

## Project C: "Oh the Places You'll Go"

### User Guide

#### Goals:

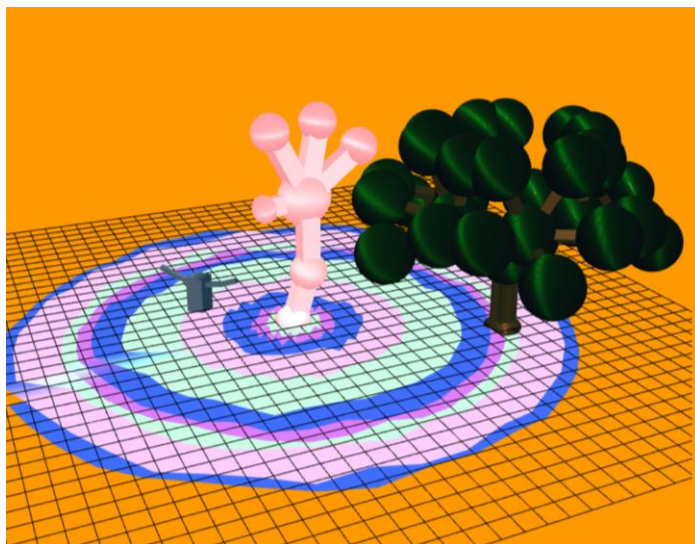
In this project, I wanted to challenge myself to make a more interesting ground plane and more sophisticated objects than I had in the past. I also wanted to write shaders that accurately implemented the Phong lighting model to display the object.

#### Instructions:

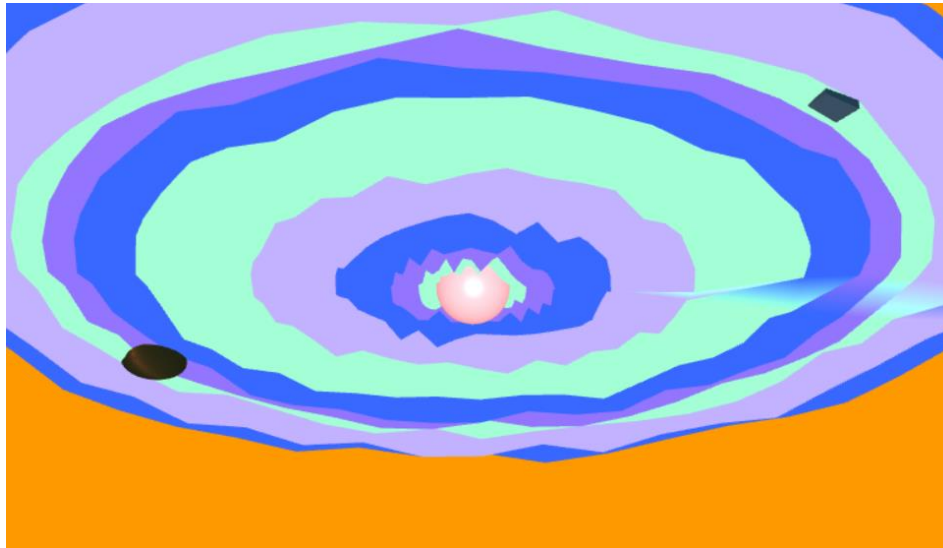
1. The arrow keys move the camera parallel to the ground plane.
2. 'W' and 'S' move the camera up and down.
3. 'A' and 'D' rotate the camera direction about the vertical axis.
4. 'Q' and 'E' rotate the camera about the horizontal axis.
5. 'I', 'J', 'K' and 'L' move a light source that is suspended above the scene in the cardinal directions, parallel to the ground plane.
6. Hit 'O' to show/hide the grid lines.
7. Hit 'F1' to hide or display these instructions (or 'H', or '1').

#### Results

The three jointed objects are the tree, the hand, and the panicked robot. All are smoothly animated to move with time.



The specular highlights can be seen the most clearly by looking at the ball joint of the hand from below the scene (by pressing 'Q' to tilt the scene back).



The light that is not attached to the camera can be adjusted parallel to the ground plane with the 'l', 'j', 'k', and 'i' keys. It can be difficult to see the effects of it, but it can be seen by looking at the base of the hand, moving the light around, and watching the specular highlight change.



