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| computer graphics  PROJECT VERSION 2 | Ahmed Seffah  [Course title] |

Answer

2. Array- Your scene will be rendered several times using the ArrayCamera and other cameras. Every camera will only render a portion of the canvas. You can picture this like the split-screen multiplayer games we played on older consoles. In array do not lose detail because to consistent exposure because we collect from various angles.

Cube- To make a render of the surroundings, the CubeCamera is used to obtain a render looking in all directions (ahead, backward, left, right, upward, and downward). It can be used to produce a shadow map or an environment map for reflection.

Stereo-Using two cameras that resemble the eyes, the scene is rendered using the StereoCamera to produce what is known as a parallax effect, which tricks your brain into believing that there is depth. To see the outcome, you need the necessary tools, such as a VR headset or red and blue glasses(Three.js Journey — Cameras, n.d.).

1. A **spot light** delivers an extremely direct source of light and operates just as it would in real life. Utilizing a spot light has a number of advantages, one of which being the light's ability to be directed. The region that is really lighted depends on how broad the cone angle is, which is controlled by the spot light's cone of emission. The light will be softer or harder depending on how far away the spot light is from the object and how bright it is.

The most prevalent sort of light in 3D software is **a point light**. A point light and an incandescent light bulb that radiates light in all directions are quite similar. A point light can be compared to a sphere of light that covers a space. The light will shine stronger and darker on objects that are nearer to it. When you need to create a light that has a single point as its source, like a lamp or candle, or illuminate areas with a smooth falloff in all directions, point lights are fantastic.

A **directed light** replicates the sun's natural lighting. Parallel light rays are emitted in a single direction by directional lights, yet the light extends indefinitely. A directed light can be compared to a massive flash light that is constantly centered and never goes out that is located far away from your things. The light may be turned in any direction. The rotation values of a directed light are all that matter because it symbolizes a far-off light source, like the sun. Its X, Y, and Z coordinates are meaningless.

Soft light rays from an **ambient light** are cast in all directions. It simulates more of a secondary light that is applied to all items in a scene and comes from all different angles because it has no distinct directionality and does not throw any shadows or shade. Insufficiently illuminated portions on a render can be filled in with ambient lighting(“three.js Docs,” n.d.).

Reference

*Three.js Journey — Cameras*. (n.d.). Three.js Journey. https://threejs-journey.com/lessons/cameras

three.js docs. (n.d.). *Three.Js*. https://threejs.org/docs/



