THREE.JS

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https://threejs.org/
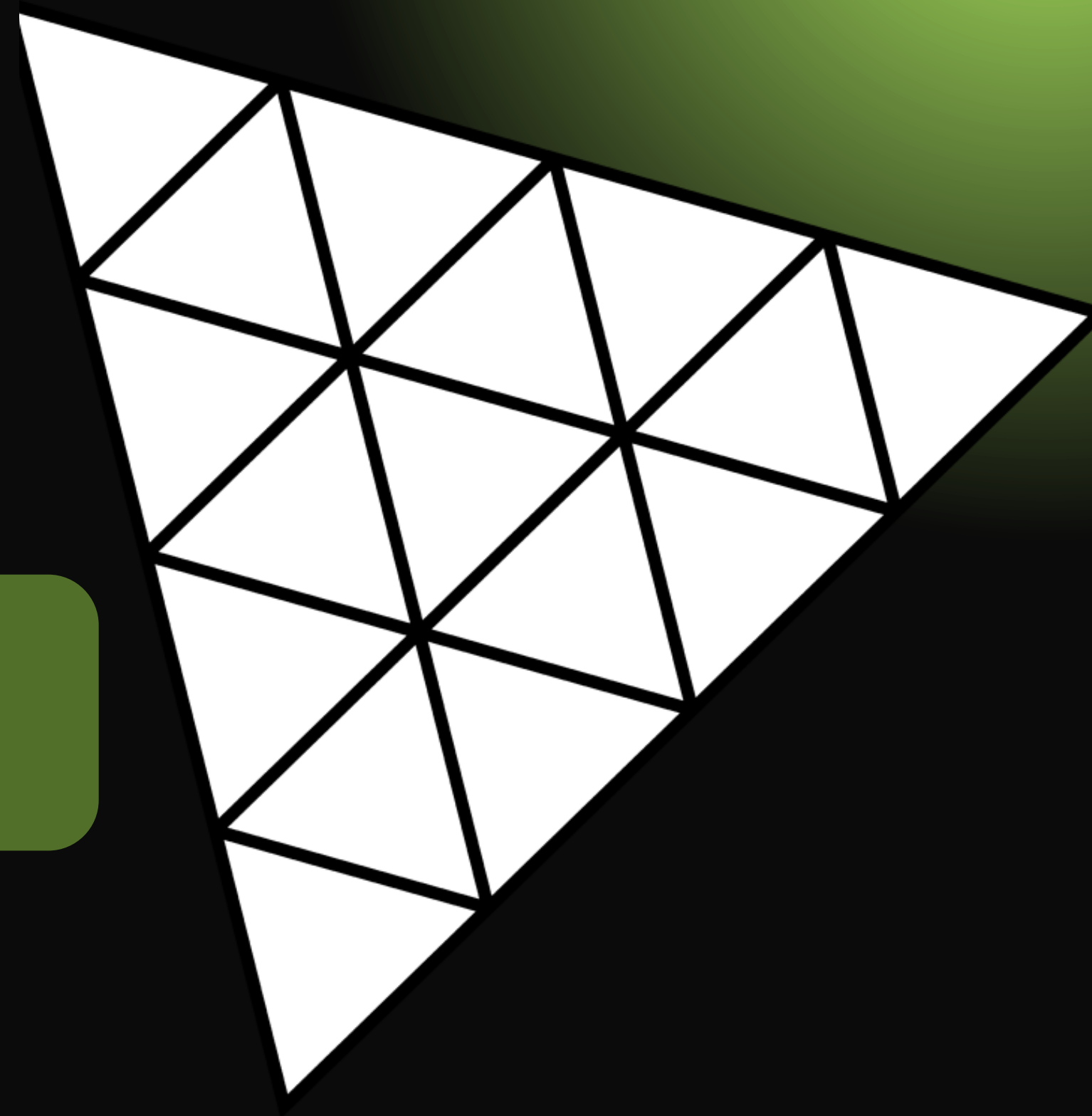
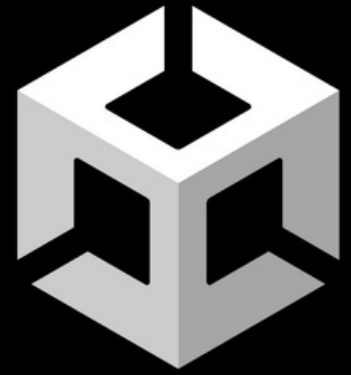https://github.com/Albert-Hovhannisyan/Three.js-Presentation

