

Nightbreed Game Design Document



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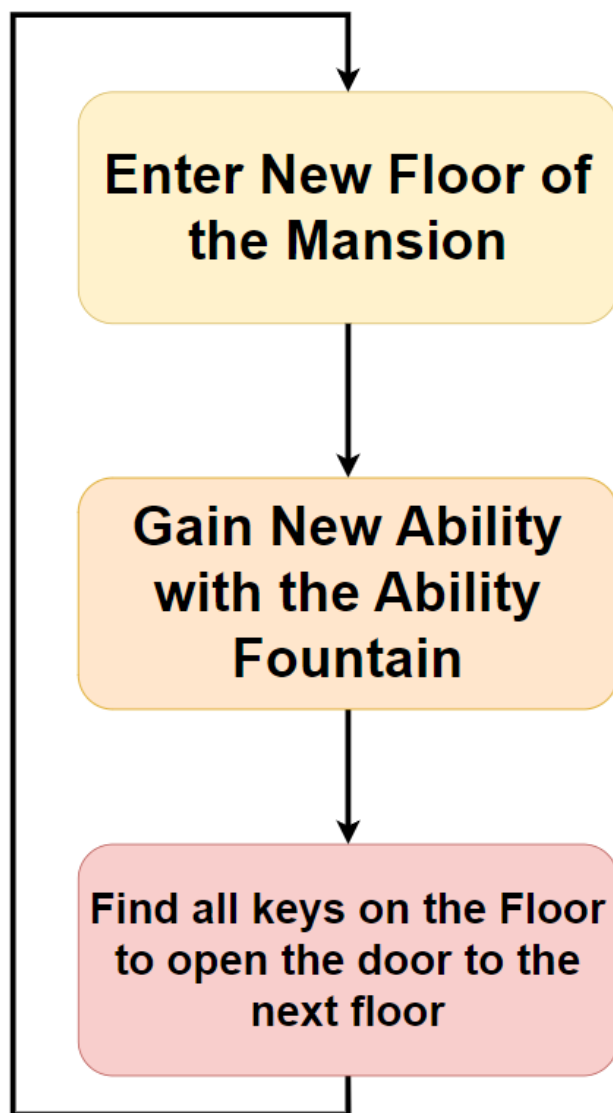
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High Concept

Quick Pitch

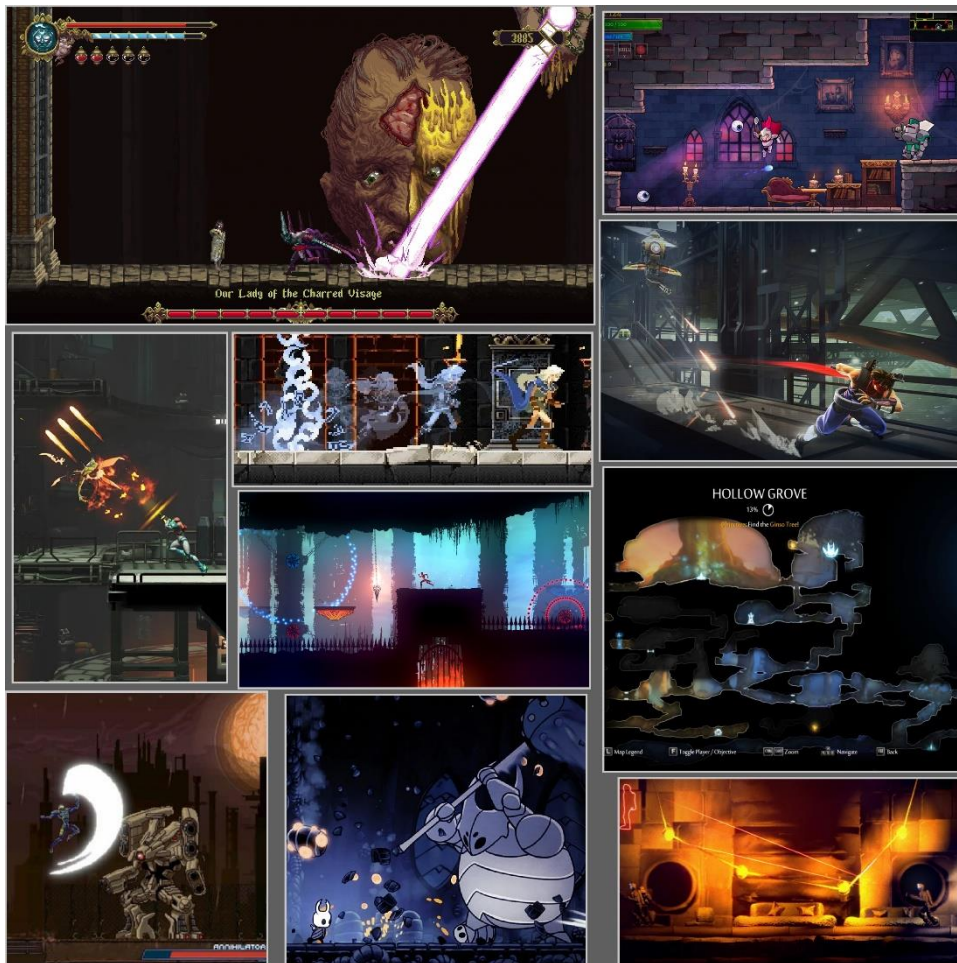
This game will be a vertical climbing-based metroidvania where the player will have to collect a certain number of keys in each layer of a castle to proceed to the next level, this will continue until a final confrontation boss fight.

Gameplay Summary



This game is a lot more puzzle-focused than combat focused therefore the core gameplay loop revolves around the idea of exploration of each floor as you try to find the keys required to open the next door. To assist the player in finding these keys and solving the puzzles of the floor, the player acquires a new ability on each floor which allows them to both interact with the puzzles on the floor and also better navigate the puzzles/platforming on earlier floors.

Genre Moodboard



Unique Selling Point (USP)

It is common for modern metroidvania games to have a level flow that focuses on horizontal movement, with the side-scrolling nature of the flow having more of a focus on combat than platforming. To flip the script, this game will be mainly focused on ascending the castle, with the vertical movement being more suited for platforming and puzzles than combat and working well with the main movement mechanics which will be added like rope swinging and wall climbing.

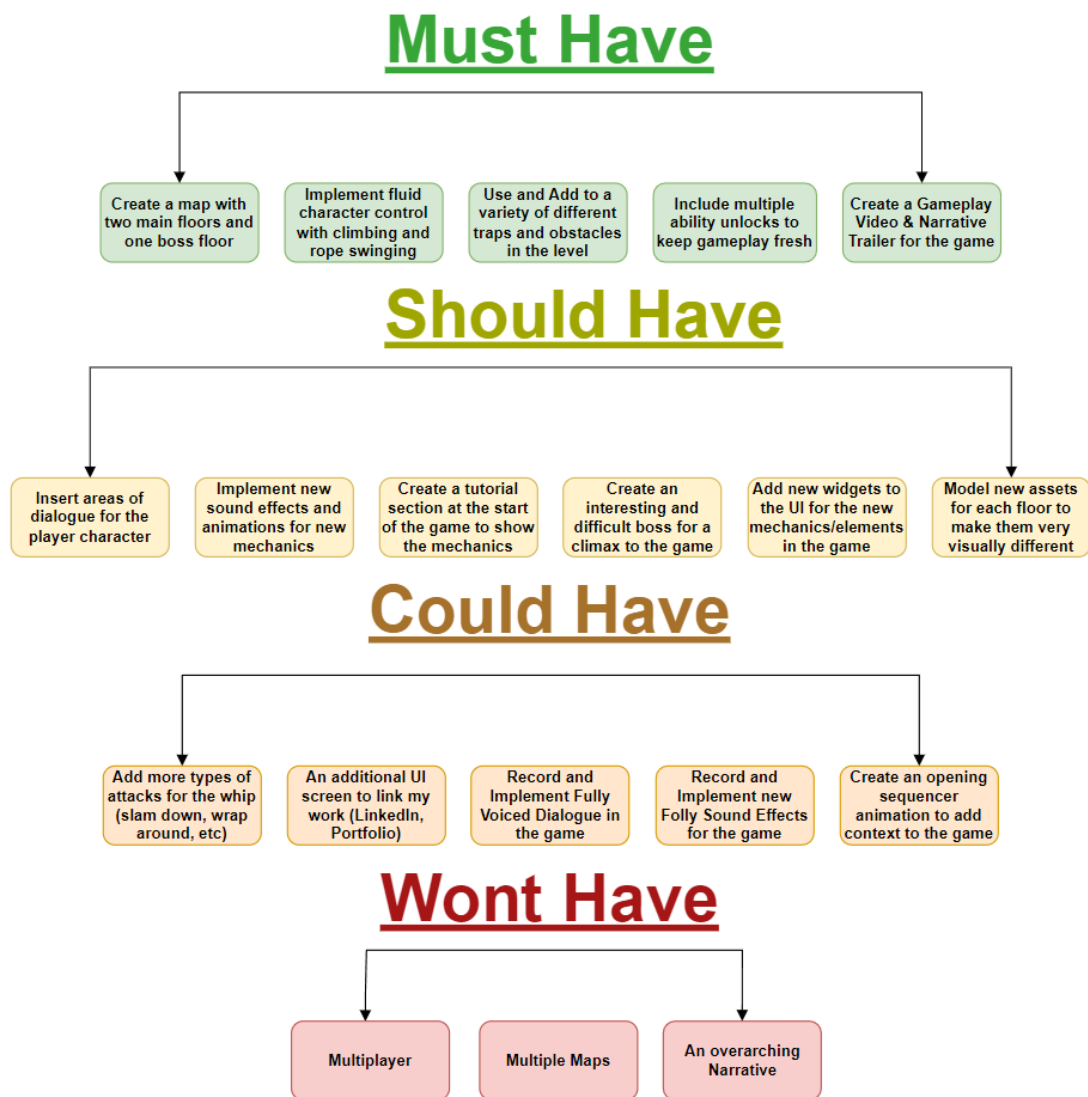
Competitors/Market Overview

Metroidvania games exist on a spectrum from games that focus on combat to games that focus on puzzles, as this game is more on the puzzle side of this spectrum it will be competing with games that also focus on movement and puzzles like *Teslagrad* and *Ori and the Blind Forest*. This focus on puzzle design will likely attract players that like to think and consider their surroundings more like *Tacticians* and *Method Actors* from *Laws & Costikyan's* player profiles. If the game is examined under *Vandenberg's Domains of Play* this game will be very popular with players who enjoy games that are quite calm solo experiences which they can become very skilled at with practice.

Novelty Challenge

Harmony Simulation

MoSCoW Diagram



MoSCoW Stage	Completion
Must Have	
Create a map with two main floors and one boss floor	
Implement fluid character control with climbing and rope swinging	
Use and Add to a variety of different traps and obstacles in the level	
Include multiple ability unlocks to keep gameplay fresh	
Create a Gameplay Video & Narrative Trailer for the game	
Should Have	
Insert areas of dialogue for the player character	
Implement new sound effects and animations for new mechanics	

Create a tutorial section at the start of the game to show the mechanics	
Create an interesting and difficult boss for a climax to the game	
Add new widgets to the UI for the new mechanics/elements in the game	
Model new assets for each floor to make them very visually different	
Could Have	
Add more types of attacks for the whip (slam down, wrap around, etc)	
An additional UI screen to link my work (LinkedIn, Portfolio)	
Record and Implement Fully Voiced Dialogue in the game	
Record and Implement new Folly Sound Effects for the game	
Create an opening sequencer animation to add context to the game	
Won't Have	
Multiplayer	
Multiple Maps	
An Overarching Narrative	

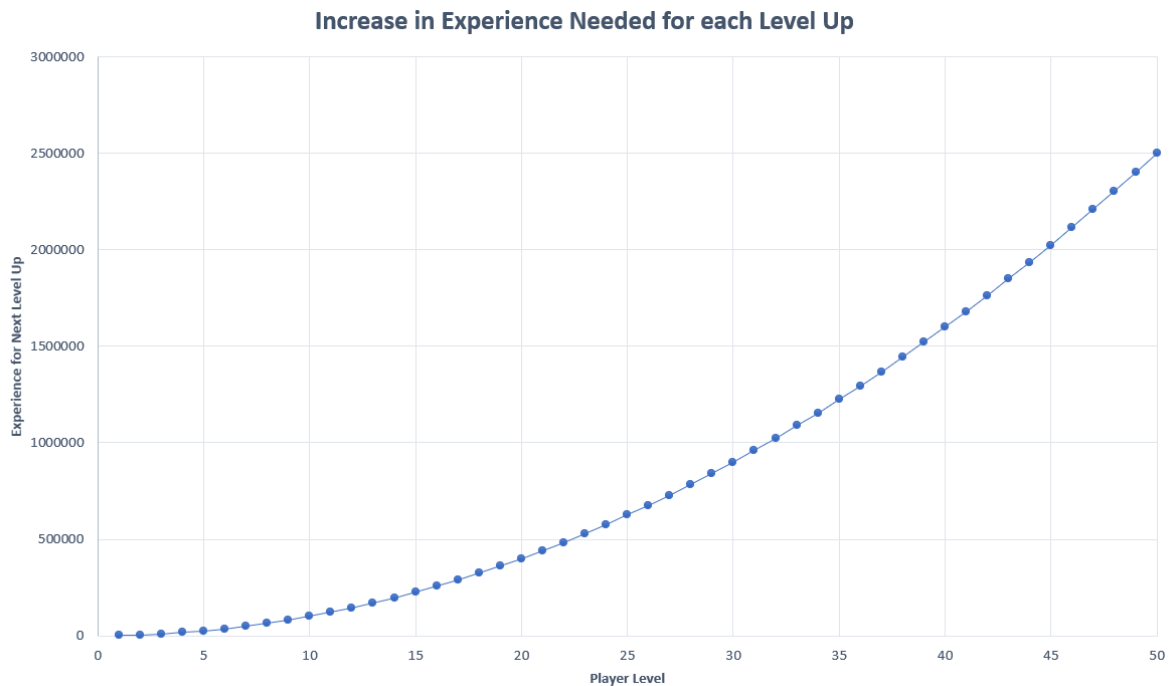
Character

Character Statistics

The player character has four main statistics which dictate how the character functions, these are Strength, Defence, Intelligence and Luck. Strength is used in physical attacks like the Whip and the Knife, Defence is used to reduce the amount of damage taken, Intelligence is used to increase the damage of the magic attack and reduce casting times and Luck is used as an exponent for EXP. For this game, when the character levels up their statistics will increase and instead of increasing the statistic by a static number, the statistic will increase by a random integer in a range. This not only allows for more variation in builds between runs but it also makes it easier to balance the different statistics as for example the Luck stat should be smaller than the rest of the stats.

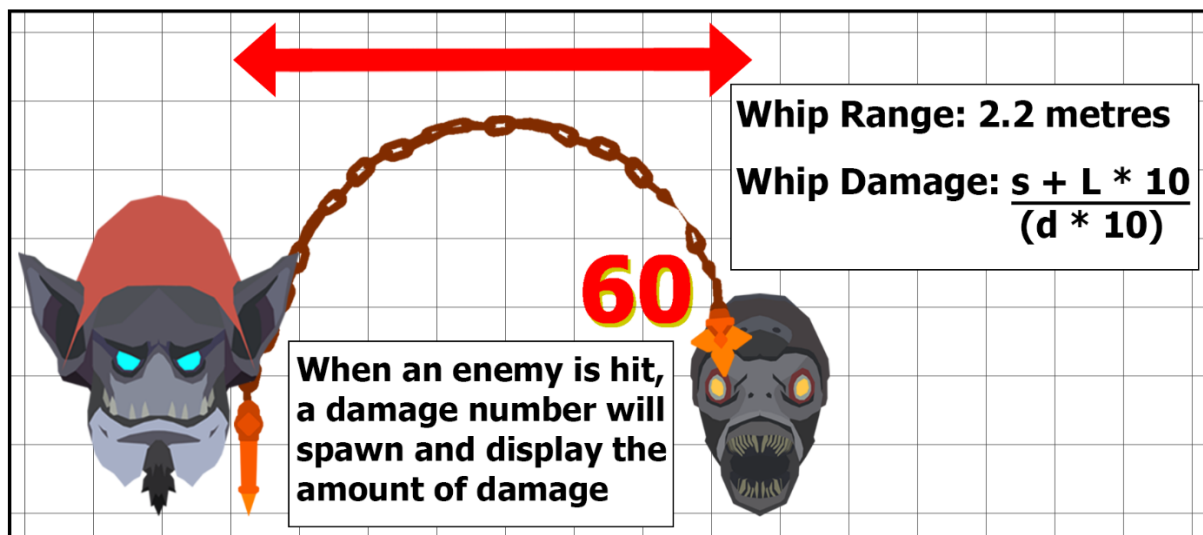
Name of Statistic	Starting Value	Amount Increased when Pick-Up is used	Amount Increased when Levelling Up
Strength	100	10	6 – 10 increase
Defence	100	10	6 – 10 increase
Intelligence	100	10	9 - 13 increase
Luck	100	N/A	5 - 9 increase

In order to have a dynamic levelling up system which becomes more difficult as the player continues through the game, this game uses the formula $L^2 * 1000$ to exponentially increase the required experience points needed to advance to the next level.

