**Computer Graphics, Lab Assignment 6**

Handed out: June 5, 2023

**Recommended due: 15:00,** June 5, 2022

**Hard due: 23:59,** June 11, 2023 **(NO SCORE for late submissions!)**

*Submit your assignment through the LMS system and Hconnect(gitlab).*

1. Write down a Python program to visualize ZXZ Euler angles.
   1. This is how ZXZ Euler angles works
      1. Rotate along Z-axis by α
      2. Rotate along X-axis of the new frame by β
      3. Rotate along Z-axis of the new frame by γ
   2. Start from T6.py practice code, implement ZXZ Euler angles and add code to change α, β, γ values in the following way.
      1. If you press or repeat a key, the value of α, β, γ should be changed as shown in the table:

|  |  |
| --- | --- |
| **Key** | **Transformation** |
| A | Increase α by 10° |
| Z | Decrease α by 10° |
| S | Increase β by 10° |
| X | Decrease β by 10° |
| D | Increase γ by 10° |
| C | Decrease γ by 10° |
| V | Initialize orientation |

* 1. Hint: You do not need to store a composed rotation matrix as a global variable. You can just store α, β, γ as global variables.
  2. Set the window title to **[studentID]-[assignment#]-[prob#]** and the window size to (480,480).
  3. Expected result: Uploaded LabAssignment6-1.mp4
  4. Submit a single .py file - **[studentID]-[assignment#]-[prob#].py**