Hi there, this is Gaokai Zhang. This document outlines the process and considerations involved in the design of the level for my mp2 game in CS415. The objective was to create a challenging yet engaging environment which encourages players to strategize their movements while navigating through various obstacles.

**Enemy Design**

· The Patroller enemy patrols the area randomly until it spots the player (it has a limited sensing radius), triggering a chase. This behavior ensures the player must remain alert and use stealth or speed to avoid being damaged. The chase ends if either the Patroller loses sight of the player for more than two seconds, or the Patroller hits the player once, adding a strategic retreat element to the gameplay.

· The Mortar, in contrast, adds an **indirect threat** by launching projectiles with a gravity effect. Its blast radius upon impact introduces an area-of-effect hazard (and also the visual effect) which will hurt and knock back the player, forcing players to keep moving. This Mortar enemy tests the player's ability to dodge threats from above, adding depth to the combat system.

· My unique enemy, the Machine Gun enemy, **directly targets** the player with a continuous stream of bullets. This enemy's pawn sensing ability (which also has a limited sensing radius) to track and follow the player increases the direct threat level, contrasting the random nature of the Mortar and requiring quick reflexes and effective use of cover.

· Of course, all the enemy will knock the player back with damage when hit with the player and can be killed by stepping on their head.

**Level Design**

The level is structured with layers of building blocks, each populated with enemies, score-related collectibles, and health packs.

The **special characteristic** in navigation comes with one of three walls connecting layers being false and passable. This design encourages exploration and risk-taking as players must decide when they have sufficiently explored a layer (since the score we need is exactly the same as the amount of all score collectibles in the map) and are ready to find the passage to the next level. The inclusion of safe zones within layers allows for strategic planning and temporary retreate from enemy attacks, making the gameplay experience tactical.