

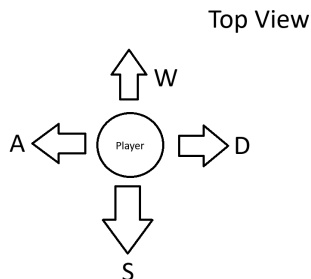
Bug Blitz



Mechanics & User Interactions

Player Mechanics

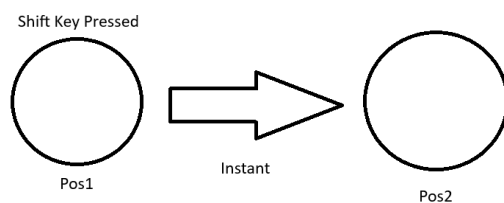
Basic Movement



In many computer games, players utilise the WASD keys on their keyboard to control character movement within the virtual environment. The W key corresponds to moving the character forward, allowing them to progress in the direction they are facing. The A key moves the character to the left, while the D key shifts them to the right. Additionally, the S key initiates backward movement, enabling players to retreat from their current position. To complement these movements, the space bar is

commonly employed for jumping in the game. This intuitive control scheme enhances the player's immersion, offering a seamless way to navigate through the game world, while also enabling dynamic actions such as jumping to overcome obstacles or explore the environment more interactively.

Dash



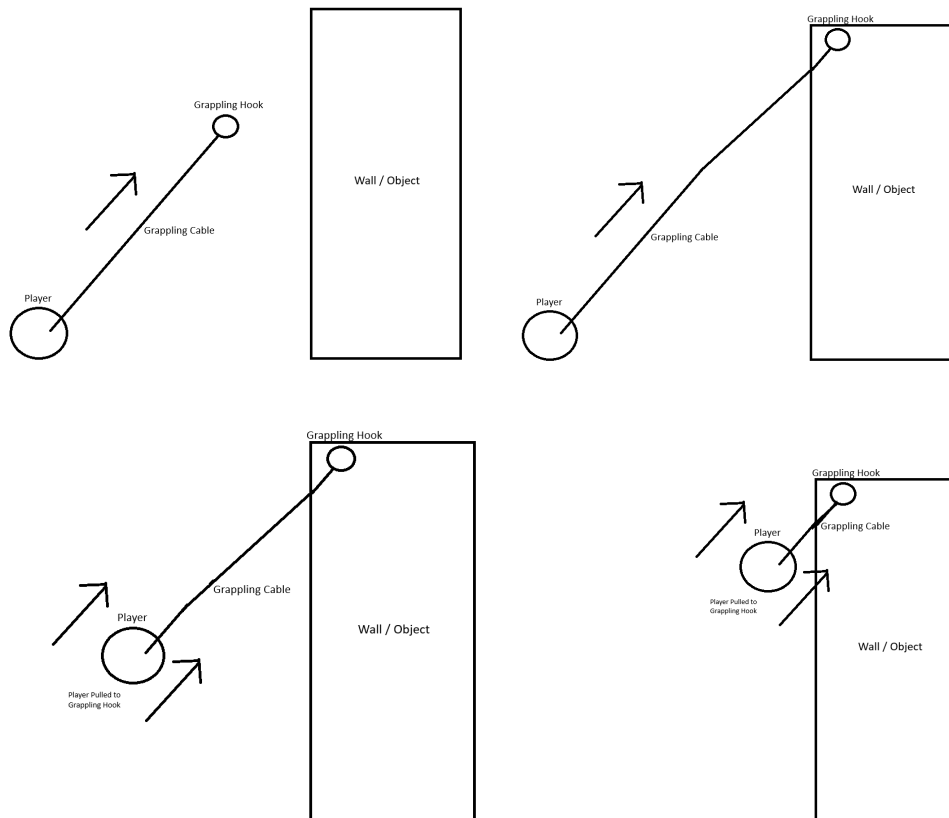
In our game, players employ the left Shift key on their keyboard to trigger dashing for their in-game character. Dashing allows the player to move a short distance of where the character is facing. Previously, the left shift button was used for sprinting but we noticed that dashing would be more beneficial to the gameplay. The dash will have 3 charges in

total and it can be used instantly when it has those 3 charges. Those 3 charges recharge overtime and when it reaches 0 charges, the player will not be able to dash. These charges will be displayed in the HUD of the player.

Grappling Hook

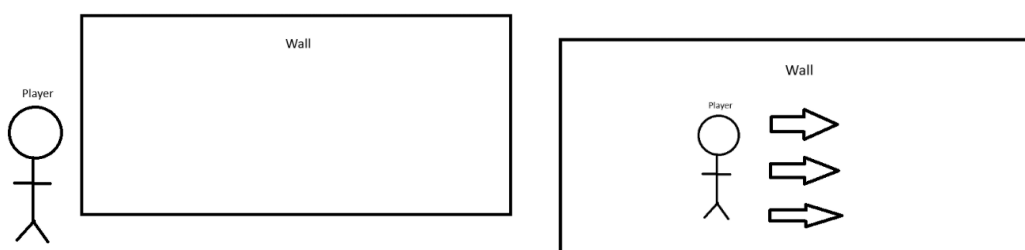
The grappling hook mechanic in a game provides an exciting dynamic by allowing players to interact with the environment in unique ways. Typically activated by pressing the right mouse button, the grappling hook launches a cable component that attaches to a surface or object within reach. Once attached, players can then use the grappling hook to rapidly traverse distances by reeling themselves toward the endpoint of the hook. This mechanic adds a layer of versatility to gameplay, enabling players to navigate challenging terrain, create strategic vantage points, or execute daring escapes.

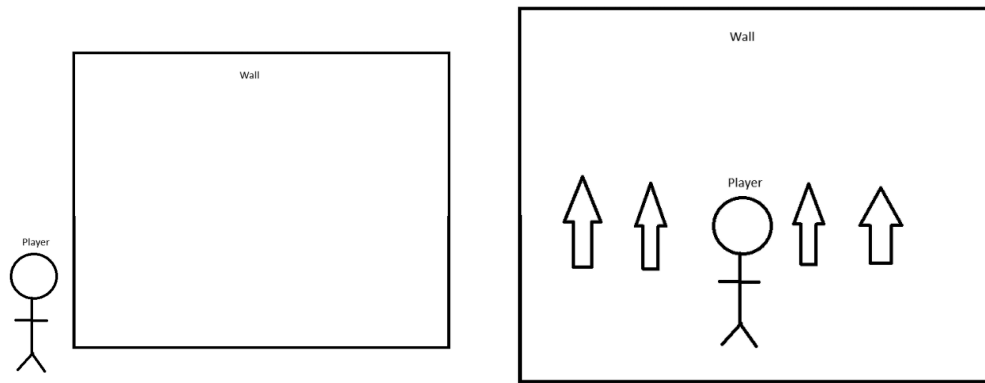
For instance, in our game, players might use the grappling hook to climb to a higher place, seamlessly transition between platforms, or cross wide gaps that would otherwise be impassable. This dynamic feature not only enhances the overall immersion but also encourages creative problem-solving and strategic thinking, making it a memorable aspect of the gaming experience.



Wall Run

The wall run mechanic within our game is an exhilarating dimension to movement by granting players the ability to traverse both horizontally and vertically along walls. Activated by jumping toward a wall, this mechanic initiates a seamless wall run that can be either horizontal or vertical, reminiscent of the gameplay seen in titles like Titanfall. Players can deftly manoeuvre along surfaces, allowing for rapid navigation and access to hard-to-reach areas. The wall run mechanic not only enhances the fluidity of gameplay but also offers a visually captivating and empowering experience as players effortlessly traverse the game world in gravity-defying ways.

