Assignemnt 1206

Sorry to pile on this one more task, but I think we need to get over this hump so that we don’t have to deal with it anymore next semester. Should be fairly simple though: type, tweak, run, and commit. 1 hour tops.

For Submission

Get your hands dirty with OpenGL — take the spinningsquare.cpp program and make the following changes to it:

1. Change the object being drawn. Go on, be creative, knock yourself out.

2. Change the way spinning is toggled: instead of a mouse click, use the keyboard. Hint: you’ll need to use glutKeyboardFunc() instead of glutMouseFunc(), and the function you pass should have signature void func(unsigned char key, int x, int y).

3. Change the title, initial size, and initial location of the window.

Commit this, your OpenGL program, under /homework/cmsi370/spinningshape.

Extra Credit

Just in case you’re a little inspired (and to give you one more opportunity to pad your homework grade), a little advanced reading in OpenGL will allow you to make the following additional changes to the program. Do them all to get extra credit:

1. Change the axis of the object’s rotation (the sample version rotates around the $z$ axis).

2. Implement the following keyboard controls (and their corresponding functions):
   a. + and – increase and decrease the rate of rotation, respectively.
   b. [ and ] decrease and increase the frame rate of the animation.
   c. The $C$ key changes the object’s color (or color scheme, in case you figured out how to draw objects with multiple colors).
   d. The $S$ key changes the object being drawn (i.e., rotate among 2 or more different objects as the user hits the $S$ key).

Just include these features in /homework/cmsi370/spinningshape, I’ll look for them when I go through your code.