

Project 1a

Points: 5+5+5

Purpose

Learn to move objects via the mouse in OpenGL

Set up

[Project 0](#)

Task 1: Create Scene

Display 8 points on the screen each of a different color and arranged uniformly on a circle.

Task 2: Picking

Upon mouse click, change the color of the selected point to highlight it. Restore the original color upon release.

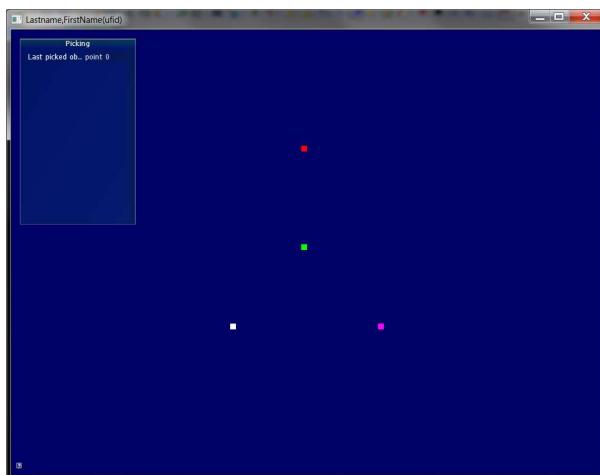
Use orthogonal projection.

Task 3: Dragging

Implement the ability to move the points with the mouse

Make all points suitably large.

- The OpenGL window origin (0,0) is bottom-left, whereas the mouse reports with (0,0) on top-left
- In order to map mouse to world coordinates
 - retrieve the cursor position using `glfwGetCursorPos`
 - obtain world coordinates using `glm::unProject(glm::vec3(---, ---, 0.0), ModelMatrix, ProjectionMatrix, Viewport)` where "---" is a placeholder for your code.
 - Consult web OGL documentation!



Task 4: Redo in webGL

Implement Tasks 1--3 in webGL using [picking](#)

WHAT TO SUBMIT

- Your **modified source files** (.cpp's, shaders, etc)
- A **link** to a screen capture of your running program showcasing the implementation of all of the tasks using [recordit](#) (Mac, Win) or similar software.