

Games Design Document

Game Name

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High Concept:

One line Introduction:

The ultimate run n gun weapon gallery simulator! Eliminate hordes of marines with an assortment of overpowered weaponry.

Theme / Environment / Setting:

Low Poly / Sci-Fi / Futuristic Factory and Alien Worlds

Unique Selling Point/s and Key Mechanics:

Top-Down High Action Horde Arena Shooter with a Lives System

Gameplay Summary

I am taking gameplay elements from both Doom Eternal and Hotline Miami; small levels with sections of high action moments with lots of enemies and opportunity for the player to use their assortment of weapons they either find or carry over from the last successful mission.

The player has a safety net of lives like in DOOM Eternal. If you have spare lives, you will be revived on the spot with all your weapons but lose all your lives and you will restart the level with the essentials. I hope this system encourages skilful gameplay and makes the player feel powerful and strong compared to the start where they are vulnerable.

The weak the player is not defenceless; the player has a small dash that can help them avoid incoming projectiles or enemy melee attacks. The player is also always equipped with a short ranged but powerful melee attack that can if timed correctly reflect enemy projectiles back at them for stylish gameplay, like Samus's reflect attack in the Metroid 2 Remake.

World Summary

At the start of the level or game; the player's arsenal will be small, and the goal is to collect weapons scattered around the level to better combat the harder sections, but the player can go through the entire level with a dinky rifle if they so desire. Weapons will be in set locations even on restart and it is up to the player of setting a flow of collecting the weapons and using them to get past the rooms filled with enemies, like finding the fastest and best way to get through a level in Hotline Miami. Lives will be hidden in secret spots in the level too, rewarding player awareness with more survivability.

The entire level won't be just action, players will be given time to breathe and plan a strategy in soft-safe zones in-between combat sections. These areas won't be completely safe, the occasional enemies will block your path, but they shouldn't take much effort to take down.

Production Outline

I have already tinkered with the framework, building the level, and editing mechanics. Changing and adjusting the level as I update the mechanics to better suit new gameplay features. Realistically I believe I can get this level done, so I want to try and aim to have multiple levels in a playable state by the end of the semester. Each level progressing in difficulty and complexity like typical game progression. The current level I'm working on is straight forward, does not incorporate the physics puzzles included in the framework and is pure combat.

Weapon testing and weapon levelling features are something I want to dabble with the engine also, but so far, I haven't been able to understand exactly how the weapons are added, stat manipulation is easy enough, but I want more weapons for the player to use rather than the three the framework uses.

Player Characteristics Outline

Dook's life was quiet and peaceful, living off the land on his farm not troubled with big problems out of his scope, not problems intergalactic in scale. Then one day the lovely green fields were clouded in a deep toxic smog that burned the surface down to rock. Hard and heavy metallic structures pierced the grounds, factories ready to drink the planet dry for its natural resources.

Dook's farm was crushed and eviscerated when one of factory complexes was dropped from the sky, the workers probably did not know they destroyed one lowly Ork's livelihood, probably would not have cared either. Seeing his home destroyed and planet on the brink of destruction, Dook is fuelled by unyielding rage to take revenge on the invaders. Stealing, learning and adapting their advanced weaponry back at them, a one-man army to save his planet from complete pollution.

Player Persona

Background

I come from a background of a lot of FPS, my first game was Halo 2 on the original Xbox, played the Halo 3 campaign so much that I can remember the specifics of every enemy encounter in the game. And whenever I have tried designing a game, an aspect of my preferences for FPS manages to slip in. The constant carnage of *Serious Sam* or the power fantasy of *DOOM*, that constant action and engagement is the type of gameplay I constantly try to replicate, to find out and study that its quite easy for my preference in gameplay to overwhelm and frustrate the average person.

For my top-down game I have been taking my inspirations from four main sources; *DOOM*, *Hotline Miami*, *Ratchet & Clank* and *Serious Sam*. The *DOOM* parallels in the story will be apparent to fans of the genre. As for the gameplay I want to translate the constant barrage of foes scenario you would experience in *Serious Sam* in the framework, but balance with the trial and error of *Hotline Miami* without it being overly tiring and boring to repeat over and over. For as much as I enjoyed *Serious Sam*, after a certain point I had to stop playing and take a break after each leveling because of how much I was required to make quick moment to moment decisions and deal with scenarios that feel like they are out of a fan made mod of *DOOM*; such as part in the desert level where the game throws over a hundred of same enemy type at you down a one-way street. In my mind, having to do that and the entire level as if it were a *Hotline Miami* level would make me stop playing.

