader



This is my creative shader. I converted a gif's individual frames each into separate .png files so that I could "animate" a texture across the object's surface. The texture switches between each of these .png files quick enough for it to look like a rainbow is propagating along the surface of the object. I also augmented the vertex portion of the shader by applying a time-sensitive sine wave to each vertex of the object. This gave the object a "wavy" appearance where it looked like it was almost waving in the wind.