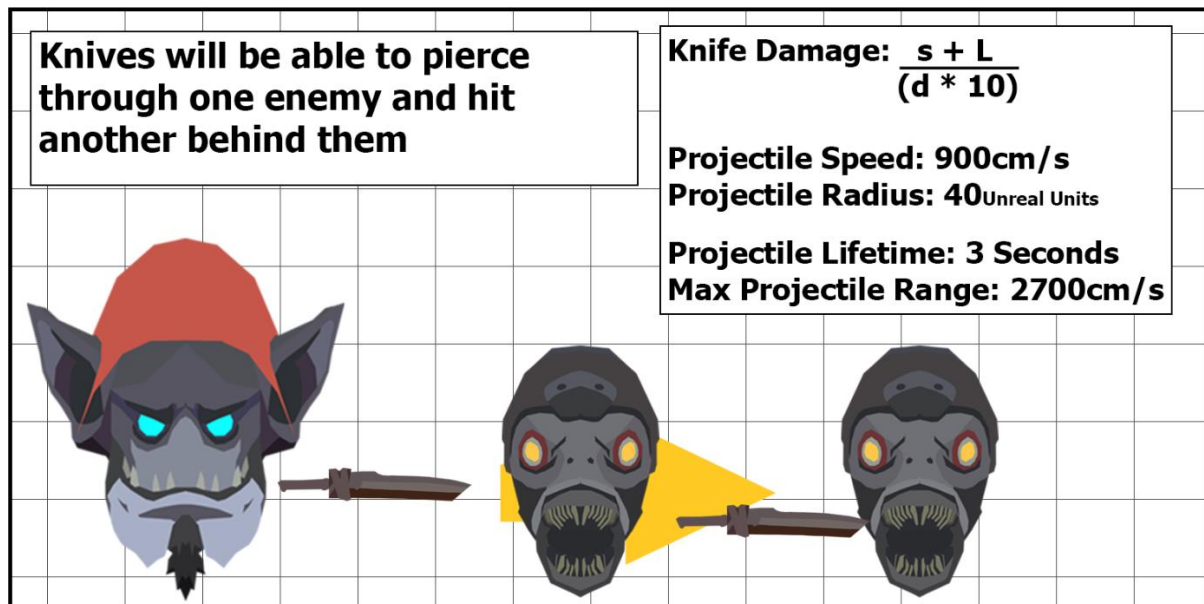


Combat & Weapons

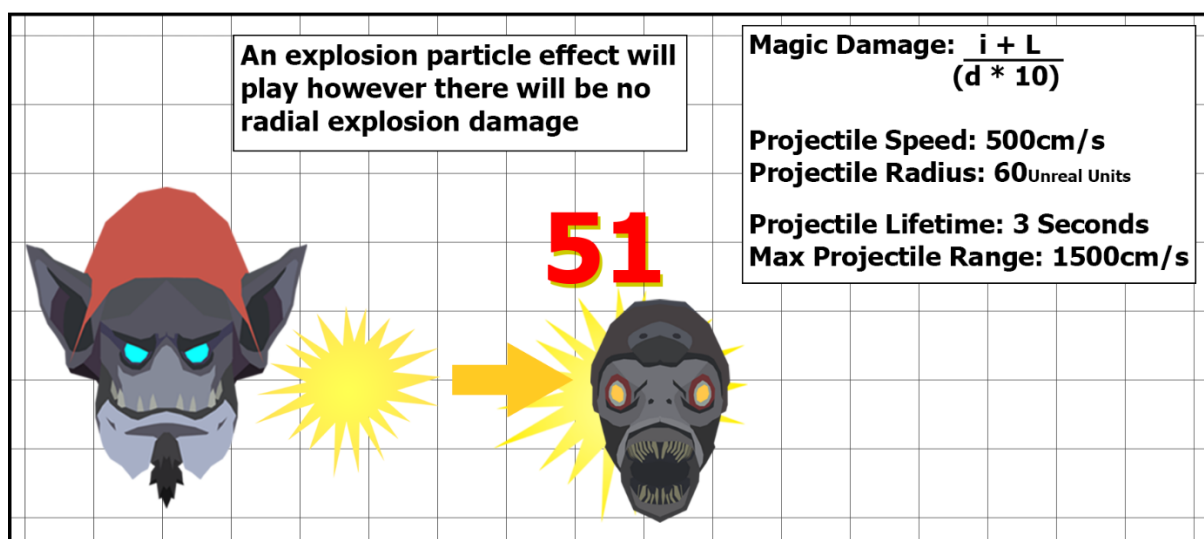
The whip is the main form of attacking that the player will use as it is both the quickest and does the most amount of base damage, the damage is calculated using the formula $\frac{Strength + Level * 10}{Defence * 10}$ so the damage potential of this weapon will increase as their strength statistic increases. This weapon has the smallest range with the whip's max range being 2.2 metres and it can only be used directly in front of the character like the other weapons.



The knives are the projectile which the player can use as they collect hearts, each knife costs 5 hearts and as a heart pick-up gives the player 15 hearts this results in the player being able to use 3 knives per heart pick-up. The main functionality of this projectile is that the knives can hit two enemies, the knife can pierce through one enemy and hit another and will be destroyed when the second enemy is hit or when the max lifetime has been exceeded. Similarly to the Whip, the damage of the knife depends on the strength stat with the damage being calculated using $\frac{Strength + Level}{Defence * 10}$ however it does have a lot longer range with a max range of 27 metres.



The final weapon which the player will have access to is the Magic Attack, this is a slower-moving projectile whose damage depends on the Intelligence statistic instead of the Strength statistic, this is calculated using $\frac{Intelligence+Level}{Defence*10}$ which is the same as the Knife attack but with a different statistic. This projectile is slower and therefore does have a lower max range than the knife, however this attack's main function in the game is to activate different parts of the environment like moving platforms & traps.



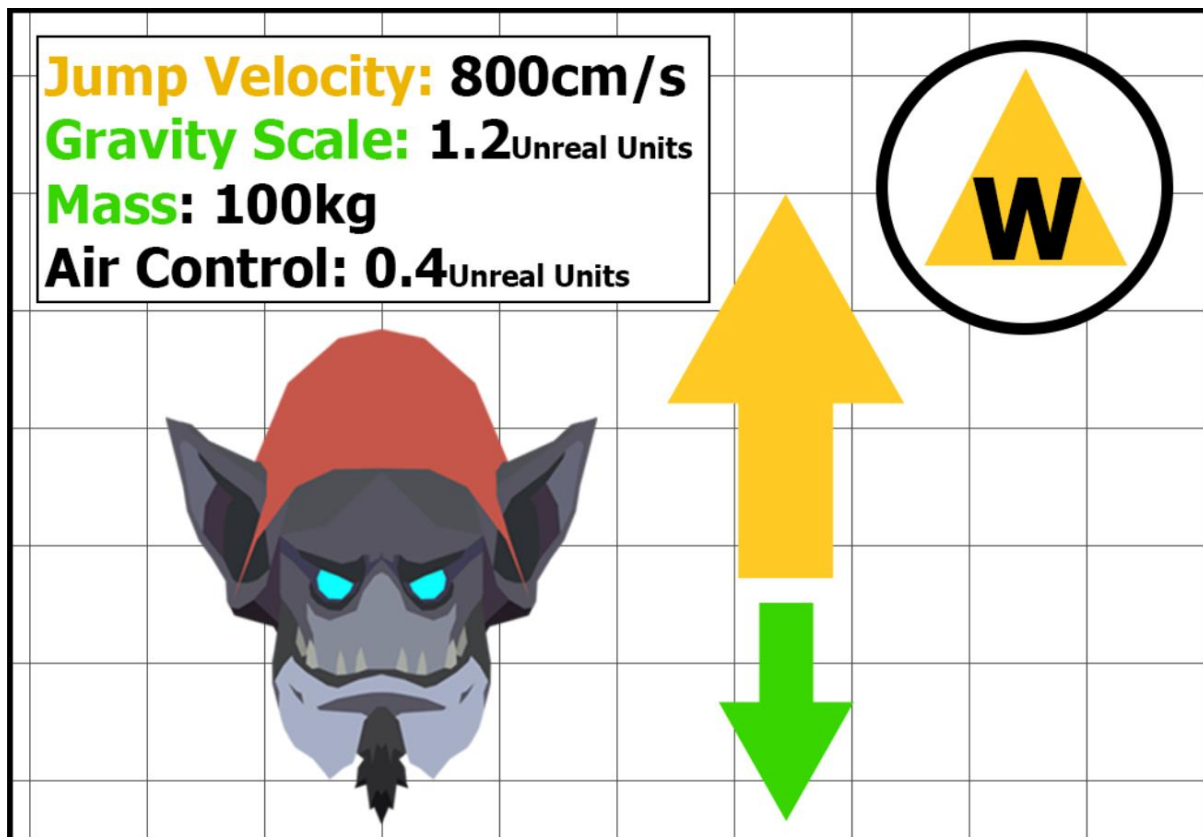
Control

Character Control

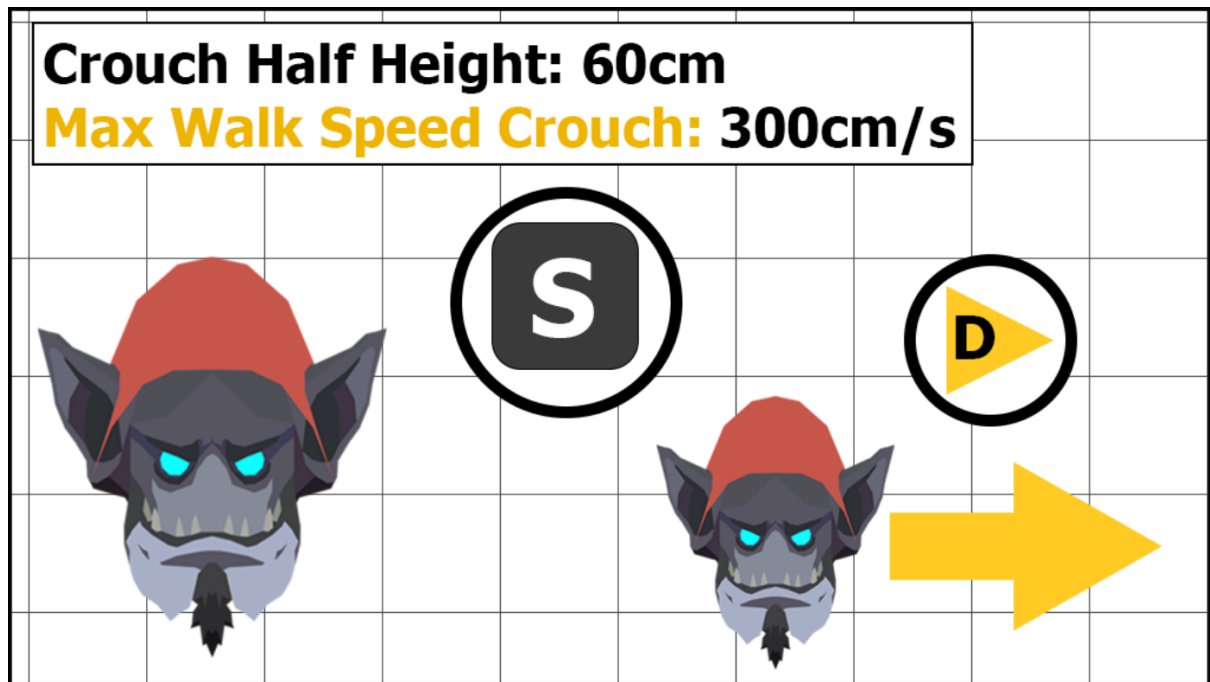
This metroidvania is fixed on the 2D axis so the player can only move back and forth, the rotation between left and right is instant so the player can switch between left and right movement without losing momentum. The player walks at 600cm/s which is faster than most enemies in the game except the Troll Boss, the acceleration rate of 2048 ensures that the player can go from standing still to full speed very quickly which will make the platforming easier for the players.



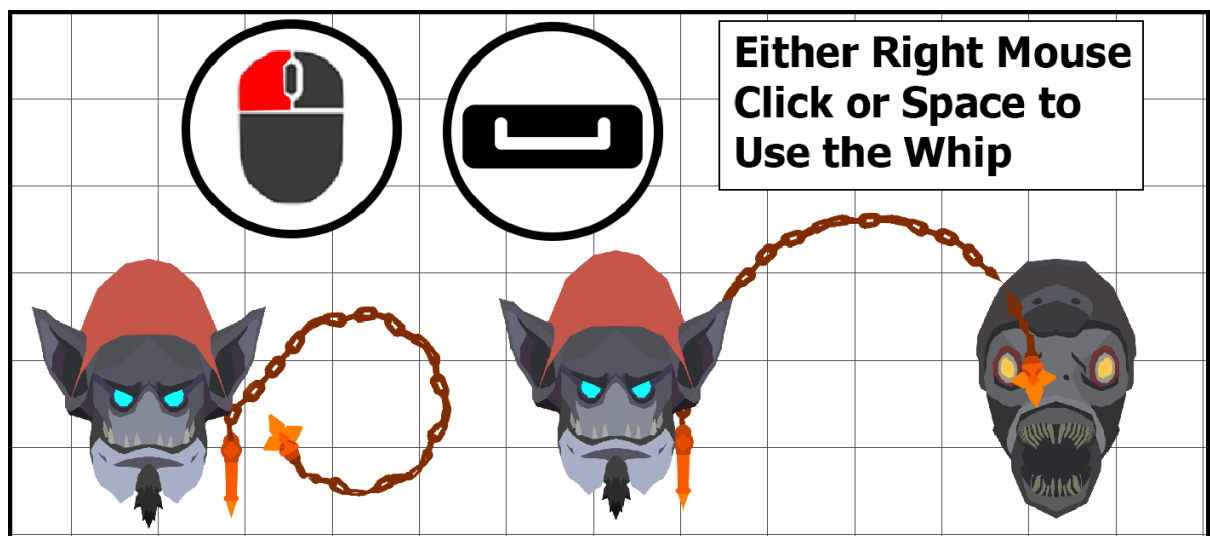
The settings for gravity and jumping have been set so each jump is slightly under 2m, so very close to the height of the player for each jump which will place more of an emphasis on the environmental mechanics like climbing on grass and swinging on ropes for vertical elevation. The air control being 0.4 does allow for some responsive horizontal movement while jumping although not allowing the player to move right at full speed from a fully vertical jump.



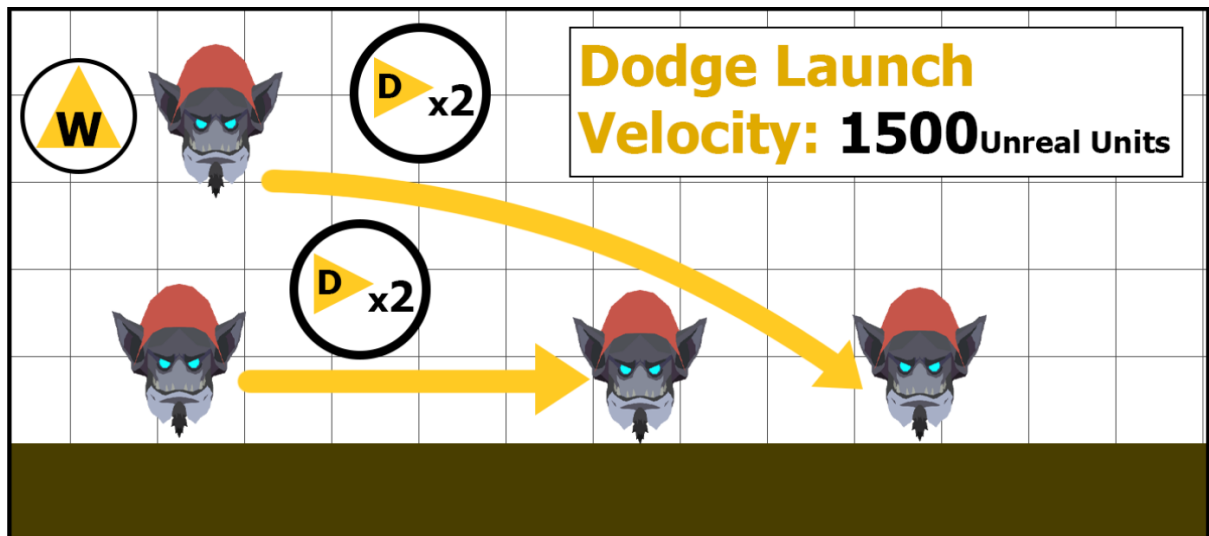
The crouch half height is set to 60 to match the crouching animation which is provided in the framework, crouching does decrease the max walk speed by half to 300cm/s but doesn't change the acceleration.



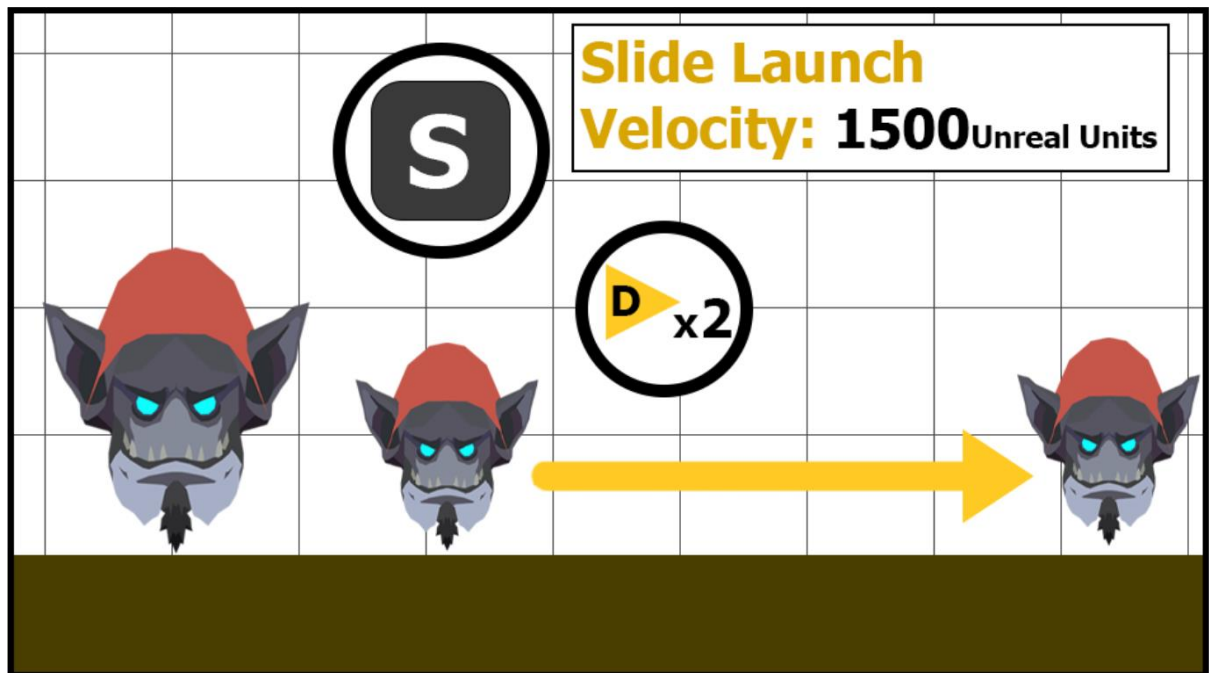
To use the main whip attack the player can either use the Left Mouse Click or the Space key which will make the character use the whip in the way they are facing, the whip can be used by both inputs to accommodate multiple styles of play depending on whether the player wants to use the mouse.



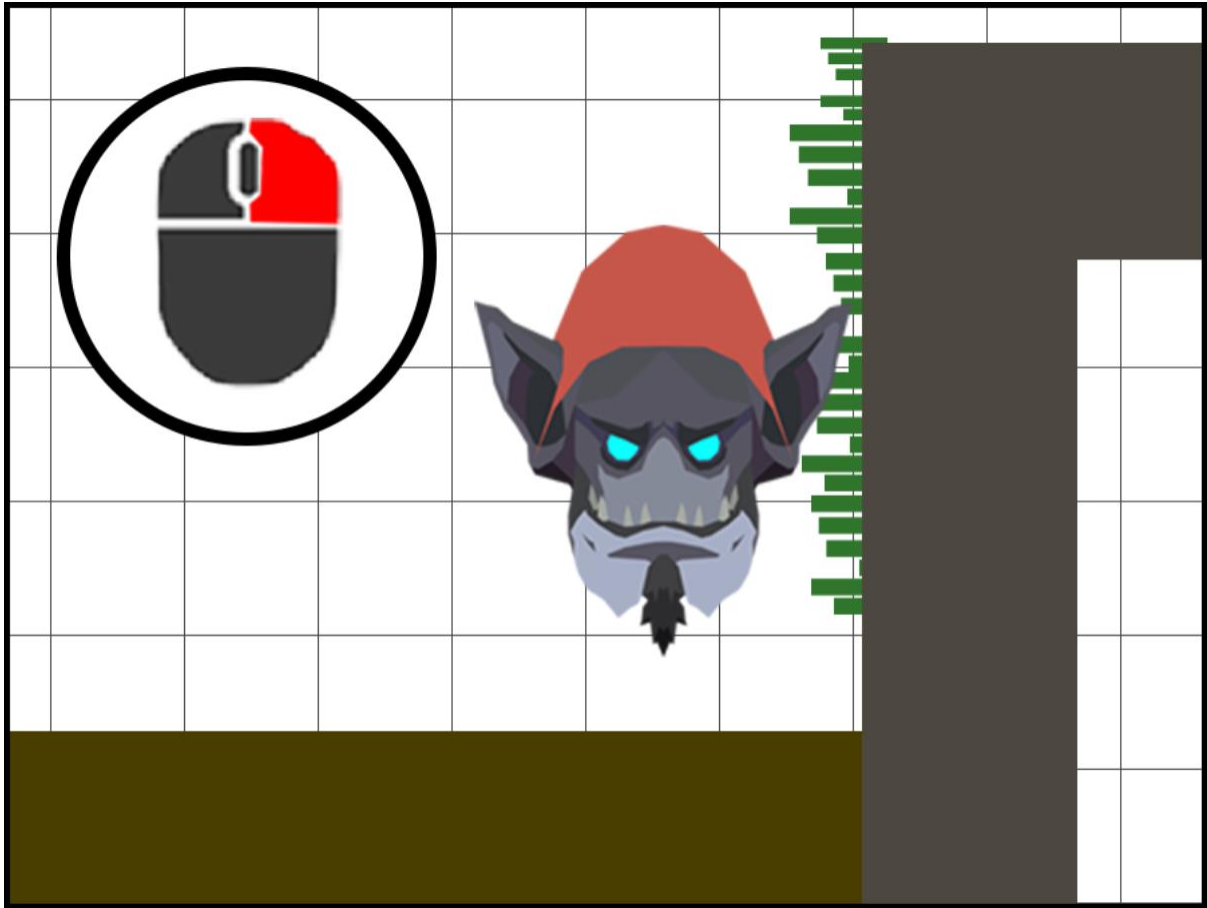
The player will be able to dodge while jumping or just walking on the floor, dodging while jumping allows for the player to dodge further as there is no ground friction causing deceleration which will occur when dodging on the floor.



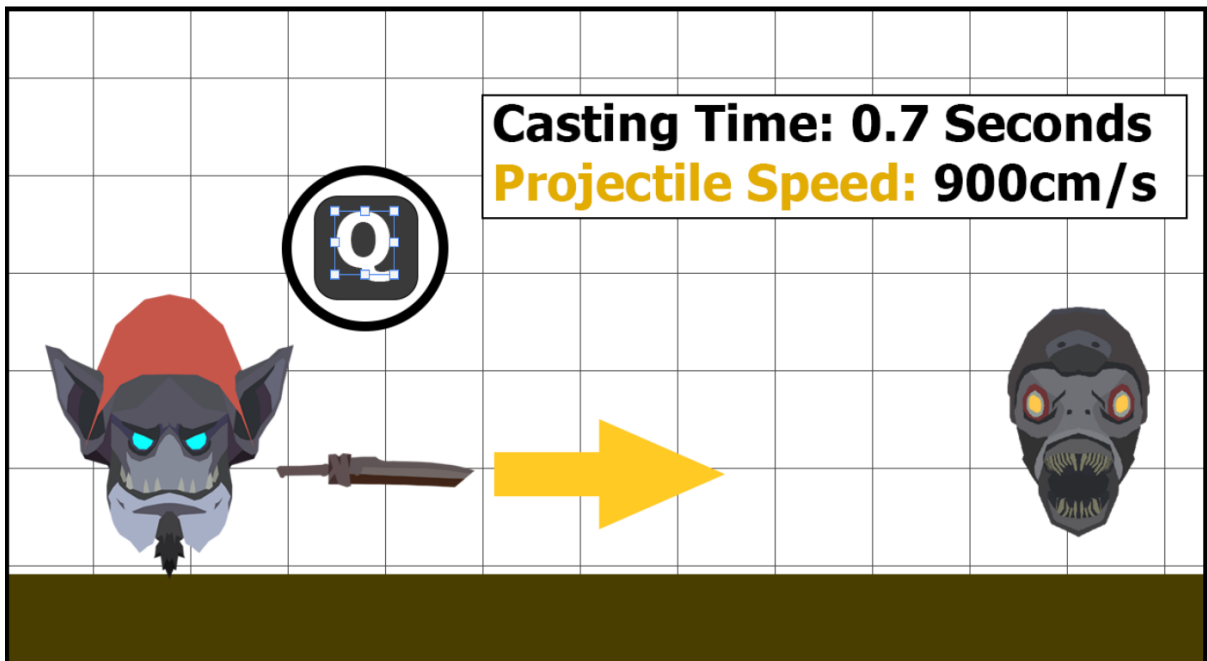
The slide has the same launch power as the dodge and makes the player move the same distance as the dodge from the floor due to the floor friction force.



To grab hold of the climbable walls with overgrown grass and vines, player will press and hold the right mouse button which will grab the environment actor if in range, the player can let go by releasing the left mouse button.



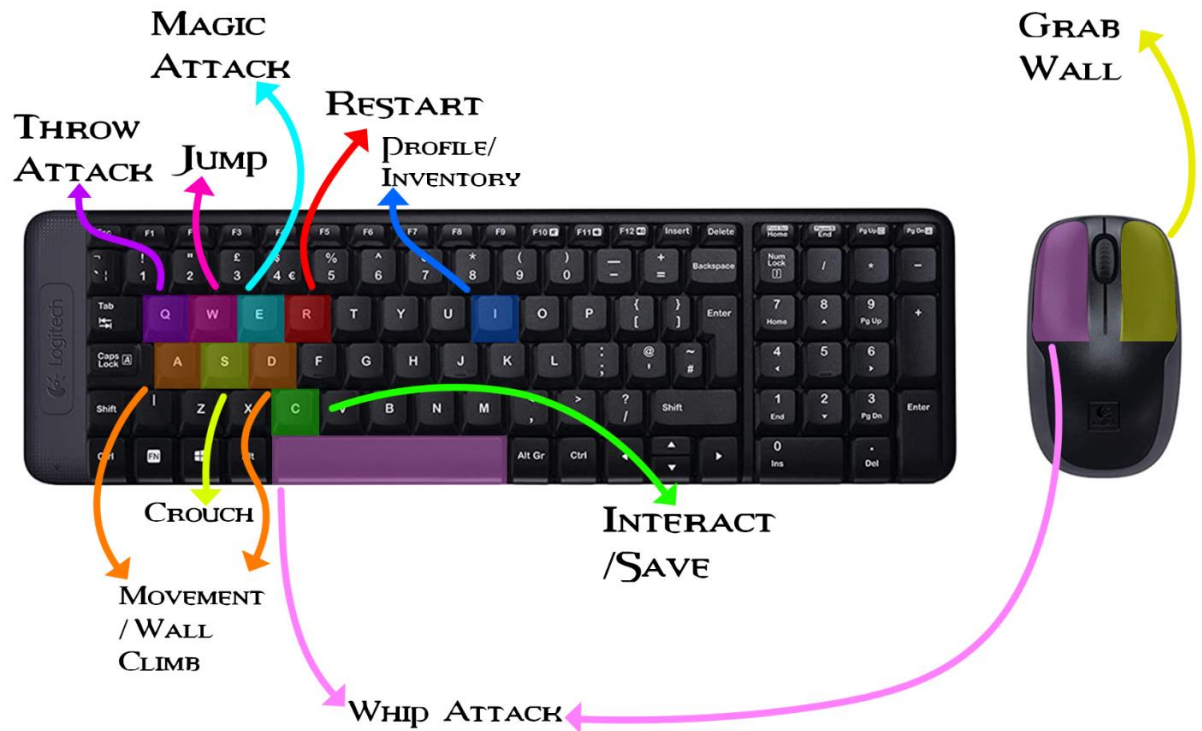
The Q key will throw a knife attack when the player has 5 or more hearts collected, there is a 0.7 second throwing animation before the knife projectile is spawned, this will travel at 900cm/s in the direction the player faces when throwing the knife, the direction can be changed in the animation.



The magic projectile can be used using the E key, this has a 0.5 second casting animation and like the knife projectile it will fire in the direction that the player faces when the projectile is spawned, this direction can be changed during the casting animation.



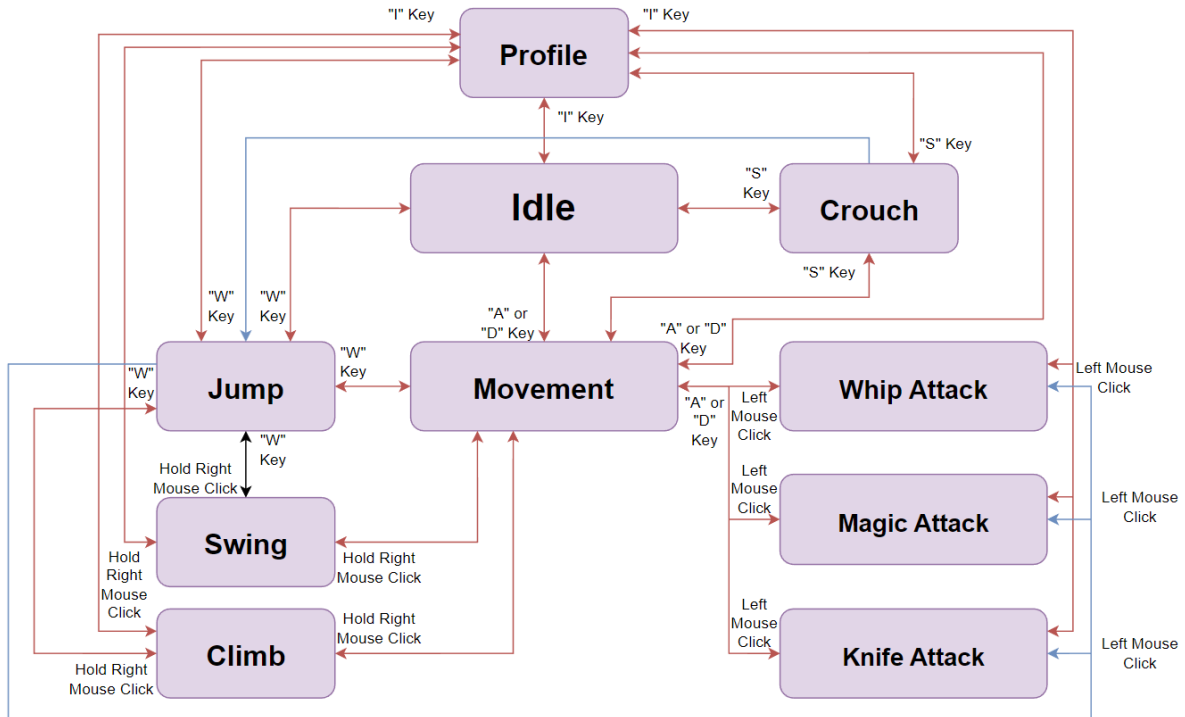
Keyboard Map



Input	Action
A and D	Movement / Wall Climb
W	Jump
E	Magic Attack
R	Restart
I	Profile/Inventory

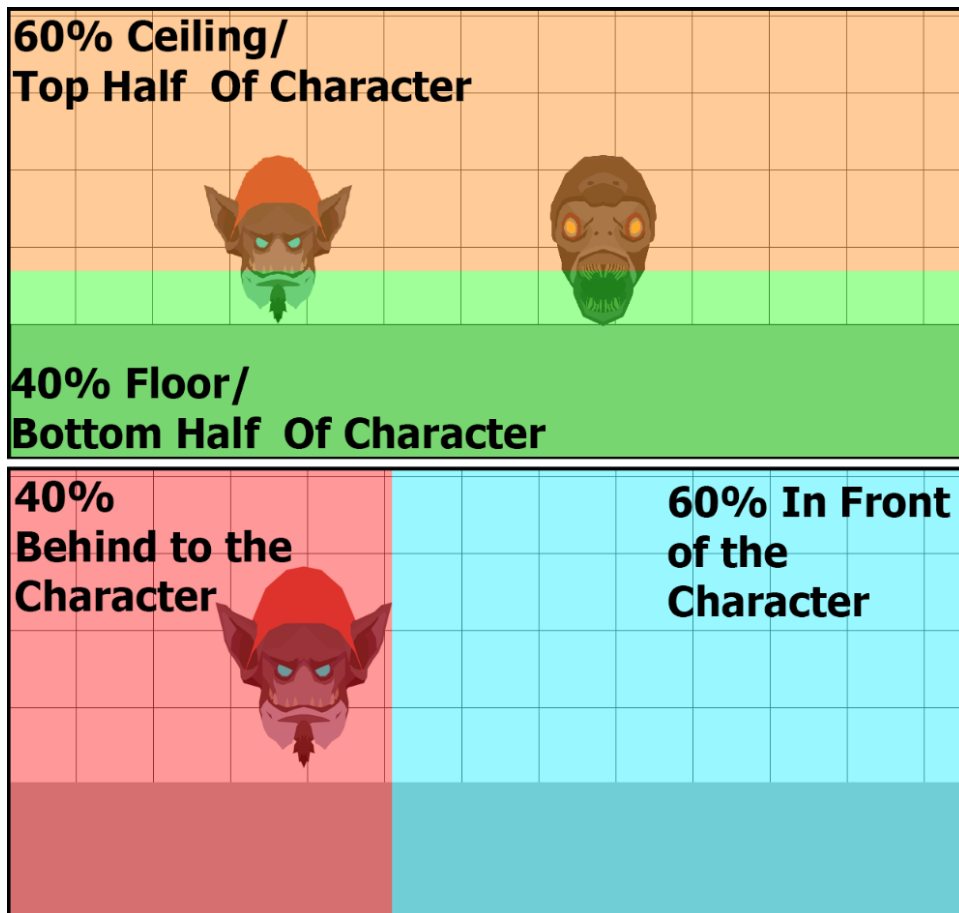
S	Crouch
Q	Throw Knife Attack
C	Interact/Save
Space and Left Click	Whip Attack
Right Click	Grab Climbable Wall

Character State Diagram

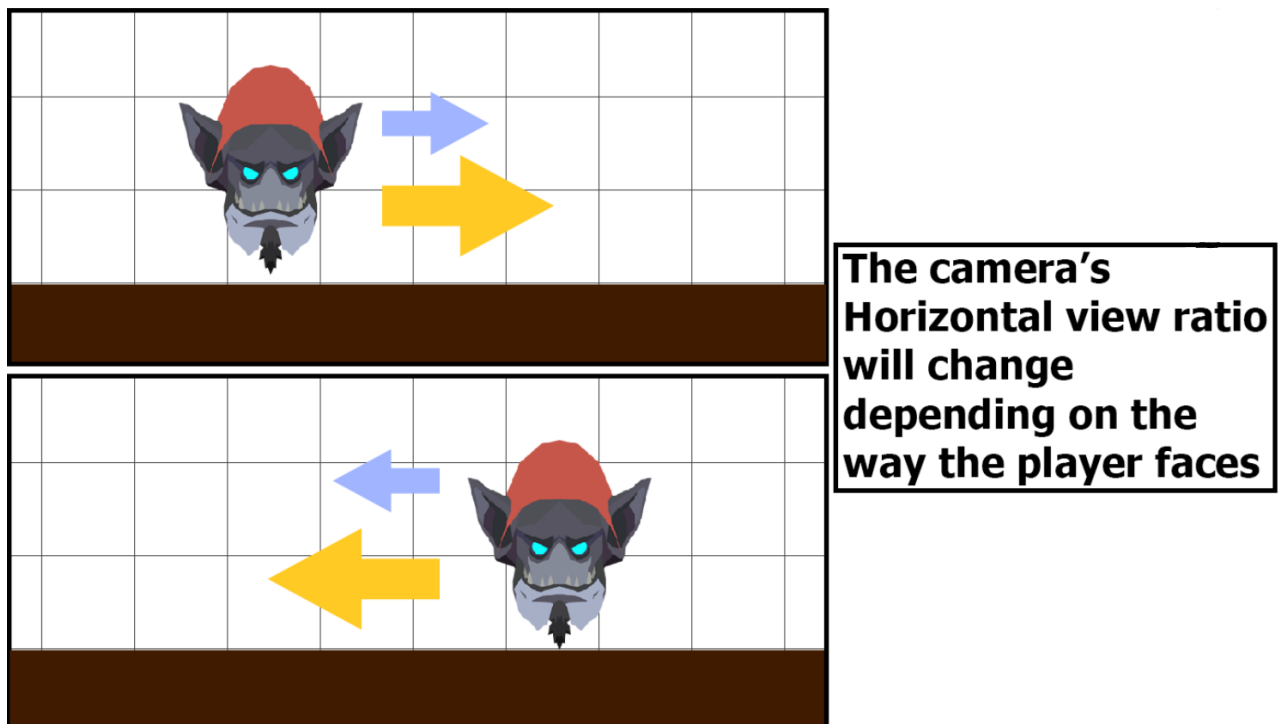


Camera

Due to the more Vertical nature of this game, the camera will be more skewed vertically to show more above the player than below the player, this is so they have a better idea about the obstacles they will be facing as they continue up the level. To the same effect, the camera will be more skewed in the direction that the player is facing, this is for the same reason as the vertical skew as the player will want to see more in the way they are facing than where they are leaving.

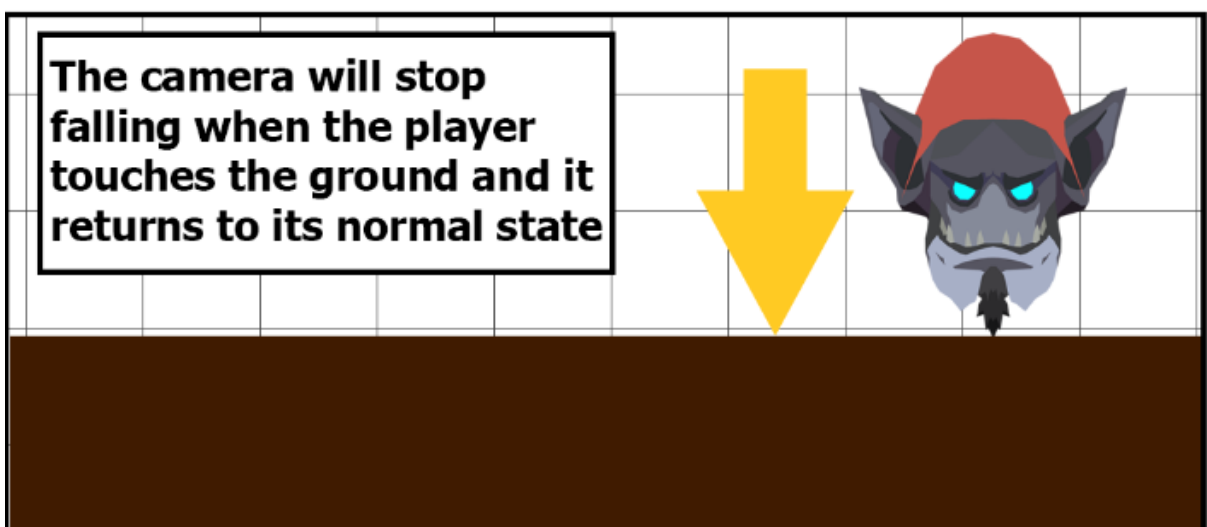
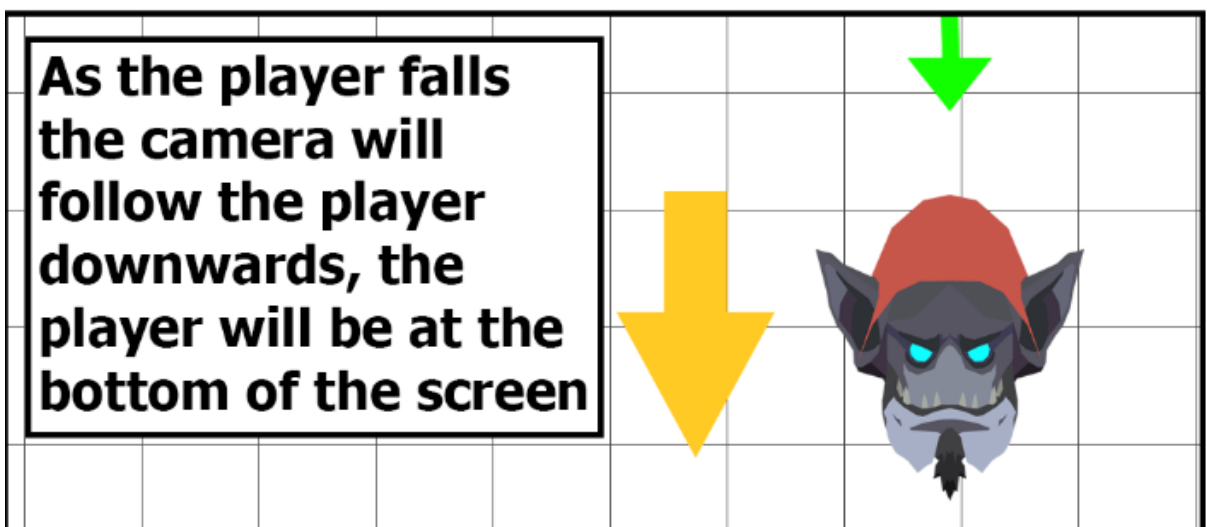
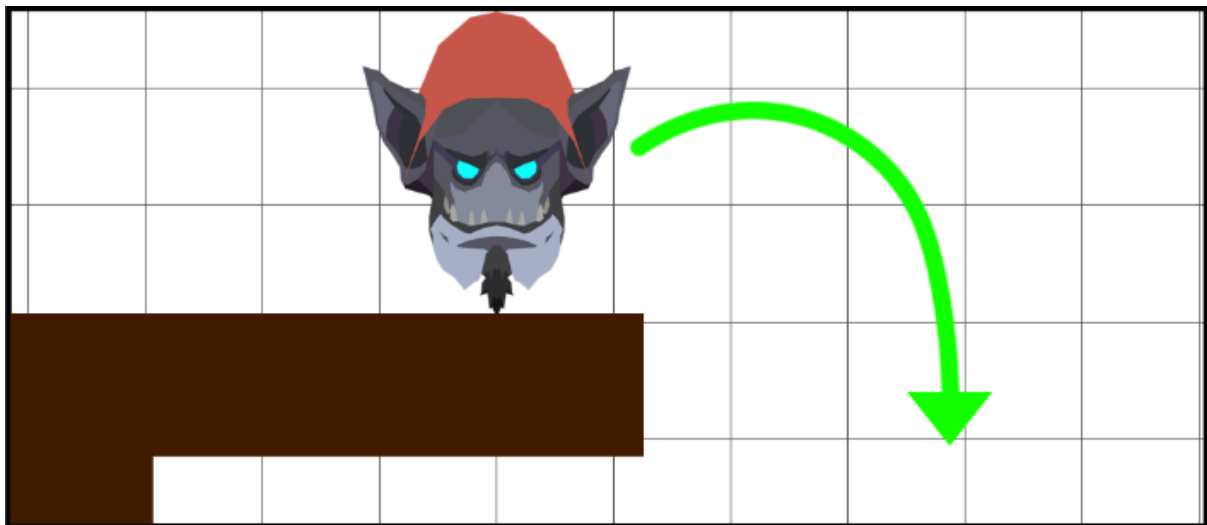


For the vertical skew, the camera's position will change when the player's direction changes to match the required skew direction, this will not be an instant switch but the camera will smoothly move between the two skew locations.



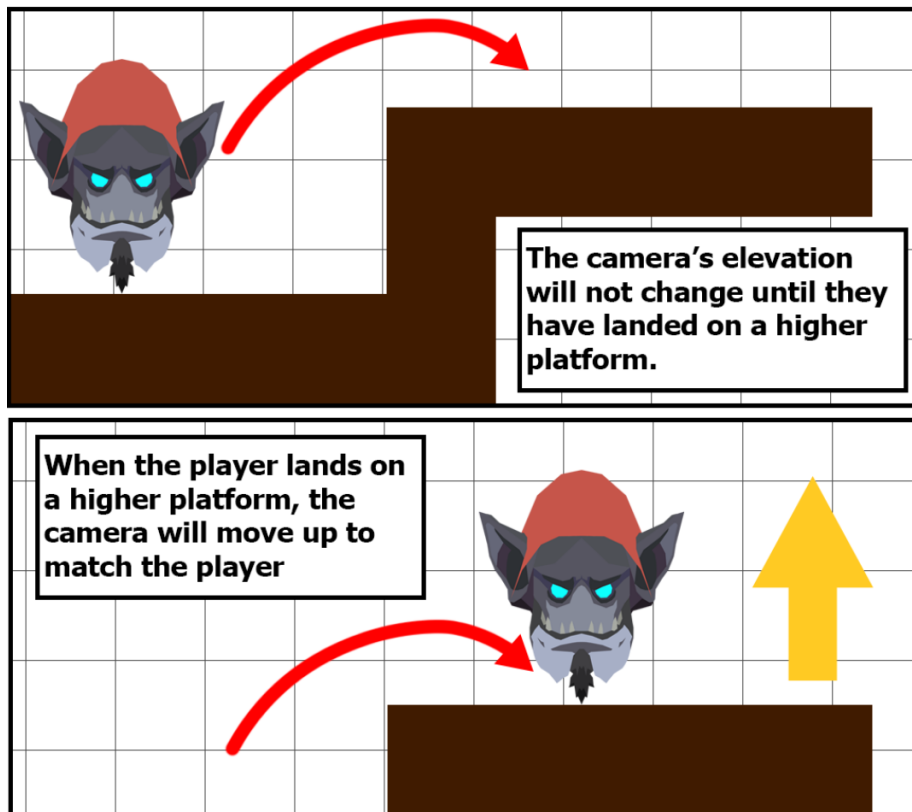
The game camera will stay vertically locked until the player falls off a cliff or jumps down to a lower

level, when reaching the bottom of the camera's view the camera will start to fall with the player character keeping them at the bottom of the screen. This will continue until the character hits the floor and stops moving downwards, when this happens the camera will return to its normal skew focused on the player and become vertically locked again.

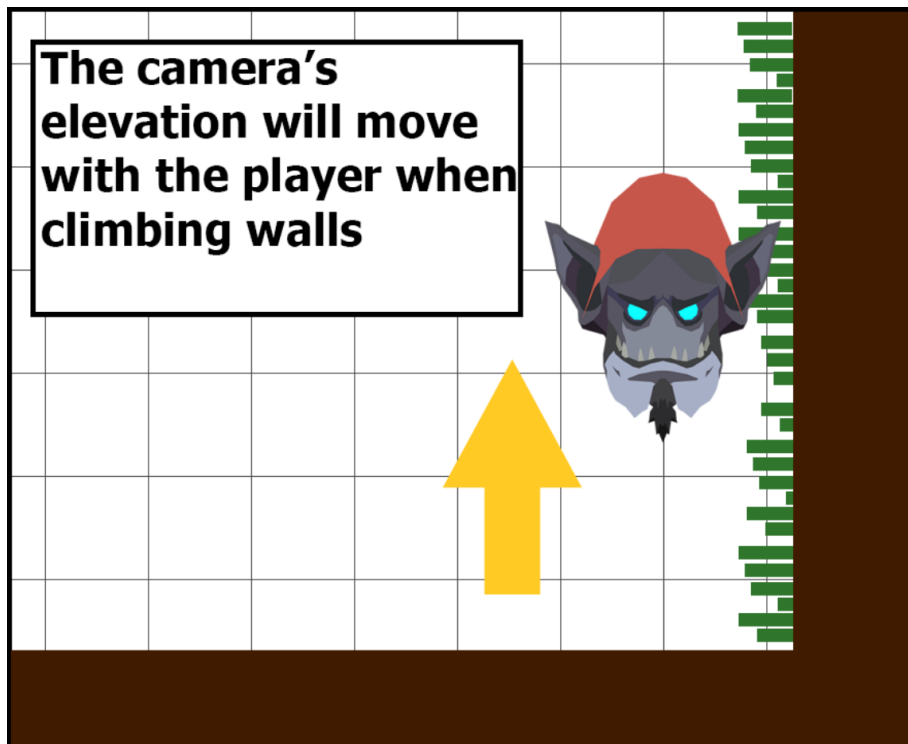


The camera's vertical elevation will not change as the player jumps in the level, however when the

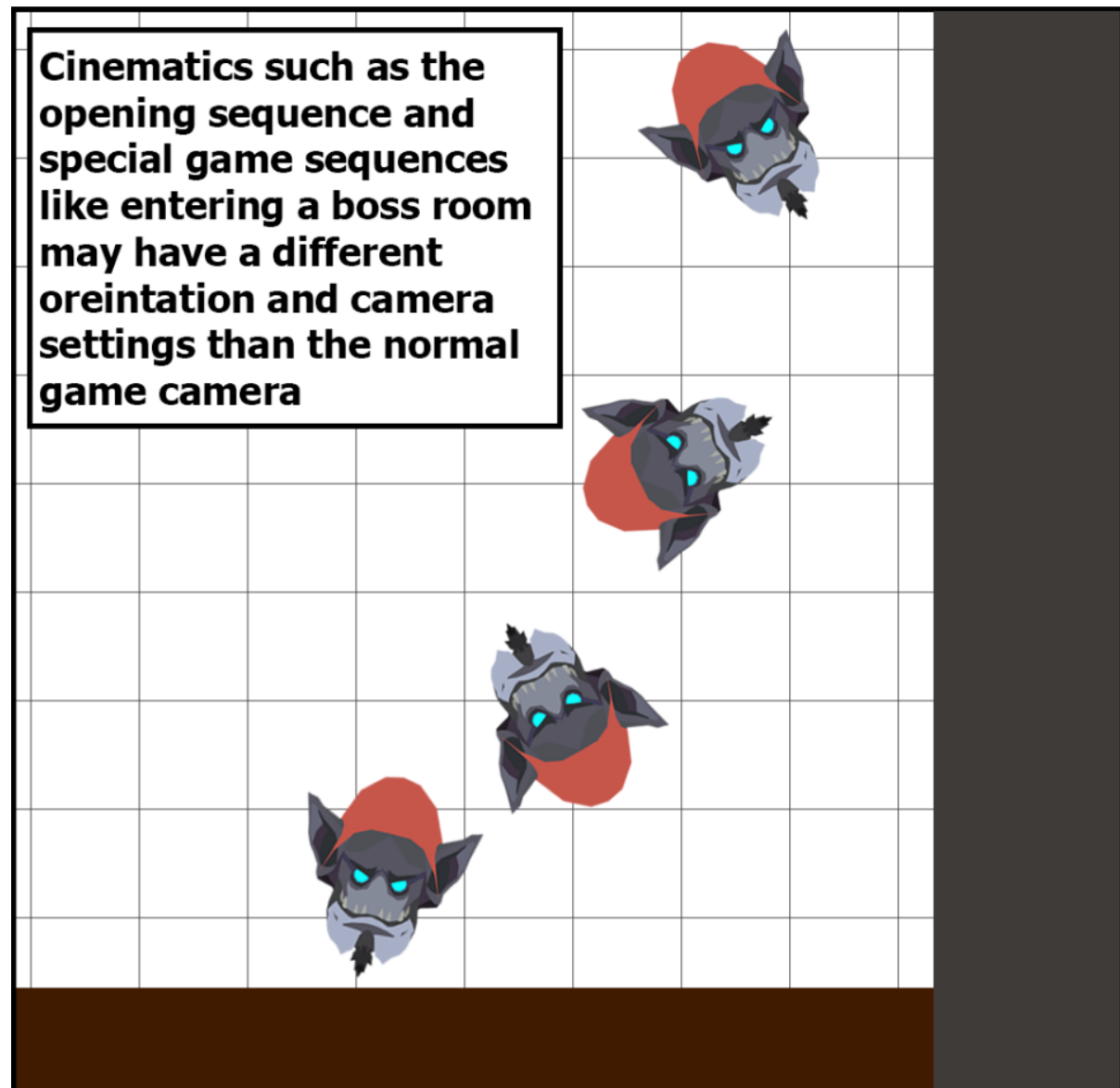
player jumps and lands on a platform with a new elevation as soon as the player lands the camera will move vertically to match the elevation of the character and return to its normal state.



While the camera usually will not move upwards with the player until they land on a new platform, the only exception will be the climbable walls where the camera will keep the player in its normal position as they move up and down.

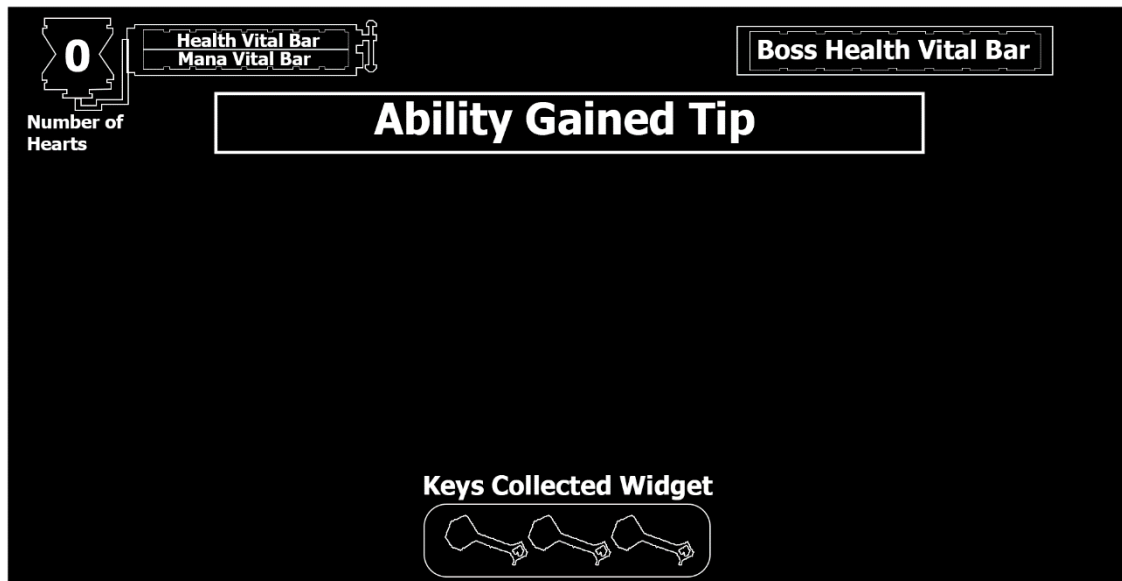


There will be separate cameras in the world for level sequences and cinematics that will play to add more cinematic elements to the game, these may have different camera settings like a different aperture and colour grading however they will be the same resolution.



UI Wireframe

In order to allow the most amount of visibility for the player as they continue through the same, all of the UI elements have been pushed to the outline edges of the screen to keep the core action of the game un-interrupted. The Keys collected widget has been added so the player can always keep an eye on how many keys they have collected and therefore how many they have yet to find. To add even more visibility to the game, the Boss Health Bar Widget and the Keys Collected Widget will only appear when the player enters the necessary area that they are used in like the Final Boss Room.



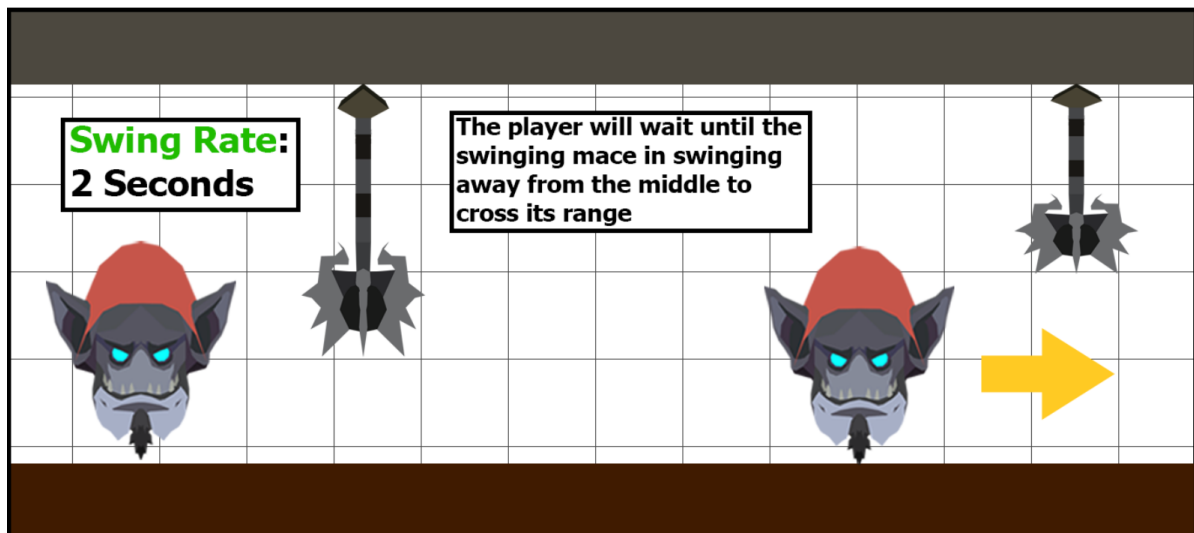
World Mechanics

Traps

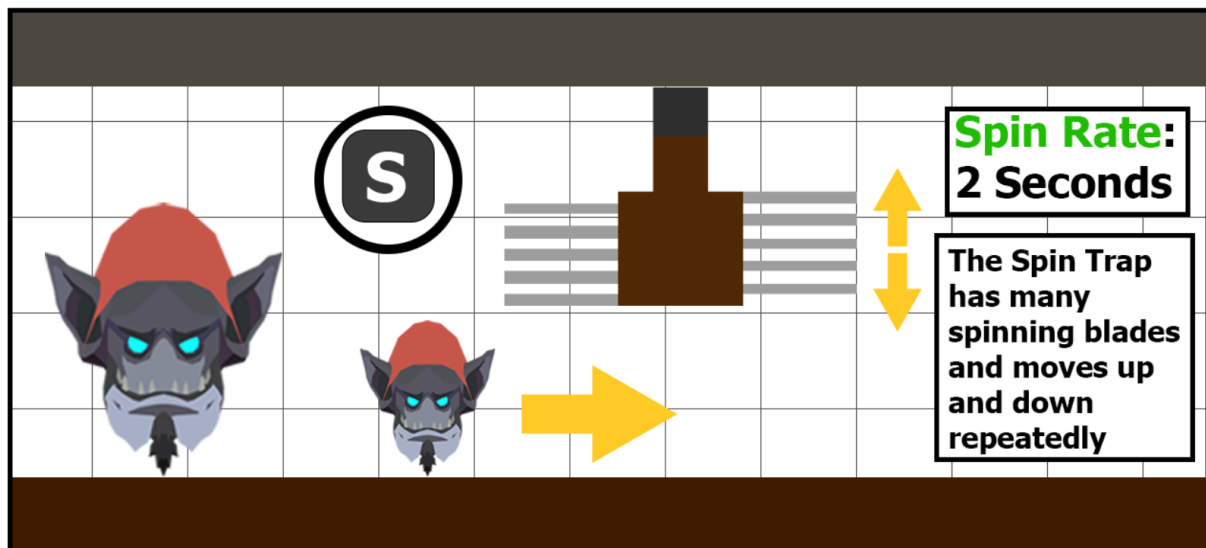
The hammer trap will slam to the ground every 4 seconds, during this slam it can damage the player leading to the player either having to jump over the hammer while its down or run past it while its winding up for its next slam



The Mace Trap swings like the hammer trap but as it swings back and forth it has a swing rate of 2 seconds instead of 4, for this trap the player can only pass it by walking through while the mace is winding up for the next swing.

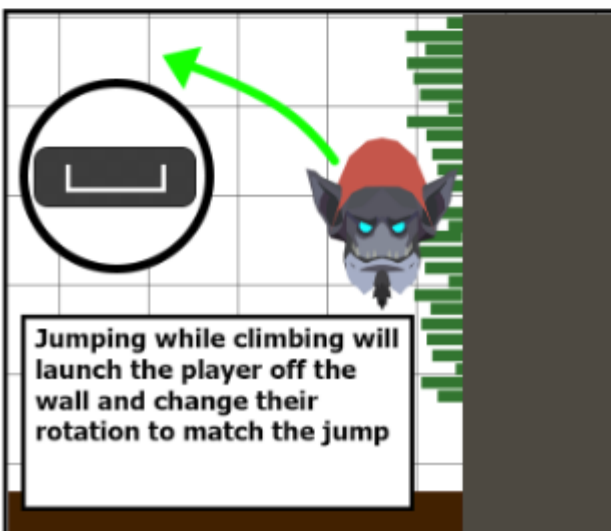
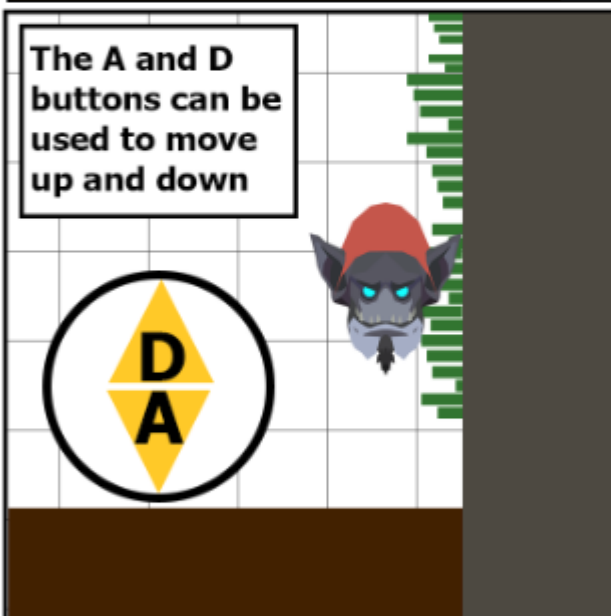
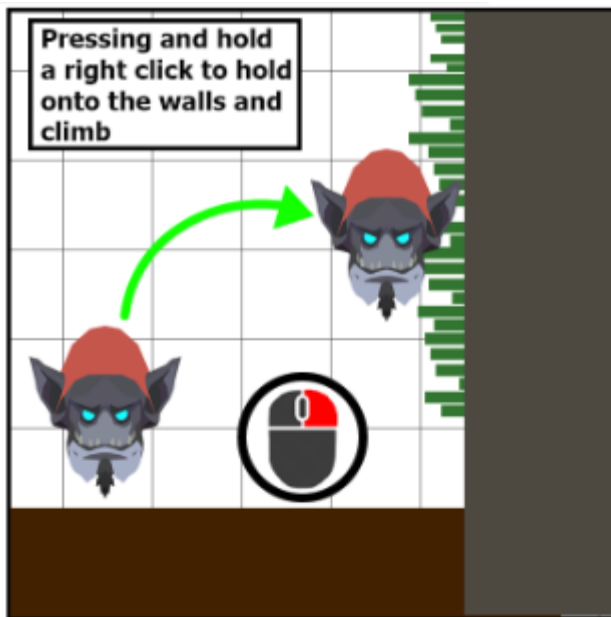


The final trap present in the game is the spin trap, this trap has multiple spinning blades which complete a full 360 degree spin in 2 seconds, these are moved up and down which forces the player to either wait for the opportune time to run past or crouch underneath to pass safely.

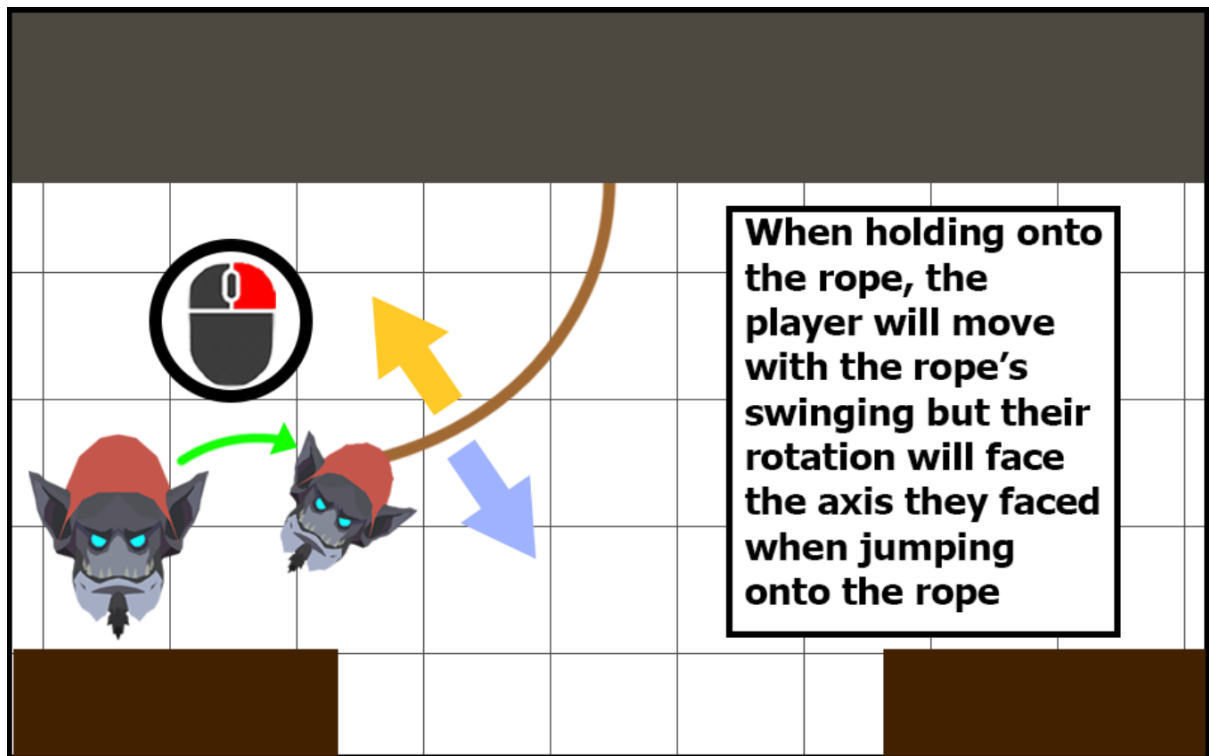


Environment Mechanics

I have two core environmental mechanics which are key for the player when progressing through the level, the first of these are climbable walls which the player will be able to ascend through pressing and holding the Right Mouse Button and using the movement keys. As stated previously the camera will follow the player as they move up and down the wall but will become vertically locked when the player jumps off or climbs onto a ledge. Speaking of which, the player will be able to jump off the climbable walls with the jump button "W" which will launch the player upwards in the opposite direction they face as they climb the wall.

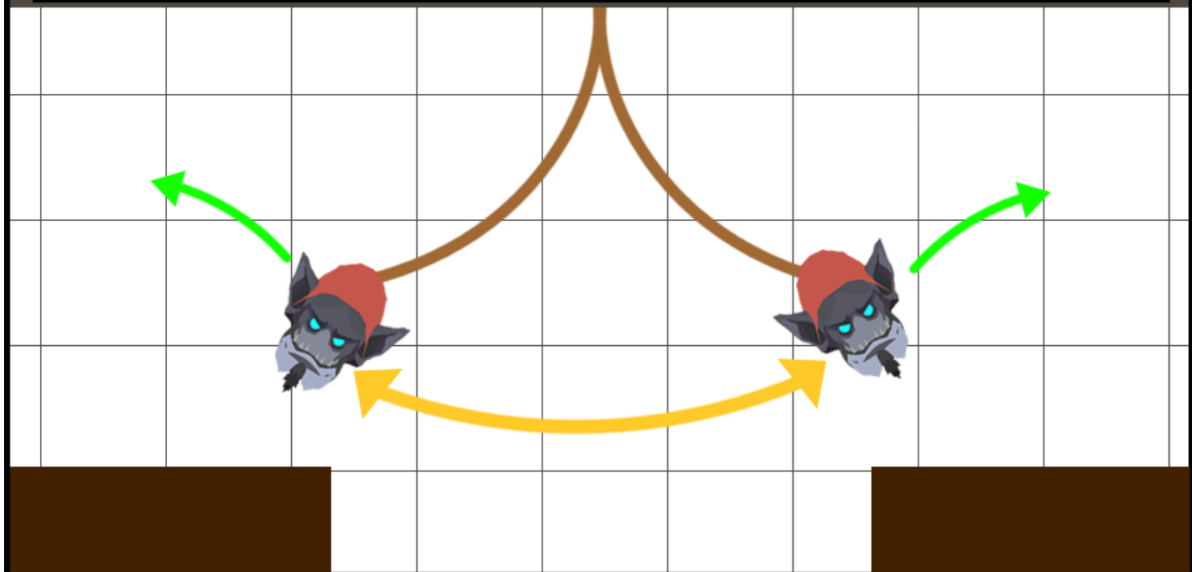


The second core environmental mechanic is the swinging rope, this will be used for horizontal movement and crossing larger gaps which cannot be cleared with the double jump, when the player jumps into the rope and holds Right Mouse Button they will grab onto the rope and swing with it.

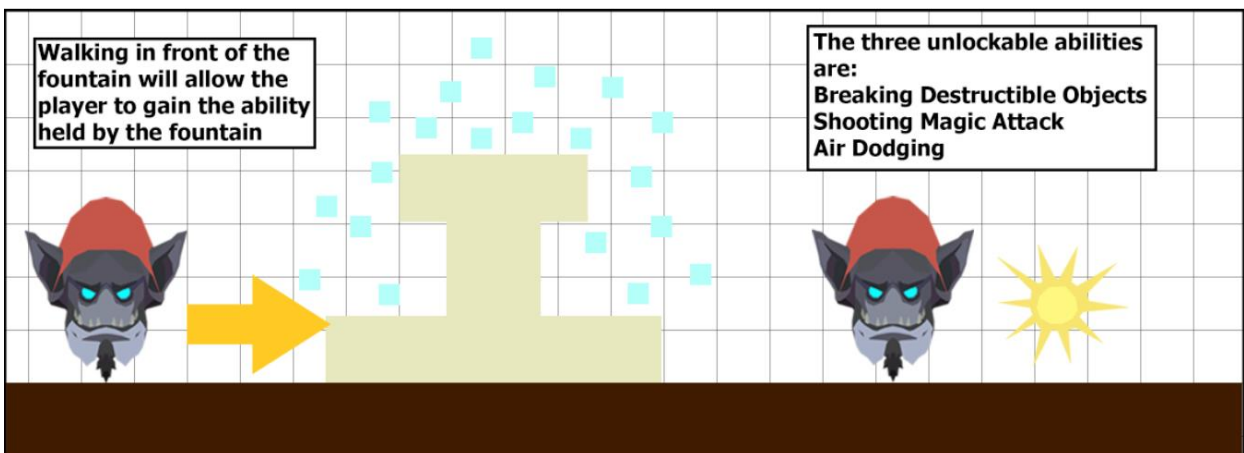


When the player wants to stop swinging on the rope, they can either release the Right Mouse Button to simply drop from the rope or jump off the rope where the player character will be launched in the direction they swing (if swinging backwards, they will be launched backwards). The strength of this launch will be determined by how close to the end of that swing they are moving towards, so the player will move more to the right if they are closer to the end of the right swing.

To stop swinging on the rope, the player can jump and they will be launched off the rope in the direction that the rope was swinging.



