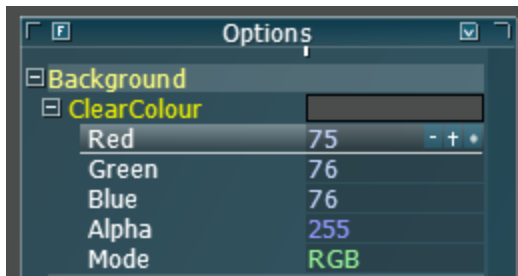


## GENERAL USER INTERFACE

The user interface in this project provides the user with the ability to modify. The background colour, direction of light, colour of the light, specular value of the light, as well as the following features of the terrain generation, The octaves, scale multiplier, amplitude, and persistence, pressing space will re-generate the terrain, and pressing N will highlight the normals of the terrain.

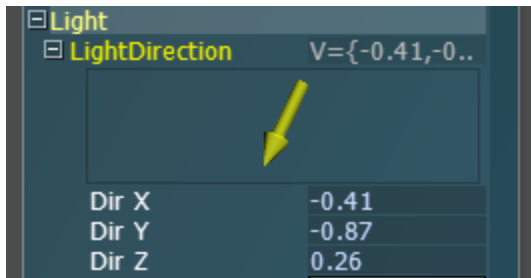
### BACKGROUND COLOUR



This setting allows you to modify the Red, green and blue values of the background, it does this by modifying the colours used in `GL_CLEAR_COLOUR` when it is called.

Alpha and Mode have no effect.

### LIGHT DIRECTION



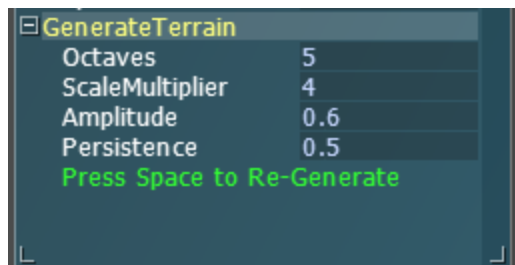
This allows the user to modify the direction of the light used in the scene, it modifies the values of the `light_direction` value and is parsed into the shader from the draw call. the values are normalised while you move the arrow around, using the value inputs themselves will allow you to go outside normalised ranges

## LIGHT COLOUR & SPECULAR



The light colour option allows you to tint the colour of the directional light above. It modifies the colour variables that are passed into the shader. the specular value modifies the specular light on the objects, the higher it is the the sharper and smaller the specular light, lower values give a more spread out effect

## TERRAIN GENERATION



The Terrain Generation aspect of the GUI allows you to modify the amount of octaves in the generation, improving smoothness(minor improvement for higher load times) amplitude, persistence and scale mutliplier will changed other aspects of the terrain, pressing space will regenerate the terrain with the new values. Generation only has 1 seed so any identical inputs will create the same terrain. Pressing N will also temporarily highlight the normals of the terrain.