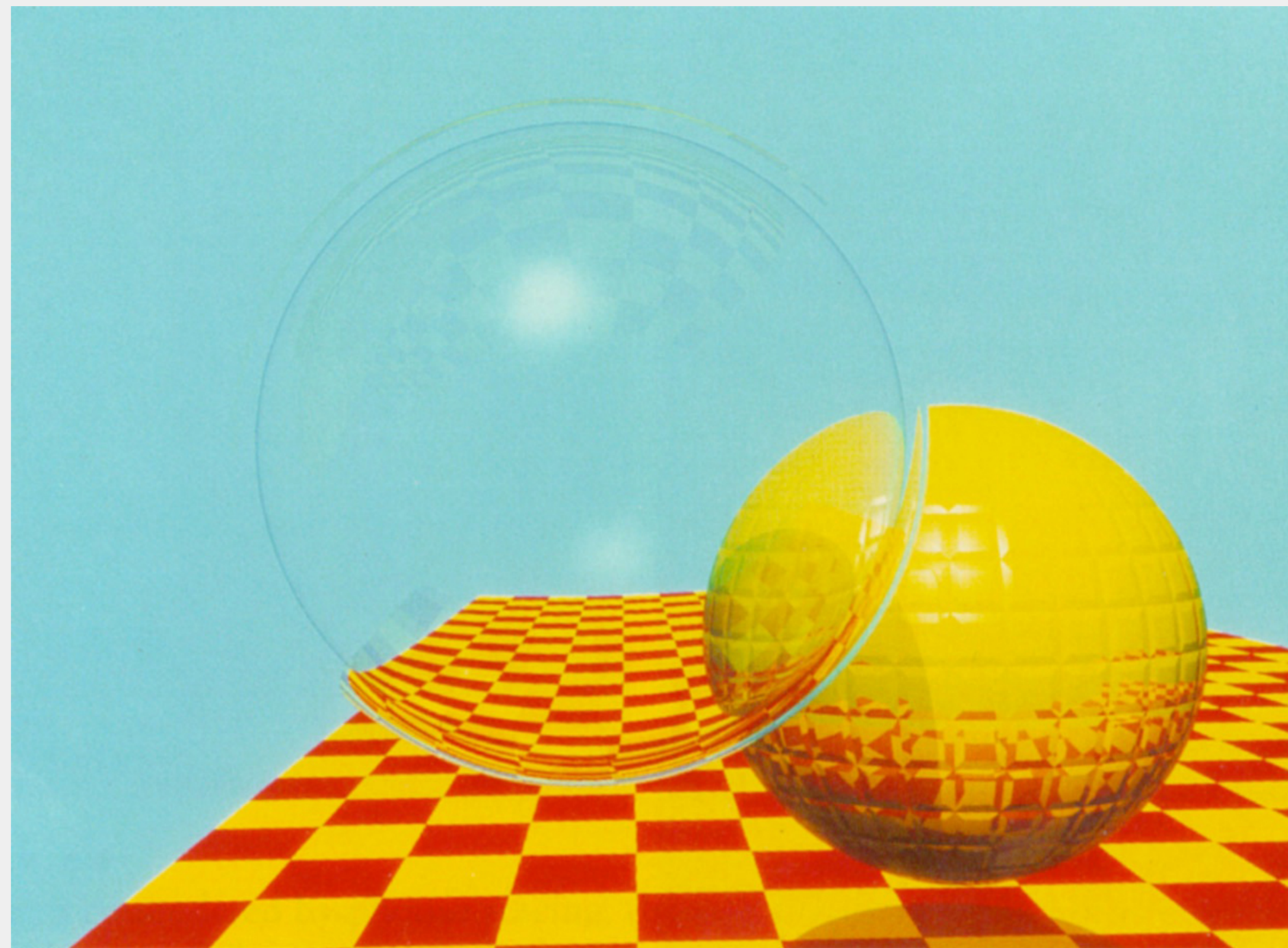


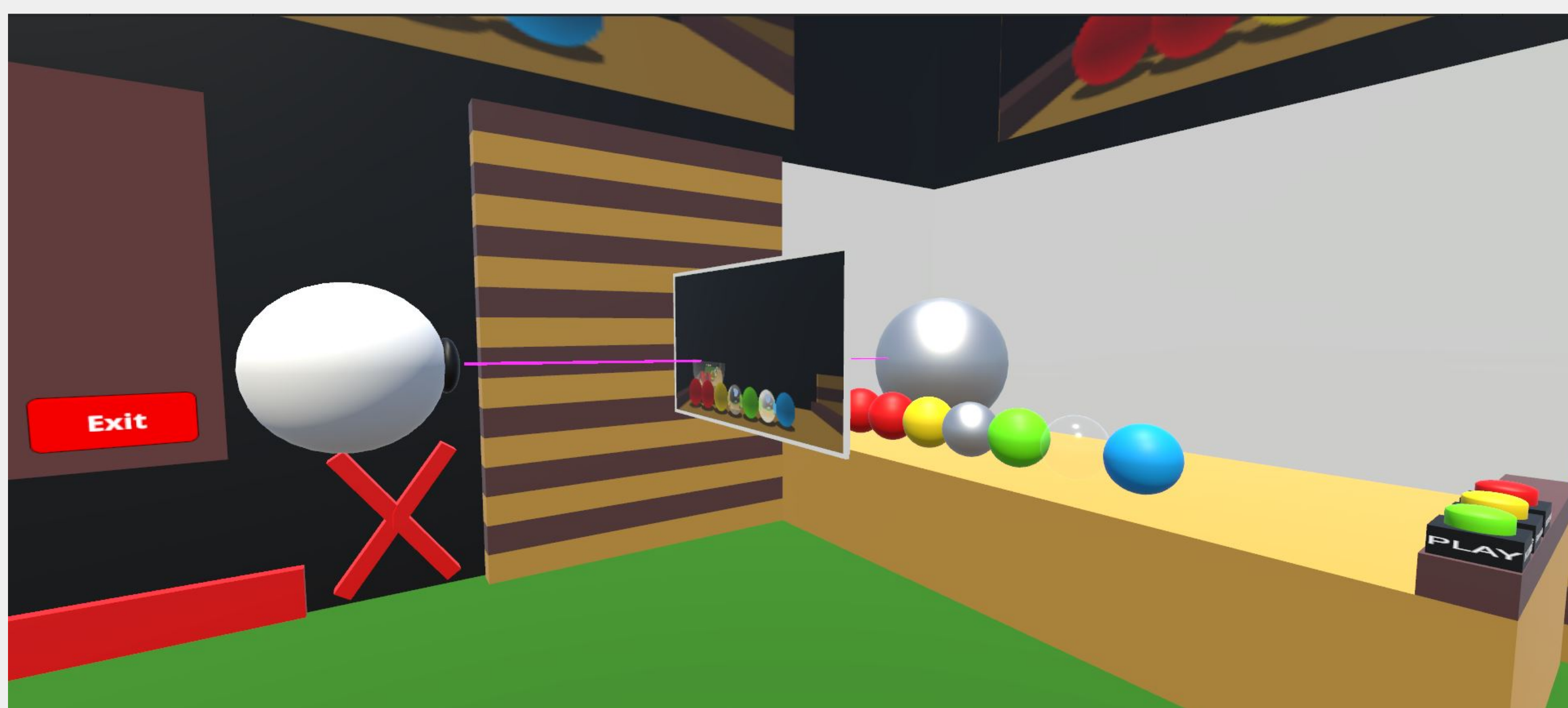
Whitted Raytracing



Immersive Learning

- ▶ Raytracing is one of the major topics in computer graphics classes.
- ▶ Students have to implement their own version of a working raytracer.
- ▶ To implement a raytracer students need to understand the basic concepts of computer graphics like coordinate systems, camera, lighting or reflection.
- ▶ Key for the successful implementation of a raytracer by the students: develop a high spatial imagination.
- ▶ The immersive learning application **Visual Raytrace** supports the transfer from 3D space to a programming language and deepens the understanding of the basic concepts of a raytracer.

