

Computer Science 102
Summer I 2009
Project 3 – Advanced Ray Tracer

Due: midnight, Wednesday, 6/17/2009

Overview

For this project, you will extend your ray tracer to include: boxes, multiple lights, reflection, antialiasing, as well as code enhancements (linked lists).

Description

Your ray tracer should fulfill the following requirements:

- function pointers and IMG_T, if not included in Project 2
- boxes – added to object types
- multiple light sources
- reflection – through recursive ray tracing
- antialiasing – through pixel subsampling
- reading the scene description from an external file (format given on the webpage)
- code enhancement –
 - image data structure – (i.e., 2D array) so that it can be output after all processing, rather than during processing
 - storing objects and lights in linked lists

You must create images to show off all of the features of your program (be creative!). As always, your code must be well-structured and commented.