Level Design Documentation:

Primary and Secondary Level Objectives

Following the strokes of classic FPS games, the player's goal is to reach the end of the level. Some missions may require you to find collectables before you're allowed to progress ala keycards in *DOOM*. In the more recent *DOOM* entries, often the player is required to clear an arena full of enemies to progress. I've been testing how to implement that as a roadblock.

Focal Point of the Game

I want to capture that addictive and timeless gameplay loop that *DOOM* and *Halo* pioneered, the 'thirty seconds of fun'. I feel both games capture it in different ways; *DOOM* with its focus on player movement and positioning against archetypical enemies, *Halo* with its smart AI that reacts uniquely to the player's weaponry and playstyle.

I've made attempts to strengthen the enemy sandbox of my small demo to achieve a similar effect. Increasing the default values; health, damage and speed to make the encounters for

Gameplay Influences

I've mentioned many games so far in this document, this list is a collection of exactly what influences I wish to take from these games for my own framework and gameplay flow.

DOOM Eternal:

1. High Intensity arena combat
2. Constant smart movement (dodging projectiles and dashing to and away from enemies)
3. Dynamic Lives system
4. Focus on player empowerment
5. Secret rooms/hidden stashes

Halo:

1. Distinct enemy archetypes
2. Enemy Hierarchy (Different colours depending on enemy rank, visual indication which enemy prioritize)
3. Weapons in the sandbox each fill a role and there shouldn't be a weapon that excels in every situation

Serious Sam:

1. Large but still linear levels
2. Horde encounters
3. Player positioning and spatial awareness is key to not get overwhelmed and surrounded
4. Spaces at the beginning, sometimes middle and end of the levels act as moments of reprieve so the player can catch their breath

Ratchet and Clank 3:

1. Weapon Leveling based on how many enemies killed
2. Wave based arena shooting
3. Silly and fun weapon concepts (Gun that fires blackholes or turns enemies into sheep)

Metroid Dread/Metroid 2 Return of Samus remake:

1. Enemy projectiles can be deflected with a well-timed melee swipe
2. The player is rewarded for exploration with additional resources to help the player progress through an area, sometimes a permanent powerup is rewarded

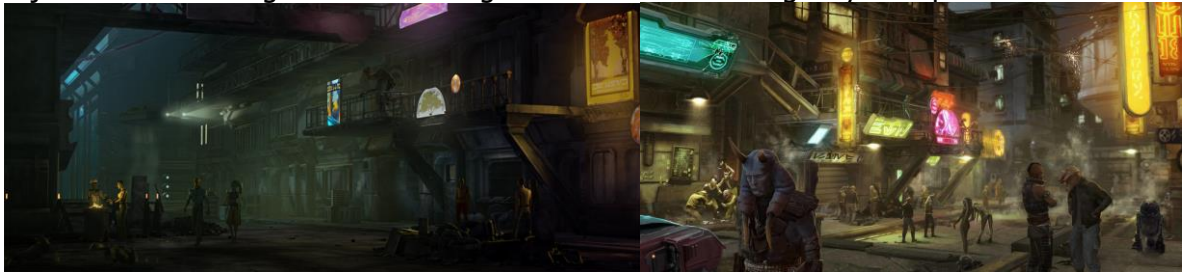
Flavor Story

Duke has managed to slip into one of the factories that sits atop a mountain surrounded by its own toxic lime green cloud. Armed with his trusty Bolter Rifle, he's ready for some revenge for them polluting his home and burning his home. Whatever it takes, Duke will find a way to blow this factory and any invader that stands in his way to kingdom come.

Visual Influence and Design

The Smog

The green smog I was inspired by *Star Wars* concept art for the criminal underworld of Coruscant. And official artwork by Games Workshop for their *Warhammer 40k* franchise, art of Imperium Hive cities. I want a similar untrustworthy industrially poor feeling in my own project and simulating that same smog effect I feel is a strong way to capture it.



