

EECS 351 Project B Report

Project Name: Ray Tracing glass / mirror boxes, spheres, etc.

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User Guide

Before Run

You should have nodejs installed on your computer. After install nodejs. Run

```
$ npm install http-server -g
```

Then under project root directory, run

```
$ http-server
```

When you successfully run the server. Open your browser and go to <http://localhost:8080/>.

You'll see the first scene preview on the left.

- You can use WSADQE to tilt camera.
- You can move by YHIKJL, YH for forward/backward, IKJL for horizontal and vertical.
- You can use numkey 1-4 to switch scenes.
- You can change reflect recursion and sampling size.
- You can switch light on & off.
- Click on buttons to render image.

Results

- Figure 1 shows jitter 4*4 sampling of the first scene
- Figure 2 shows state after tilting & moving camera of first scene
- Figure 3 - 5 shows the 2nd - 4th scene with some other configuration

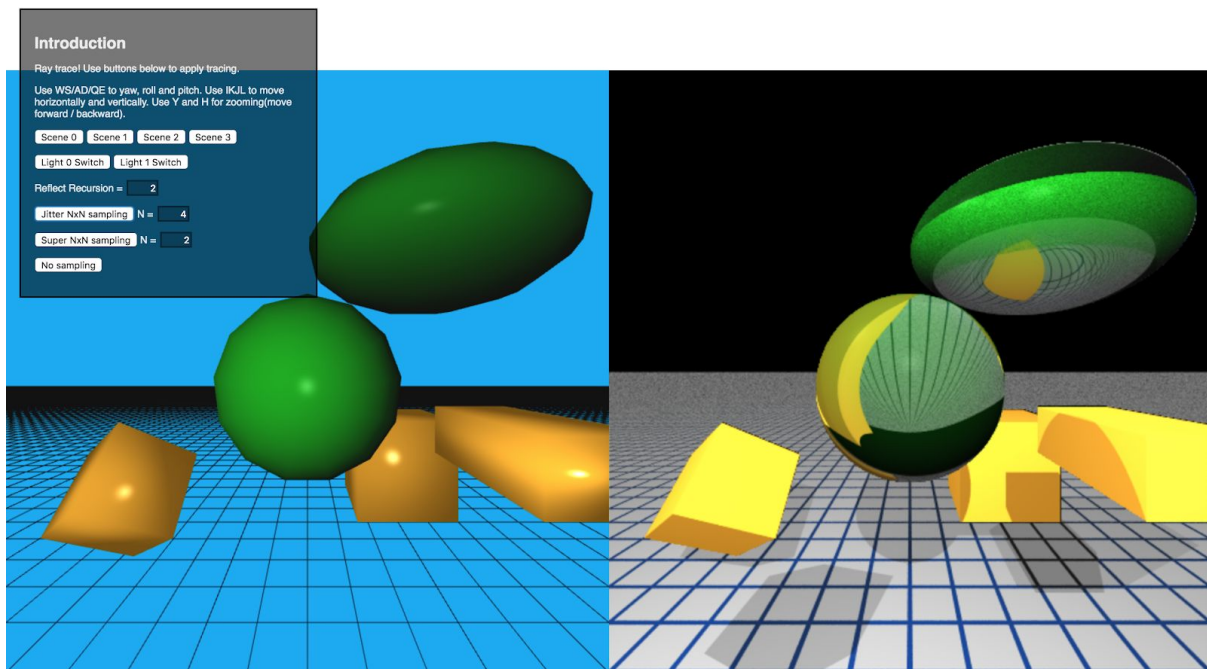


Figure 1. 1st scene with 4x4 jitter sampling

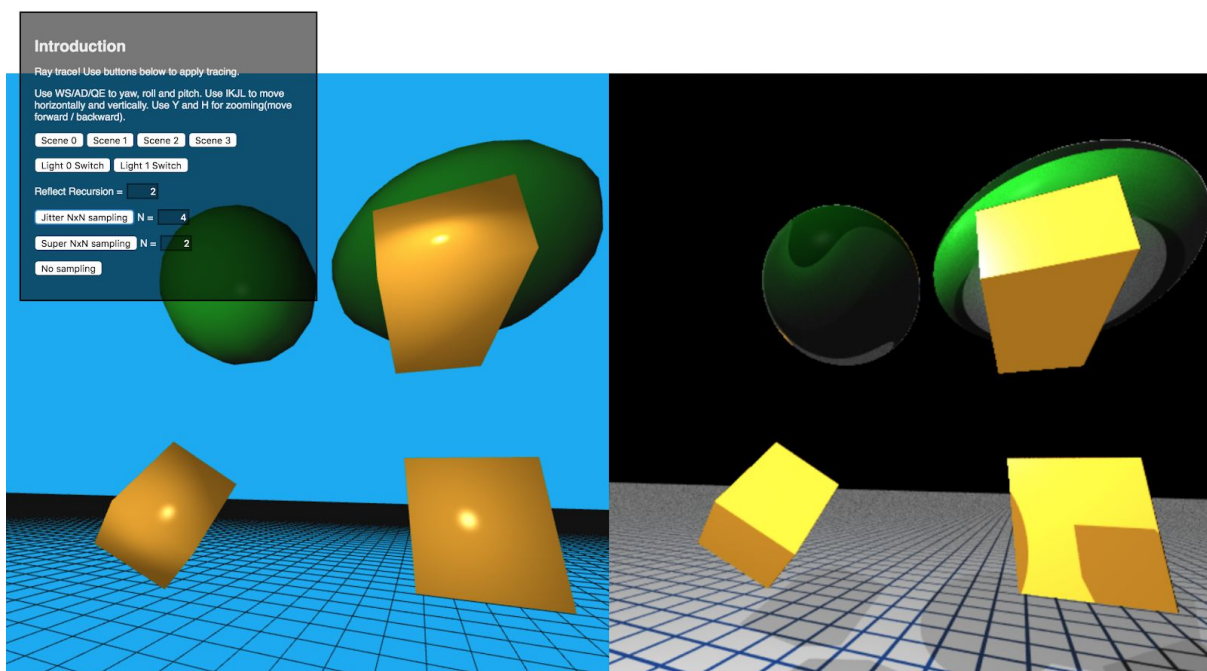


Figure 2. State after tuning camera

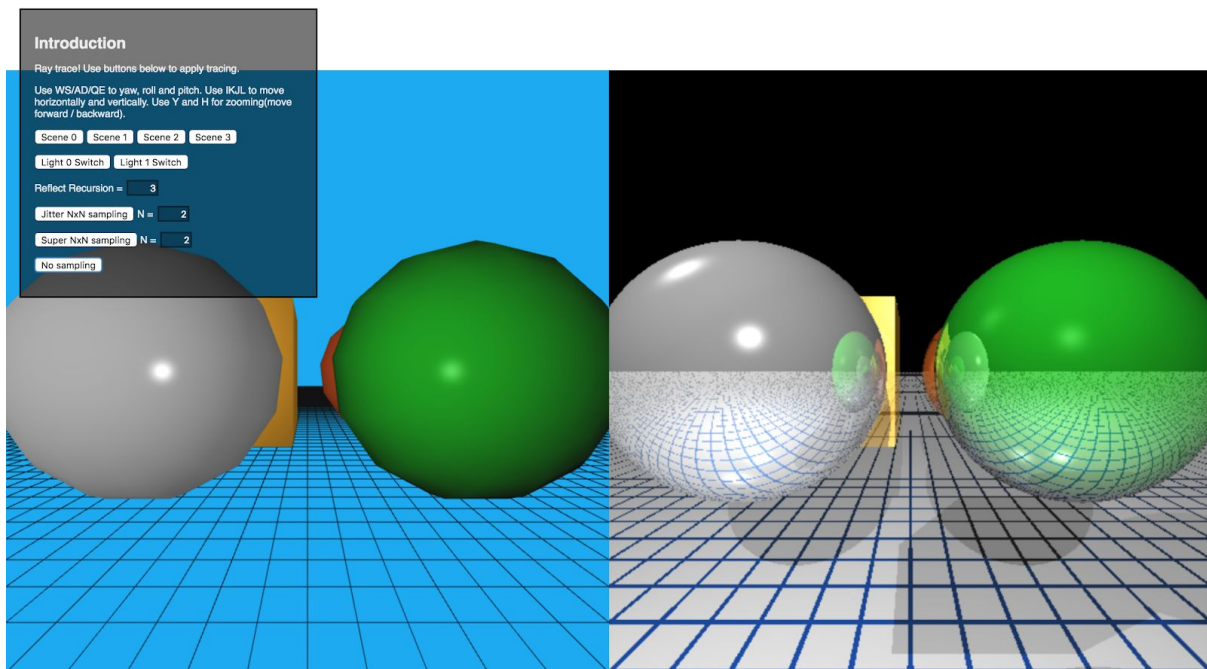


Figure 3. 2nd scene with 3 reflect recursions

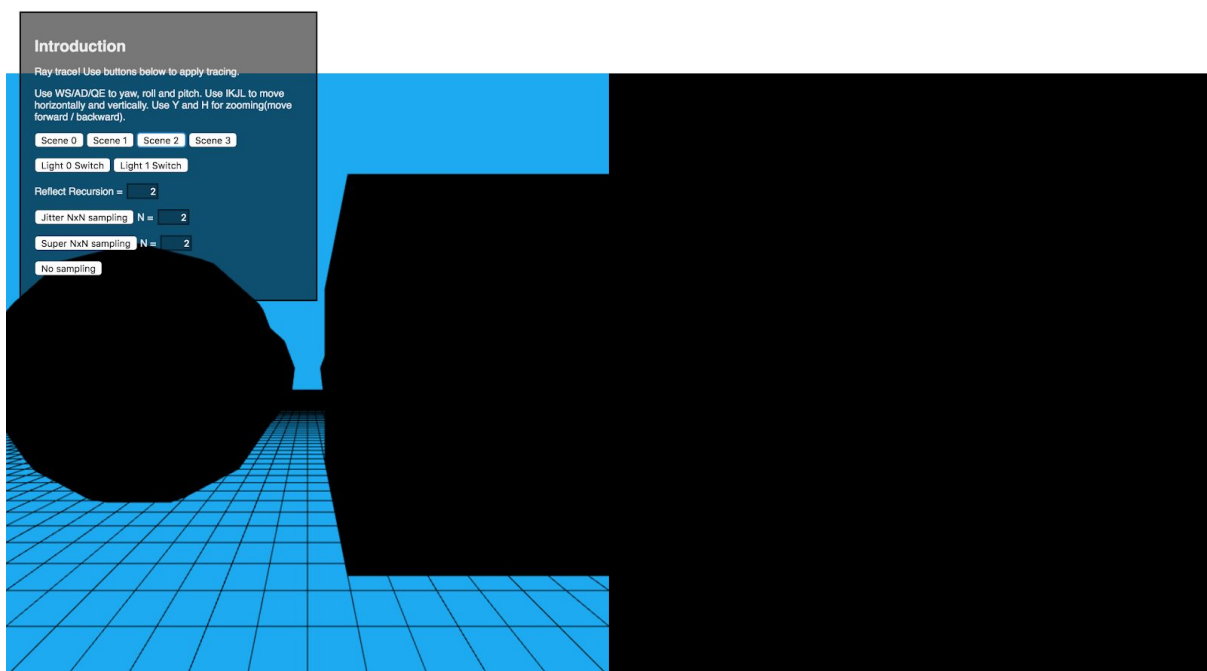


Figure 4. 3rd scene with lights off

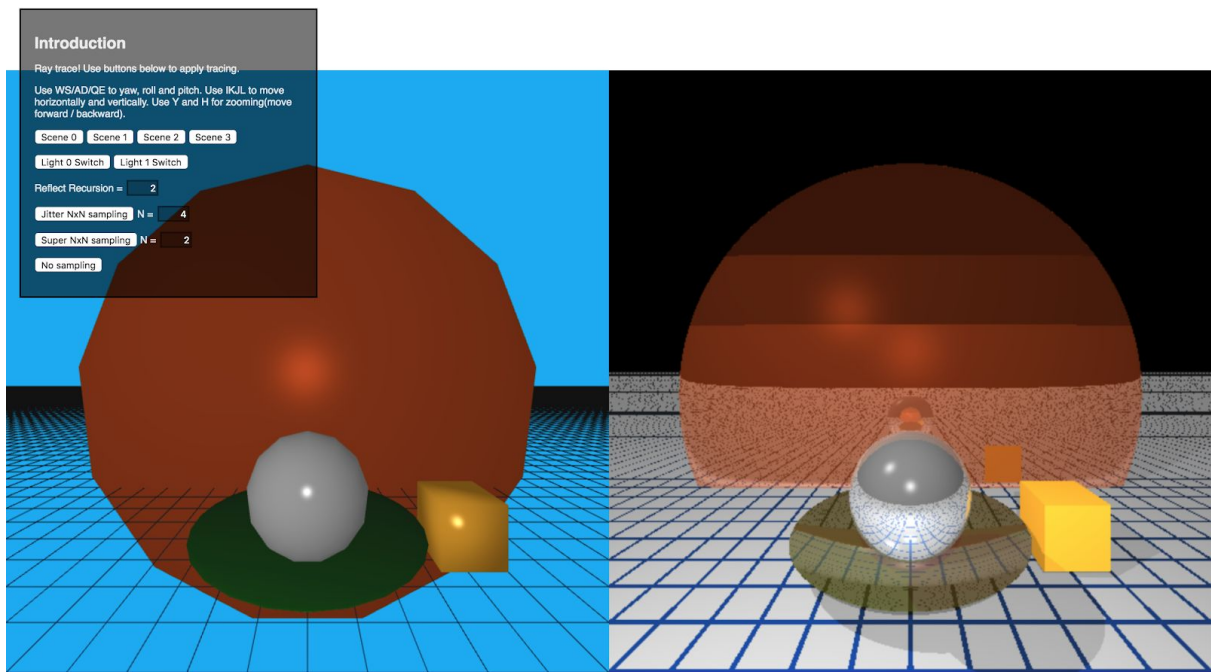


Figure 5. 4th scene