Welcome to OpenGL

Exercises

Exercise 1 - GLUT

Get started:

Compile the programme:

g++ -lGL -lGLU -lglut -I . *.cpp

Execute the programme using

./a.out

Take a high-level look at the part of the code that is indicated to be read. You will find many comments that will help you.

The most important functions are display, keyboard, and animate. display is where you can draw and use OpenGL, keyboard is where the keyboard interaction is taken into account, animate is not intended for use of OpenGL, but this function is called in each frame and can be used to animate objects.

First, become familiar with the enum DisplayMode, which defines what is drawn in the function display. The mode is chosen in the function keyboard (numerical values input during execution will change the mode).

Add all cases to the function display.

Exercise 2 - Building a simple model

- Go to the function drawTriangle and follow the assignment
- Go to function drawUnitFace and follow the assignment
- Go to function drawCube and follow the assignment

Exercise 3 - Hierarchical Animation

- Go to the function drawArm and follow the assignment

Exercise 4 - Light

- Go to the function drawLight and follow the assignment

Exercise 5 - Drawing a full model

- Go to the function drawMesh and follow the assignment

Good Luck!