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Design Documentation for CS415 Assignment 2: Level Design

This document outlines the level design for Assignment 2 in the Computer Science 415 course, focusing on the conceptualization and development of the game map, enemy types, and resource utilization.

Level Layout and Objective

The core of my design revolves around the conceptualization of the game's level layout, envisioned as a labyrinthine maze. This maze features multiple pathways, each leading to power-up collectibles crucial for gameplay progression. To achieve victory, players are tasked with locating a minimum of seven out of the nine available items scattered throughout the map.

Enemy Design

Three distinct categories of adversaries have been integrated to enhance the game's challenge:
1. **Movable Pursuer Enemy:** This enemy type exhibits random movement patterns until a player enters its line of sight, triggering a pursuit behavior. Encounters result in a decrement of the player's health.
2. **Immovable Gun Turret:** Positioned strategically across the map, these turrets fire projectiles at regular intervals, influenced by gravity. Player contact with these projectiles also leads to health reduction.
3. **Immovable Landmine:** Similar to gun turrets, landmines are stationary hazards that diminish the player's health upon contact.
A unique gameplay mechanic allows players to neutralize these threats by jumping onto the enemies' heads.

Resources and References

The development of this level design incorporated various resources, detailed as follows:
1. **Turret Enemy Design**: Inspiration and guidance for the turret enemy were derived from a tutorial video available on [YouTube](https://www.youtube.com/watch?v=x5k1gcJ7zi8). The turret model was sourced from [Sketchfab](https://sketchfab.com/3d-models/fixed-machine-gun-turret-282a894d2a594db79b4a1e95e0cb09e0).
2. **Game Music:**
   ● Background music (BGM) utilized "PYRO" by Chester Young and Castion.
   ● The sound effect for damage incurred by the player was obtained from the Chinese TV show "Liang Jian" ("亮剑").
   ● Additional sound effects were contributed and recorded by my friends.
3. **Other Resources:** The project also employed assets from the official Unreal 5 tutorial project, facilitating the development process.