CS 432 – Interactive Computer Graphics
Final Project

I: Introduction

The final projection must show your mastery of the fundamentals of computer graphics covered in the course. It will build upon in-term projects and as per the course outcomes you will "design, implement and document an interactive graphics project".

As per usual you should submit a **zip file** containing the code and any supporting files (GLSL, textures, SMFs, etc…) and for this final projection, a PDF document described in Section III. In addition, you will create and upload a **video demo** where you demonstrate functionality of your applications and talk through its features and behaviors.

In addition, you MAY work with one other student. However if you do so, you must make it clear who did what in your documentation.

II: Components/Composition

Your final project must have the following components:

1. A 3D world.
2. At least one camera that you can explore the world by moving around.
3. At least one other camera.
4. Unless there's a documented reason not to do so, all objects should be texture mapped a lit.
5. There must be at least one light source.
6. There must be some animation of drawable objects.
7. You must be able to click on objects and have something occur when you click on them.
8. You must have some dynamically generated objects (objects that aren't there initially, but appear/disappear based on what's going on in your program).
9. You must have some new object geometry other than what was implemented during class. That is, you scene must including things other than spheres, planes, cubes (although you can have more complex objects that are made out of these, for instance a house).
10. You must have at least one of the following "advanced" concepts implemented:
    a. Reflection/Environment Mapping
    b. Shadows
- On your webpage, below the canvas, should be instructions on how to use your application and citations/links to any resources you used.

III: Documentation

As previously mentioned, below the canvas in your applications should be two sections:

1. Instructions on how to use your application.
2. Citations (if applicable) to external resources.

In addition, on BBLearn is a document for you to fill out highlighting how/if you completed all the required components

IV: Video Demo

You should create a short (~5 minutes) video walkthrough of your project. In this you'll demonstrate behaviors and explain anything new and interesting. If there are multiple members of the team, each must talk at some point in the video. This video will be uploaded to a *Final Project Videos* discussion board on BBlearn for everyone's viewing enjoyment! **Please embed your video** in the forum so I don't have to download a ton of videos locally.

V: Grading

Your grade for this assignment will consider several factors, many of which are subjective. If you worked with a partner, there are higher expectations and based on your work allocation remarks you may not end up with the same grade.

1. Demo	10pts
2. Components (4pts each)	40pts
3. Documentation	10pts

4. Subjective Quality/Complexity
    a. 0 – Didn't do anything
    b. 10 – Not much going on
    c. 20 – Pretty basic
    d. 30 – Good
    e. 35 – Very good
    f. 40 – Excellent
	40 pts

VI: Example Projects

Below are screenshots of some projects from previous years: