

1 Introduction

Zip up all your work into a single zip file and upload the project to the MyClasses site for this class. In these exercises you need to update the DoxyGen documentation. Fully document all new data members and methods to any of the classes, and update the documentation for anything that has changed, including the documentation in the main that gives an overview of the program.

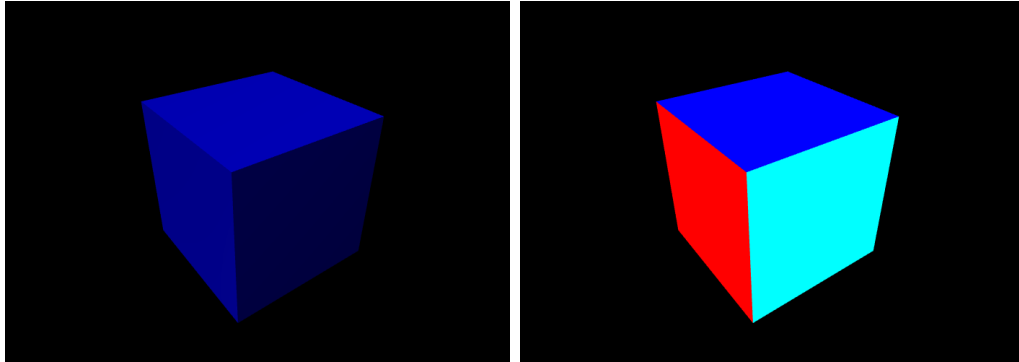
The first exercise was inspired by the old acrylic picture cubes that came out in the 70s or 80s. The second was inspired by a final project of one of my students several years ago. He created a maze game where you were in a hallway (dungeon like but simple and sparse) and you could only see a few feet in front of you. There were a lot of dead end hallways and you had to navigate the maze by remembering the turns you made.

2 Exercises

1. Picture Cube: Create a program that will display a single picture cube with 6 famous faces on each face of the cube. The image textures are supplied. The program should have the same 3-D user interface as we have been working with, support for spherical and YPR cameras, keyboard and mouse navigation, etc. In addition, implement four more function keys.
 - F5: Turns the cube lights on.
 - F6: Turns the cube lights off.
 - F7: Turns the cube texture on.
 - F8: Turns the cube texture off.

The top two images the textures are on, the image in the top left the lights are on and the top right the lights are off. For the bottom two images the textures are off bottom left the lights are on and the bottom right the lights are off.





2. Spooky: This program is a hallway with different textures on the walls, floor, and ceiling. The only user interface, besides the screen shot and mode change, is the up and down arrow keys. The up key moves you forward and the down key backward. Make sure that you stop before you hit the end of the hallway but can see the dead end. When moving backward make sure that you stay inside the hall and not move outside the model.

