

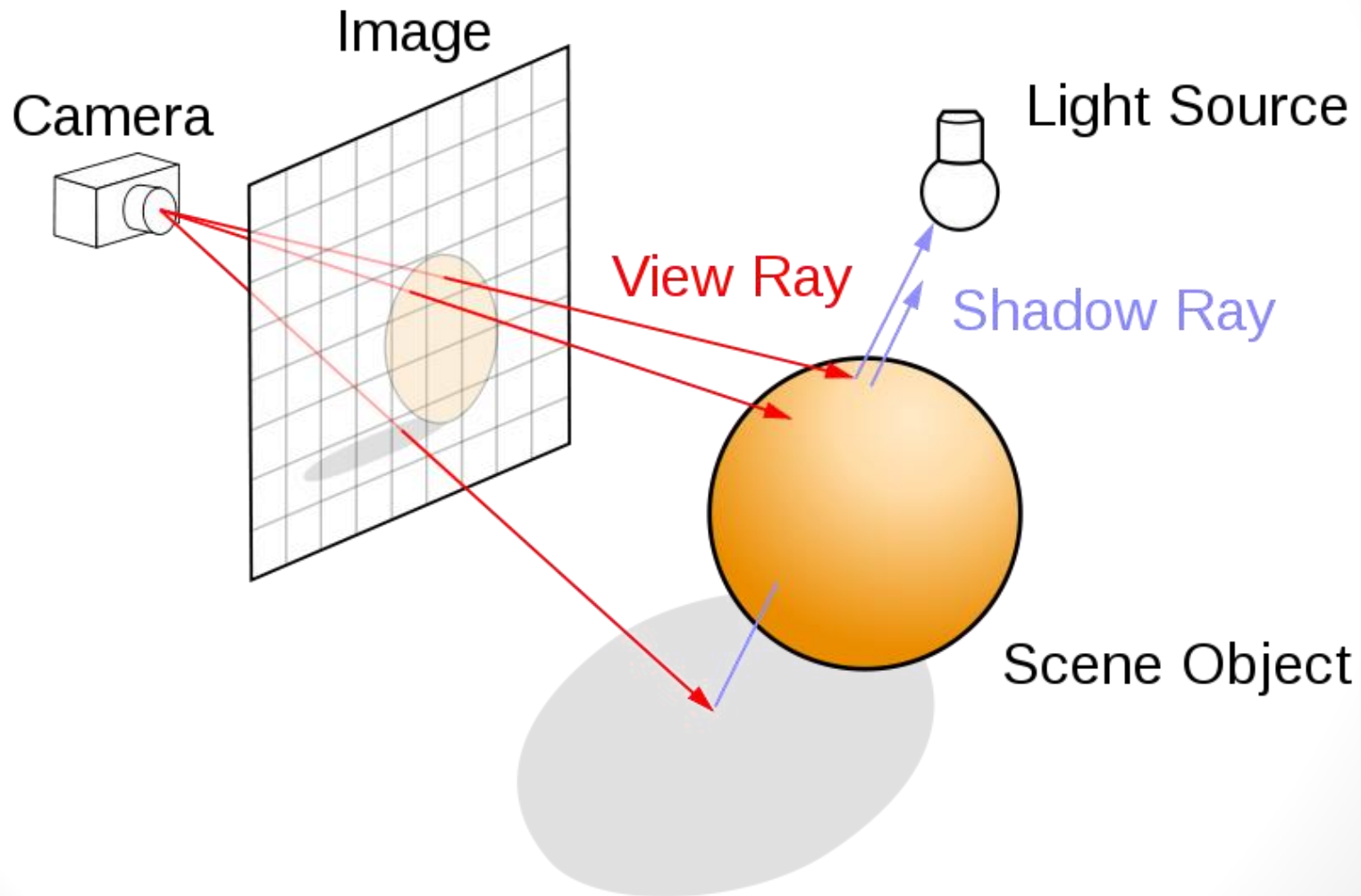
Ray tracing

- **Ray tracing** is a rendering technique for generating an image by tracing the path of light as pixels in an image plane and simulating the effects of its encounters with virtual objects.
- The technique is capable of producing a very high degree of visual realism, usually higher than that of typical scanline rendering methods, but at a greater computational cost.

Ray tracing

- This makes ray tracing best suited for applications where taking a relatively long time to render a frame can be tolerated, such as in still images and film and television visual effects, and more poorly suited for real-time applications such as video games where speed is critical. Ray tracing is capable of simulating a wide variety of optical effects, such as reflection and refraction, scattering, and dispersion phenomena (such as chromatic aberration).

Ray tracing



Ray tracing

- Optical ray tracing describes a method for producing visual images constructed in 3D computer graphic environments, with more photorealism than either ray casting or scanline rendering techniques.
- It works by tracing a path from an imaginary eye through each pixel in a virtual screen, and calculating the color of the object visible through it.