CSC4140 Assignment I

Computer Graphics

February 23, 2022

Learn to use VirtualBox and Mathematic Review

This assignment is 10% of the total mark.

Strict Due Date: 11:59PM, Feb 25th, 2022

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This assignment represents my own work in accordance with University regulations.

Signature:

1   Result

In this assignment, there is a triangle initially set in the world coordinate. It is described as a set of vertex:

$$\text{Point:} \quad (0,\ 0,\ 0), \quad (1,\ 0,\ 0), \quad (0,\ 1,\ 0)$$

The camera view is defined as a point and a vector:

$$\text{Camera view point:} \quad (0,\ 0,\ 5)$$
$$\text{Camera view vector:} \quad (0\ ,\ 0,\ \text{-1})$$

The following part shows the images of different parameters.

1.1   Parameter group 1

Parameters:

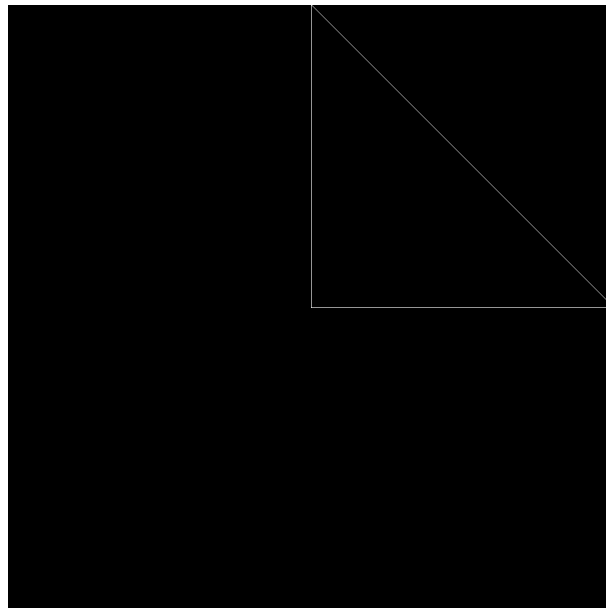$$eye\_fov = \pi/2 \quad aspect\_ratio = 1 \quad zNear = 0 \quad zFar = 5$$

Result:

Figure 1: Result of parameter group 1

1.2   Parameter group 2

Parameters:

$$eye\_fov = \pi/2 \quad aspect\_ratio = 1 \quad zNear = 0 \quad zFar = 5$$
$$axis = (0, 1, 1) \quad angle = 60^o$$
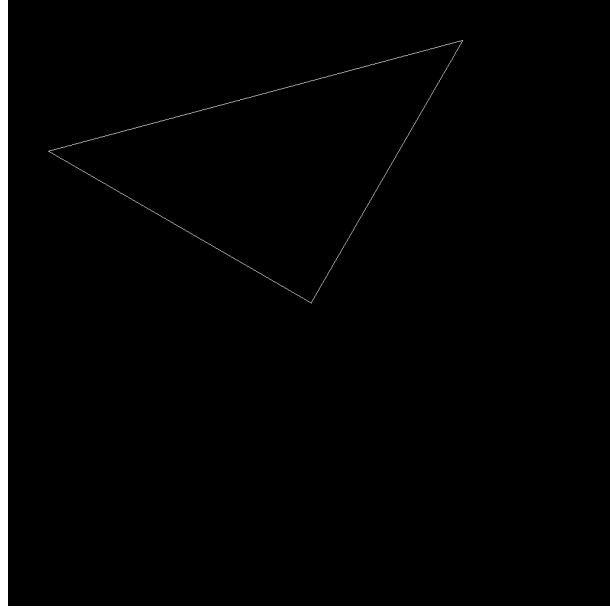
Result:

Figure 2: Result of parameter group 2

1.3 Parameter group 3

Parameters:

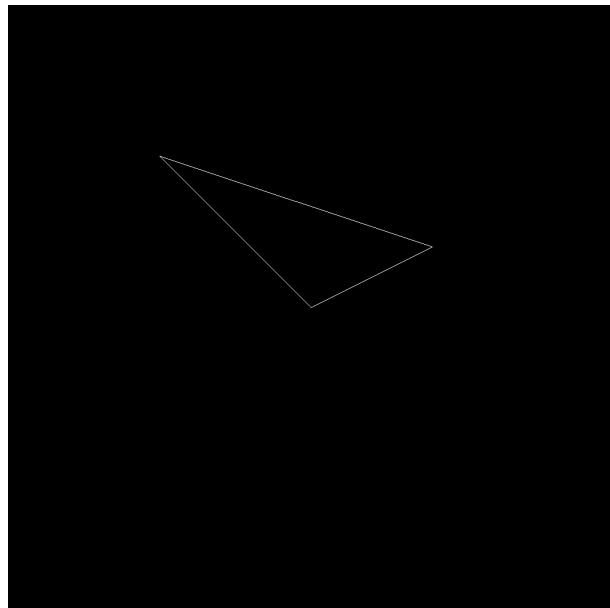$$eye\_fov = \pi/2 \quad aspect\_ratio = 1 \quad zNear = 0 \quad zFar = 5$$

$$axis = (1, 1, 1) \quad angle = 60^o$$

Result:

Figure 3: Result of parameter group 3