

Comp480

Programming Assignment #3

Due Mar.-4 (Wed..) (before 11:59pm)

Objective: Understand how to perform transformations in terms of viewing space.

Developing environment: Windows OS is recommended

Requirements:

- 1) Implement this assignment from the result of PA#2.
- 2) Provide two key maps, “m” and “v” to differential transformations defined in the modeling space and viewing space.
 - a. All the transformations implemented in PA#2 are now performed after you type “m”.
 - b. If you type “v”, all the transformations (, which will be described in 3) and 4) in this spec.) are performed in the viewing space.
- 3) Provide translation function along x, y, z directions in the viewing space (15 pts)
 - a. The amount of translations is determined by the mouse movement.
 - b. If you type “x”, “y”, or “z”, then, the cow model translates along a direction corresponding the key map. In order words, if you type “x”, then, the cow translates along x-direction in the * viewing space *.
- 4) Rotate the cow around the x-axis in the viewing space when you type “r”. The center of the rotation is at the center of the modeling space. (15 pts)
 - a. The rotation amount is computed based on the mouse movement.

Policies: Everyone must turn in their own assignment. You can collaborate with others, but any work that you turn in should be your own. Turn in your work by emailing an archived and compressed version of it (source and executable) to TA (Mr. YongYoung Byun).