CS 230, Quiz 3

Solutions

You will have 6 minutes to complete this quiz. No books, notes, or other aids are permitted.

Problem 1 (2 points)

Correct the orientations of the following triangles so that their orientations are consistent. The numbers are indices into the vertex list. (0,4,5), (1,2,3), (1,2,5), (2,4,5), (2,4,6)

Adjusting the orientations to be consistent with the first: (0,4,5), (1,2,3), (1,5,2), (2,5,4), (2,4,6).

Problem 2 (2 points)

In the ray tracing project, the signature for the shader function looks like this:

```
    vec3 Shader::Shade_Surface(const Ray& ray, const vec3& intersection_point, const vec3& normal,
int recursion_depth) const;
```

In the case that a ray is cast and no intersection is found between the ray and any objects in the scene, we will make a call to a special Shader object called background_shader.

What should be passed in for intersection_point and normal and why? (The "why" is the part that is what is being graded here. You may consult your code if you like.)

No valid intersection point or normal direction is available, and the corresponding shader must not attempt to use them. As such, it does not matter what is passed in for those arguments.