Competitors

Unity | BabylonJS

WebGL™

Three.js vs WebGL

WebGL is a very low-level system that only draws points, lines, and triangles. Usually three.js uses WebGL to draw 3D.

https://webglfundamentals.org/

Babel

Babel is a free and open-source JavaScript transcompiler that is mainly used to convert ECMAScript 2015+ code into a backwards compatible version of JavaScript that can be run by older JavaScript engines.
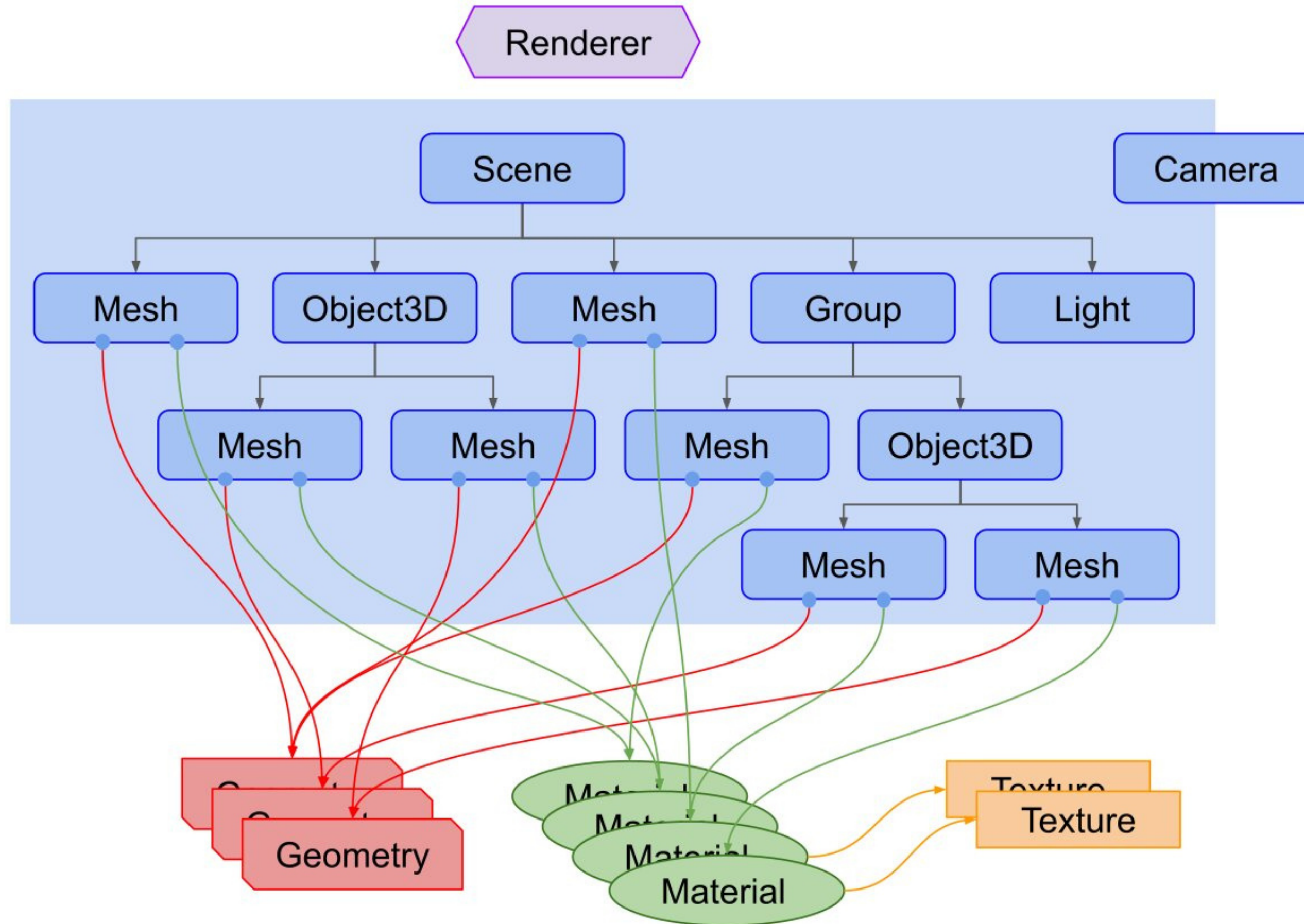

https://babeljs.io/

How does it work?