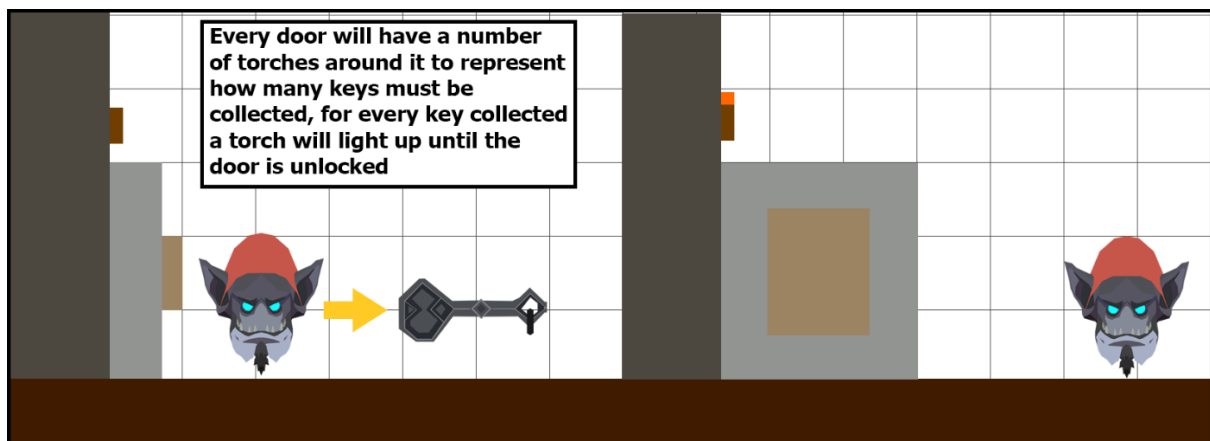
Each floor of the mansion will have a fountain that when passed allows the player to gain a new ability, this will be communicated through a particle effect to shine on the player and the Ability Unlocked UI widget which was shown in the UI wireframe. Each of the 3 abilities serve different functions and have double uses as they can be used outside of simply solving the puzzles (Air Dodging allowing for better movement, Magic being a projectile attack, etc)



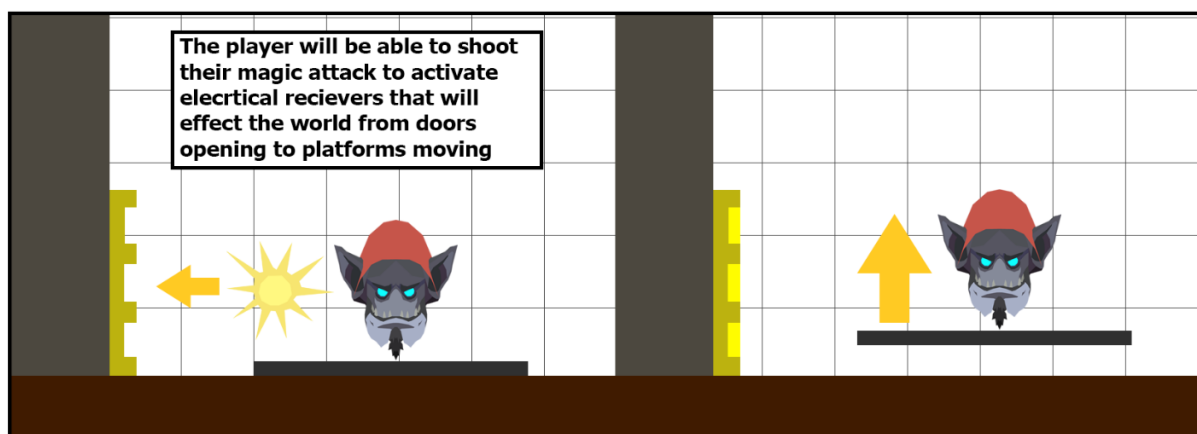
Each floor also has a checkpoint which can be accessed by walking in front of the checkpoint and pressing E, this will allow the player to reset at this position when they die.



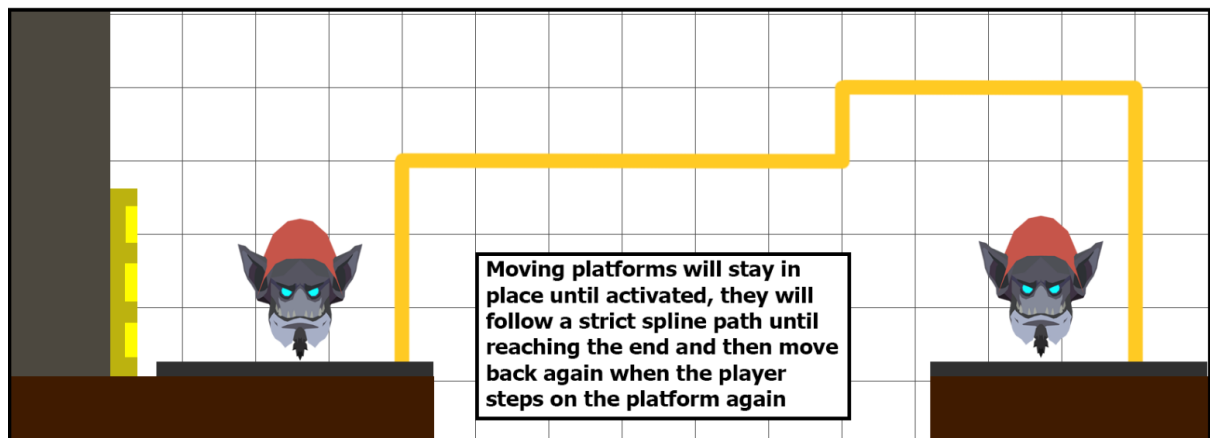
Due to this game having a large focus on exploration and puzzle-solving, one of the core environmental mechanics for exploration are key doors where the player will have to collect three keys in each room to open the door to the next section. To implement some affordance and make the progress clear to the player, each door will have three torches which will come alight when the player has collected their respective key.



The player will gain access to the magic attack from the second level of the castle, this can not only be used for combat but can also be used to activate mechanical elements of the castle like moving platforms and locked doors. When the magic attack hits the receiver, it will glow with yellow light and the affected mechanism will be activated instantly to make the cause and effect as clear as possible.



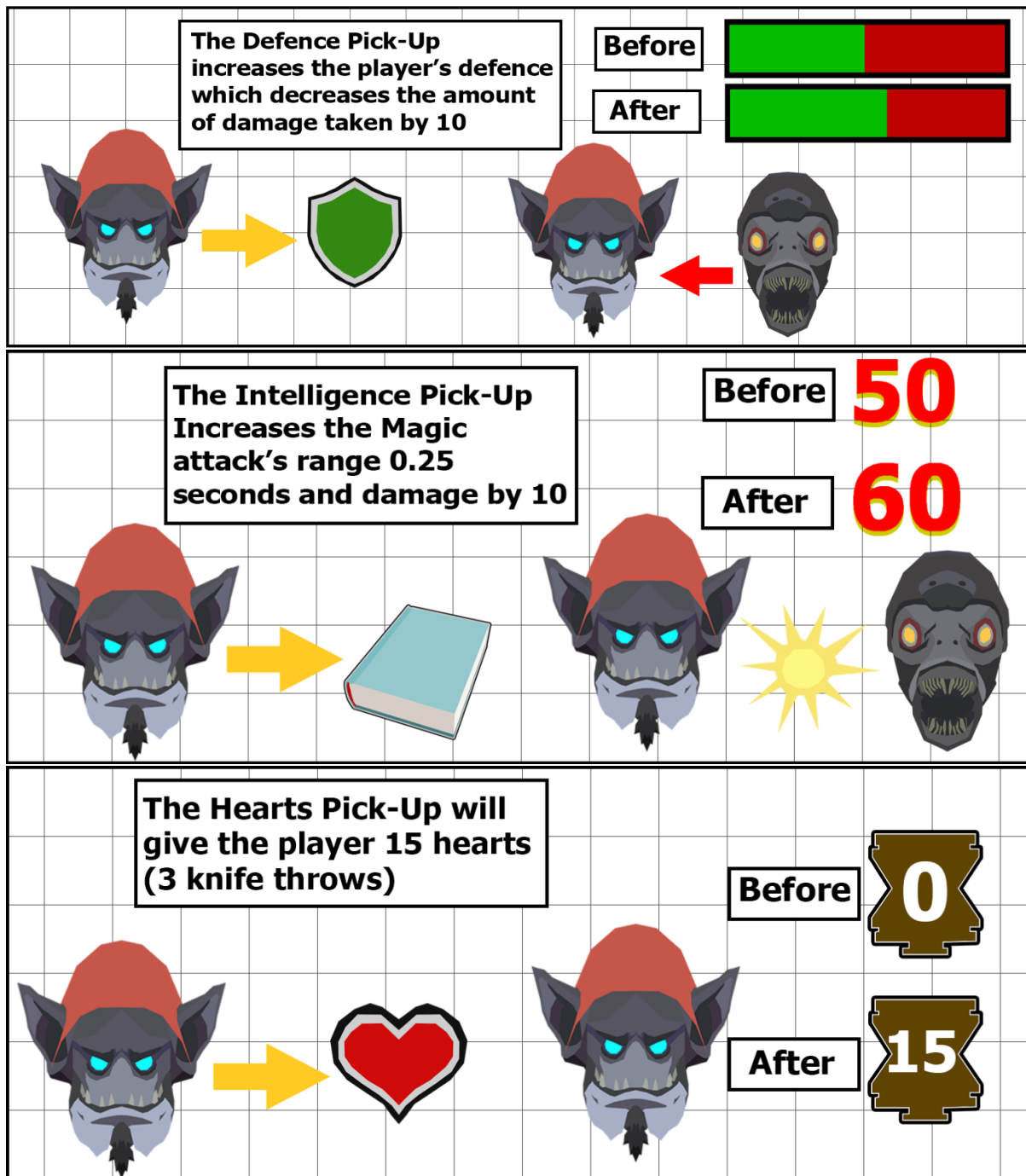
The movable platforms will follow a spline in the level when they are activated which allows for more control in the way the platforms move, these platforms will move back and forth for everytime the player walks on them.



Pick-Ups

There are multiple pick-ups in the level which will increase the different player statistics that buff the player's abilities (Strength making physical attacks stronger, Defence reducing damage, etc) and they are scattered throughout the different floors. This is important to the level's progression as there will not be many enemies as the game's focus is on the platforming and puzzle elements so these pick-ups give a more obvious feeling of progression that will motivate the player to continue.

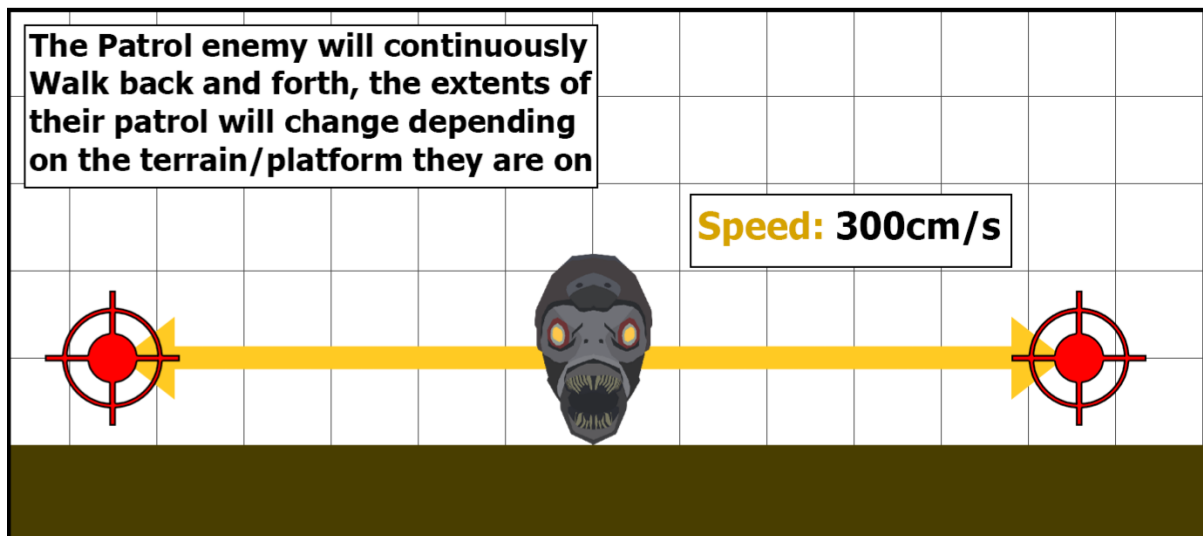




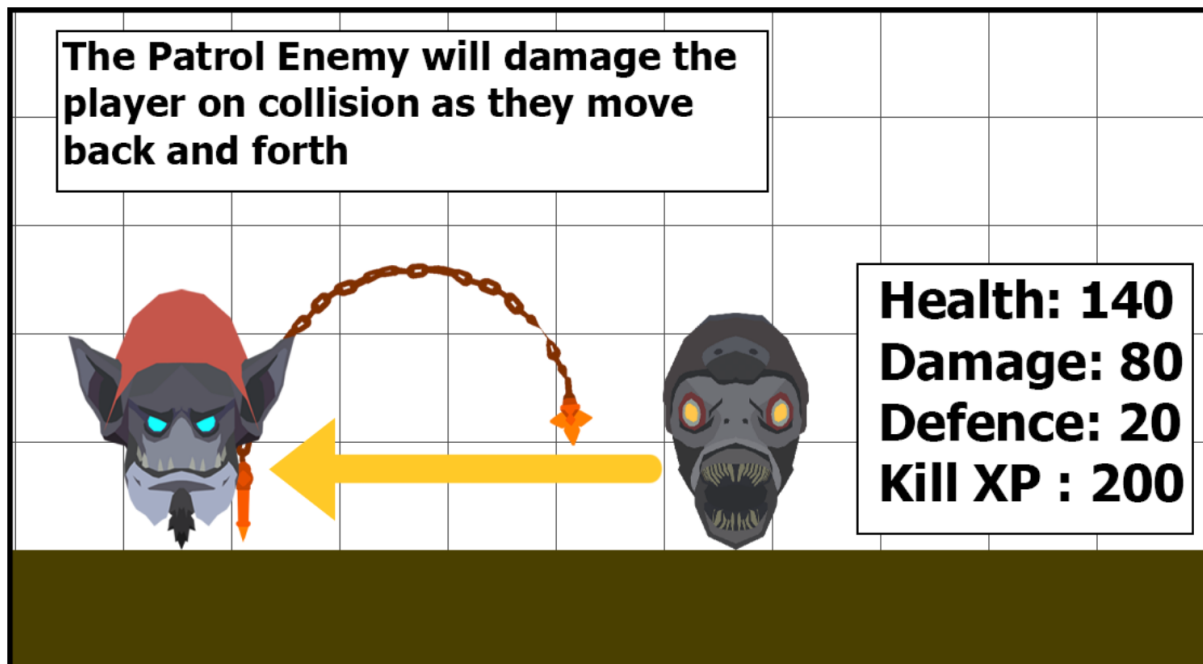
Enemies

Patrol Enemy

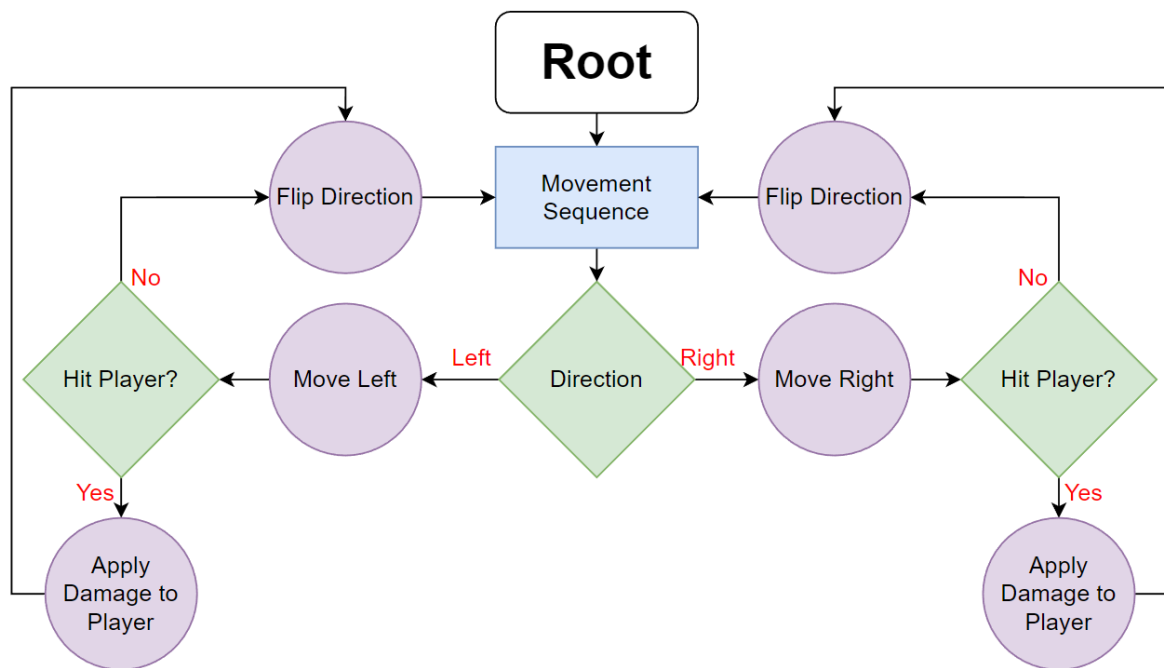
The patrol enemy is the most common type of enemy in the game, they will move back and forth repeatedly with the bounds of this repeated movement changing depending on the platform they are placed on and how far I want them to move. They move at 300cm/s which makes them slower than the player but not slow enough that the player can move around them easily.



The patrol enemy will simply run into the player to damage them and will take a few hits with the whip to kill which allows them the time to get in close if the player simply stands still and doesn't manoeuvre around properly.

