

DUNGEON MAKER

DOCUMENTATION

Dungeon Maker is a design tool for creating semi-procedural random levels.

The generation algorithm converts the network of nodes into a two-dimensional matrix and then instances the rooms respecting the specified connections.

What is a room?

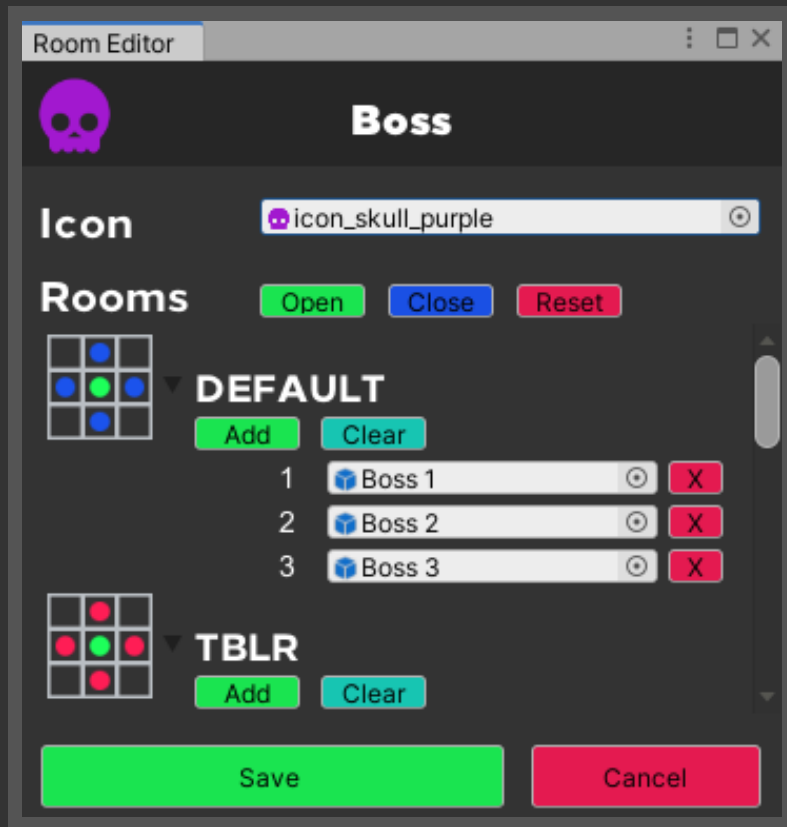
A room is a list of GameObjects. So it can be anything. In essence it's just a concept.

What is a dungeon?

A dungeon is a set of interrelated rooms.

That is, the dungeon determines how these concepts are related.

2.1 Room Editor

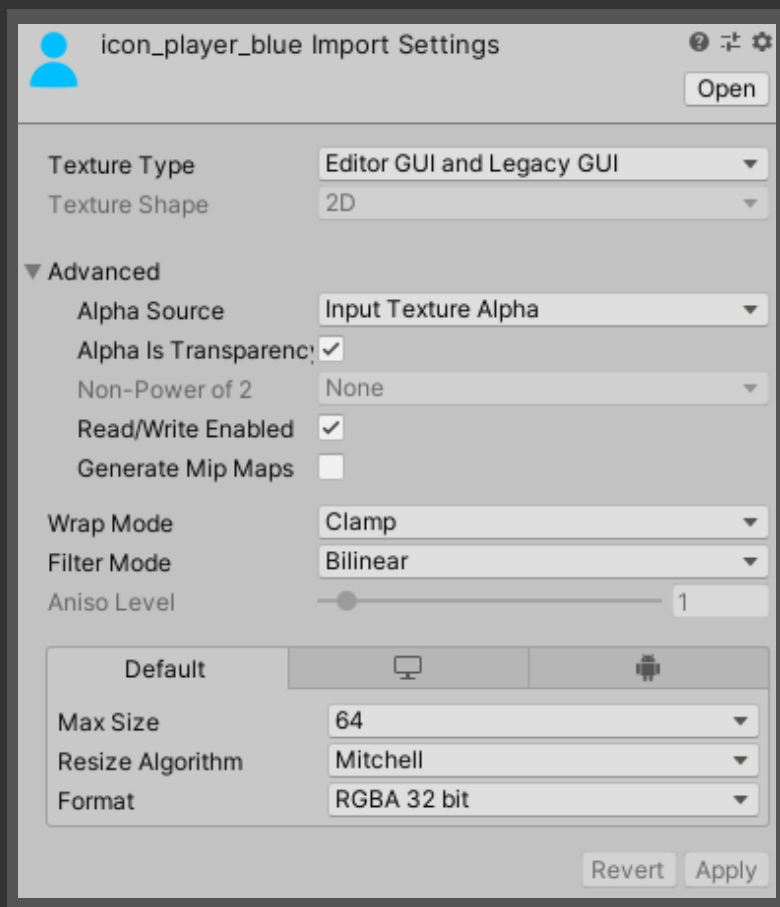


You can create a new room from the tab:
Dungeon Maker > Editors > Room Editor.

