

## MP 2 Level Design Document

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This MP was a level design challenge. The requirements can be found here:

<https://illinois-cs415.github.io/assignments/mp2.html#enemy-behavior>

The design choices undertaken during the initial planning phase of this project were distinctly influenced by the iconic video game Super Mario Brothers. To be more specific, the objective was to replicate a streamlined obstacle course reminiscent of the game, where players must skillfully maneuver through a series of challenges, such as jumping and evading mobs and projectiles, akin to the Goomba and Bullet Bill, while concurrently collecting different collectible items, including health packs (akin to mushrooms) and collectibles in the collectibles (akin to gold coins). To realize this vision, the spatial design of the project was intentionally constrained to evoke a one-dimensional experience. While deliberating on the possibility of adopting a three-dimensional level akin to those found in games like Super Mario Galaxy and Super Mario 64, a deliberate decision was made to maintain simplicity and repetition in the level structure, akin to a maze, facilitating a more accessible introduction to the concept of world-building.

Moreover, the conception of a unique enemy in this project drew direct inspiration from an adversary encountered in Super Mario Brothers. This inspiration emanates from my own early experiences with the game, which was characterized by the memorable challenges posed by the Lakitu character. Lakitu, a turtle perched in a cloud, was encountered on the desert stage and exhibited a propensity for hurling turtle shells at the player. This adversary marked a pivotal point in the game, as it necessitated the player's acute awareness of and response to incoming projectiles.

Building upon this foundation, a novel adversary was conceived, amalgamating the pursuit behavior of the Goomba with the projectile-launching capabilities of Lakitu to give rise to the Acid Cloud enemy. The Acid Cloud, as its name suggests, persistently tracks the player's movements, diligently converging on the player's position at regular 5-second intervals. If it successfully closes the distance to the player, the cloud deploys its own form of projectile—an ice or hail ball—that, upon impact, inflicts damage upon the player. Furthermore, remaining within the vicinity of the Acid Cloud results in gradual and detrimental exposure to its "acidic" influence, adding an additional layer of complexity to the gameplay experience.