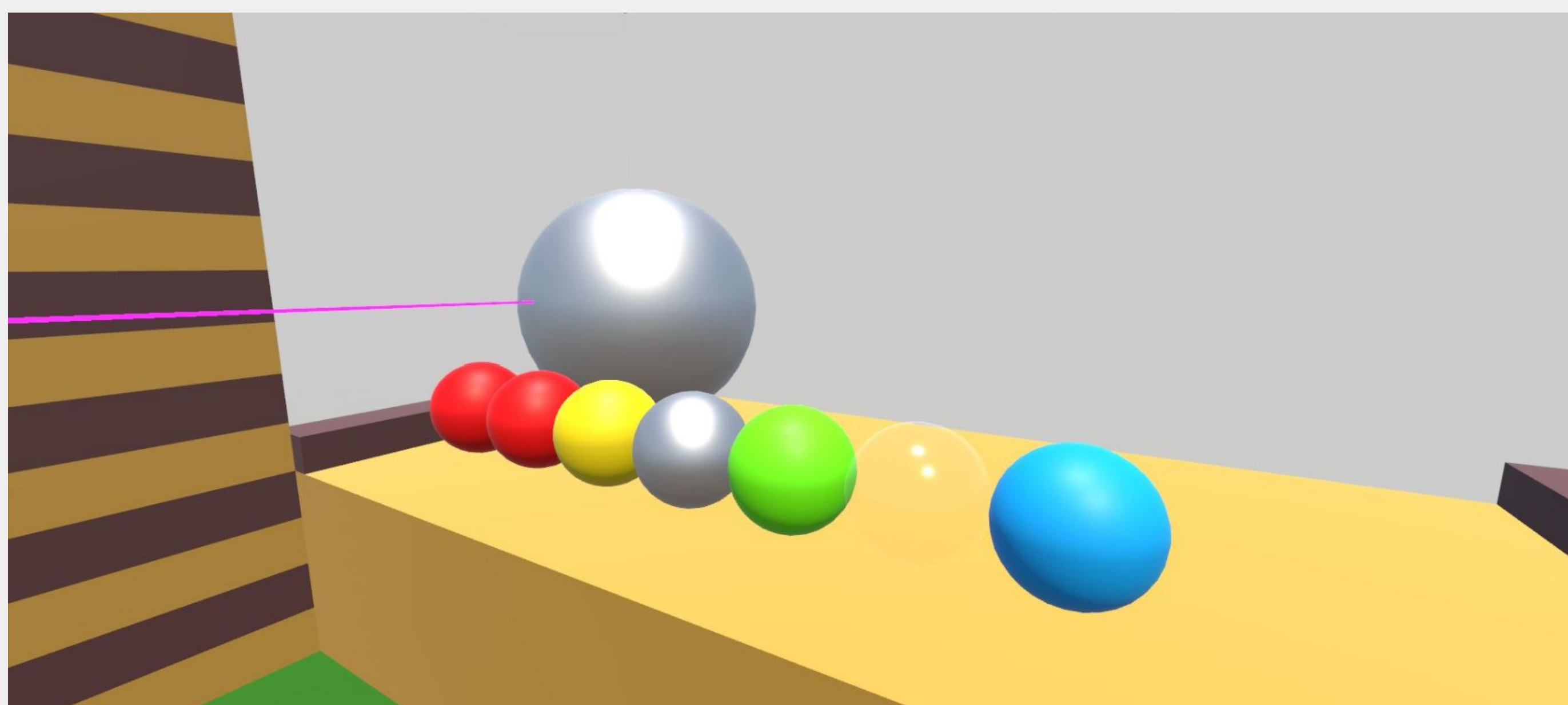
A Raytracer in a Virtual Environment



Unity and C#



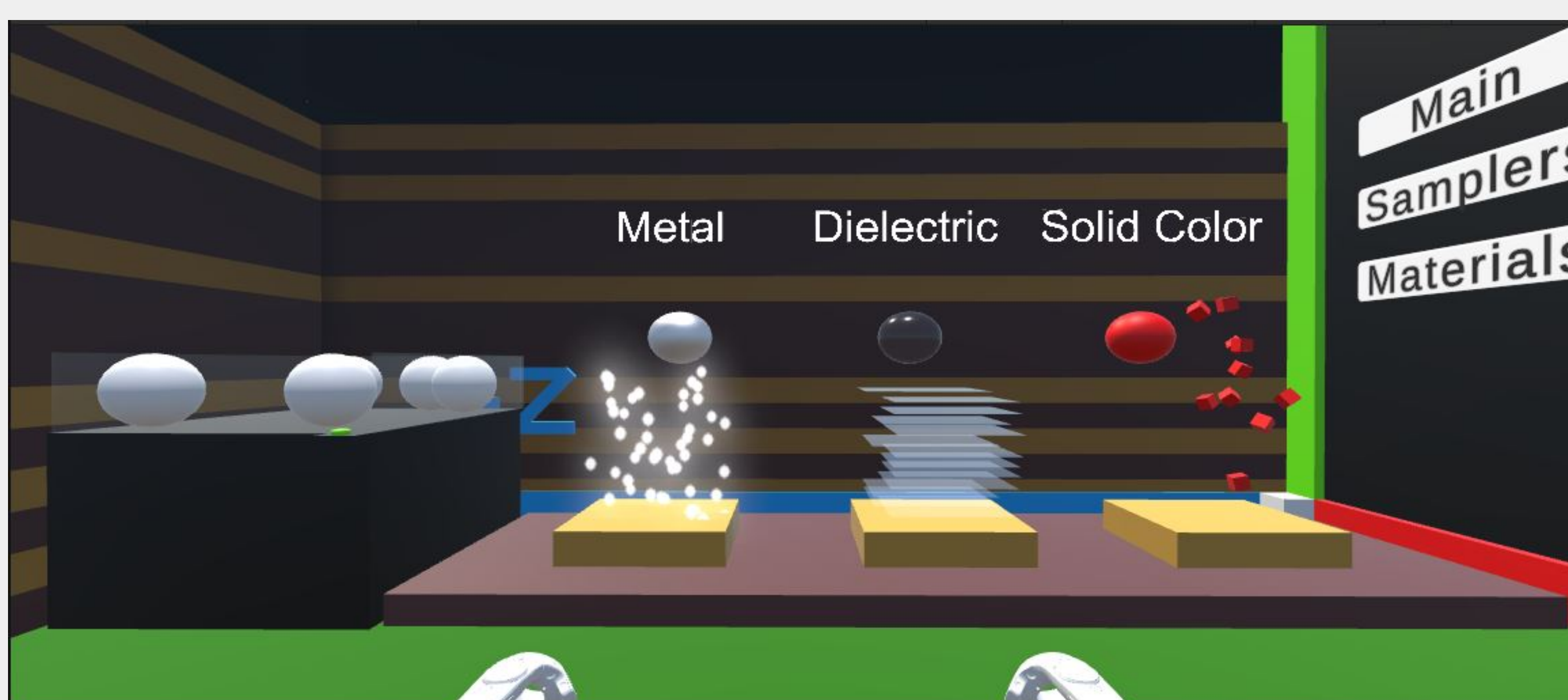
Ray-Sphere Intersection



