Assignment 0

Advanced Graphics, Augmented Reality, and Virtual Reality

August 2020

1 Learning Objective

Through this assignment, we wish to have a better understanding of how basic rendering in OpenGL works, including the code involved. This assignment will not be graded, but submission is compulsory as this covers key basics.

2 Problem Statement

In this task, you will be required to add/edit the snippets of code provided here, understand what each of them individually do, and implement the following :

1. Create a Pentagonal Pyramid. This will be our object in focus.
2. Assign different colours to each of the external vertices.
3. Assign six different keys to move the object along the three different axis.
4. Assign six different keys to move the camera along the three different axis. The camera need not have to change orientation so as to always face the object while this happens.
5. Assign three different keys to move to three different pre-decided positions of the camera. Note that over here, after each 'teleportation' we wish to face the object.

3 Submission Guidelines

You are free to use any low level implementation of OpenGL, and are encouraged to explore the different frameworks available (GLUT, GLEW, Gl3W etc.). The assignment must be written in C++. Please submit required files in a roll numbered zip on Moodle on or before 11.59 PM August 19, 2020.