Lab #2 for CPE 458 & CPE 473

Triangle intersections and anti-aliasing Required Lab report

Due Monday, May 9, 2011 at 11:59pm

1. **You will need to handin all your source and makefiles to the CPE 473 and CPE 458 handin directories**
2. **Lab report requirements**
   Please make sure that you write a clear lab report for lab #2. Title the file "report.txt" and submit it via handin along with all your program files. You will need to include run information for two different files, bunny_jumbo_tris.pov and bunny_tasty.pov. Make sure that for all timings, your program is not compiled with profiling (ie without the –pg flag and with optimizations, the –O3 flag). All runs should be to create an image of size 640 by 480 with shading but no shadows. Please carefully note for each run if it is with or without anti-aliasing.
   1. **Include all the members of your team's names**
   2. **Please include the number of register's your kernel is using (cubuild will tell you).**
   3. **Please state the number of threads your implementation used**
   4. **Please state how you handled memory on the GPU (did you use shared memory, if so how did you handle the memory management).**
   5. **Use the "time" program to time your CPU version ray tracing** bunny_jumbo_tris.pov (without anti-aliasing)
   6. **Use the "time" program to time your GPU version ray tracing** bunny_jumbo_tris.pov pov (without anti-aliasing)

7. **Use the “time” program to time your CPU version ray tracing** bunny_jumbo_tris.pov (**with** anti-aliasing)
8. **Use the “time” program to time your GPU version ray tracing** bunny_jumbo_tris.pov pov (**with** anti-aliasing)
9. **Use the “time” program to time your CPU version ray tracing** bunny_tasty.pov (without anti-aliasing)
10. **Use the “time” program to time your GPU version ray tracing** bunny_tasty.pov (without anti-aliasing)
11. **Be sure to include output images for each of the above runs.**
12. **Now compile for profiling:**
    a. **copy the first 10 entries from running gprof on your CPU version ray tracing** bunny_jumbo_tris.pov (without anti-aliasing**) into your report**
    b. **copy the first 10 entries from running gprof on your GPU version ray tracing** bunny_jumbo_tris.pov (without anti-aliasing)