Modular Rooms for grid-based game level generation

A screenshot of a video game

Description automatically generated

Each Room is made of several pieces:

1. Walls with textures and collider2D components already applied.
2. Configurable doors to the top, bottom, left, and right.
3. Markers for in game items to generate in the room

Configuring the doors:

* A close-up of a sign

  Description automatically generatedEach door has two pieces:

1. The Door component – the door itself
2. The “NoDoor” component – Wall section that fills the gap where a door is not necessary.

How to add a door:

1. Set the corresponding Door component to active in the scene.
2. Set the corresponding “NoDoor” component to not active.

Alternatively, the “Room.cs” script attached to each room object contains functions “EnableLeftDoor”, “EnableRightDoor”, “EnableTopDoor”, and “EnableBottomDoor”. These functions will simply add a door to the corresponding side of the room instance they are called on.

The “ItemSpawn” component:

* ItemSpawn is an empty component added with tag “ItemSpawn” that serves as a marker object to instantiate various items into the scene.
* When calling instantiate, pass the ItemSpawn component’s transform as the parent position and object. This will create the item where the ItemSpawn component is placed.
* These marker components can be duplicated and moved as desired.

The Platform prefabs:

* These rooms include 6 arrangements of platforms
  + Called “Platforms”, “Platforms(2)”, “Platforms(3)”, etc.
* These platforms can be placed in each room as a child component. When the position is set to 0, 0 for x and y coordinates, the platforms will fit centered in the parent room. This allows for easy instantiate calls to generate the platforms when the room itself is created.

SpawnRoom prefab:

* The SpawnRoom prefab is identical to the Room prefab except it includes a small platform placed in the center of the room.

Boss Room prefab:

* The Boss Room prefab is identical to the Room prefab except it includes a BossPlatform and BossDoor component.
  + BossPlatform: simple platform that is the parent of BossDoor.
  + BossDoor: A special door object that can be enabled and disabled independently of the room doors. It is disabled in the scene by default.