

Terrain Generator
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The terrain generator was done for a coursework for an OpenGL module, whence using this API for it. The goal was to use recognised techniques, implement them and justify our choices.

There was no requirement about what the terrain should look like; we could've done anything from lunar landscapes to fjords. My choice was a standard hill landscape and I chose to use the popular faulting algorithm as it generates reasonable looking hills in reasonable amount of iterations. In order to improve the "smoothness" of the terrain and add a more natural rolling hills look I applied an erosion filter.

The last addition to the application was the slope-lighting algorithm, that is computationally cheap and reproduces the effects of sunlight on landscape to an acceptable and believable level.