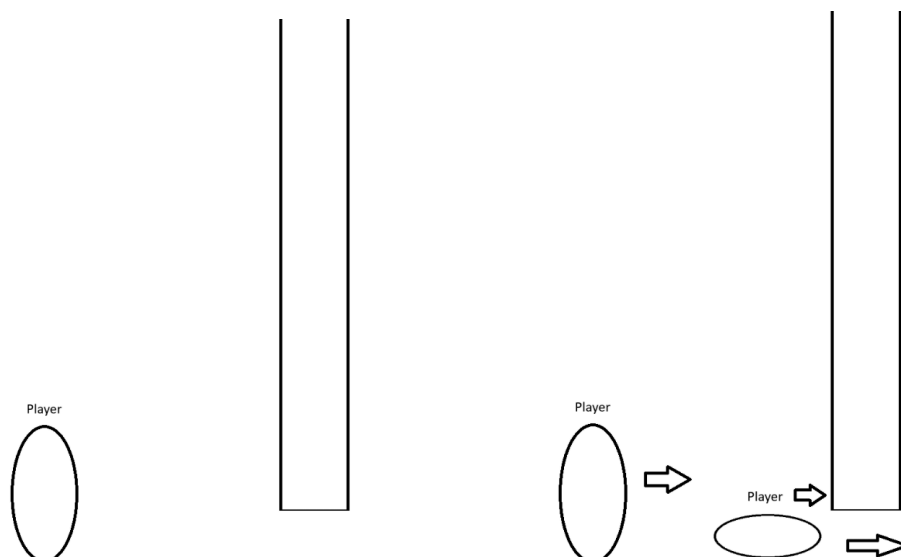




Slide

The sliding mechanic in our game introduces a dynamic movement option that enhances player mobility and strategic gameplay. The sliding mechanic simulates real-world physics to create an authentic sense of motion. When triggered, the character will smoothly transition into a sliding motion, utilising the momentum from the sprint. This mechanic not only adds an immersive element to the gameplay but also serves as a versatile tool for players.

The sliding mechanic offers several benefits to the overall design of our game. Firstly, it provides a swift and dynamic means of evading danger, allowing players to quickly take cover or dodge incoming attacks. Secondly, sliding can be seamlessly integrated into combat sequences, enabling players to perform fluid and unexpected movements. Moreover, sliding can be employed for traversal, allowing players to navigate tight spaces or achieve rapid descents down inclines. The mechanic's realism and physics-based implementation add a layer of authenticity to the gameplay, enhancing player immersion and satisfaction.

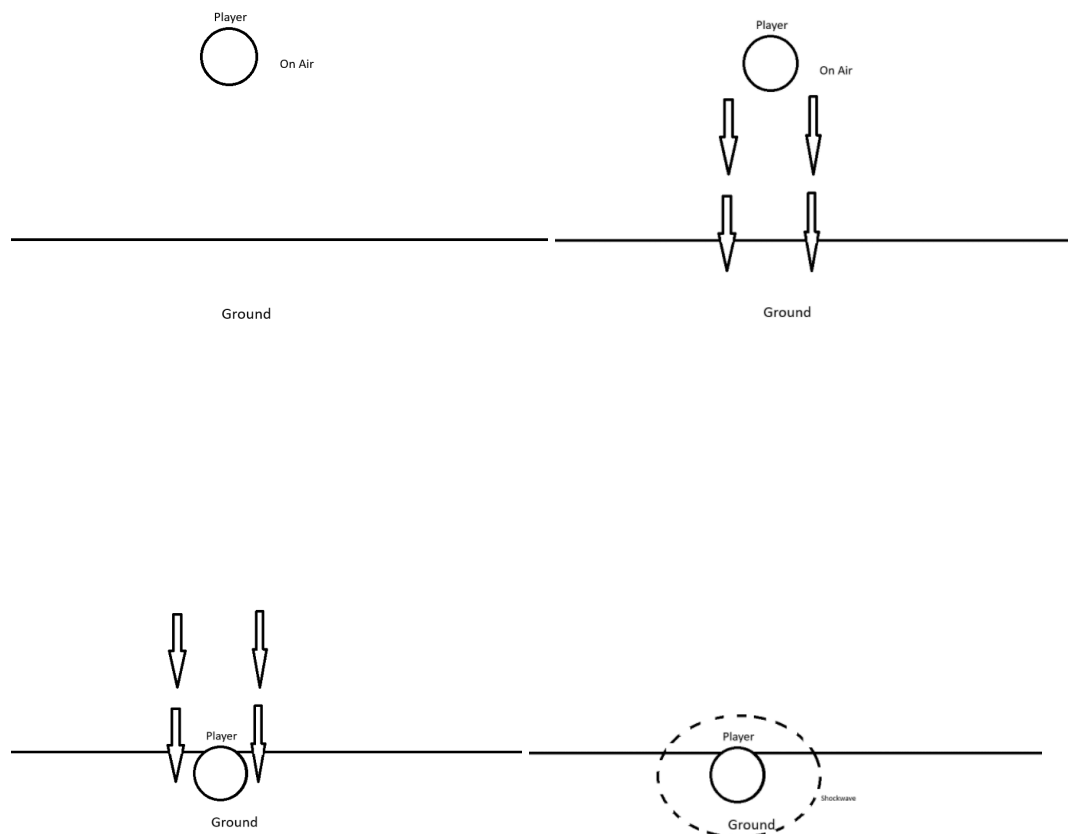


Ground Pound

Adding a ground pound feature to our game gives combat encounters more strategic depth while also improving player control and mobility. The ability to do the ground pound in midair

gives players additional options for interacting with opponents and navigating the game environment. Tactical benefits include the ability to instantly ground the player after a tactical movement on air and switch between aerial to ground-based or evasive moves with ease. In addition, the mechanic's inclusion of damage and knockback upon impact amplifies its usefulness in battle situations by giving players an adaptable instrument to handle enemy engagements efficiently.

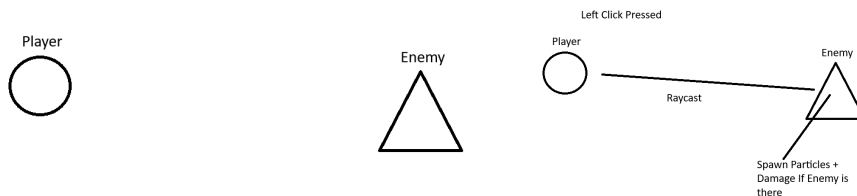
Furthermore, the ground pound mechanic can act as a central point for the advancement and mastering of player skills. Gaining mastery of the ground pound's timing, placement, and combo potential necessitates a deeper interaction with the game mechanics, which rewards experimentation and smart play. The ground pound feature also enhances the user experience by adding a layer of complexity and excitement to our game's gameplay loop, which can be utilised for defence, offence, or environmental interaction.



Shooting Mechanic

The shooting mechanic in our game seamlessly integrates into various movement actions, creating a dynamic and versatile combat experience. Players can engage in gunfire not only while standing but also while crouching, sliding, and sprinting, enhancing the tactical options available during encounters. The shooting mechanic is easily triggered by pressing the left mouse button, allowing for quick and intuitive weapon usage. This design choice encourages

players to experiment with different movement techniques during combat, adding an element of strategy as they choose when and how to employ each action. Whether it's taking cover while firing from a crouched position, performing evasive manoeuvres while shooting on the move, or executing surprise attacks during a slide, the shooting mechanic enriches the gameplay by offering a seamless fusion of movement and combat that caters to diverse playstyles.



Movement Combination

The gameplay in our game boasts a unique fusion of movement mechanics, including sprinting, crouching, sliding, and wall running, that collectively redefine the player's interaction with the virtual world. Imagine a scenario where a player encounters a complex urban environment filled with obstacles and adversaries. To navigate this challenging terrain effectively, the player could initiate a sprint to swiftly close the gap between structures. Upon reaching a wall, they might trigger a wall run to ascend to a higher vantage point, gaining a strategic advantage over opponents below.

