Final Project

In this final project, you are going to create a nice-looking scene which includes multiple 3D objects.

I encourage you to move your design or code from your Howmework 3 and 4, and properly integrate into your final project. Do not waste your effort in the past.

Required User Interaction: (30%)

- One of the 3D objects is the "player". Users can move the player and rotate the player by the mouse and keyboard.
- By default, your camera should move/rotate along with the "player". This is so called the first person view angle.
- Allow users to switch between the first person view angle and the third person view angle (by pressing the mouse button or a key). The third person view angle can be just a fixed camera position which can cover most of the region of your scene.

Technical Requirements: (35%)

- 1 point light and implement the local illumination (ambient+difusse+specular and phong shading)
- At least, 1 of the 3D objects with nice texture mapping
- Use an environment cube map to have the environment background
- Make some of your objects keep moving or rotating. This is an example, http://math.hws.edu/graphicsbook/source/webgl/cube-camera.html
- At the bottom of your webpage, write some texts to shortly introduce your work and tell users how to play your work

Options: (You should implement at least 2 of them) (35%)

If you implement 1 more function, you will receive 5% extra bonus. If you implement 2 more functions, you will receive 10% extra bonus.

- shadow
- cube map reflection/refraction
- dynamic reflection
- bump mapping

Bonus:

All works will be voted by all students, the instructor and TA. Each student can vote to three other students' works (cannot vote to yourself)

- 1st place: 10% bonus
- 2nd place: 8% bonus
- 3rd place: 6% bonus
- 4th place: 4% bonus
- 5th place: 2% bonus

Demonstration:

- **Demonstration time: 2:20PM, 1/6 (Thu.)**
- Each one has 4 -5 minutes to introduce your work
- Your program will be collected from moodle in advanced and we will run it on instructor's computer
- You do not have to prepare slides (powerpoint)
- Play your work and introduce your work
- Emphasize what you have done about the technical options
- Your goal of this demonstration is to attract people to vote you

Submission:

- You have to submit your program to moodle before the deadline - **10:00AM, 1/6 (Thu.)** .
- Find a best view angle and take screen shot. Submit this screen shot image, too.
- You have to put all files (index.html, js) and the screen shot in a folder, zip the folder, rename the zip file to your student ID (e.g., 407470888s.zip), and submit this zip file to moodle. E
- **Book the order for the demonstration**: https://tinyurl.com/ydhkrveu
- **Late submission will not be accepted**