Or by right clicking in the project window:
Create > Dungeon Maker > New Room.

Icon

It represents the room in the Dungeon Editor (Folder: Dungeon Maker > Icons).

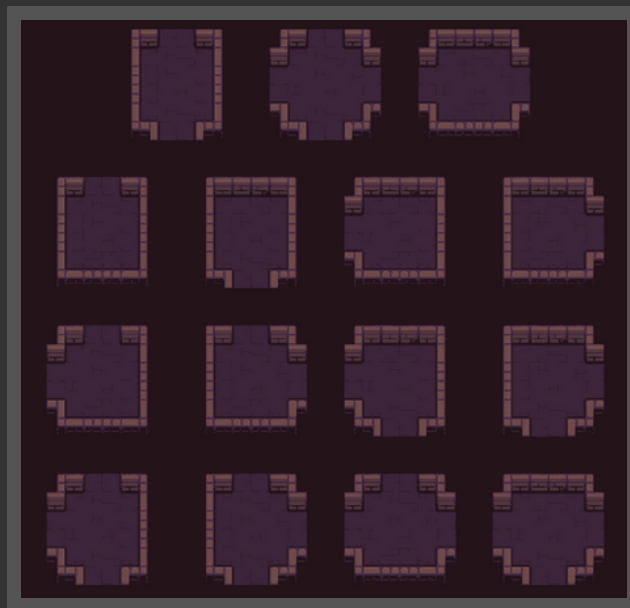


To create your own icon, just set it up as in the image:

Texture Type: Editor GUI and Legacy GUI.
Read/Write Enabled: Yes.

Rooms

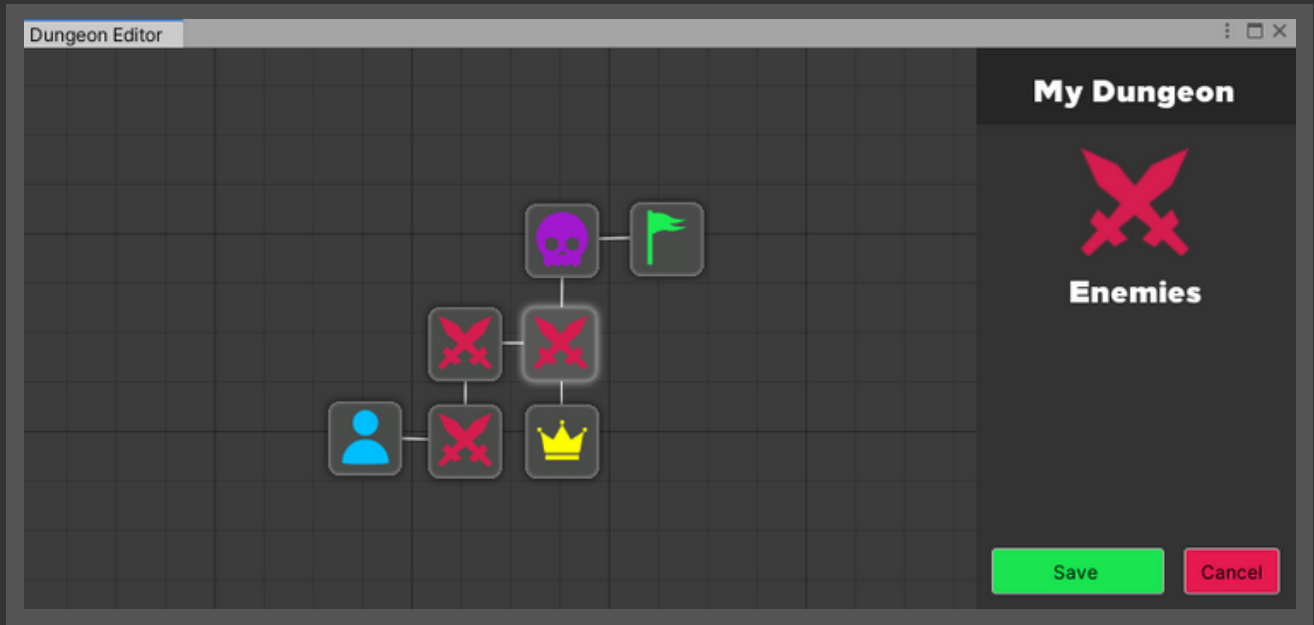
When creating a room in a dungeon, an element is chosen from a list depending on the location and connections the room has. If the object is not found, it will return an object from the DEFAULT list. Otherwise it will return an error in the room format.



Example of the aspects of a room (TB, TBLR, LR, etc). The letters indicate the exits/entrances to the room.

Top (T), Bottom (B), Left (L), Right (R).

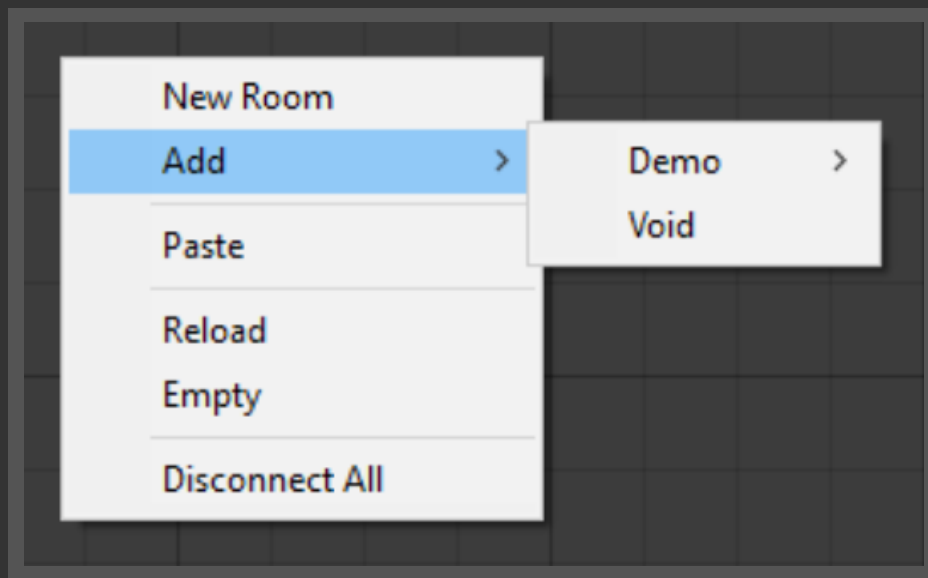
2.2 Dungeon Editor



You can create a new dungeon from the tab: Dungeon Maker > Editors > Dungeon Editor.

Or by right clicking in the project window: Create > Dungeon Maker > New Dungeon.

Right click on an empty space to display the context menu:



New Room

Create a new room from scratch.

Add

Insert a room in the dungeon

For the rooms to appear in the menu they must be in the folder Resources > Rooms. The rooms will be displayed with the same hierarchy as in the folder.

Void

This option will create an empty node. It is used to make space between the rooms or to facilitate the creation of the dungeon to the generation algorithm.

Paste

Paste a node that has been previously copied.

Reload

Returns the dungeon to its original state.

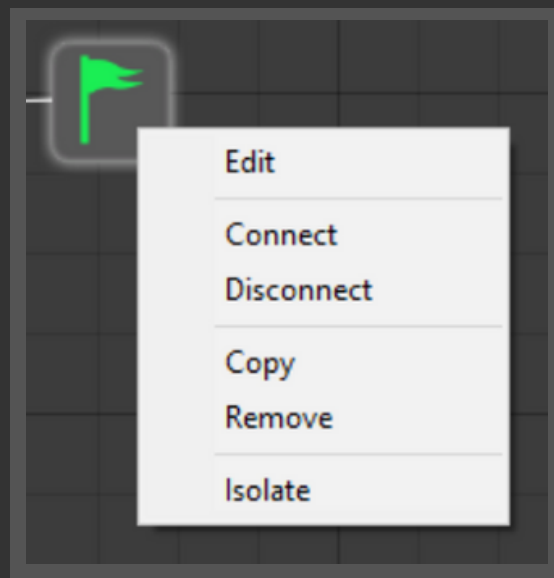
Empty

It removes all the nodes from the dungeon.

Disconnect All

It removes all connections from the dungeon.

Right click on a node to display the node's context menu:



Edit

It opens the room of the selected node.

Connect

Select other nodes to create a connection between them (maximum 4).

Disconnect

Select another node to disconnect both nodes.

Copy

It copies the selected node.

Remove

It removes the dungeon node.

Isolate

It removes all connections from the node.

Left click to select a node.

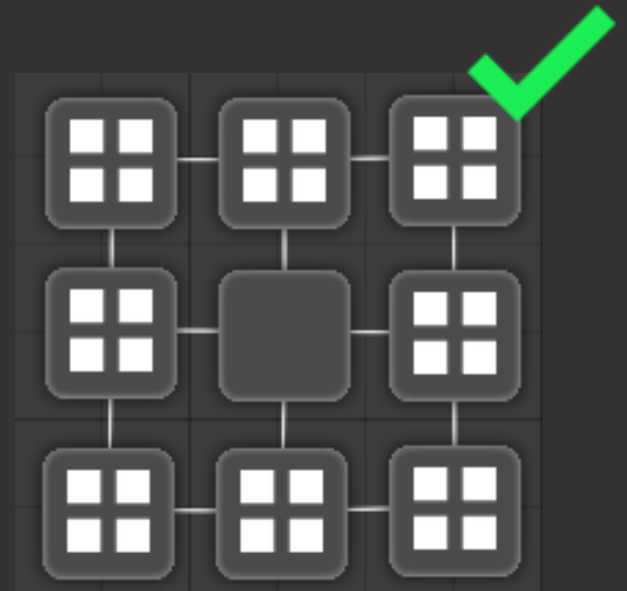
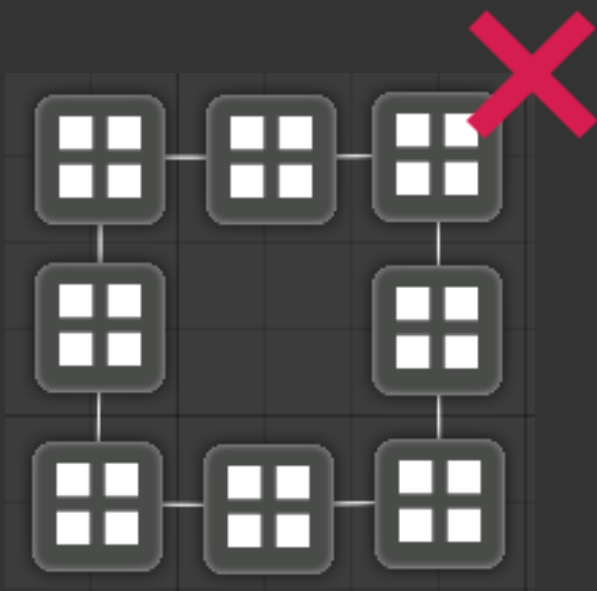
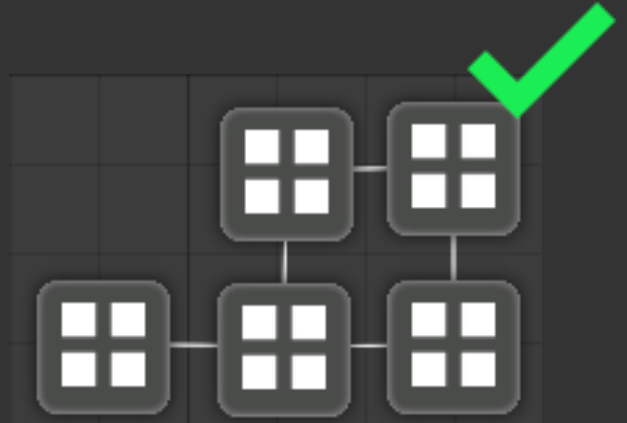
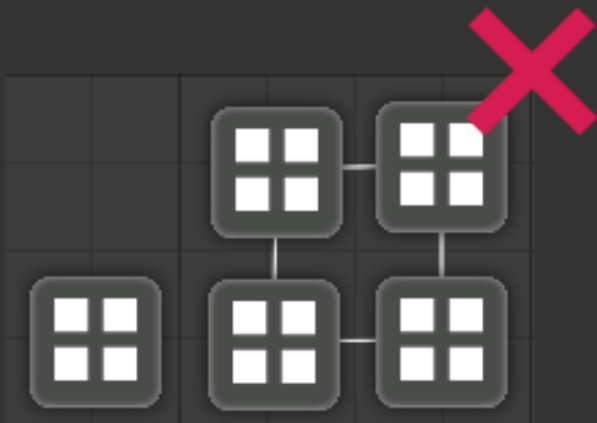
Drag with left click to move the grid.

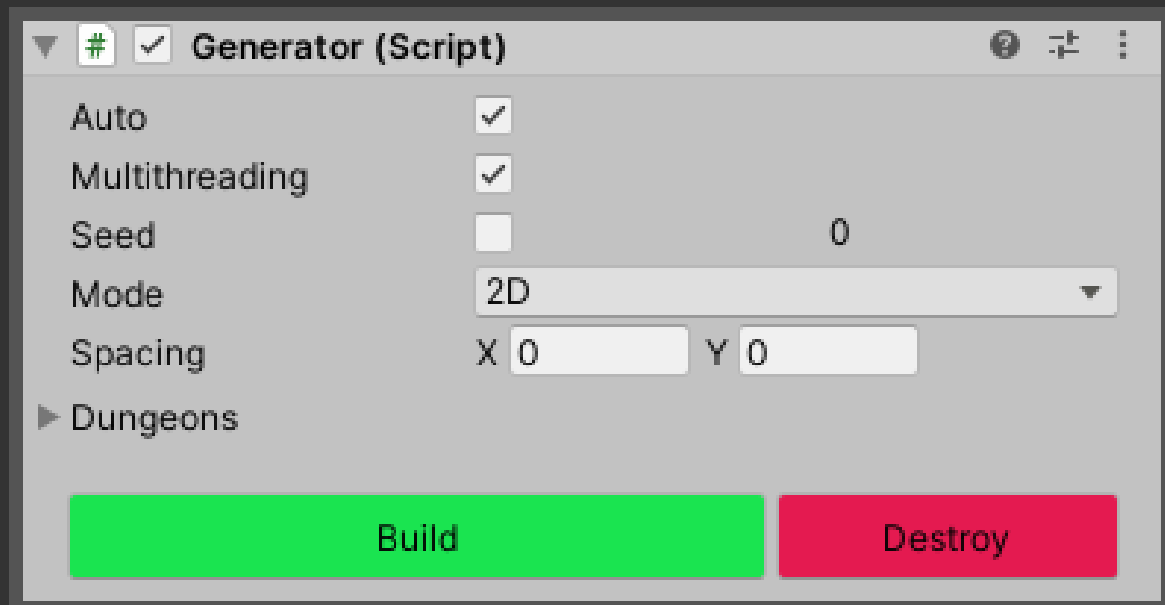
Press ctrl + left click on a node to select multiple elements.

Press the mouse wheel to select all the elements.

Roll the mouse wheel to zoom.

There are some structures that are not supported by the editor. Do not leave disconnected nodes or empty spaces near many nodes:





You can create a generator from the tab: GameObject > Dungeon Maker > Generator.

By right clicking in the hierarchy window: Dungeon Maker > Generator.

Or by adding the Generator script to a GameObject.

Auto

Generates a dungeon automatically when the generator is first activated.

To generate a dungeon manually use the Generate method.

Multithreading

It executes the dungeon generation as a sub-process in another thread.

It is used so that Unity does not have to wait for the generation to finish in order to continue with its processes.

It can also be useful for making loading screens.

The Generating variable indicates whether a generation is in progress.

Seed

It shows the seed that has been used to generate the last dungeon.

You can also mark the seed as static and test your own seeds.

Mode

It is used to determine how to place the rooms.

In case it is 2D, the rooms will be placed on the X and Y axes.

In case it is 3D, the rooms will be placed on the X and Z axes.

Spacing

Indicate here the maximum width and length that the rooms will have.

The rooms will be placed on an invisible grid with these dimensions.

Dungeons

Add here the dungeons you want to use in the generation.

One will be chosen at random from the list.

When you finish creating a dungeon, an object will be created in the scene that will contain all the rooms correctly placed according to the specifications you have indicated in the Dungeon Editor.

You will find that this object has a script added to it called Dungeon Object and that the rooms have the Room Object script.

These two scripts contain important information about the dungeon and how the rooms relate to each other. Plus some useful functions and methods.

If you are a programmer, I recommend you look at these scripts if you are interested in generating more customized dungeons.

Useful events: `Generator.OnGeneratorStart`, `Generator.OnGeneratorFinish`.

