Lab 0 - OpenGL introduction

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0 Assignments

1. Draw a single cube;

2. Change the color to be applied to each face instead of vertex;

3. Add scaling commands with mouse buttons.

1 Draw a single cube

It was simply changed the value to 1 in variable n_cubi in the $drawScene()$ function. The positioning and resizing was left as is in the function.
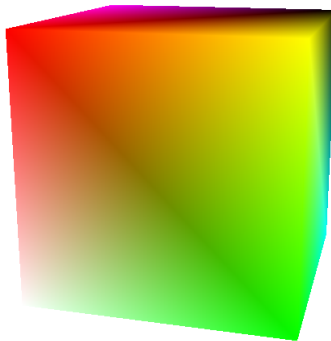

Figure 1: Single cube drawn in the scene.

2 Change the color to be applied to each face instead of vertex

A *polygon_monocolor*() function was implemented which assigns the same color to all the vertices making up the polygon. To do so, the input variable a is used as index for the color's array and assigned to all vertices.
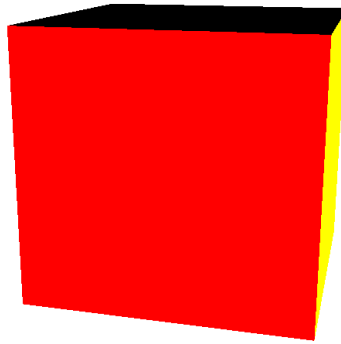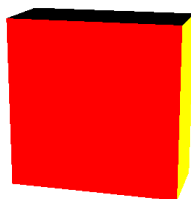

Figure 2: Cube with one color per face.

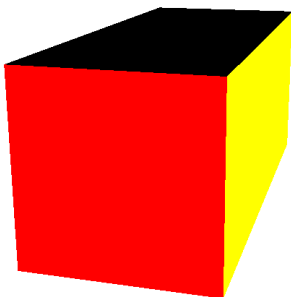## 3 Add scaling commands with mouse buttons

In the *mymouse*() function, the scaling factor of 1.1f is multiplied to one of the coordinate's *scale* global variable, depending on the button pressed: *scaleX* if left button, *scaleY* if middle button, *scaleZ* if right button.

(a) X axis modification of the cube.

(b) Y axis modification of the cube.

(c) Z axis modification of the cube.

Figure 3: The visual results of the described solutions.