1. Problem Statement:

The purpose of this assignment is to give students an opportunity to either implement a programming project or write a research/summary paper on a computer graphics topic of their choice. The list of possible topics are:

- Texture mapping
- Piecewise cubic curves or surfaces
- Fractal curves or surfaces
- Physics based models
- Human computer interaction
- Ray tracing

For the programming project option, students are required to implement a program that demonstrates one of the computer graphics techniques above. There are two goals: (1) to make some pretty pictures for the report, and (2) to demonstrate knowledge about the specific topic. In the case of ray tracing, this is such a huge topic that students are only required to demonstrate some part of the ray tracing process. As always, students are allowed to build upon any of the sample programs in the graphics source directory. Students should document their design, implementation, and testing using the standard project report template.

For the research/summary paper option, students are required to write a 4-5 page paper, double spaced that describes the history and mathematics behind one of the topics above. When writing the paper, students should assume the reader is another student who has taken computer graphics, but who has not studied this topic in detail. If you borrow figures from Wikipedia, or from another public domain source like a class website, be sure to include a caption that gives proper credit to the source. Also, be sure to add quotes and a proper citation for any direct quotes you include in your report.

2. Project Submission:

In this class, we will be using email project submission to make sure that all students hand their programming projects and labs on time. Send your completed project with two attachments, the project report and the source code, to the GTA lcweaver(at)email.uark.edu and CC the instructor jgauch(at)uark.edu. The dates on your email will be used to verify that you met the due date above. All late projects will receive reduced credit (10% off per day for three days, and zero credit after three days).