Submitting team member:

Justin Vesche

Team members:

Junchi Zhu, Justin Vesche, Matthew Baxter

Description:

For our project, our group decided to use Three.js, using ReactJS. The exact library we used was React Three Fiber. With our project we created our own scene and added objects within the scene. Creating the objects, we used shapes and we also loaded in object files. The objects were created with meshes. The coke can was created using shapes and was made by us. The earth was also created with a shape. The earth uses some bump mapping, in which Junchi followed the tutorial (<https://www.youtube.com/watch?v=ymavtyRpT0E>) to understand how to create the earth and get familiar with Three.js. Using the Three.JS documentation, we were able to figure out more capabilities. In doing so we added stars, fog, multiple lights, and shadow mapping. In doing shadow mapping we used both directional lighting and a spotlight, which is visible on the plane. There are 3 lights in total in the scene. On the earth it is also visible to see Phong shading. For our animation side of things, we have moving shapes, and if the user clicks on the yellow box, the box will teleport along the scene. To understand how to add object files we used the React Three Fiber documentation (<https://docs.pmnd.rs/react-three-fiber/tutorials/loading-models>). More of the links and resources are listed below. Also noted, some of the objects were created in Blender and imported over. The Alan Turning letters and the large faced yellow object were the only 2 imported objects.

Citations:

<https://docs.pmnd.rs/react-three-fiber/tutorials/loading-models>

<https://www.youtube.com/watch?v=ymavtyRpT0E>

<https://codeworkshop.dev/blog/2019-12-31-learn-the-basics-of-react-three-fiber-by-building-a-three-point-lighting-setup/>

<https://threejs.org/docs/>