CS 380
Introduction to Computer Graphics

Programming Assignment #3

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Objective

• Understand how to perform transformations in “viewing space” (= camera, eye)

• Understand distinction between “modeling space” and “viewing space”.
Basic Knowledge

• In Graphics, we have 3 different spaces
  1. World Space
  2. Object Space (= Modeling Space)
  3. Camera Space (= Viewing Space, Eye Space)

⇒ They have different basis (frames)

⇒ How to convert from certain space to the other space (frames)?
Requirements

0. PA #3 will start from the result of PA #2

1. Provide two key maps ‘m’ and ‘v’
   
   – If you type ‘v’, all transformations are performed in the “viewing space”
   
   – If you type ‘m’, all transformations are performed in the “modeling space”
Requirements

2. Provide translation along x, y, z directions in the “viewing space”
   a) If you type ‘x’ or ‘y’, the cow should be translated in the viewing x-y space
   b) If you type ‘z’, the cow should be translated along the z-direction in the viewing space

3. If you type ‘r’, the cow should be rotated around the x-axis in the viewing space
Submission

• Due: April-25 (Fri.) (before 11:59pm)

• File Format
  : StudentNumber_PA3.zip (ex. 20149999_PA3.zip)
    • zip file = modified/added codes and “README.txt”
    • “README.txt” = brief comments about your codes

• Send e-mail to TA, cs380ta@gmail.com

• I will not accept any late submissions