As they approach an opposing force, the player could seamlessly transition into a slide to rapidly evade gunfire, using the momentum to create an unexpected and evasive trajectory. Mid-slide, they might decide to trigger a crouch, sliding into cover behind a low obstacle while maintaining the ability to shoot accurately at adversaries. Following this, they could execute a quick jump from cover, initiating another wall run on an adjacent surface to flank enemies from an entirely different angle.

This combination of movement mechanics not only showcases the fluidity of gameplay but also provides players with a plethora of strategic options. The synergy between sprinting, crouching, sliding, and wall running empowers players to devise creative tactics in the heat of battle, reinforcing the immersive and dynamic nature of our game's movement system.

Lastly, it is worth noting that there will be a system where the player is only able to use 1 movement at once but is able to switch the movement usage throughout the journey. For example, the player currently can only use the grapple but in the middle of the grappling into the wall, if the player wants to wall run, the player can switch their tool into wall run but the player will stop grappling. This is done to encourage the player to use their mechanics with total control because we noticed players tend to accidentally wall run while grappling and fighting enemies losing control of the whole movement aspect of the game. This can create an imbalance and also an unsatisfactory result of the gameplay. Additionally this also does

this to reduce motion sickness as a range of movements executed all at once can be very disorienting.

Weapon System

In our game, players are equipped with a diverse arsenal of weaponry, each offering distinct advantages and strategies to master.

Pistol

The pistol serves as a reliable sidearm, offering quick draw times and precision aiming for close to medium-range engagements. Players can choose to reload this firearm manually to ensure they're prepared for the next encounter.

Rifle

The rifle, on the other hand, packs more firepower and accuracy, making it ideal for medium to long-range combat scenarios. Its reloading mechanic requires careful consideration, as players must manage their ammunition effectively to maintain a strong position on the battlefield.

Flamethrower

For those who prefer a more unconventional approach, the flamethrower introduces a fiery and area-denial aspect to gameplay. With its devastating close-range capabilities, the flamethrower can clear out groups of enemies while leaving environmental hazards in its wake. However, players must be mindful of their fuel levels and reload accordingly to ensure a steady stream of flames.

Moreover, our game allows players to seamlessly switch between these three distinct weapons during gameplay, enabling rapid adaptation to different combat scenarios. This variety in weaponry, coupled with the reloading mechanics, promotes strategic decision-making and empowers players to tailor their loadout to their preferred playstyle, making each engagement a unique and thrilling experience.

Melee

The melee mechanic in our game introduces a straightforward yet impactful dynamic to player interactions. Players can execute melee attacks, delivering a forceful blow that results in the targeted enemy being forcefully pushed back. This mechanic serves multiple strategic purposes. For instance, players can strategically use melee attacks to manoeuvre adversaries towards environmental hazards like pitfall zones, setting up elaborate takedowns. Alternatively, it provides a means to swiftly inflict immediate damage upon opponents, offering a tactical advantage when engaging in close-quarters combat.

In order to make a well-balanced gameplay experience, the damage output of the melee attack has been deliberately calibrated. It strikes a delicate equilibrium, delivering a substantial hit that imparts a palpable sense of satisfaction when landing a successful strike. However, the mechanic is intentionally designed to avoid being overly dominant or abused through spamming. This approach ensures that the melee attack remains a strategic option rather than an all-encompassing tactic.

Bug Bits

The potency of each utility will be meticulously evaluated and fine-tuned during the critical balancing phase in the ongoing development of our project. This stage is pivotal in ensuring that each utility's impact aligns harmoniously with the overall gameplay experience.

