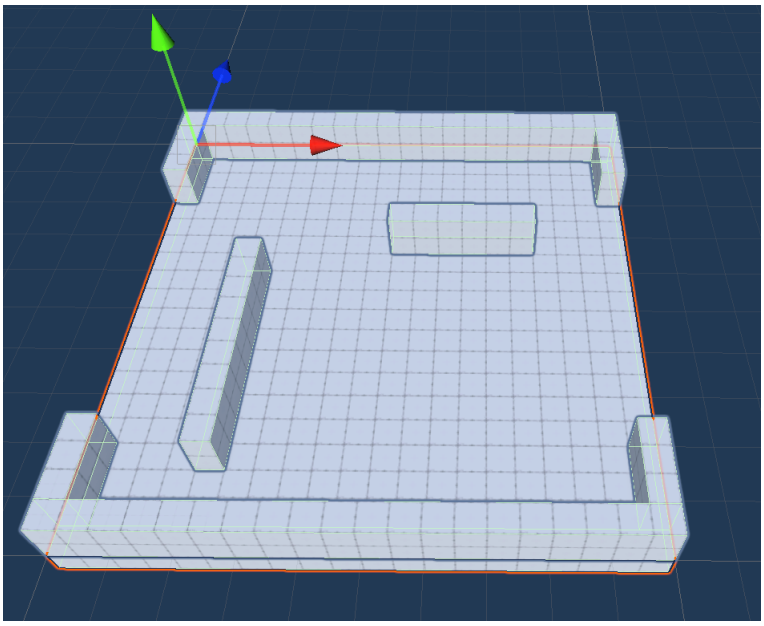
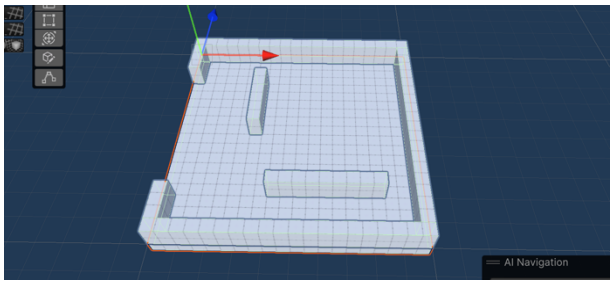
Guide for setting up random level generator

1) Create prefabs. These prefabs have to have uniform sides (squares) and will need to be scaled to integers.

   For my example, I set up several 20x20 unit blocks via ProBuilder

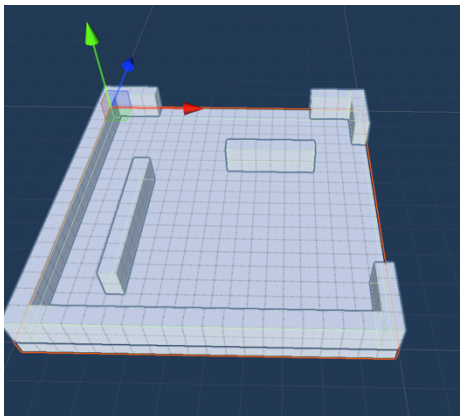


2) You will need to create Start Segments which can only have an opening in one direction:
   a. Up
   b. Left
   c. Right

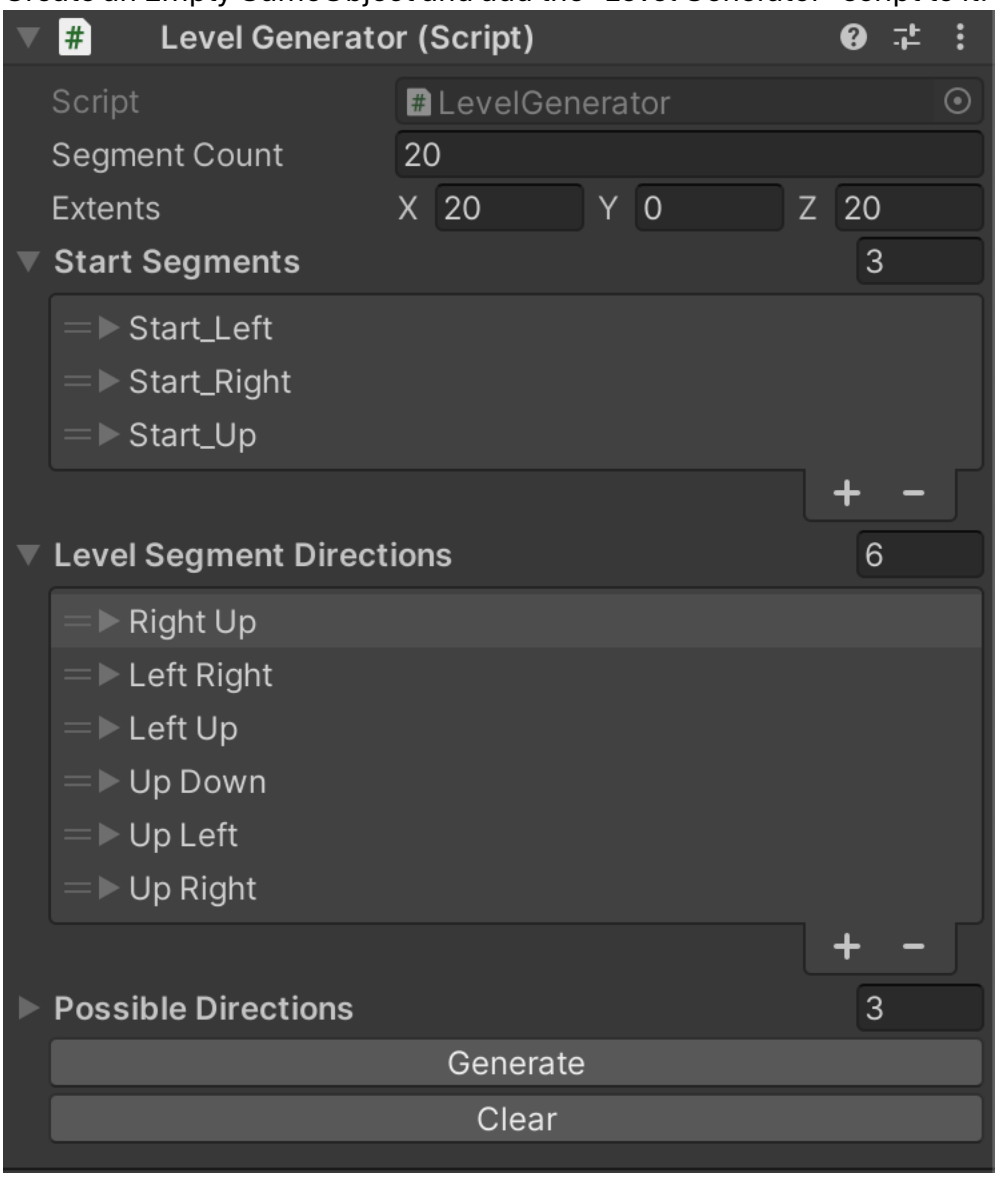


3) Make sure you create segments that have these transition points:
   a. Right Up
   b. Left Right
   c. Left Up
   d. Up Down
   e. Up Left
   f. Up Right

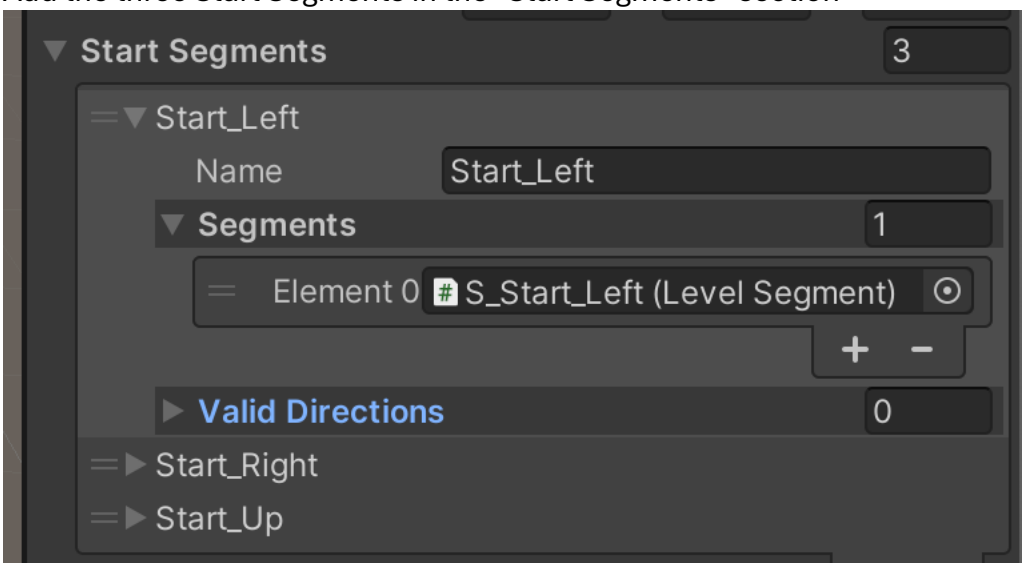
   For example (Right Up):



4) Create an Empty GameObject and add the “Level Generator” script to it:

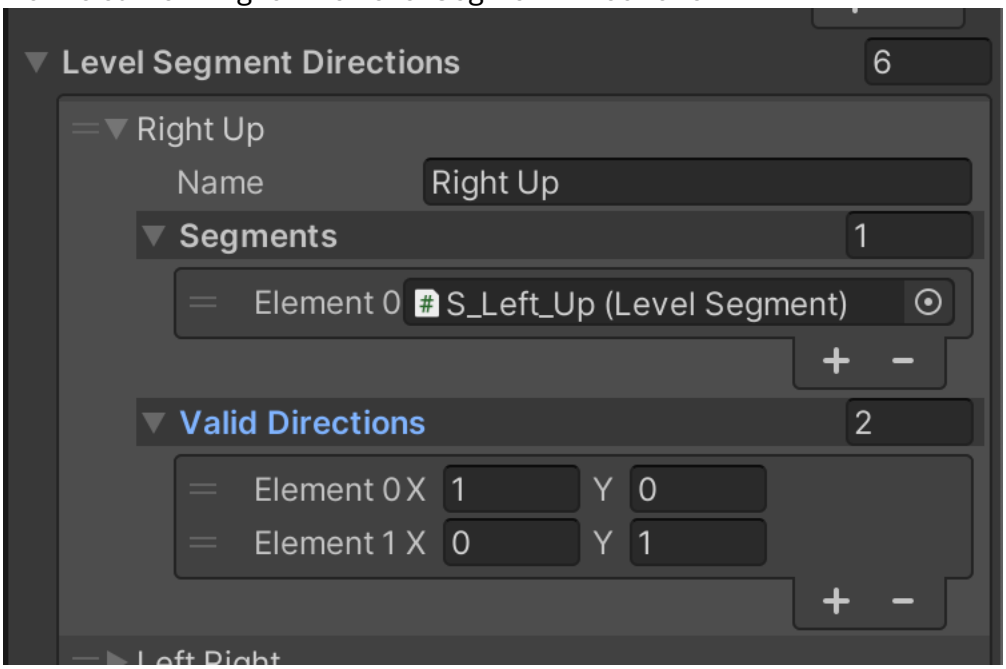


5) Add the three Start Segments in the “Start Segments” section



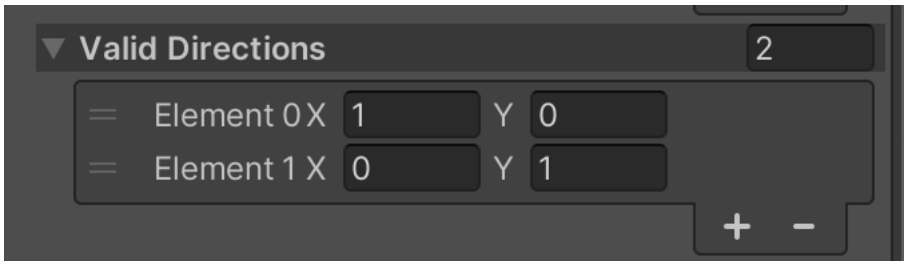
   a. You can add different variants of each direction to add variety to the level design. The system will randomly choose from all variants in a given direction at the start

6) Do the same thing for the Level Segment Directions:



   a. The Names aren’t really important; They’re just a way to organize the different sections better.

7) IMPORTANT: Make sure you set the “Valid Directions” values

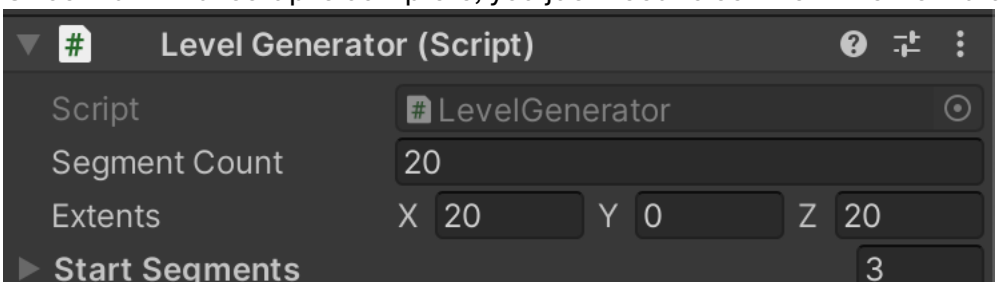
a. 

   For instance, the “Right Up” section will have directions in the <1,0>(Right) vector and <0,1>(Up) vector. It is **important** to set these values properly, otherwise you’ll run into errors

8) Set the “Possible Directions”

   a. These must stay as these values, otherwise you’ll run into errors
   b. These values prevent the grid from placing segments on top of each other. Note that they can only go left (-1,0), right (1,0), or forward (0,1)

9) Once that initial setup is complete, you just need to set the “Extents” value



   a. The Extents is the length and width of your prefab segments. For my example, each prefab segment has a length/width of 20 units. You can set your to whatever you’d like, but you have to make sure that it is consistent

10) Finally, set the Segment Count to how many segments you want to spawn per iteration
   a. This value can be changed at runtime

11) To generate the level, call the Generate() function at runtime. If you’d like to clear it, call the Clear() function.