We need to pass a ***Scene*** and a ***Camera*** to a ***Renderer*** and it renders (draws) the portion of the 3D scene that is inside the <u>frustum</u> of the camera as a 2D image to a canvas.

Renderer
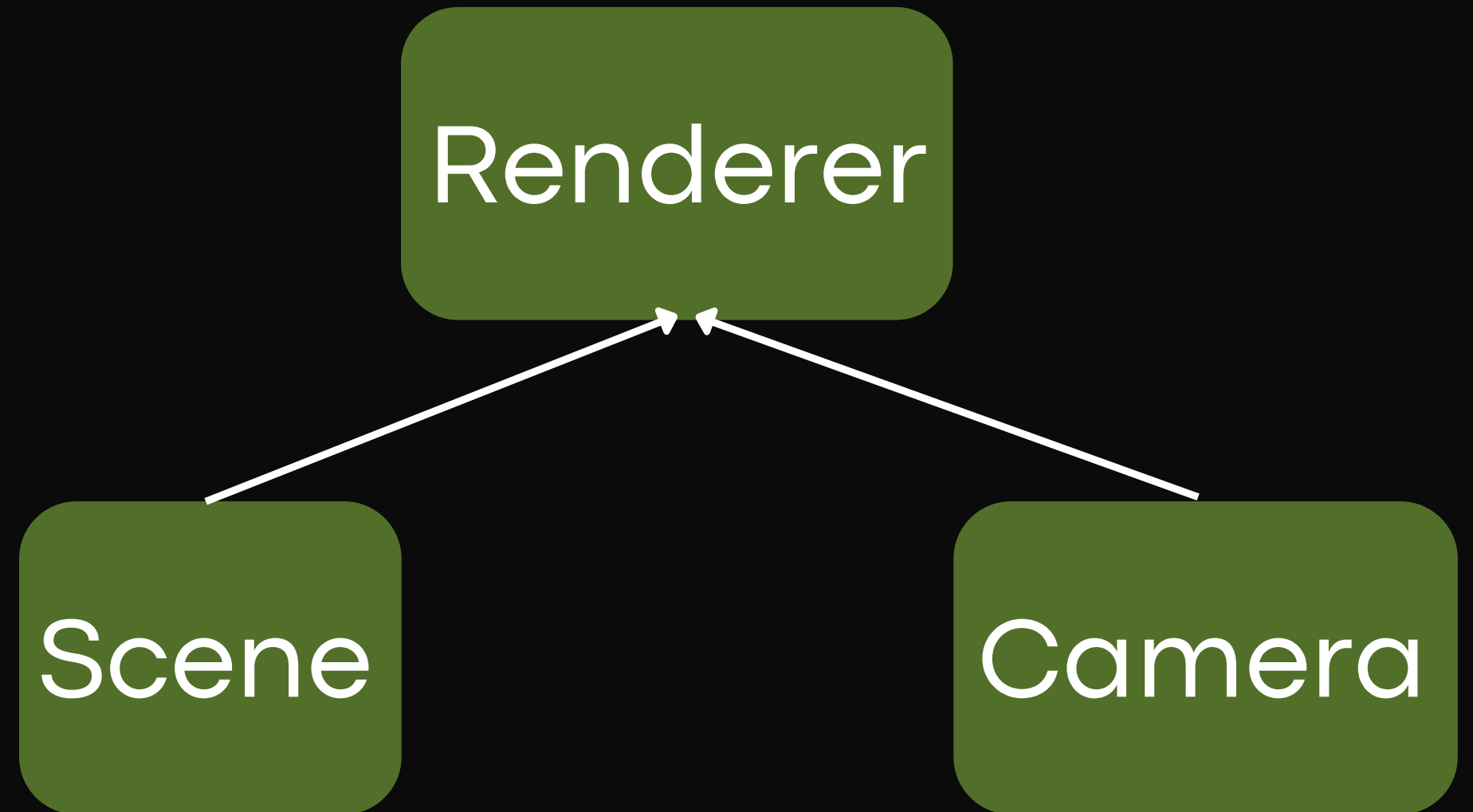
Scene
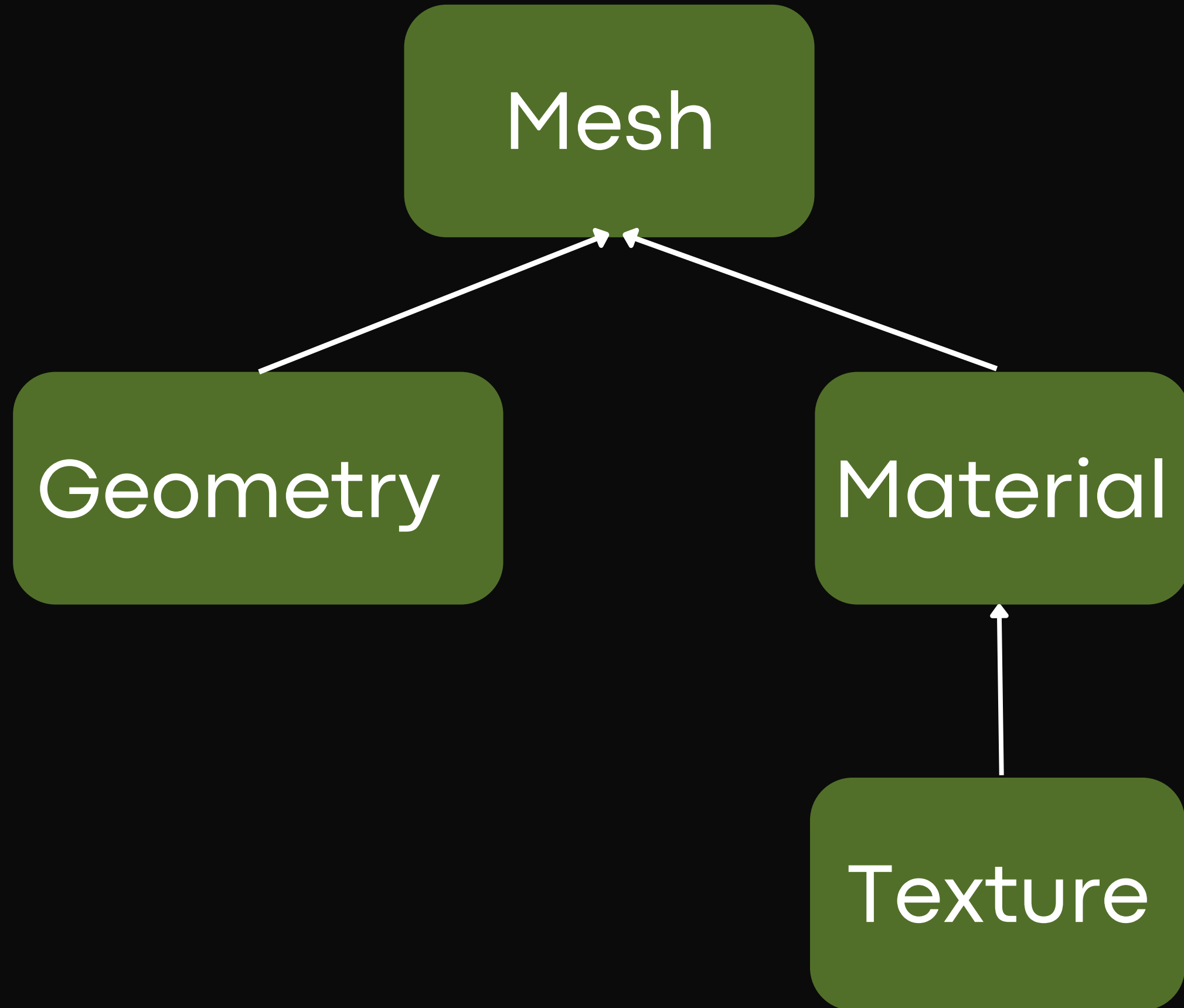
Camera