Additionally, a distinctive bug bit currency system will be integrated, introducing an intriguing mechanic that seamlessly ties into player progression. Whenever the player successfully eliminates an enemy, they will accrue bug bit, a unique in-game currency. These precious bug bits hold a dual purpose, functioning as both a tangible measure of accomplishment and a resource that players can utilise for self-preservation. By strategically expanding their collected bug bit, players can effectively mend their wounds and rejuvenate themselves amidst the throes of gameplay, striking an equilibrium between risk and reward that contributes to a more immersive and challenging player experience.

Healing Bits

The healing bits offer an interaction between the player mechanics and how the health system works. It provides a healing reward to players when they successfully defeat or eliminate enemies. The strength of the healing bits are not significantly high but rather low compared to manually rejuvenating wounds through bug bits. However, it adds depth and complexity to gameplay by rewarding skillful combat. It also encourages players to engage in battles strategically and adds an additional layer of immersion and decision-making to the gaming experience.

High Score & Leaderboard System

Since our game is not narrative focused, we will be implementing a leaderboard system with their own online leaderboard for the scoring system. The scoring system will have a couple of factors which are :

- How fast the player finished the level
- How many enemies the player killed
- How many health the player has at the end of the level

This system will improve the replayability of the game and also adds an exciting edge of competition to the players especially since the leaderboard is online.

Enemy Mechanics

Bug Blitz will have three enemies and one boss to fight in the final level. Each enemy represents a different type of movement. There will be enemies that can stick to the wall,

enemies that can fly, and enemies that are on the ground accompanied by the Boss. Here are the enemy types and their mechanic descriptions :

Spidoll

Spidolls are an intriguing form of opponent that is intended to enhance and challenge the player's experience. These unsettling does exhibit a few distinctive mechanics:

Wall Crawling and Leaping

Spidolls are unique among enemies in their extraordinary capacity to move across both walls and floors. They can suddenly rush off the wall towards the player character, surprising and exciting the players, so they need to be on their guard.

Web Shooting

Spidolls have a unique web-shooting attack that they may use. They will fire webs with astonishing precision when they locate a player. These webs hurt players, but they also have a sneakier side effect that slows down mobility after contact.

Dynamic Area Controls

The Spidoll sprays a web that forms a zone of control on the floor. Players will need to make more tactical choices as they move across the battlefield since their movement speed will be slowed as long as they stay in this location.

Precision Damage

The Spidolls only deal precise damage if one of their daring jumps results in actual contact with the player. This highlights how crucial time and positioning are for both the player and the Spidoll.

Overall, Spidolls present a complex task that calls for players to master the skills of timing, accuracy, and evasion. They provide an element of surprise to confrontations, keeping players alert and delivering an engaging game experience.

Flyder

These aerial foes give the game a dynamic and difficult component. Flyders are distinguished from other enemies in the game environment by their distinctive flying skills.

Flight

Flyders have the ability to fly around the world to detect and attack the player. It flies with very simple manoeuvre throughout the environment patrolling and changes states into attacking when seeing a player.

Collision Damage

Collision Damage: If a player runs into a Flyder and collides with them, they will lose health. Players are rewarded for avoiding collisions because of this concept, which promotes quick, accurate movements in combat.

Overall, Flyders add to a fun and demanding gameplay experience by encouraging players to develop their evasion, spatial awareness, and strategic thinking skills in order to successfully navigate encounters.

Vice

The relentless presence of Vice on the field adds a special mix of strategy and danger to our game.

Persistent Detection and Pursuit

Vice have keen eyesight, allowing them to recognize players as soon as they enter their field of vision. These cunning creatures start a persistent pursuit as soon as they see the player, displaying their tenacity in the process. Players must be aware of their surroundings since Vice can appear out of nowhere.

Flesh Seeking

Vices tend to pursue the player when it has sight on it. Vice will stop and damage the player when it collides with the player providing strategic thinking skills to navigate and avoid collision with the Vices.

