CSci 427 Homework 2

Due: 12:00 pm, Monday, 1/29

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This assignment took approximately 5 hours to finish. No additional files or methods were implemented, nor were any features incorrect.

Overall, the assignment took a bit of time to really understand the math behind the triangle intersection, but once the pieces were sorted out, the implementation was fairly straightforward. A reference paper from Curless was useful in determining whether or not a point was within the triangle; otherwise, the slides and book were sufficient enough to easily implement the images.

generateViewRay() is the method that creates the vector properties for the specific point in question. The coordinates to the point are sent in as arguments. First the x vector is calculated using arguments provided. Then the aspect ratio is calculated using the field of view arguments provided. Both of these will be used in conjunction with other provided arguments to calculate the U and V vectors that are necessary to compute the viewplane. U represents the horizontal view, while V is the vertical view. The point on the viewplane is used so that the resulting vector will point in the correct direction towards the plane. Once the direction is calculated, the vector is done, with the origin having already been provided.