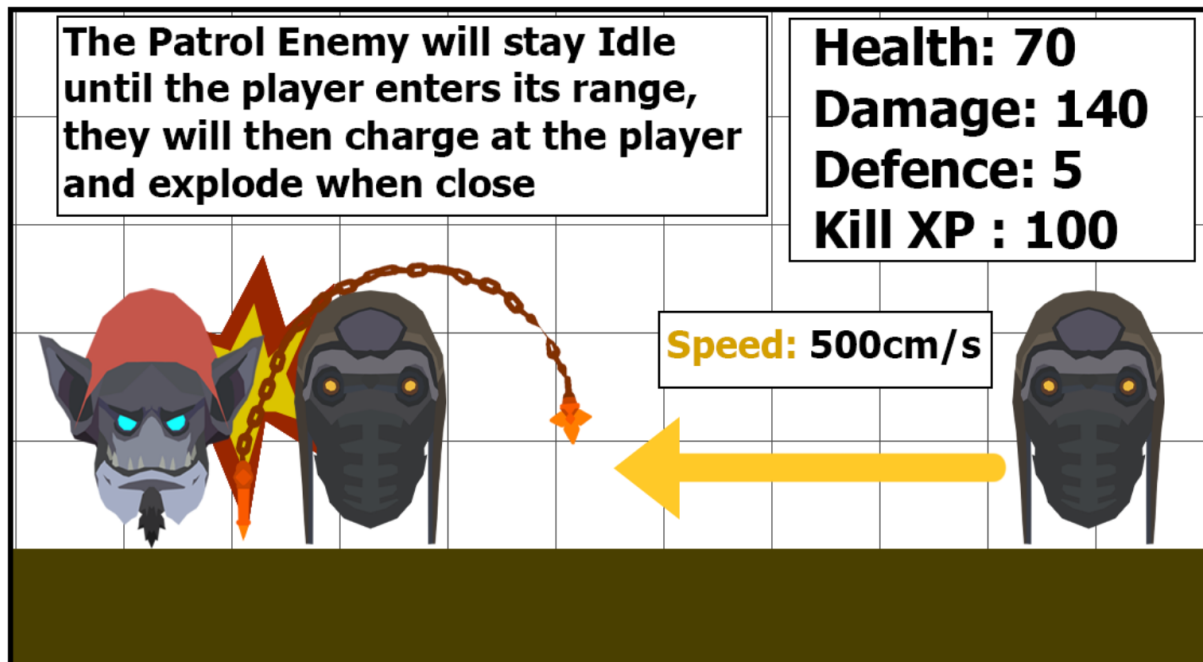


Patrol Enemy Behaviour Diagram

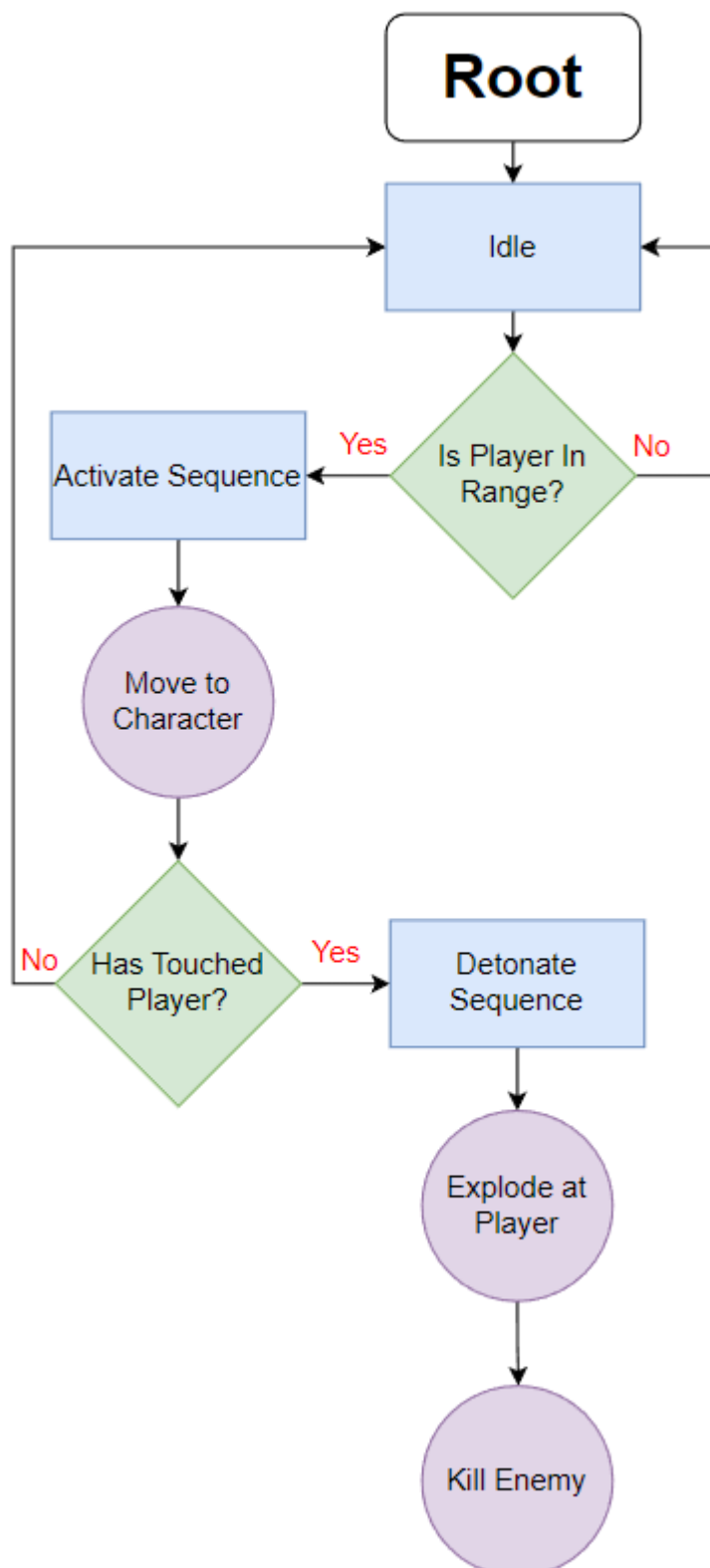


Bomber

The bomber enemy, similar to the patrol enemy, will damage the player on impact however this damage is different as it is explosion damage that deals more damage. The Bomber will stand still until the player enters their range which will be set individually to allow for a more dynamic enemy which can be placed in different, surprising areas without randomly walking off. This enemy has less health than the normal patrol enemy however to compensate it rewards less XP when killed to make-up for its lack of challenge.

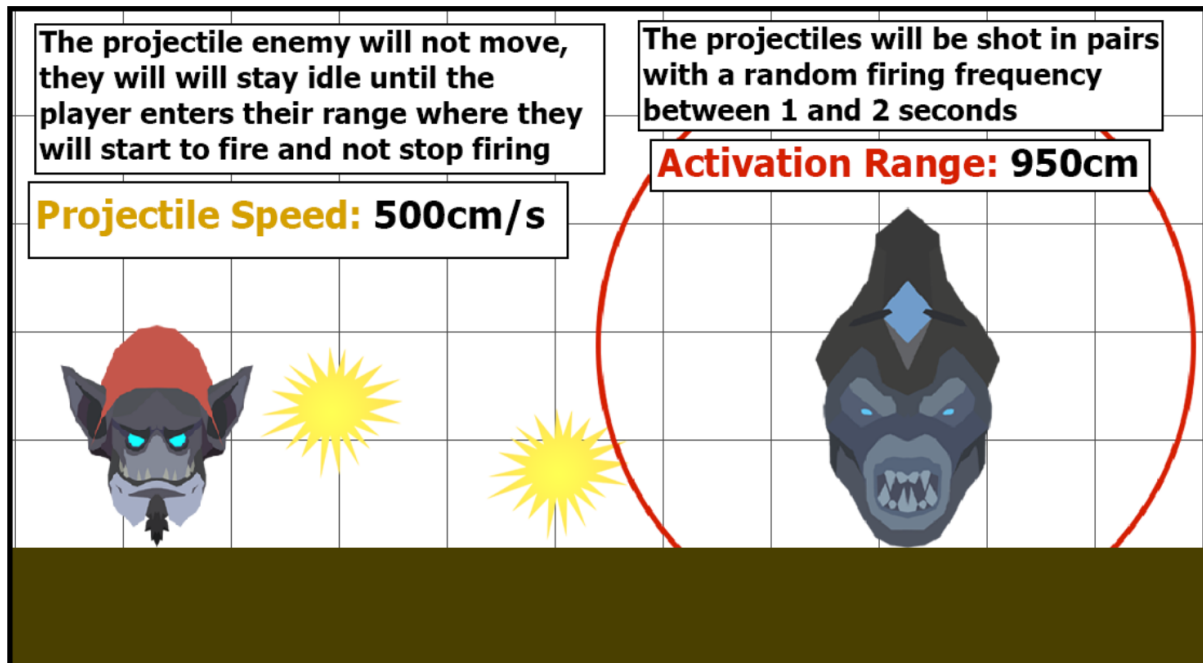


Bomber Behaviour Diagram

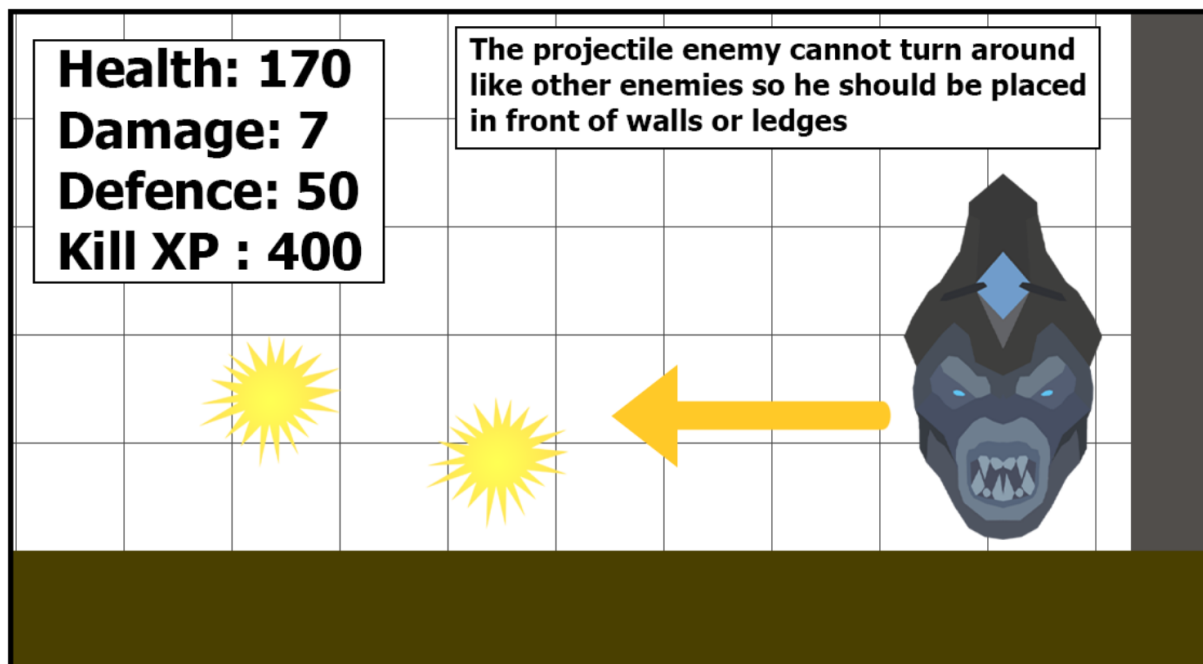


Projectile Enemy

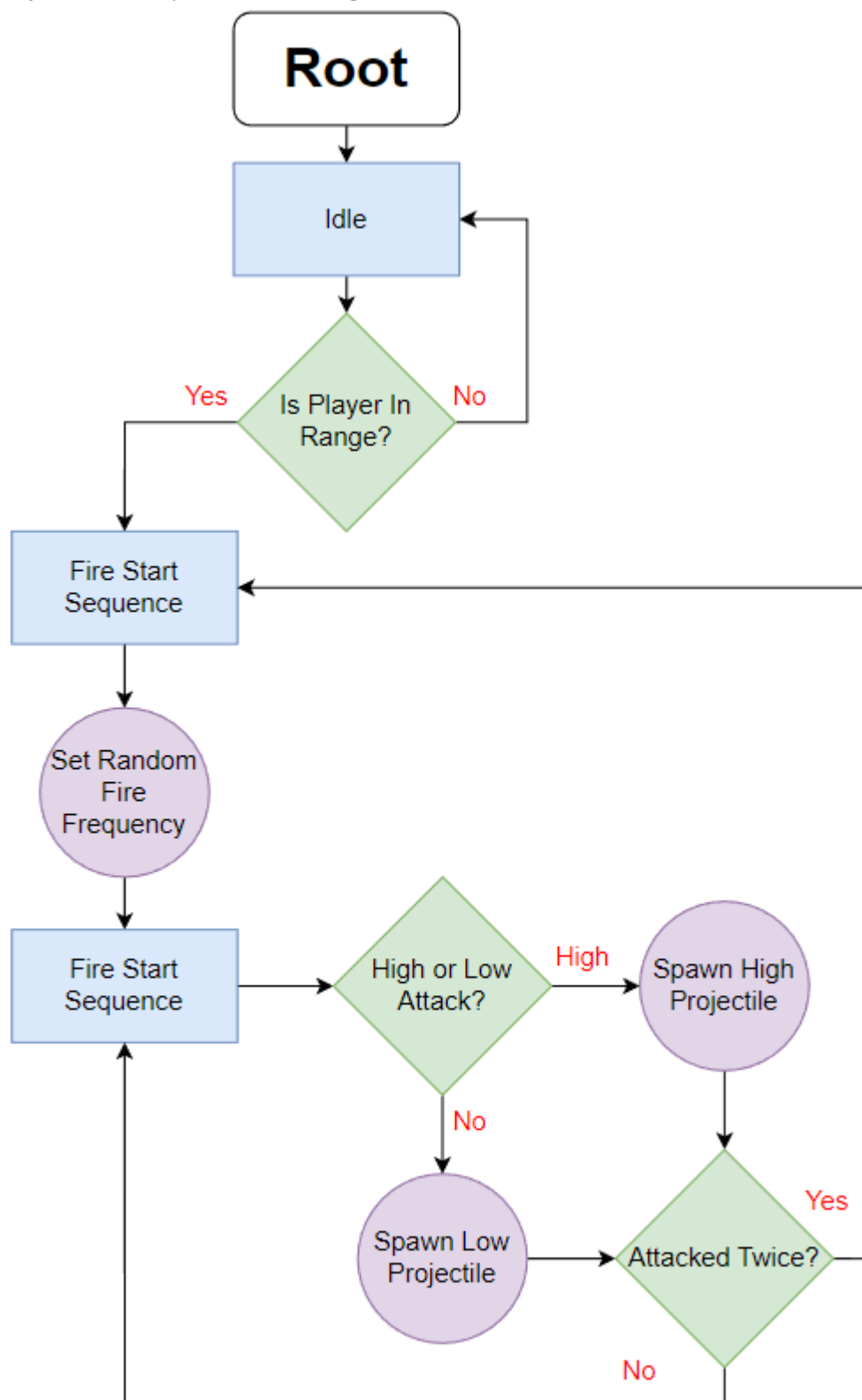
The projectile enemy is a stand-still guard who attacks with magic attacks that are shot with a random rate between 1 and 2 seconds at the player, with each projectile having a random chance to be either a high attack or a low attack which will force the player to either jump or crouch. The speed of these projectiles are the same as the player's own magic attacks which will make them more of a challenge to take down.



Due to the Projectile Enemy's lack of mobility, he will mostly be placed in areas where he only has to look and attack forward like on edges and in front of walls to force the player to attack him head-on. He has the most amount of health out of all three standard enemies as well as the highest defence and this difficulty causes him to have the highest Kill XP as well.

