CSC 305 Assignment 2

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Operation system: Windows 10 Compiler: Visual Studio

Exercise 1:Basic Ray Tracing

Ray tracing using Parallelogram

In order to determine if the points follow the parallelogram in ray tracing, we used the ray tracing formula that was given to us. We would be able to determine if the points are within the parallelogram. By doing so, we would be able to compute the normal of the intersection points.
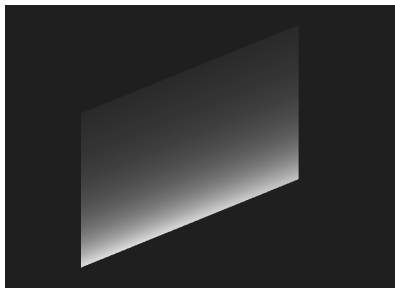
Ray tracing using perspective:

We modify the ray sphere intersection to follow the generic case, we also modify the ray equation for perspective projection. The direction of the ray is equal to the result ray original - parallelogram origin.
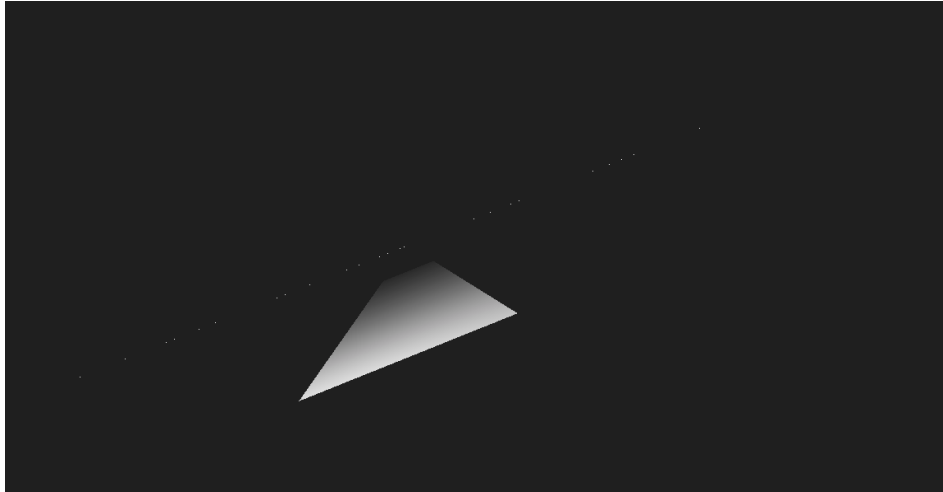
Exercise 2: Shading

We implement the shading using the introduced formula in a class by creating matrics in R, G, and B. It helps to redefine and coloured the area

Here is the result of my result:
Exercise 1 result:

Exercise 2 Result: