

## // ProceduralTerrain

```
for (int x = 0; x < x_segments; x++) {  
    for (int z = 0; z < z_segments; z++) {  
        float height00 = GetHeight(x + 0f, z + 0f, x_segments, z_segments);  
        float height01 = GetHeight(x + 0f, z + 1f, x_segments, z_segments);  
        float height10 = GetHeight(x + 1f, z + 0f, x_segments, z_segments);  
        float height11 = GetHeight(x + 1f, z + 1f, x_segments, z_segments);
```

```
        int x0 = x * CellSize;  
        int z0 = z * CellSize;  
        int x1 = (x + 1) * CellSize;  
        int z1 = (z + 1) * CellSize;
```

This is how we define  
the four corners of  
a terrain segment

Left(x = 0)  
Far(z = 1)



```
        var vertex00 = new Vector3(  
            (float) x0, height00 * (float) TerrainHeight, (float) z0  
        );  
        var vertex01 = new Vector3(  
            (float) x0, height01 * (float) TerrainHeight, (float) z1  
        );  
        var vertex10 = new Vector3(  
            (float) x1, height10 * (float) TerrainHeight, (float) z0  
        );  
        var vertex11 = new Vector3(  
            (float) x1, height11 * (float) TerrainHeight, (float) z1  
        );  
    }  
}
```

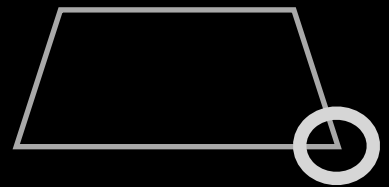
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    for (int z = 0; z < z_segments; z++) {  
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```

```
int x0 = x * CellSize;  
int z0 = z * CellSize;  
int x1 = (x + 1) * CellSize;  
int z1 = (z + 1) * CellSize;
```

This is how we define  
the four corners of  
a terrain segment

Right(x = 1)  
Near(z = 0)



```
var vertex00 = new Vector3(  
    (float) x0, height00 * (float) TerrainHeight, (float) z0  
);  
var vertex01 = new Vector3(  
    (float) x0, height01 * (float) TerrainHeight, (float) z1  
);  
var vertex10 = new Vector3(  
    (float) x1, height10 * (float) TerrainHeight, (float) z0  
);  
var vertex11 = new Vector3(  
    (float) x1, height11 * (float) TerrainHeight, (float) z1  
);  
}  
}
```