Alex Ayerdi – NetID: ama610 - Project B

Jungle of Odd Objects and Solar System with Alien Planet

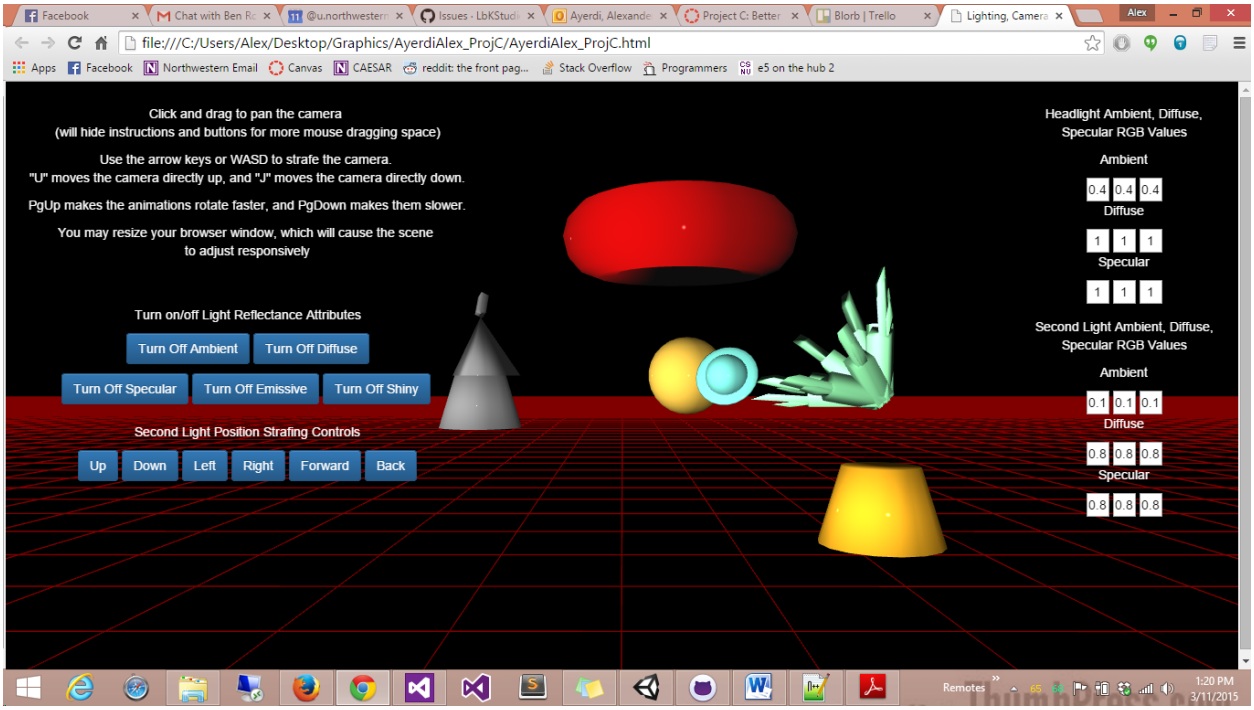
User's Guide:

My goal for this project is to be able to create a 3D world that includes a ground plane, a moveable perspective camera view, the ability to move your camera in 5 degrees of freedom, the ability to speed up or slow down animations, have two point source Phong lighting lamps with user adjustable RGB values, one light source is a "headlight" attached to the camera and the other is user adjustable with GUI buttons, have buttons to turn on/off light properties, have 8 different objects (3 are jointed and animated), and have different material reflectances for each object.

