

Assignment #2: Event-Driven System Implementation

Maze Game

Overview

The game is a simple 3D maze game where you navigate through a maze avoiding the walls. If you collide with a wall you take damage and your health bar decreases.

System Design & Event Flow

- Player Movement: You control the player with WASD keys using Rigidbody and AddForce Y-axis movement is locked so you stay on the ground
- Collision Detection: OnCollisionEnter detects when you have hit an object tagged "Wall"
- Health System: When a collision happens, TakeDamage() reduces your health and updates on the Health Bar

Events & Modularity

- An ex, collision keep the system responsive.
- Movement, damage and UI, are easy to adjust or reuse
- Makes the game flexible

Challenges & Solutions

- Collision issues but fixed as soon as I made sure there was a Rigidbody and Collider
- The Health Bar was not updating and forgot to add the player script to the player which included the OnCollisionEnter
- Floating player when hitting W, fixed using Rigidbody constraints to freeze vertical movement

Conclusion

It is a very simple example of using Unity's core systems to build interactive mechanics.