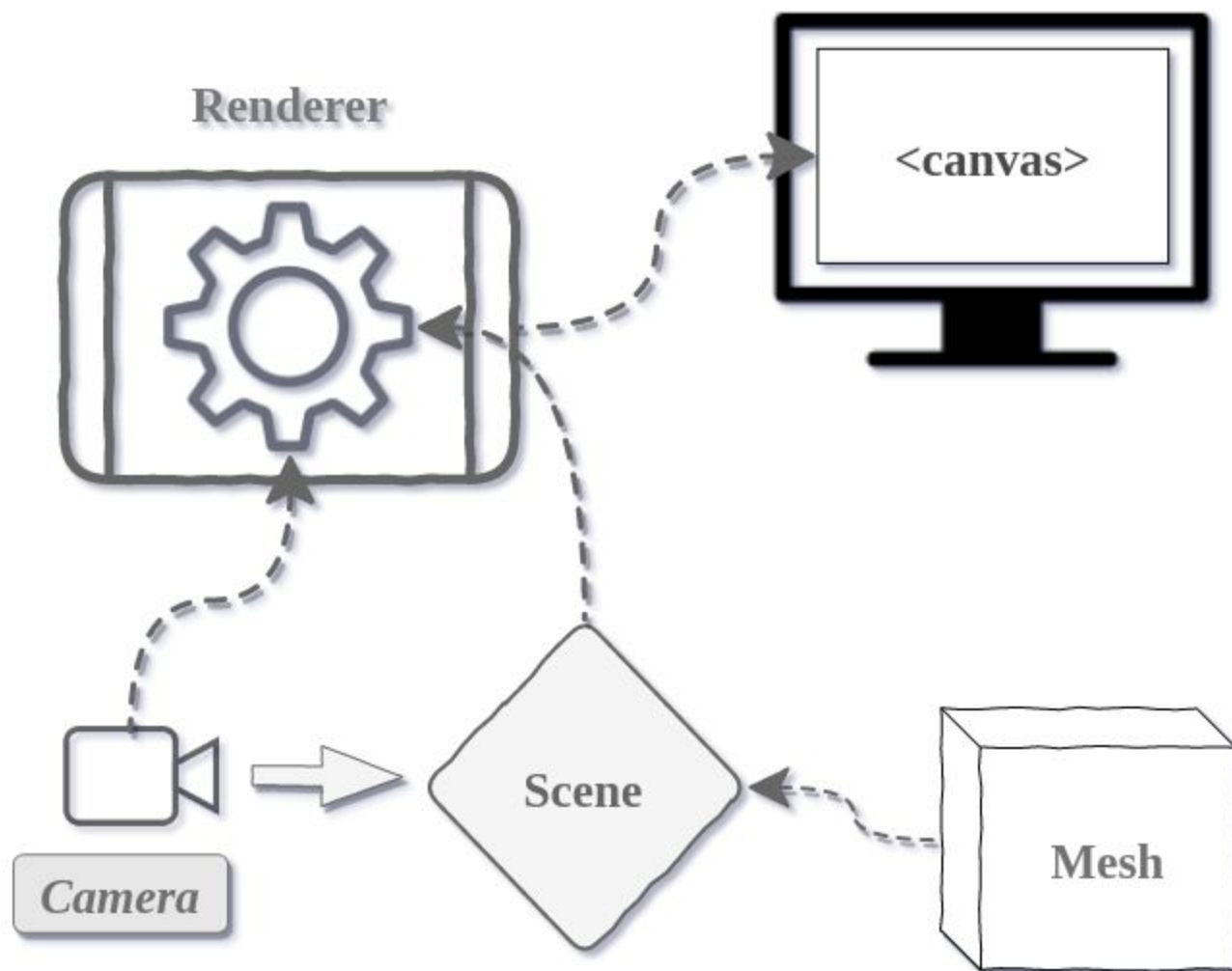


WebGL+ThreeJS

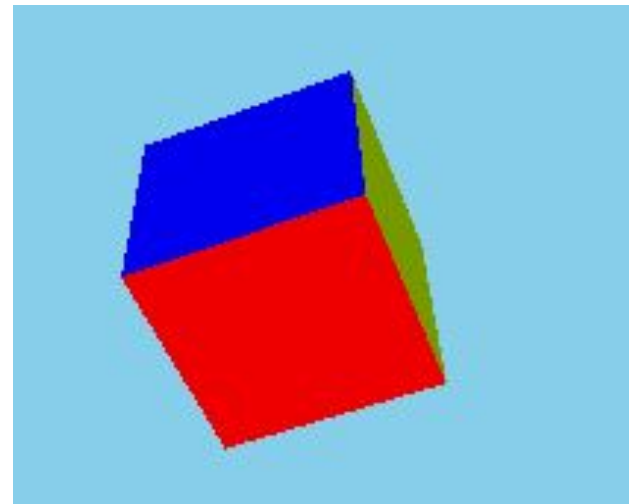
