CMPE 460 Computer Graphics

Assignment #3

In this assignment, you are expected to render a 3D Object, on which you can sit. (Like chair, sofa, etc.) In order to do that, you can either create a .ply file, which contains the complete vertex and triangle information for the object or you can define a building block object (like a cube) and create duplicates of it, such that they together constitute the sitable object. For the second method, you will need to modify the model matrix of each building block object appropriately. (Hint: Use the glm::translate, glm::rotate and glm::scale functions, in order to generate the model matrix for the current building block object). A skeleton OpenGL project which renders a simple rectangle from a .ply file has been provided. You can modify this code according to your needs. (I strongly recommend that you experiment with the code and investigate how the OpenGL code, including the vertex and fragment shaders, works).

The .ply format is a simple text based 3D object descriptor file. You can find all relevant information and exampe code about the format in <http://paulbourke.net/dataformats/ply/> . A basic file named rectangle.ply has been provided with the code as well. The code has a simple .ply reader. The example .ply file and the code contains comments indicating how the .ply file is structured and used.

For any questions, you can contact: [ufukcbicici@yahoo.com](mailto:ufukcbicici@yahoo.com).

Deadline: 24.04.2018; 09:00