
MPCS 51087 Project 2, Milestone 1

Ray Tracing - Serial Implementation

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This milestone shows a serial implementation of ray tracing to render a three-dimensional sphere illuminated by a single light source.

Usage:

On command line:

Compile:

```
$ gcc -fopenmp -O3 -o serial ray_tracing_serial.c -lm
```

Run: Two command line arguments – number of rays, grid dimension.

```
$ ./serial N_rays n
```

Methodology:

The ray-tracing algorithm was implemented in C and the results were visualized in python using Matplotlib.

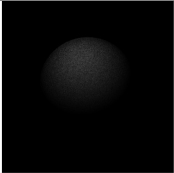
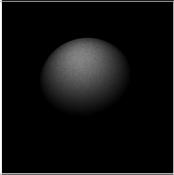
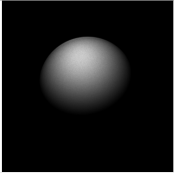
Number of Rays	Time (s)	G: Generated Sphere
1 million 1e6	0.400753	
10 million 1e7	4.065462	
100 million 1e8	40.059221	

Figure 1: Times and plots of G for different number of rays.