

```

1  #version 330 core
2
3  // Cook-Torrance Shader
4
5
6  // uniform data
7  uniform mat4 uProjectionMatrix;
8  uniform mat4 uModelViewMatrix;
9  uniform vec3 uColor;
10
11  // I created these-----
12  uniform float u_ambient_coeff;
13  uniform float u_diffuse_coeff;
14  uniform float u_specular_coeff;
15  uniform float u_power_specular_coeff;
16  uniform vec3 u_light_position_coeff;
17  //-----
18
19  // mesh data
20  layout(location = 0) in vec3 aPosition;
21  layout(location = 1) in vec3 aNormal;
22  layout(location = 2) in vec2 aTexCoord;
23
24  // model data (this must match the input of the vertex shader)
25  out VertexData {
26      vec3 position;
27      vec3 normal;
28      vec2 textureCoord;
29  } v_out;
30
31  void main() {
32      // transform vertex data to viewspace
33      v_out.position = (uModelViewMatrix * vec4(aPosition, 1)).xyz;
34      v_out.normal = normalize((uModelViewMatrix * vec4(aNormal, 0)).xyz);
35      v_out.textureCoord = aTexCoord;
36
37      // set the screenspace position (needed for converting to fragment data)
38      gl_Position = uProjectionMatrix * uModelViewMatrix * vec4(aPosition, 1);
39  }

```