Vice is a very simple yet needed enemy in our game. Its role is very simple, it collides with the player but in a grounded form. This can cause more variety in the game while not sacrificing the simple nature of the game since when the enemies are too complex, it takes away from its movement core of the game.

Slimeacite

Slimeacites don't really do much of being hostile but it can add a variety of enemies and add life into the environment by adding creatures that are not hostile but can be hostile if given the circumstances.

Simple Patrol Behaviour

Slimeacite will have a simple patrol behaviour that patrols around the environment. This can help with making the Slimeacites more lifelike even if it doesn't directly attack the player.

Melee Attack

Slimeacites does a very short range melee attack to the player when it is attacked by the player. Slimeacites will only attack when the player attacks them first and they need to get close to the player and then do the attack therefore it won't provide much of a challenge since this enemy is quite weak to begin with.

Overall, Slimeacites won't affect the gameplay as much as other enemies but it is necessary to add a sense of variety and also life to the environment to make the player more immersed in the world building of the game.

Rakqybcgdb (Pronounced Bick)

With Rakqybcgdb (pronounced "Bick"), the game's final boss, players will face off in a dramatic battle. We want to provide a compelling and difficult gaming experience. To do this, we created a multi-layered system that challenges players' combat prowess while simultaneously keeping them on their toes. This guide will explore the subtleties of two crucial mechanics: the spawning of minions from holes in Rakqybcgdb's flesh and its potent crushing attacks. Rakqybcgdb is a massive and repulsive monster with various unique powers.

Spawned Minions Mechanic

The torso of Rakqybcgdb is covered in menacing, pulsating holes that act as entrances for various adversary types. By introducing unpredictability and requiring the player to adapt fast, this mechanism gives the boss fight more dimension.

Rakqybcgdb's body is riddled with holes that can give rise to a wide variety of foes, each with its own special skills and weaknesses. This ranges from the enemies introduced earlier which were the Spidolls, Vices, Flyers and Simecites. This variant adds a tactical aspect to the encounter by requiring players to plan ahead and prioritise targets.

The spawning patterns of Rakqybcgdb change as the conflict develops. It might create lesser foes at first to gauge the player's battle prowess. More powerful opponents are unleashed as the battle gets more intense. This dynamic scaling makes sure that the difficulty level remains interesting and increases as the player advances.

Crushing Strikes Mechanic

Rakqybcgdb's enormous hands are not just for show; they are also powerful weapons that can harm the player horribly. This mechanism gives the battle a sense of danger and urgency.

Rakqybcgdb uses recognizable animations and aural cues to signal its crushing strikes. Players can thus predict and avoid these lethal attacks if they act swiftly.

The arena is destroyed by the boss's devastating blows as well. The player can tactically take use of these effects, which include the ability to destroy pillars, produce

shockwaves, or release debris from the ceiling. This gives the conflict a component of environmental puzzlery.

Rakqybcgdb's crushing strikes increase in frequency and unpredictability as the boss's health drops. Throughout the many stages of the combat, players must adjust to the changing patterns of these strikes, keeping them interested and challenged.

Flesh Projectile

The flesh projectile adds an answer to the size and the lack of mobility of the boss. The boss can shoot up a flesh projectile that follows the player that the player needs to shoot to get rid off. This could add an extra layer of challenge and also an extra use of the shooting mechanic for the boss fight.

Weak Points

The boss will have weak points that the player is able to shoot to inflict more damage. This can help with the balancing of the boss fight and also the way the boss works. Since the boss will be large in size and bullets will realistically won't affect it that much, adding weak points could also help with the narrative of the game and can affect the world in a more immersive way. After hitting the weak points multiple times, the player then is able to attack all areas of the boss in a limited amount of time and the player can continue doing so until the boss is defeated.

The Rakqybcgdb boss encounter gains complexity, strategy, and excitement from the inclusion of the Spawned Minions and Crushing Strikes mechanics. To succeed, players will need to learn both offensive and defensive tactics, making the boss battle in our game a memorable and satisfying experience.