



Lab Assignment 02

Objectives

Getting familiar with OpenGL API, projection types and mouse interaction.

Problem Statement

You are required to create an OpenGL project using the project template. You should implement an application that asks user about the projection type (orthographic or perspective). If user chooses orthographic projection a triangle should be drawn; otherwise, a pyramid should be drawn.

At runtime, Input handling should be as follows:

- When user clicks left mouse button, scene should spin around specific axis in counter-clockwise(CCW) manner.
- When user clicks right mouse button, scene should spin around specific axis in clockwise(CW) manner.
- When user presses space button, scene should stop spinning.
- When user presses 'i', you should zoom in the scene.
- When user presses 'o', you should zoom out the scene.

If user chooses parallel projection, the spinning should be around z-axis; otherwise spinning should be around y-axis. Use code in this [link](#) as starter code.

References

- [std::cin](#)
- [enum](#)
- [glOrtho](#)
- [glFrustum](#)
- [glutMouseFunc](#)
- [glRotatef](#)
- [glTranslatef](#)
- [glutIdleFunc](#)
- [glutGet\(GLUT_ELAPSED_TIME\)](#)

Delivery Policy

- You should submit a report describing your code flow, screenshots of sample run and challenges you faced (if any).
- You should submit the project source code (.cpp file(s)).
- You should cite any additional resources you used.
- Further details for the submission instructions will be posted later on MS Teams.

Good Luck