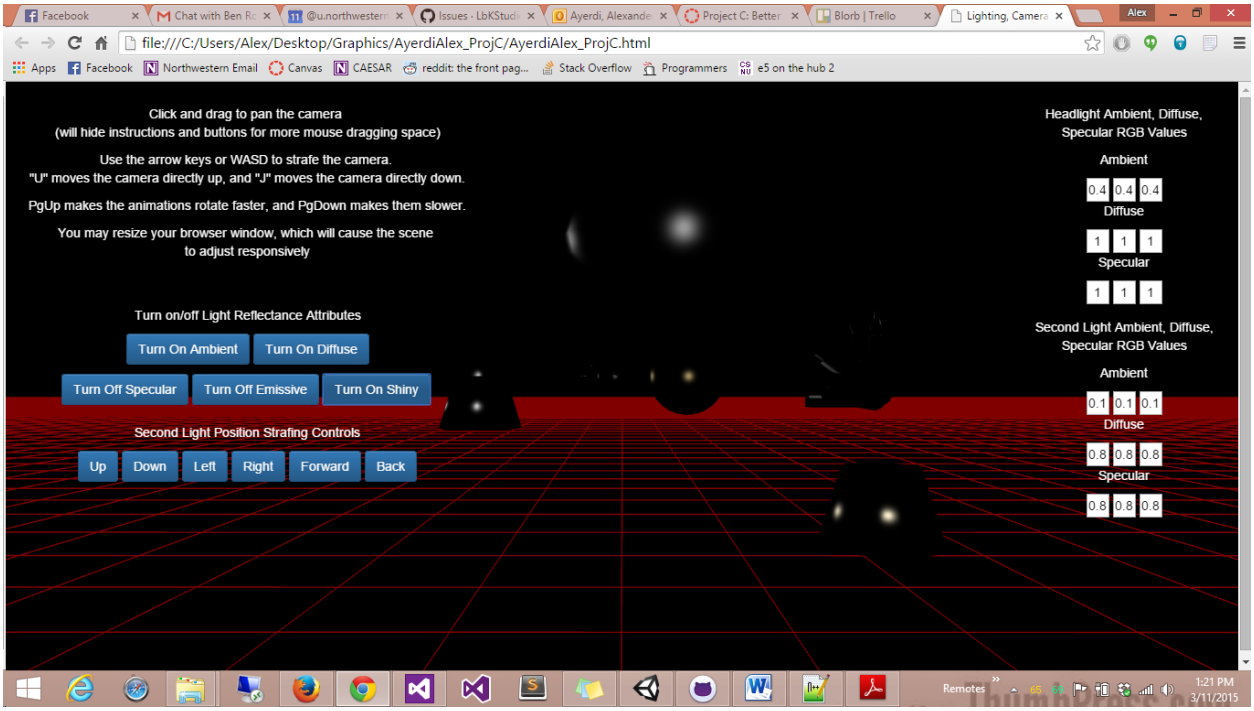
To move the camera the user must use a combination of mouse drags and arrow key movements. The camera can pan using the mouse drag movement. In addition, the camera can strafe left to right or back to front using the arrow keys or by using the WASD keys respectively. Instructions for this movement is located in the top left of the canvas.

To speed up the animations, the user can use PgUp or PgDown respectively. The user is able to turn on and off light properties by clicking the respective buttons on the main GUI. Also, the user is also able to strafe around the secondary light source by its own respective buttons on the GUI.

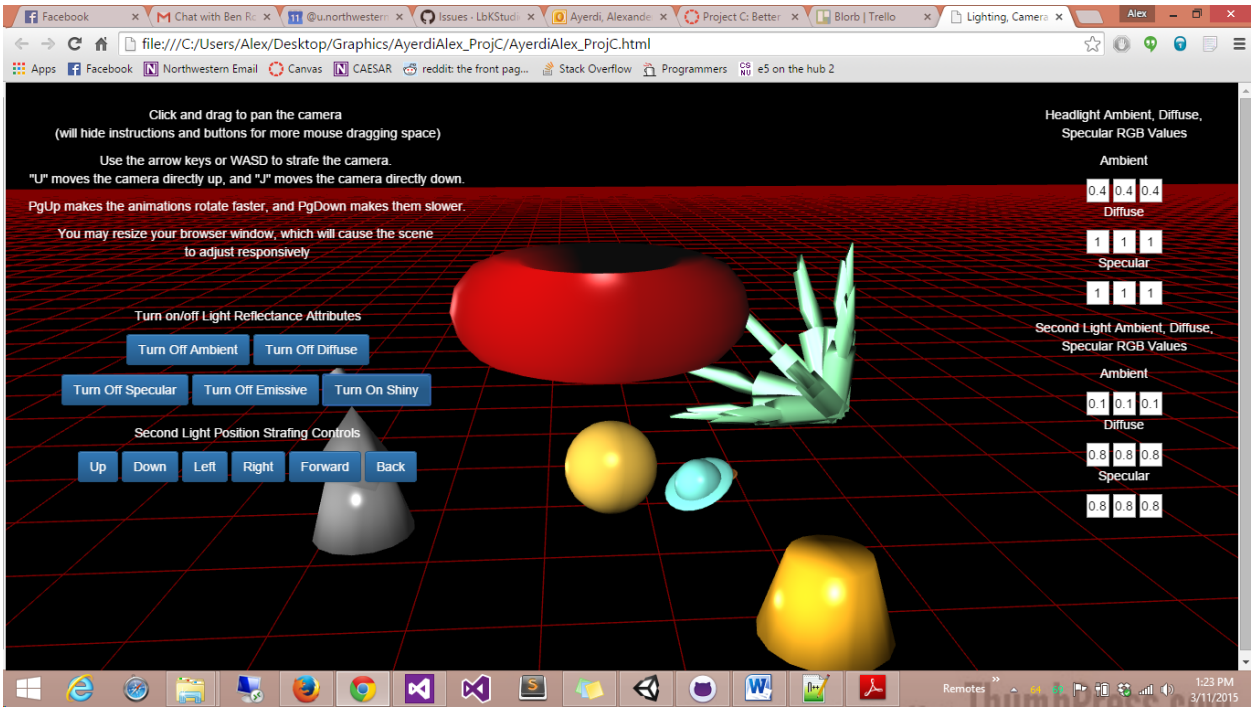
Screenshots:



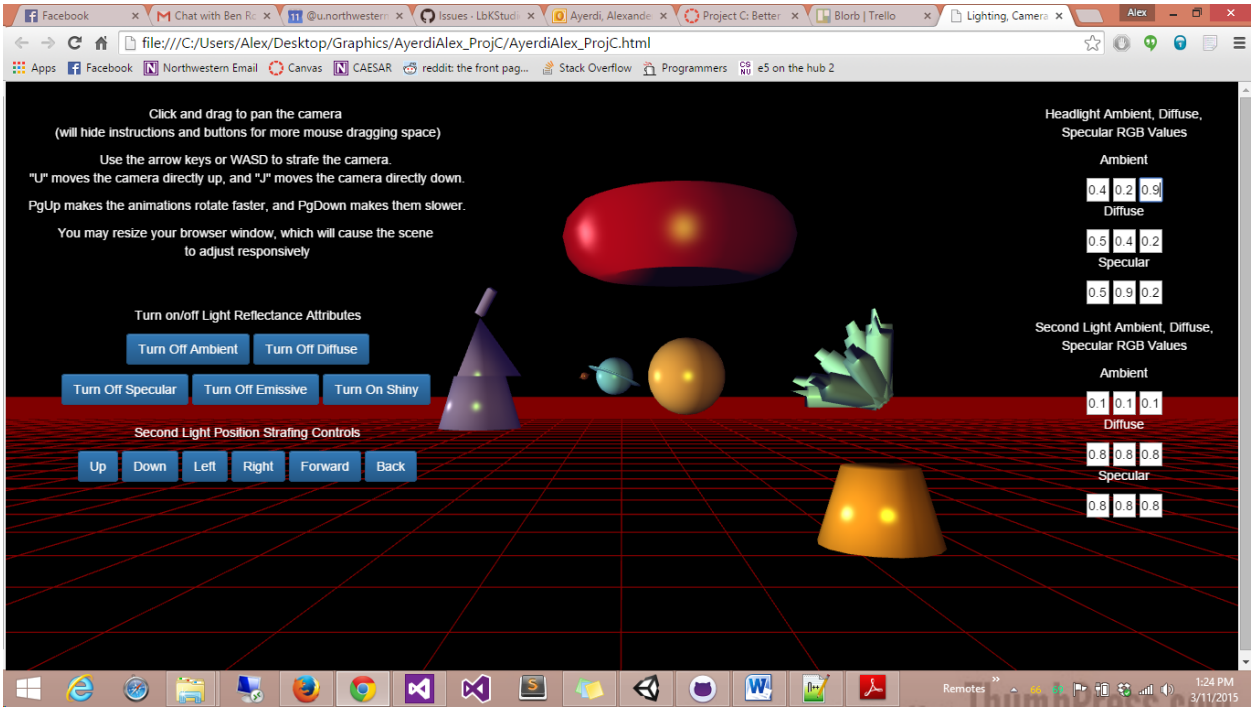
Here it is visible to see the various different materials and objects in the scene. There are two light sources visible, and one is coming from the “headlight” position of the camera. You can also see the instructions on the top left of the screen for the user to know how to control the controllable portions of the scene.



Here is an example of turning on/off some of the light properties.



Here is a good view of the various jointed objects rotating in the view from a different camera angle. Here you can see that the secondary light does not move when the camera moves.



Here different lamp RGB values are used to create a different colored scene because the lamp is emitting different ambient, diffuse, and specular qualities.