// ProceduralTerrain

```
float height11 = 0f;
float amplitude = 1f;
float frequency = 1f;
for (int i = Octaves; i > 0; i--) {
  float octave_x0 = x / Scale * frequency;
 float octave_z0 = z / Scale * frequency;
 float octave_x1 = (x + 1f) / Scale * frequency;
  float octave_z1 = (z + 1f) / Scale * frequency;
 height00 += Mathf.PerlinNoise(octave_x0, octave_z0) * amplitude;
  height01 += Mathf.PerlinNoise(octave_x0, octave_z1) * amplitude;
  height10 += Mathf.PerlinNoise(octave_x1, octave_z0) * amplitude;
  height11 += Mathf.PerlinNoise(octave_x1, octave_z1) * amplitude;
                              We follow the same pattern as before
 amplitude *= Persistance;
  frequency *= Lacunarity;
                               Left(x = 0)
                               Near(z = 0)
int x0 = x * CellSize;
```

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  height00 += Mathf.PerlinNoise(octave_x0, octave_z0) * amplitude;
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                              We follow the same pattern as before
  amplitude *= Persistance;
  frequency *= Lacunarity;
                                Left(x = 0)
                                Far(z = 1)
int x0 = x * CellSize;
```