

midterm_legacy.js

```
1 import {readShaderFile} from './examples/shader.js';
2
3 /* Pipeline for shader ~ program w/o shader.js */
4 // 1. shader source: readShaderFile 사용
5 const vertexShaderSource = readShaderFile('shVert.glsl');
6 const fragmentShaderSource = readShaderFile('shFrag.glsl');
7
8 // 2. create shader
9 vertexShader = gl.createShader(gl.VERTEX_SHADER);
10 fragmentShader = gl.createShader(gl.FRAGMENT_SHADER);
11
12 // 3. shader source 붙이기
13 gl.shaderSource(vertexShader, vertexShaderSource);
14 gl.shaderSource(fragmentShader, fragmentShaderSource);
15
16 // 4. compile
17 gl.compileShader(vertexShader);
18 gl.compileShader(fragmentShader);
19
20 // 5. create Program
21 const program = gl.createProgram();
22
23 // 6. attach shader to program
24 gl.attachShader(program, vertexShader);
25 gl.attachShader(program, fragmentShader);
26
27 // 7. link program
28 gl.linkProgram(program);
29
30 // 8. use 선언
31 gl.useProgram(program);
32
33 /* Pipeline for vao ~ draw call w/o utils */
34 // vao, vbo
35 const vertices = Float32Array([
36
37 ])
38 const indices = Uint16Array([
39
40 ])
41
42 const vao = gl.createVertexArray();
43 gl.bindVertexArray(vao);
44
45 const vertexBuffer = gl.createBuffer();
46 gl.bindBuffer(gl.ARRAY_BUFFER, vertexBuffer);
47 // 만들어 둔 array의 data를 버퍼로 옮기기
48 gl.bufferData(gl.ARRAY_BUFFER, vertices, gl.STATIC_DRAW)
49 // shader의 attribute location 활성화
50 gl.enableVertexAttribArray(0) // (location)
51 // vertexAttribPointer(attribute location, num of data per vertex, type of data, normalize,
stride, offset)
```

```
52 gl.vertexAttribPointer(0, 2, gl.FLOAT, false, 0, 0);
53
54 const indexBuffer = gl.createBuffer();
55 gl.bindBuffer(gl.ELEMENT_ARRAY_BUFFER, indexBuffer);
56 gl.bufferData(gl.ELEMENT_ARRAY_BUFFER, indices, gl.STATIC_DRAW);
57
58 // actual draw call (in render())
59 // gl.drawElements(mode, index_count, type, byte_offset)
60 // gl.UNSIGNED_SHORT = Uint16Array
61 gl.drawElements(gl.TRIANGLES, 6, gl.UNSIGNED_SHORT, 0);
62 // gl.drawArrays(mode, first, count)
63 gl.drawArrays(gl.TRIANGLES, 0, 6);
```