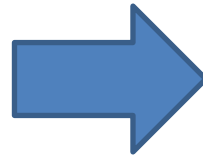
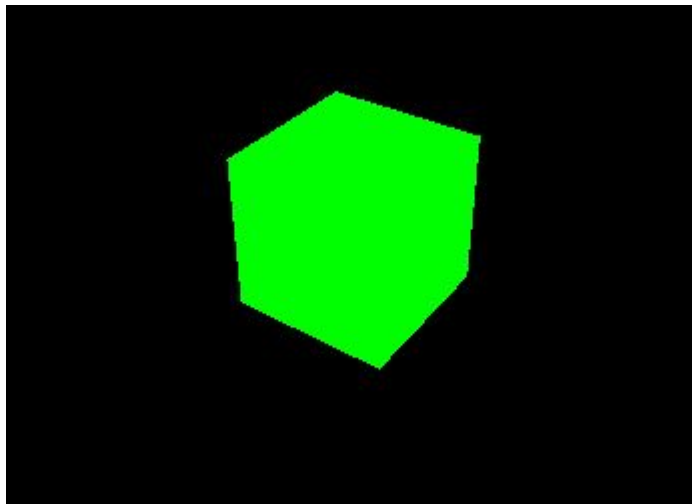
Bài thực hành 02