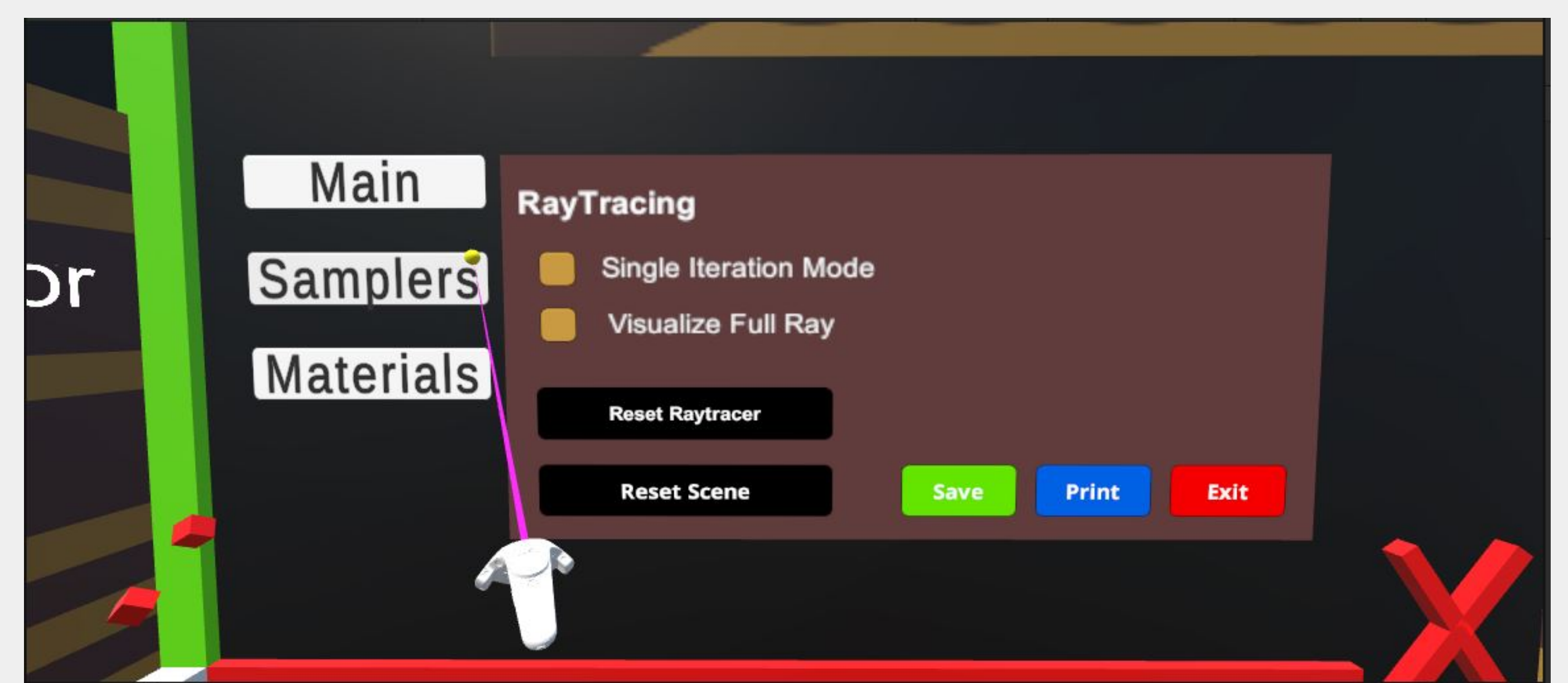
A Virtual Framebuffer and a Virtual Ray



Interactive Scene Definition



Settings for the Raytracer



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