CS6366 Project Proposal

1. **Title for Project:** Shadow Cube with Fog and Lighting over patterned wall

2. **Name:** Shizhe Bao

3. **Summary**

   3.1 Description of Problem

   Shadow over the figure with cube. The checked patterned background and on floor with yellow and blue color combination. The cube colored can be toggled, keep on rotating on the axis. The motion can be toggled with the keyboard. Light can be given to cube and the pattern wall, it can be toggled too. Linear Fog can be applied to the Cube and the Wall. The shadow can be clearly visible even when in the motion. The motion in the shadow is effective.

   3.2 My proposal

   3.2.1   Create a checked patterned background and display the cube in the center of the screen.
   3.2.2   Set the color of the cube.
   3.2.3   Translate and rotate the camera along its own axes.
   3.2.4   Make the cube keep on rotating on the axis.
   3.2.5   Set the toggleable light source and display the shadow.
   3.2.6   Create the fog and make it toggleable.

4. **Goals**

   4.1. Read and display the cube in the center of the screen as triangle meshes.
   4.2. Translate the virtual camera along its own axes.
   4.3. Rotate the camera along its own axes.
   4.4. Support for interactive change of colors for the cube.
   4.5. Support start and stop rotating.
   4.6. Display the yellow and blue color checked patterned background on the screen.
   4.7. Support to turn the light on or off.
   4.8. Support to turn the fog on or off.
   4.9. Support to reset the position of cube, light on/off and fog on/off.