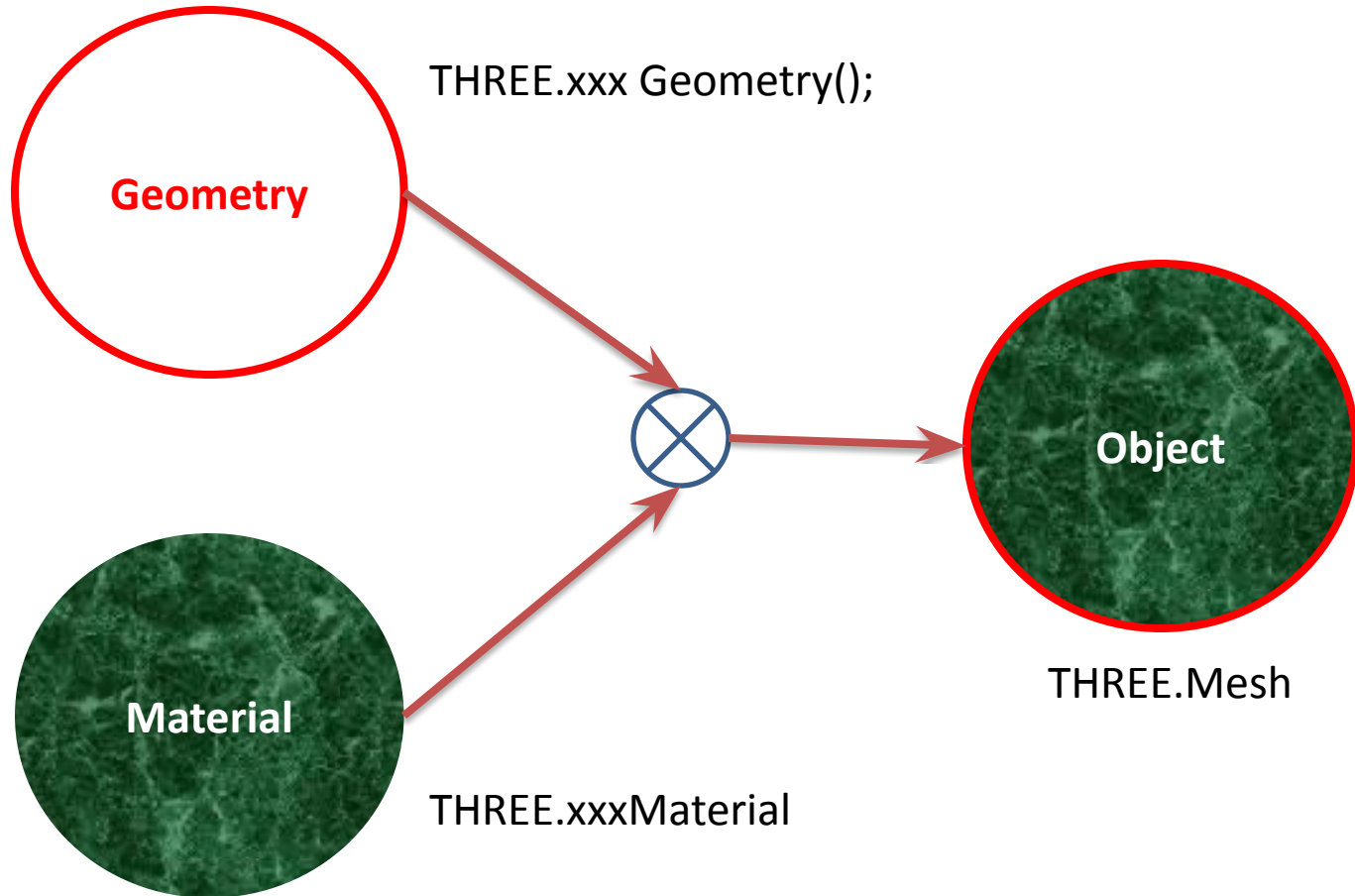
Material

Yêu cầu 1

- Hãy tô màu mỗi mặt của khối lập phương bằng 1 màu khác nhau

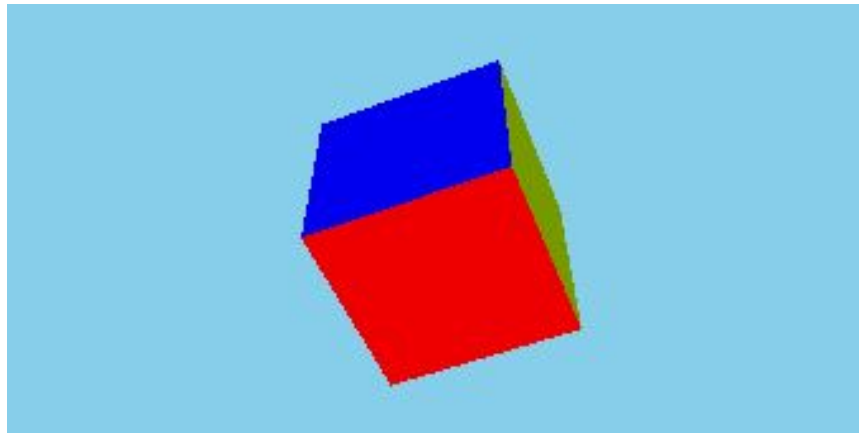


Add Objects



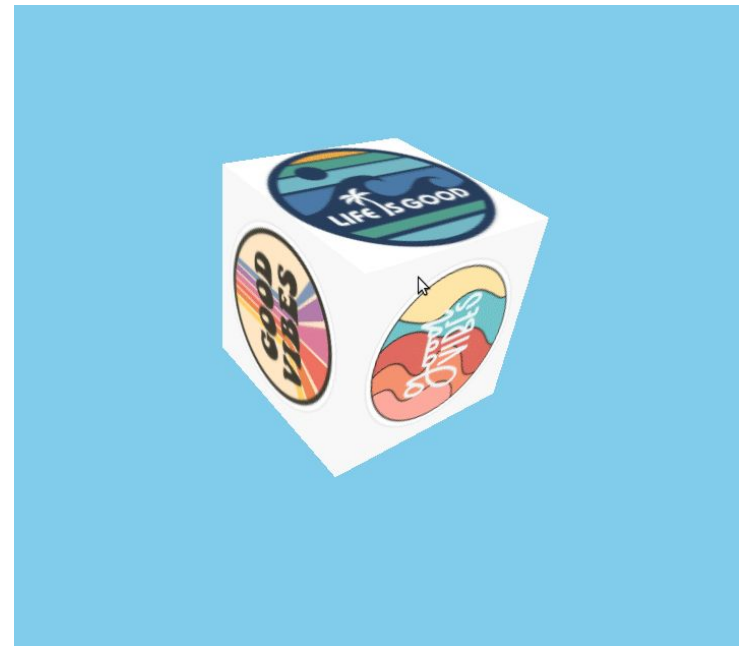
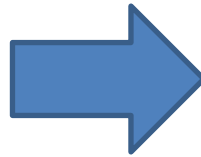
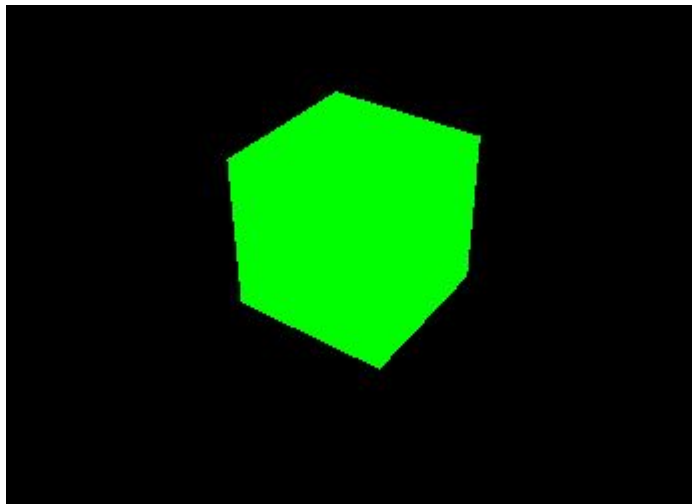
Yêu cầu 1: Tham khảo

```
var material = [  
  new THREE.MeshBasicMaterial({color: '#ee0000'}), //right  
  new THREE.MeshBasicMaterial({color: '#00ee00'}), //left  
  new THREE.MeshBasicMaterial({color: '#0000ee'}), //top  
  new THREE.MeshBasicMaterial({color: '#e00ee0'}), //bottom  
  new THREE.MeshBasicMaterial({color: '#115533'}), //front  
  new THREE.MeshBasicMaterial({color: '#779900'}), //back  
];
```



Yêu cầu 2

- Hãy tô màu mỗi mặt của khối lập phương bằng 1 ảnh khác nhau



Texture

<https://threejs.org/docs/#api/en/textures/Texture>

<https://github.com/mrdoob/three.js/tree/master/examples/textures>

Load Texture

- Create textureLoader:

```
var textureLoader = new THREE.TextureLoader();
```

- Load textures

```
var texture0 = textureLoader.load('textures/cube1.jpg' );
```

```
var texture1 = textureLoader.load('textures/cube2.jpg' );
```

```
.....
```

```
var texture5 = textureLoader.load( 'textures/cube6.jpg' );
```

Load Texture

Lưu ý:

- Đường dẫn đến file texture
 - https://static.lockex1987.com/learn-threejs/textures/alpha_map.png
 - https://static.lockex1987.com/learn-threejs/textures/sands/sands_color.jpg
 - https://threejs.org/examples/textures/uv_grid_opengl.jpg
 - https://static.lockex1987.com/learn-threejs/textures/sands/sands_displacement.png
 - https://static.lockex1987.com/learn-threejs/textures/blocks/blocks_normal.jpg
 - https://static.lockex1987.com/learn-threejs/textures/blocks/blocks_color.jpg
 - https://threejs.org/examples/textures/crate_color8.tga
- Kích thước của ảnh phải là bội số của 2.

