

Computer Graphics

Project 0 -- Spinning Cube

Description:

In this project you will alter an existing OpenGL program to spin a cube on the display. The code for a program that spins a pair of triangles is posted on the course website with this project. In addition, you should find the libraries and include files needed posted as well.

The purpose of this project is to have you set up your environment and successfully compile and run an OpenGL application.

Details:

You may modify the code on the website as much as you would like. It is set up to use glut and glew for handling the windows and the extensions. It has callbacks for keystrokes, a timer, and display. I STRONGLY suggest you compile the program as is before modifying it. It should run and display a pair of rectangles rotating around the origin. Once you have the existing code running, then I would suggest that you alter the program.

Your triangles should have different colors. I would suggest 2 possible patterns since you will want to be able to tell if your program is operating correctly. The first would have a unique color for each of the 12 triangles. A set of 12 distinct colors could be:

Color	RGBA	Color	RGBA
White	1.0, 1.0, 1.0, 1.0	Red	1.0, 0.0, 0.0, 1.0
Blue	0.0, 0.0, 1.0, 1.0	Green	0.0, 1.0, 0.0, 1.0
Cyan	0.0, 1.0, 1.0, 1.0	Magenta	1.0, 0.0, 1.0, 1.0
Yellow	1.0, 1.0, 0.0, 1.0	Orange	1.0, 0.584, 0.0, 1.0
Pink	1.0, 0.412, 0.76, 1.0	Indigo	0.294, 0.0, 0.51, 1.0
Grey	0.75, 0.75, 0.75, 1.0	Gold	1.0, 0.843, 0.0, 1.0

The second option would be to set the corners of the cube to values for a color cube. These would be Black (0.0, 0.0, 0.0), White, Red, Green, Blue, Magenta, Cyan, and Yellow. The choice is yours although I suspect the 12 distinct colors will make things easier to debug.

Project Submission:

For this project you should submit only the source files that you have changed. You do not need to submit any file that has not been changed.

Discussion Board:

There is a Discussion Board set up for this on BlackBoard. It is named Project 0 Discussion Board.