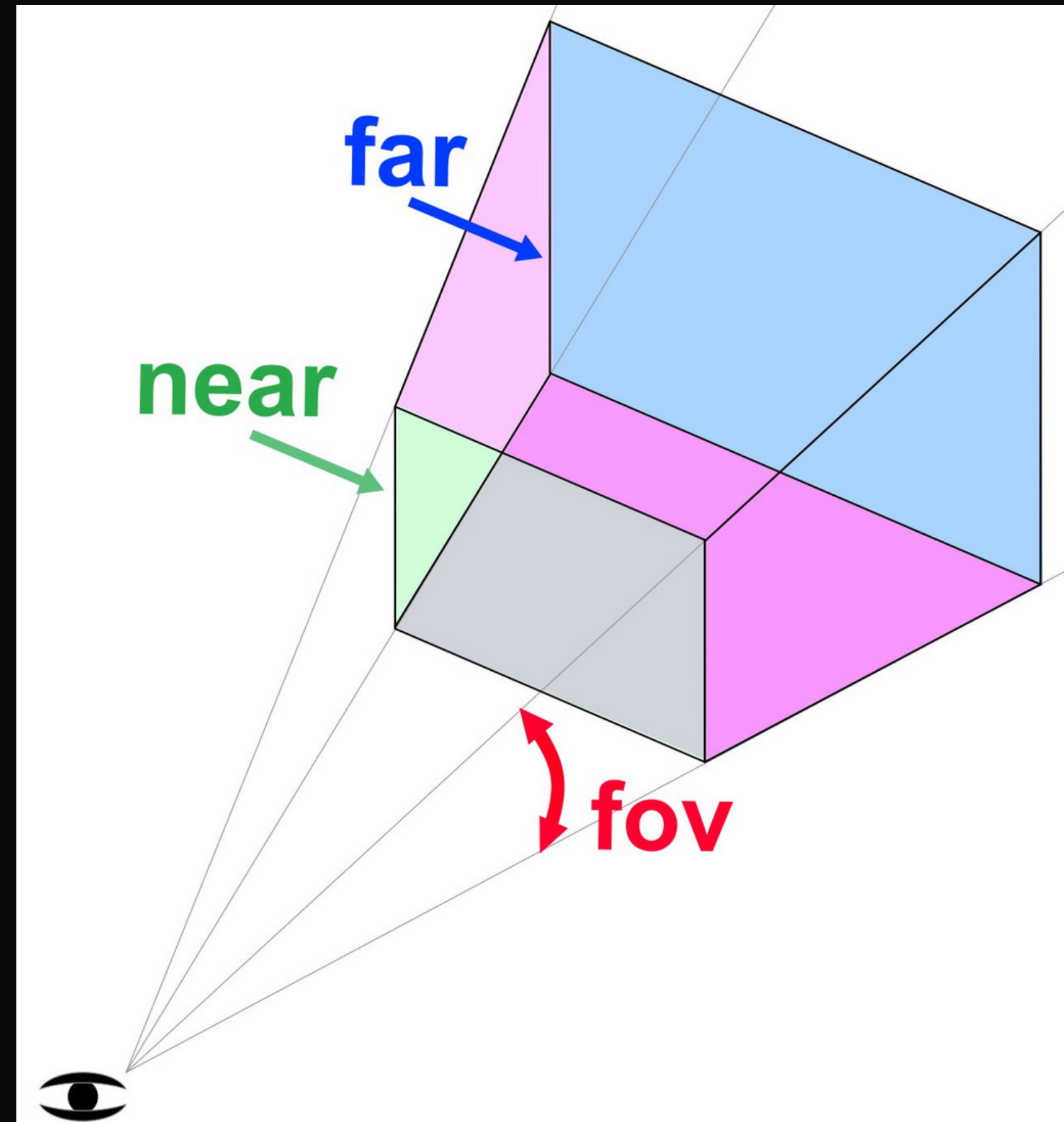# Main Components

Scene

- Mesh

- Object3D

- Group

- Light

Mesh

Perspective Camera

- fov (field of view)

- aspect

- near

- far

How to import custom 3D objects to ower browser?

Some popular supported formats:
.obj (Wavefront)
.gltf
.glb

GLTF vs GLB

- GLTF is based on JSON file format. It requires external processing file formats, such as for textures, shaders and animation data.

- GLB is a version of GLTF. It is a binary file format. It locates all of the elements of a 3D scene, including materials, node hierarchy and cameras in one single compressed file.

Sources

https://threejs.org/manual/#en/fundamentals

https://threejs.org/docs/index.html#manual/en/introduction/Creating-a-scene

https://threejs.org/

https://webglfundamentals.org/

https://babeljs.io/

https://visao.ca/what-is-glb-file/#:~:text=The%20GLB%20format%20is%20a,in%20one%20single%20compressed%20file.

Thank you for your attention!