STAR WARS - CORUSCANT UNDERWORLD



WARHAMMER 40,000 – HIVE CITY

Industrial Influence

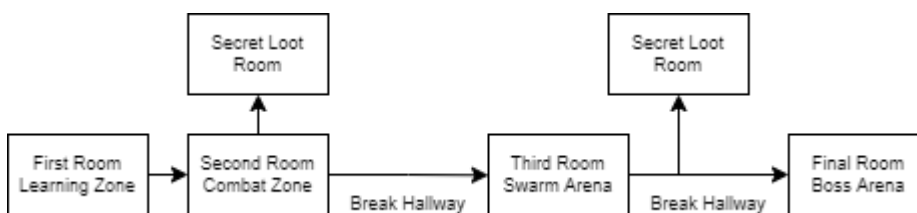


SONIC GENERATIONS – PLANET WISP



COUNTER-STRIKE GLOBAL OFFENSIVE - NUKE

Level Design Plans



Level Layout Breakdown:

The First Room, there are the two main ideas I have for developing this part of the level, a serviceable learning environment and a lure. Enemy count must be low, and the play area must be large enough to accommodate the faster paced gameplay, the combination of both should be a safe enough environment for learning the very basics of the game. An intriguing lure could be shiny items to help the player, or the promise of more enemies to battle.



Finished Design

Second Room

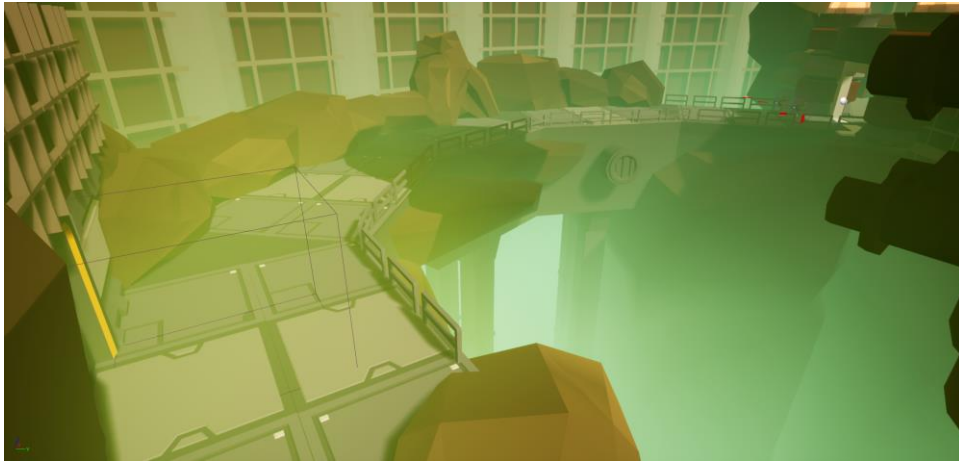
I intend for it to be an introduction to larger enemy encounters; the player will be confined to a small space that is advantageous to the enemies. But there should be a floodgate to keep them from completely overwhelming the player, frustrating gameplay should be avoided.



Finished Design

Break Hallway One

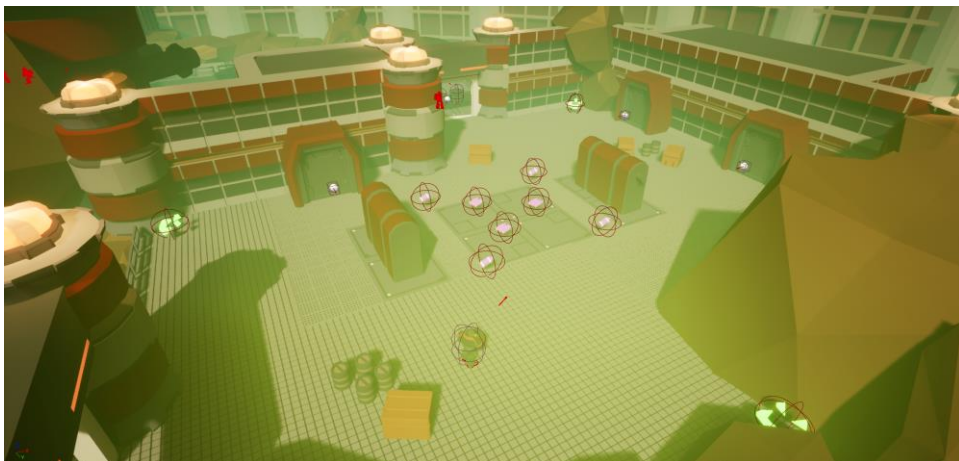
I intend for the second room to be sufficient enough of a challenge to warrant a break room in the level, a travel zone between the second and third room that will give the players necessary breathing room. Many games already do a similar technique, after tough encounters in *Halo Combat Evolved*, there is usually a minute of silence to allow the player to take a break but also soak in the atmosphere of the Halo Ring.



Finished Design

Third Room

I imagine this zone to be much larger and open than other areas. Lots of enemies charging the player and forcing them to make split second decisions, I want to enforce the fast action pace of the game. This room should be the example to follow for other large encounters in the game going forward.



