3D Procedural Maze Generator - Documentation

Overview

The **3D Procedural Maze Generator** allows users to generate dynamic mazes with customizable size, layout, and appearance. It provides complete control over maze dimensions, wall textures, and entry/exit points.

Setup Guide

1. Adding the Maze to Your Scene

1. Create an empty GameObject and name it **MazeManager**.
2. Add the following components to it:
    - **Maze Generator** (Required for generating the maze)
    - **Maze Controller** (Handles maze settings and customization)

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2. Configuring the Maze Generator

- **Maze Cell Prefab:** Drag and drop the **MazeCell** prefab into the Maze Generator component.
- **Cell Size:** Set the size of each cell in world units.
    - **Default:** 15 (Each cell is 15x15 on X and Z).
    - Adjust this value if you change the size of the **MazeCell** prefab.

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3. Configuring the Maze Controller

- **Width & Height:** Set the number of cells in the maze grid.
- **Generate Entry Exit (Boolean):**
    - **Enabled:** Creates an entry and exit in the maze.
    - **Disabled:** Generates a fully enclosed maze.

Customization Options

- **MazeCell Prefab:**
    - Customize the **wall textures** or **mesh** to change the visual style.
    - Modify the **size** of the prefab if needed (adjust the **Cell Size** in the Maze Generator accordingly).
- **Maze Size:** Adjust the **Width & Height** in the Maze Controller to change the overall dimensions.
- **Entry/Exit Control:** Enable or disable the entry/exit via the **Generate Entry Exit** option.

Demo Scene

A **Demo Scene** is included to show how the system works. Open it to see a working example of the maze generation process.

Final Notes

- Ensure the **MazeCell** prefab is properly assigned in the **Maze Generator**.
- Always set the correct **Cell Size** to match your **MazeCell prefab's world size**.
- Use the **Maze Controller** to modify the maze structure easily.