

Live Lecture Chat Window February 3, 2023

15:21:19 Is there going to be a study guide or are the quizzes sort of a study guide?

The quizzes and the Test Review are the best study guides. I make up the tests from the Test Review.

15:32:13 Why were `n.x` and `n.y` commented out in `func RotateNormal`? Is it because we don't change their values?

Correct. For example, when you rotate an object about the X axis, its X-coordinates don't change. Pick up something off your desk and rotate it about a horizontal axis to convince yourself of that.

16:42:46 When you assign a value to an out variable, does it immediately continue down the pipeline, even before the end of the vertex shader file is hit? Say from vertex out to fragment in?

No, everything holds up until all vertices in that polygon (e.g., a triangle) have been processed by the vertex shader and then everything travels as a group down to the rasterizer.

17:19:54 I finished up Project 3 and 4, I've been messing with the refract feature and that model of the Enterprise to make it look cloaked

That is so cool-looking! The Romulans will never see this coming.

17:31:11 From Bailey, Mike to Everyone: [The variables you need to show changes to in the video are] `uK`, `uP`, `uNoiseAmp`, `uNoiseFreq`

17:33:52 "Cannot find Range variable 'xxx'".

This isn't an error – it is a “helpful” comment from `glman`. The GLSL compiler is *really, really* good. If it finds that a certain variable of yours does not impact a pixel color in any way, it just eliminates it from your code along with any other lines of code that use it. `glman` knows that you intend to use that variable because you have it listed in your `glib` file, but when it reaches into your shader program's symbol table to connect it to a slider, it doesn't find it. All traces of it are gone, thanks to the GLSL compiler. That's where the message comes from. Be sure you have spelled it the same between the `glib` file and your code, and be sure you actually do use it to affect the color of a pixel.

17:39:43 From Bailey, Mike to Everyone: [If you want to use model coordinates to index into the noise, then `vMC` needs to be set like this]

```
out vec3 vMC;  
...  
vMC = gl_Vertex.xyz;
```