Load Texture

- Create material

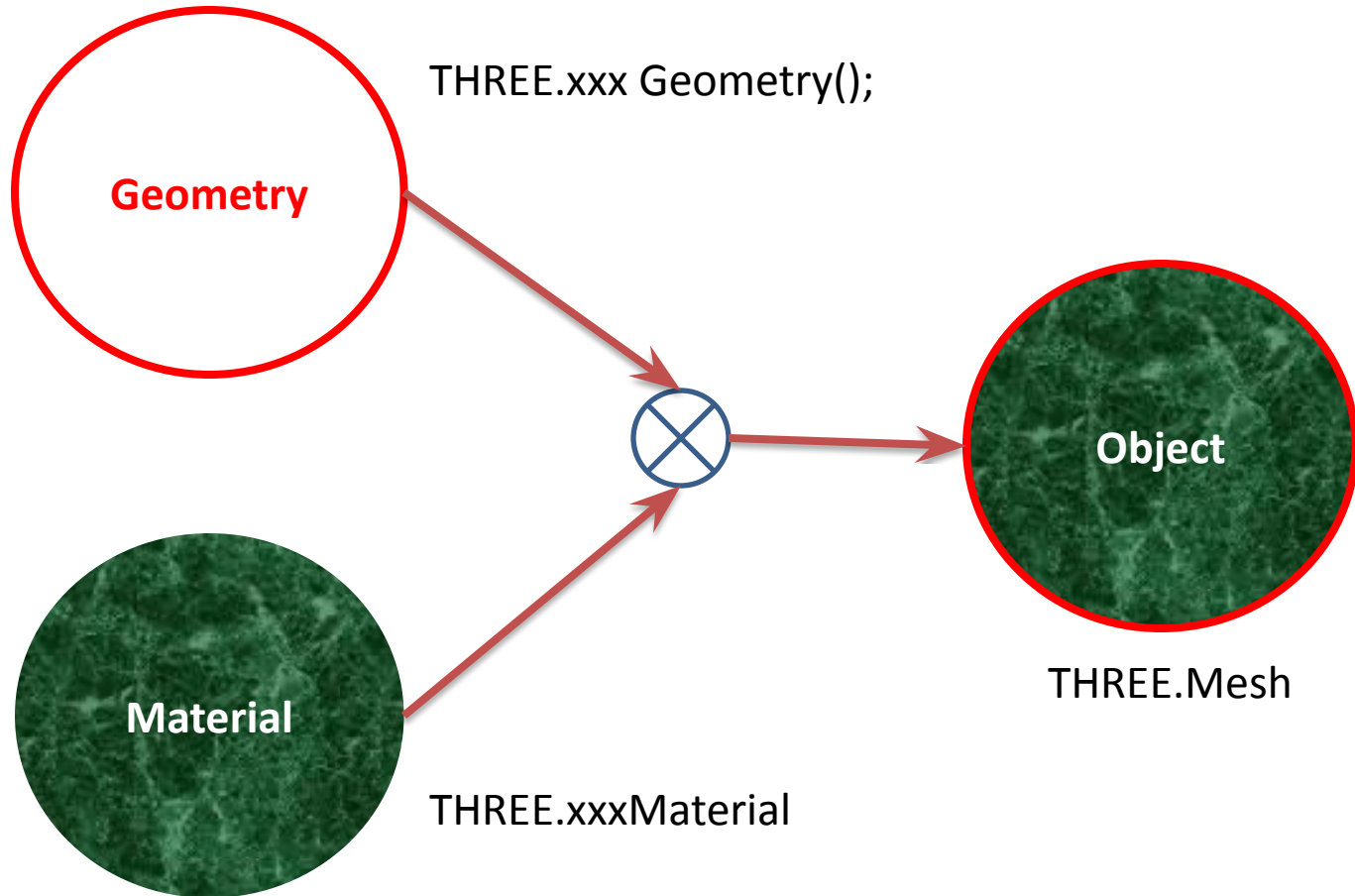
```
var material = [  
    new THREE.MeshBasicMaterial({map: texture0}), //right  
    new THREE.MeshBasicMaterial({map: texture1}), //left  
    new THREE.MeshBasicMaterial({map: texture2}), //top  
    new THREE.MeshBasicMaterial({map: texture3}), //bottom  
    new THREE.MeshBasicMaterial({map: texture4}), //front  
    new THREE.MeshBasicMaterial({map: texture5}), //back  
];
```

Yêu cầu 3

- Hãy vẽ thêm 1 đối tượng Hình nón và cho hai hình chuyển động với tốc độ khác nhau và ngược góc quay với nhau



Add Objects



Add Objects

- Geometries
 - BoxGeometry
 - CircleGeometry
 - ConeGeometry
 - CylinderGeometry
 - DodecahedronGeometry
 - EdgesGeometry
 - ExtrudeGeometry
 - IcosahedronGeometry
 - LatheGeometry
 - OctahedronGeometry
 - ParametricGeometry
 - PlaneGeometry
 - PolyhedronGeometry
 - RingGeometry
 - ShapeGeometry
 - SphereGeometry
 - TetrahedronGeometry
 - TextGeometry
 - TorusGeometry
 - TorusKnotGeometry
 - TubeGeometry
 - WireframeGeometry

Lưu ý:

Cho phép sử dụng OrbitControls để điều khiển
màn hình phóng to/ thu nhỏ