4.1 Framework



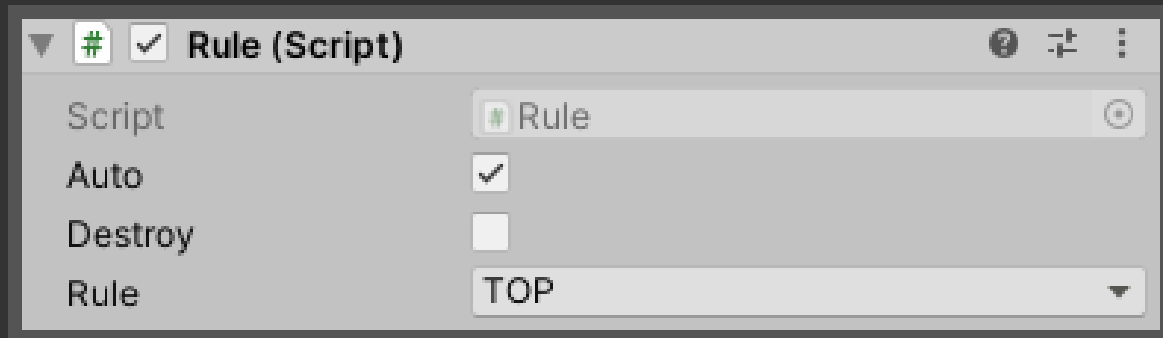
You can create a framework from the tab: GameObject > Dungeon Maker > Framework.

By right clicking in the hierarchy window: Dungeon Maker > Framework.

Or by adding the Framework script to a GameObject.

This script will help you to determine the Spacing values in the Generator.

4.2 Rule



You can create a rule from the tab:
GameObject > Dungeon Maker > Rule.

By right clicking in the hierarchy window:
Dungeon Maker > Rule.

Or by adding the Rule script to a
GameObject.

This script is used in the rooms.
If the room meets the necessary conditions,
it will activate the child objects, otherwise it
will deactivate or destroy them.

4.3 Randomizer



You can create a randomizer from the tab: GameObject > Dungeon Maker > Randomizer.

By right clicking in the hierarchy window: Dungeon Maker > Randomizer.

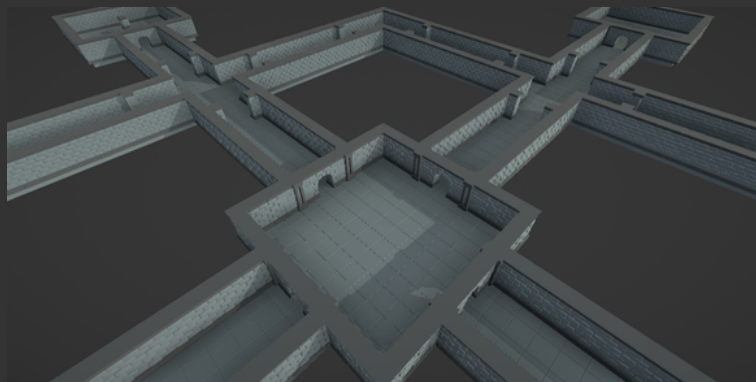
Or by adding the Randomizer script to a GameObject.

This script will activate or instantiate a random object from the list.

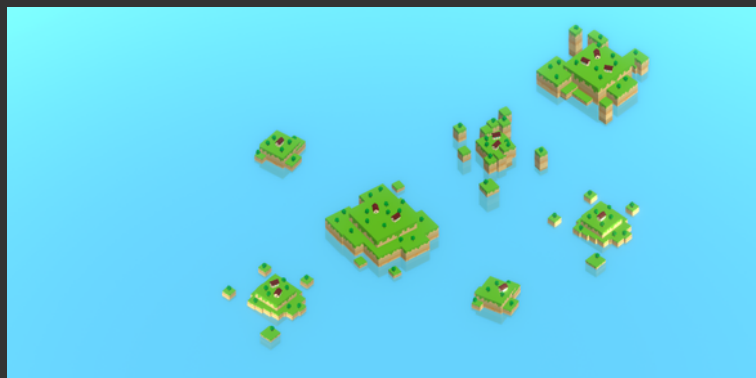
To better understand Dungeon Maker I recommend that you watch the demonstration projects:



Isaac



Corridors



Islands

If you need to contact the creator of Dungeon Maker you can send a message to this email address:

antipixelgames@gmail.com