Finished Design

Break Hallway Two

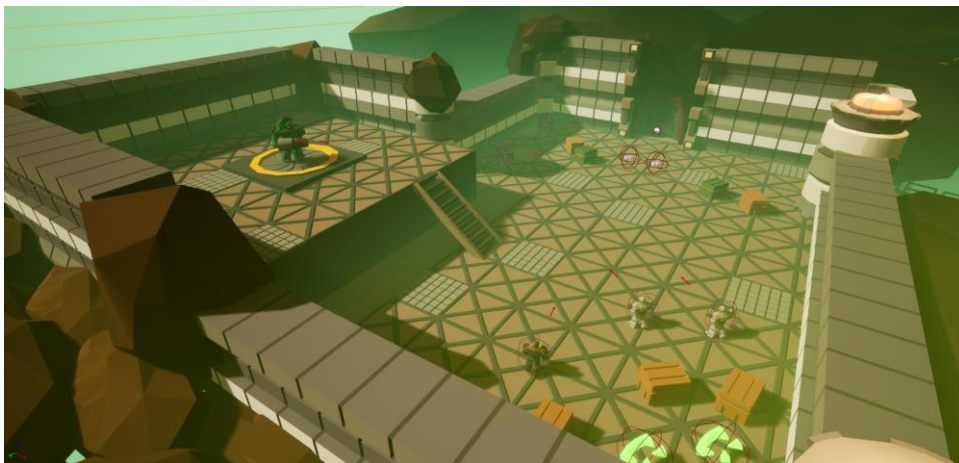
Same intention as the first breakroom, an area to let the player compose themselves. As this is after a horde encounter the players going to be worn of their resources so there should be pickups to aid the player, a new weapon as a reward for getting past the horde room too?



Finished Design

Fourth Room

Not entirely sure what I want from the final room, the main idea pestering me is to have a large boss encounter that has an original strategy besides 'shoot it till it dies'. Minions could support the boss and then the strategy would be to whittle down the fortress by prioritising what targets should be taken out first.



Finished Design

Player Control and Balance

Movement

Movement speed and fluency has been increased and was a crucial design choice, the original slow pace of the framework was not idle for the FPS influence I was taking from. It was also necessary as all enemy actors inside my game have received a movement boost and are more aggressive, the higher player speed is necessary to allow the player to counteract the tougher opponents and keep the game balanced.

Additional Player Tweaks

Originally in the framework, the player started with fifty points in both health and armour, while functionally a hundred health points, I decided to change the player start to one hundred health points and have armour pickups around the level.

The default camera angle was also altered to accommodate my level geometry, the original camera was too low and close. It was challenging to see the surrounding enemies and the camera would be obscured, I chose to make the camera angle closer to something like classic *Fallout*.

Weapon Arsenal

This is the running theme so far; weapons have also been buffed. The basic 'SHOOTA' rifle I designed to be a designated jack-of-all-trades weapon, good but not fantastic for all situations, reliable as a main weapon. The machine gun of the framework felt more like an automatic shotgun than a machine gun, firing a dozen inaccurate shots at once. I altered it to make it suitable for the role of a crowd thinner and upped its maximum ammo capacity.

Weapon List

BD: Blast Damage (For explosive weapons)

DT: Damage Type

FD: Fire Delay (Time between shots)

BPS: Bullets Per Shot

Bolter/ Rifle	Function	Damage	BD	DT	FD	Accuracy	BPS	Ammo	Reload	Range	XP to Level
MK1	Hitscan	25.0	0	Standard	0.15s	3.0	1.0	600	1.0s	1000	900
MK2	Hitscan	35.0	0	Standard	0.1s	2.0	1.0	600	0.8s	1000	1100
MK3	Hitscan/Explosive	40.0	20	Standard	0.1s	2.0	1.0	600	0	1200	N/A

SHREDDA/ Shotgun	Function	Damage	DT	FD	Accuracy	BPS	Ammo	Reload	Range	XP to Level
MK1	Hitscan	30	Standard	0.8s	15	8	120	2.0s	500	2000
MK2	Hitscan	30	Standard	0.6s	10	12	120	1.5s	1000	N/A

FOH/ Minigun	Function	Damage	BD	DT	FD	Accuracy	BPS	Ammo	Reload	Range	XP to Level
MK1	Hitscan	15	0	Standard	0.05s	30	2	1000	0	3000	2500
MK2	Hitscan/Explosive	15	20	Standard	0.03s	30	2	2000	0	3000	N/A

Game Win and Progress Conditions

The Win Conditions and Challenges

The level ends when the player reaches the end objective, killing enemies and finding items are more secondary optional objectives. Maybe there will be hard blocks in the game that stop the player from progressing without fulfilling specific requirements, though right now these plans are not likely to be implemented. These plans are classic scenarios collect keys or items that function the same, find them all to open a door or path to explore the rest of the level. I'm currently working on a wave encounter, ideally that should lock the player into arena where they need to defeat all enemies before they are allowed to progress.

