

CS7.302: Assignment 2

Himanshu Singh

February 6, 2024

1 Direct Lighting

1.1 Timings

Scene	Render Time (ms)
CornellBox: Directional Light	1272.083984
CornellBox: Point Light	1405.703979
CornellBox: Many Lights	3418.294922
Donuts (Many Lights)	3792.477051

Table 1: Time taken (in ms) for rendering models, without texture

1.2 Rendered Images



Figure 1: Rendering of CornellBox: Directional Light

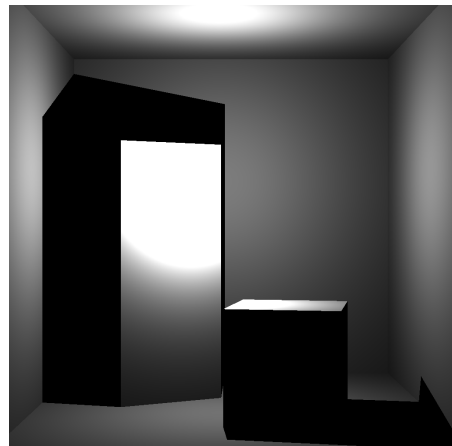


Figure 2: Rendering of CornellBox: Point Light

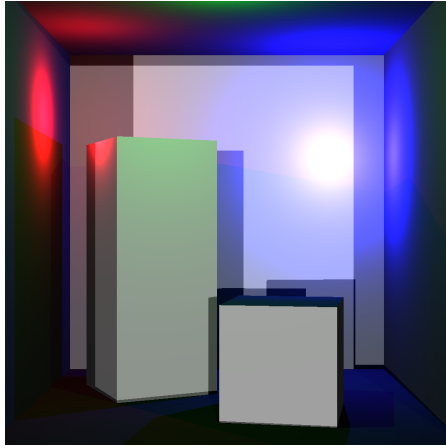


Figure 3: Rendering of CornellBox:
Many Lights

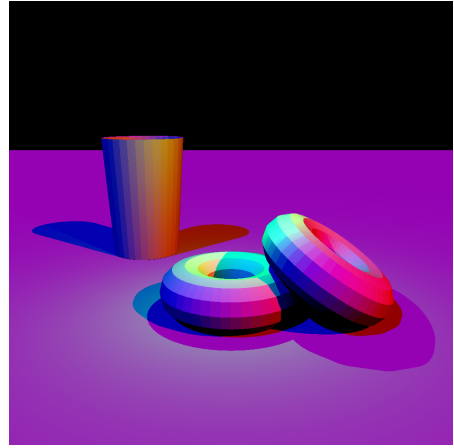


Figure 4: Rendering of Donuts (Many
Lights)

2 Texture Mapping

2.1 Timings

Scene	Render Time (ms)
CornellBox: Directional Light	1264.921997
CornellBox: Point Light	1407.619019
CornellBox: Many Lights	2411.620117
Donuts (Many Lights)	2753.679932
Monkey in the Woods (Many Lights)	2112.415039

Table 2: Time taken (in ms) for rendering models, with nearest neighbour texture map

2.2 Rendered Images

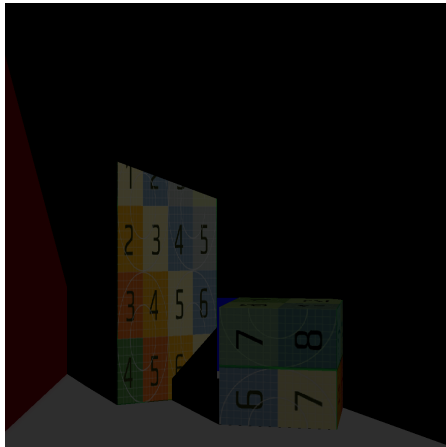


Figure 5: Rendering of CornellBox: Directional Light, with nearest neighbour texture map

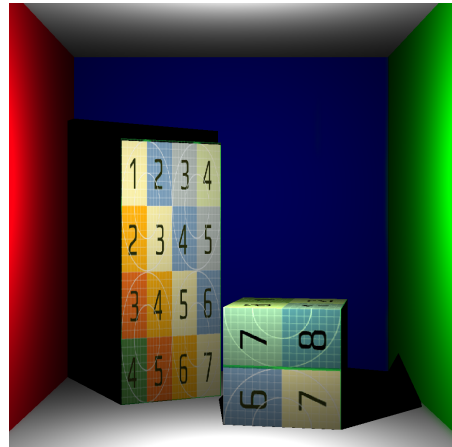


Figure 6: Rendering of CornellBox: Point Light, with nearest neighbour texture map

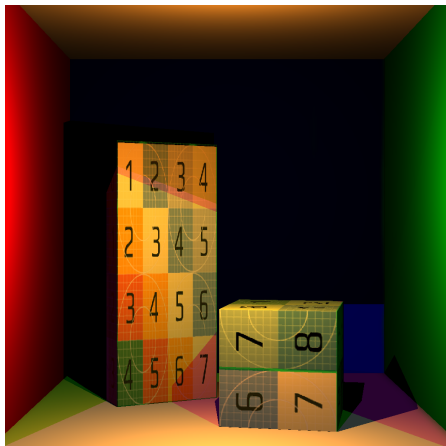


Figure 7: Rendering of CornellBox: Many Lights, with nearest neighbour texture map

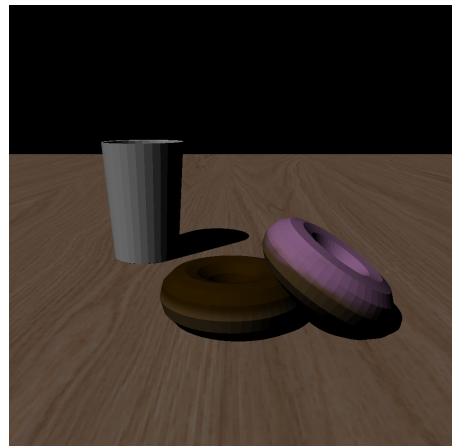


Figure 8: Rendering of Donuts, with nearest neighbour texture map



Figure 9: Rendering of Monkey in the Woods, with nearest neighbour texture map