

CSE 167: Assignment 2 Milestone—OpenGL Scene Viewer

Ravi Ramamoorthi

Please refer to UCSD Online for the full detailed assignment 2 on the OpenGL Scene Viewer, and submit according to the standard instructions on Canvas. This document only briefly describes the milestone for homework 2; the main assignment and all the details are on UCSD Online. The assignment is due on Feb 15, with the milestone described here due Feb 6 (note unusual day of the week; Feb 6 is a Monday).

Homework 2 is one of the key programming assignments in the course, allowing you to accomplish a full-fledged OpenGL scene viewer. As such, you have been given **3 weeks** to do it. (This is much more generous than we have given for the timed MOOC course when we taught that, where only 2 weeks were given). However, it is an imposing assignment, certainly at least thrice as hard as homework 1, and it is very important you **START EARLY**. Human procrastination being what it is, we noticed that many students did not actually start until the week before. Therefore, this year, we have included a milestone, which must be submitted in the standard way (like for regular assignments) on Canvas by Feb 6. The milestone will be worth 20 points, while the regular assignment is worth 40 points, for a total of 60 points.

To get full credit on the milestone, you will need to fully implement the transformation stack, i.e., everything except the lighting and shading. You need not implement lighting at this stage, i.e. you could shade your objects with a constant color (you might find it easier for debugging though, if you use a different color for each object, although this is not required; however, you must at least color objects with a different color from the background, so the silhouette of the scene is visible). However, everything except for lighting and shading should be implemented.

If you have implemented things correctly, you should be able to run your program on the test scenes given (i.e., run the grader program as for the complete assignment), and *the object boundaries and silhouettes should exactly match those in the solution*, even if the lighting is (obviously) incorrect. You can and should submit to the feedback servers on UCSD Online to verify this. Doing the transformation part builds in a fairly direct and step-by-step manner from homework 1, and requires relatively little nitty-gritty shader programming.

You will submit the homework 2 milestone by the due date on Feb 6, just like any other assignment, with the README file, your code, links to the feedback image and code graders etc. Obviously, your automatic grader feedback will indicate errors and large numbers of pixels off; do not worry about this, since the TAs will assign actual scores based on checking the transformations (and object silhouettes). If you have not implemented some functionality or have implemented other functionality beyond what is required, please note it in the README file, or any other information of interest. Please note that the milestone is an important but relatively small part of your grade. It is clearly in your best interests in terms of both the score, and balancing the workload, to do as well as possible on the milestone, but a few minor errors/deductions will not substantially affect your overall project grade, if your final submission on Feb 15 is correct.

Please read the entire homework assignment on UCSD Online before starting, since this milestone is only one step in the final homework assignment. You may also want to pay careful attention to the detailed steps and hints at the end, which collect wisdom from previous (online) students on how to approach homework 2 in a step by step fashion. All of them recommend first implementing transformations, which is why we have formalized it in this milestone. As usual, please contact the instructor, graders or TAs regarding any issues, or post on Piazza.

Finally, please note that this milestone requirement is newish this year, so it is possible we may have missed some issues and we are definitely very open to addressing any unexpected circumstances. Also, if you are unable to complete everything required for the milestone, it is a relatively small part of the grade, and the majority of your score will be determined by the final submission.