Enemy Design and Placement

Enemy Archetypes and List. A list of my early ideas for enemies the player will face based on the framework:

The first type of enemy the player will encounter will be of the rush-down archetype, they'll aggressively chase down the player. They're distinguished by their fast run speed and tendency to appear in large groups. They can be further split by their rank; the common enemies wear white while the captains wear black. Captains deal more damage and have a higher health status but that's where differences end.

Ranged marine enemies, the most common is the soldier; wearing white armour and will chase the player before stopping to fire their rifle in quick bursts. Captains wear black, same hierarchy as the melee enemies. Captains will not chase the player and will fire their weapon from a distance however, will not retreat when the player approaches. Majors are identified by their orange armour and large weapons they carry.

Enemy Behaviour and Abilities

Melee/Rush-Down Enemies: Runts are humanoid and have a low telegraphed but hurtful melee attack. One individually is easy to deal with, having a small health pool but their danger comes in them overwhelming you with horde tactics. Surrounding you and preventing you from running away and dodging their attacks. Just like how the zombies would in Valve's *Left 4 Dead*, except there is no safety net like the shove to get the enemies off you, if you get corner then the only way out is to fire your weapon and hopefully create a gap before you're wacked to death.

Marine Enemies: Soldiers are equipped with basic rifle that the player has, but theirs do not function the same as the players. Instead of automatic fire, they will fire their weapon in three bursts and continue to chase you when their weapon attack cycle is over. The bullets fired from the rifle are fast and hard to avoid, but their damage is low. Soldiers will twiddle your health down if not dealt with, but their low health stat makes them easy pickings. Your typical grunt enemy, that usually accompanies a stronger captain in sets of three or four.

Captains will accompany them; they look like soldiers but have a different strategy in attack, holding back and firing from a distance. Armed with a plasma gun, the projectile is slow and easy to dodge but knocks off a good chunk of health if it does hit. Captains have more health than their soldier counterparts, it is better to save the captains for last when in a firefight.

Specialist Majors are the toughest but rarest, coming in two variants. Sniper and rifle specialists, rifle majors have a more powerful version of the captain's plasma gun that does not deal more damage but instead has a faster projectile and fires in bursts of three like the common soldier and will chase the player in the same manner. Snipers will rarely move and will begin charging their laser sniper when they see the player, a faint transparent laser will track the player for a few seconds before they fire a large bright red beam that is one of the most damaging attacks in the game, however the laser will stop for a moment before firing. It will always miss if the player is moving, so do not stand still for too long when in an arena with snipers.

Heavy Enemies: They are big and tough, come in two variants like the majors for the ranged group. Punctures' use their own special arm minigun, it fires quick, and it shreds through player health. However heavy enemies like the ranged need to stop to fire their weapon and the Punctures' weapon has limited range. They are vulnerable to long range weapons or the player waiting to attack them in-between their firing patterns. Their counterpart, the Stompers, use an automatic rocket launcher that fires small and fast rockets that travel far and have homing properties, but the tracking is not that strong.

Melee Enemies	Health	Damage	Run Speed
Runt	75	20	700
Runt Captain	150	40	700

Marine Enemies	Health	Projectile Damage	Attack Interval	Run Speed
Soldier	100	5/15	4/s	450
Captain	200	30	2/s	450
Rifle Major	300	30/90	4/s	450
Sniper Major	300	150	10/s	100

Heavy Enemies	Health	Damage	Run Speed
Puncture	600	20	300
Stomper	600	40	300

Enemy Placement and Level Accommodation

Outside of arena combat, enemies are scattered around the level in small to medium sized groups. The purpose of these enemies is just to harass the player when they're progressing through the level, small obstacles so the player can't blitz through unless they've figured out how to safely maneuver around them.

Enemy AI Alteration

One current problem with the framework that negatively impacts the style of gameplay I want is the AI navigation and enemy aggression. Currently from my testing, AI will continue to chase the player until their line of sight is broken, I imagine it works well for a tight corridor stealth game. It does not work well for my late 90s FPS inspired game, strafing around enemies will usually make them stop chasing as they lose sight, then they will stand in place defenceless against whatever weapons you might have.