

CMSI 371

COMPUTER GRAPHICS

Spring 2007

Assignment 0301

This assignment seeks to reinforce recently-covered concepts via programming. While it isn't due until after the midterm, you might want to at least think about how you would approach these tasks (or even start them a little bit) as part of your preparation, since they should give you some real, hands-on exposure to the ideas of digital color and point/vector manipulation.

For Submission #1

Extend the Nanoshop sample program by implementing two (2) new color changers for it. Ideas include, but are not restricted to: brightness changer, contrast changer, inverter (i.e., creating a photo negative), and a tinter/blender.

Commit your code to `/homework/cmsi371/nanoshop` and tag it as `hw-0301`.

For Submission #2

Modify the Battleballs sample program in the following ways:

1. Change the shape of the battle room from the inside of a sphere to the inside of a cube (or rectangular prism). Make sure to modify both the way the room is drawn and the way the "balls" detect collisions against and bounce off its walls.
2. Change the "balls" into one of the shapes that you created for your 3D *fiveshapes* program. Be sure to adjust the values used in testing for collisions so that the bounding spheres used correspond to the size of your new "ball" shape.

Make sure to download and include the vector library from Graphics Gems; the link to the repository is available on the course Web site.

Commit your code to `/homework/cmsi371/battleballs` and tag it as `hw-0301`.