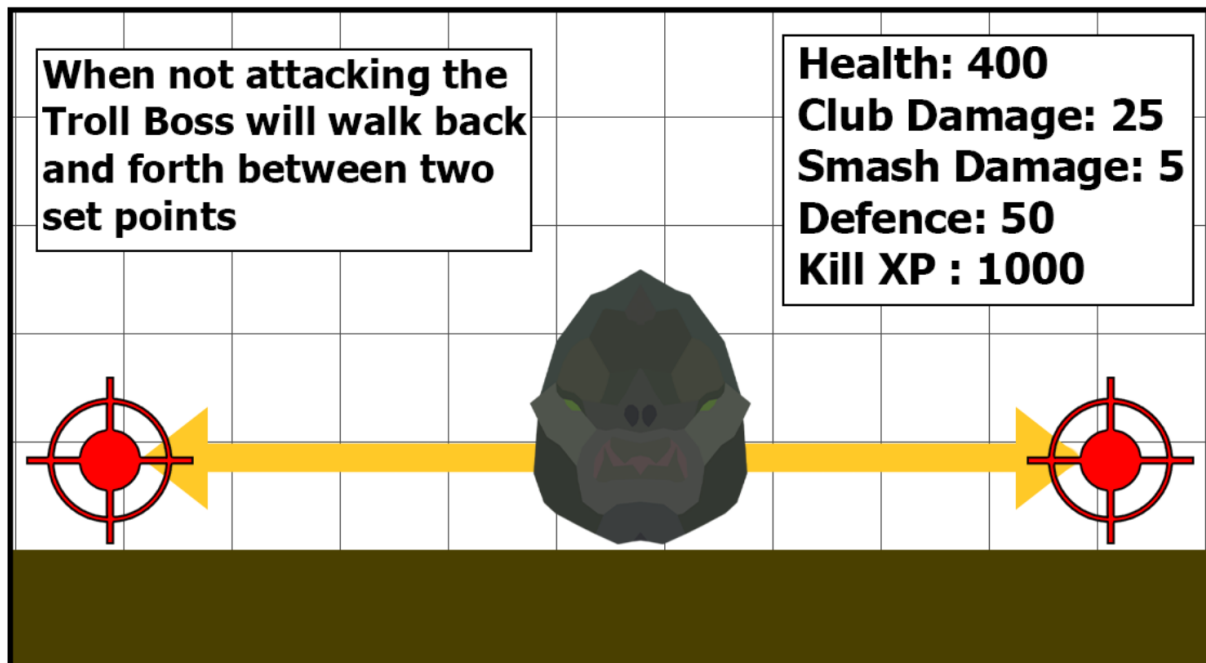


Projectile Enemy Behaviour Diagram

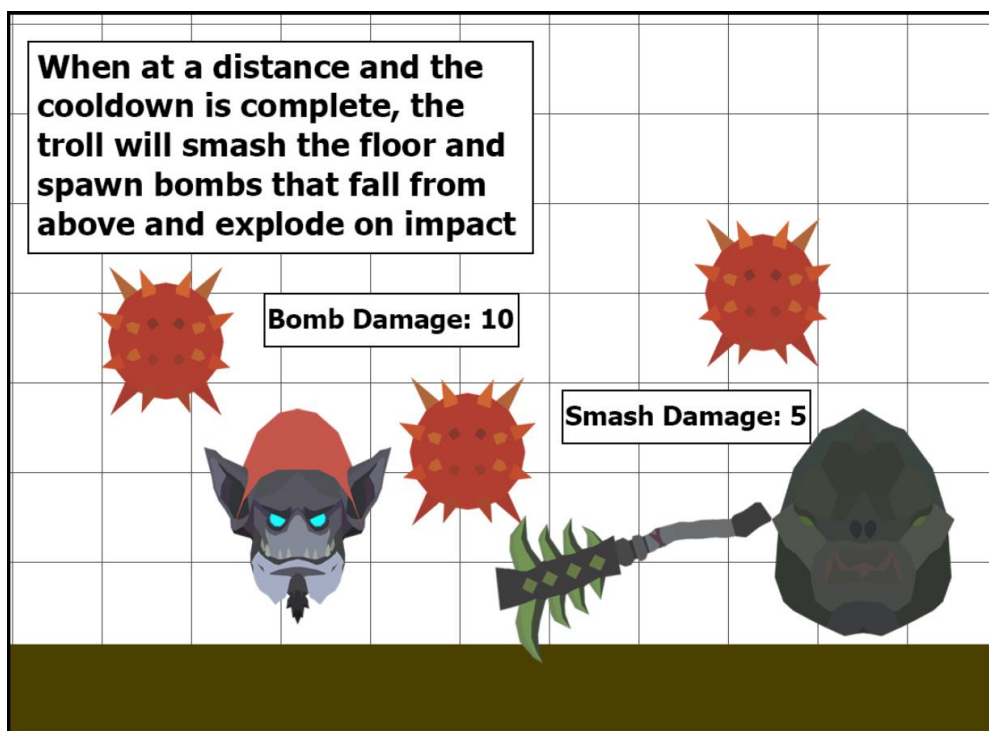


Troll Boss

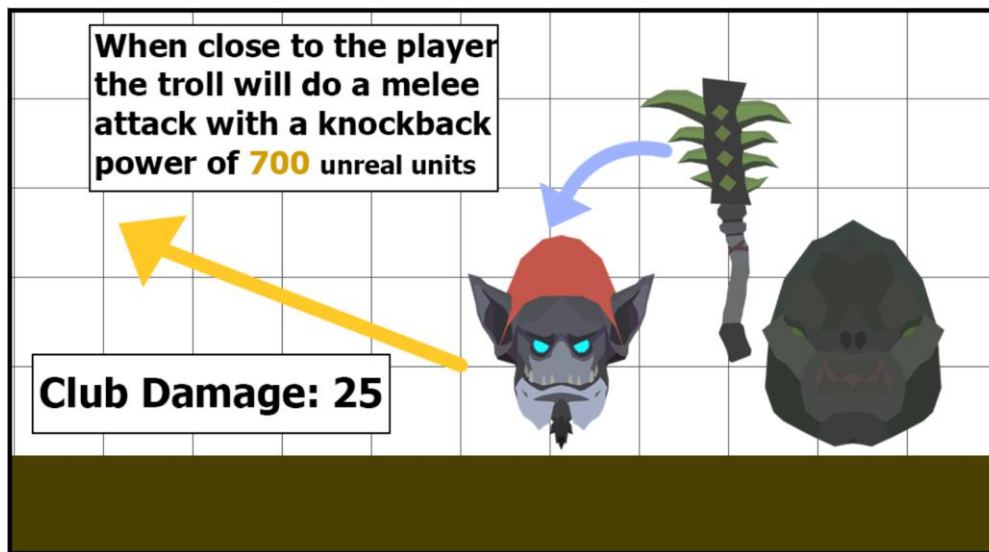
The troll boss is the strongest out of all three enemies as he is the final challenge of the game, he has the most health and the most Kill XP although his defence is slightly lower than the health of the Projectile Enemy to balance out the large Health statistic. The Boss's movement functions almost the same as the Patrol Enemy's movement although while the patrol enemy keeps moving when damaging the enemy the boss will stop to attack which gives the player a small window to dodge.



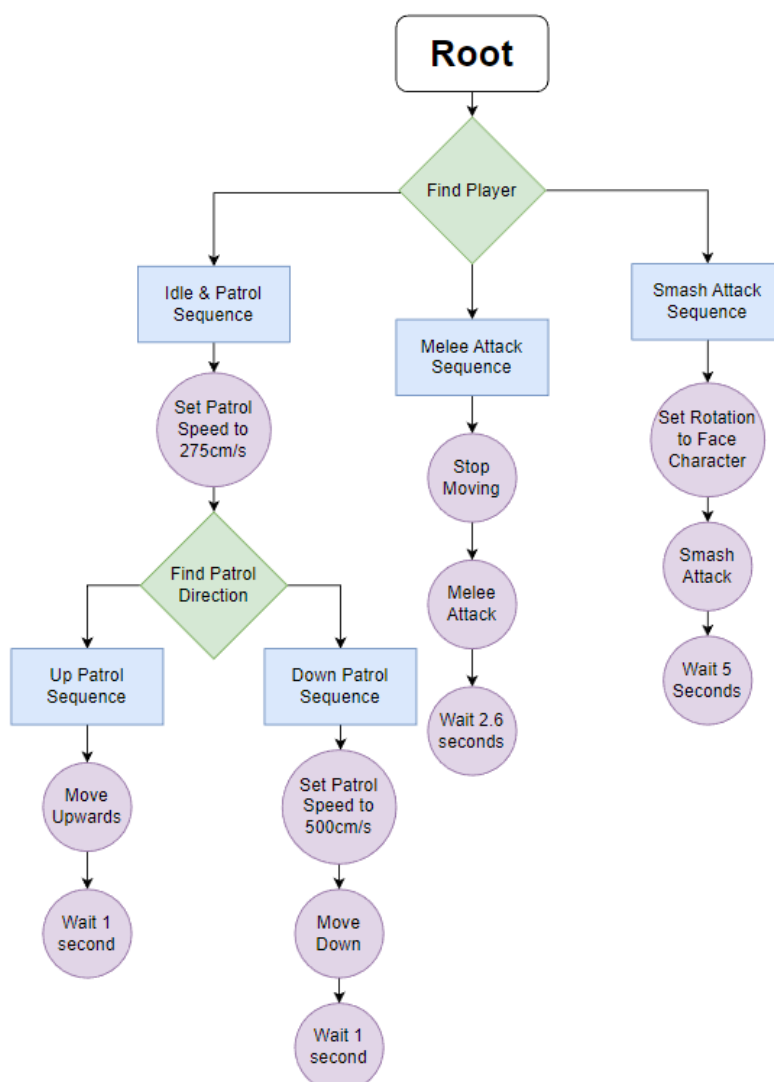
One of the two attacks the Troll can perform is the Bomb attack which occurs when the cooldown is complete and the enemy is far away from the player. The troll smashes the ground with the club which will deal 5 damage and bombs fall from the sky each dealing 10 damage, the player will have to dodge these bombs while also dodging the troll.



The second attack is the boss's most common attack which is a simple melee club attack, this occurs when the player enters his close range. The troll will swing at the player which when colliding causes 25 damage and knocks the player back with the strength of 700 Unreal Units.



Troll Boss Behaviour Diagram



Enemy Quick Point Table

	Health	Damage	Speed	Defence	Kill XP
Patrol Enemy	3	3	3	2	3
Bomber Enemy	4	2	1	3	4
Projectile Enemy	2	4	N/A	1	2
Troll Boss	1	1	2	1	1

Enemy In-Game Values Table

	Health	Damage	Speed	Defence	Kill XP
Patrol Enemy	140	80	300cm/s	20	200 XP
Bomber Enemy	70	140	600cm/s	5	100 XP
Projectile Enemy	170	7 Per Projectile	N/A	50	400 XP
Troll Boss	400	Bomb: 10 Smash: 5 Club: 25	450cm/s	50	1000 XP

Level Design

World Summary

The level will be mainly designed off a large mansion or castle, abandoned for many years which has caused many vines and weeds to grow across the manor, the mansion itself will seem half-destroyed to add to this abandoned aesthetic.

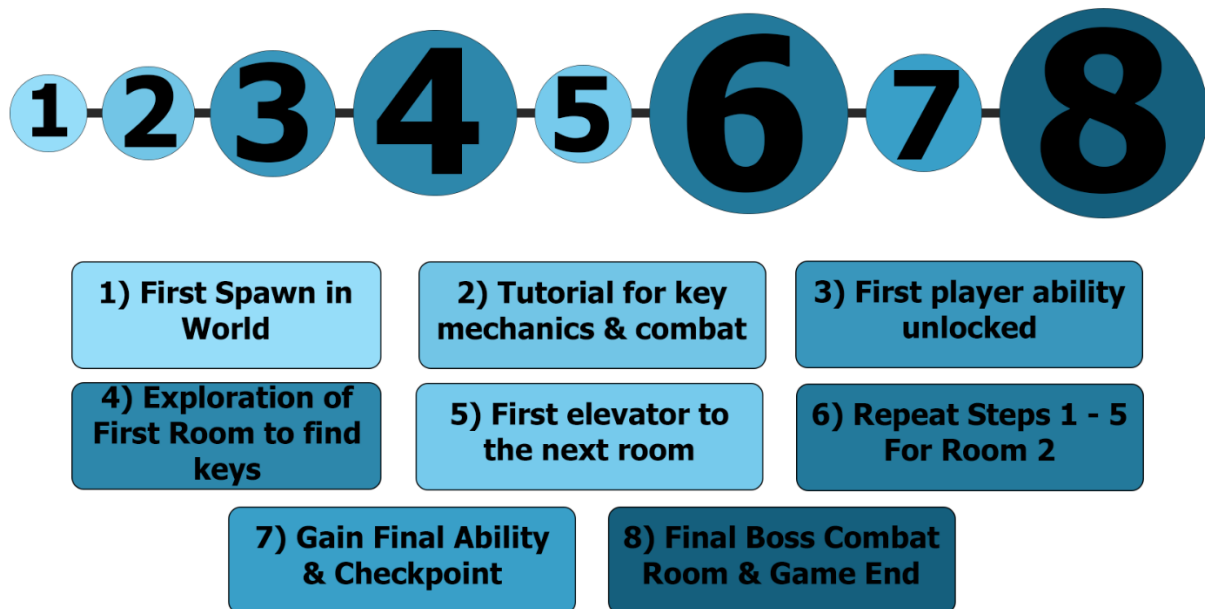
Aesthetic Mood Board



Mission Flow/Player Journey

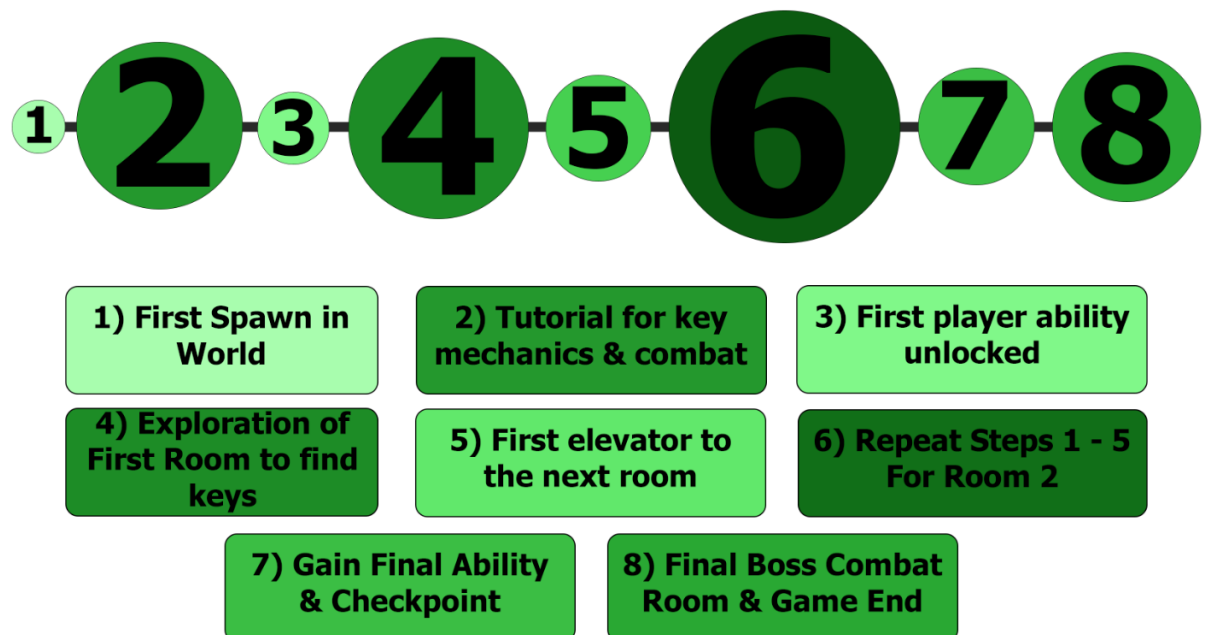
Intensity Flow

My Level's intensity flow will have a gradual build-up of tension and difficulty with the main relief coming from the elevators which rise to the next floor, this is a simple formula which would allow for easy incorporation of more levels for a larger scope.

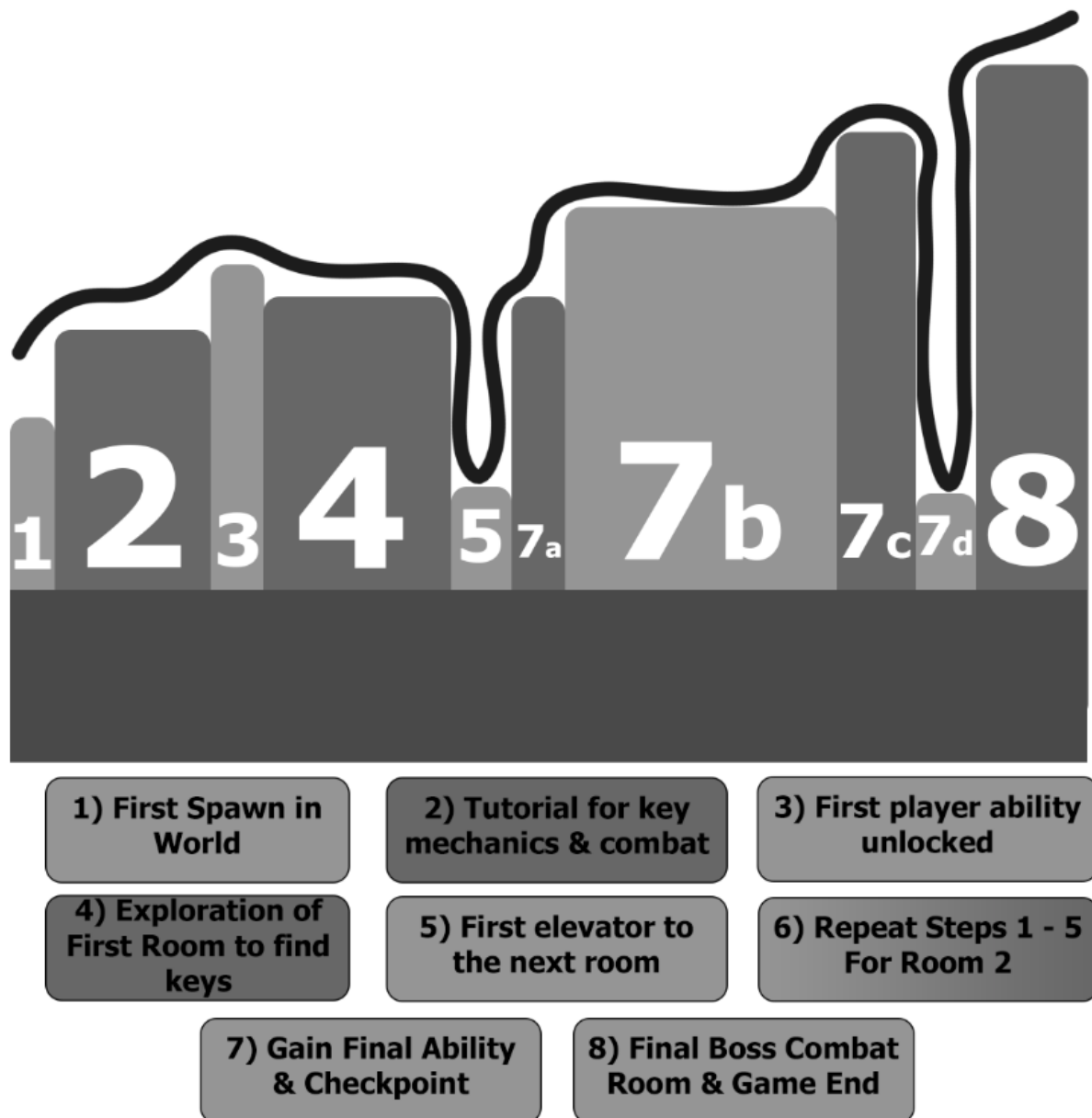


Environmental Flow

The environment bubble map shows the large contrast between the large halls and rooms of the mansion's main floors and the smaller backroom-esque sections which house the moments with more down-time like the elevator or the first ability unlocked.



Beat & Pacing Map

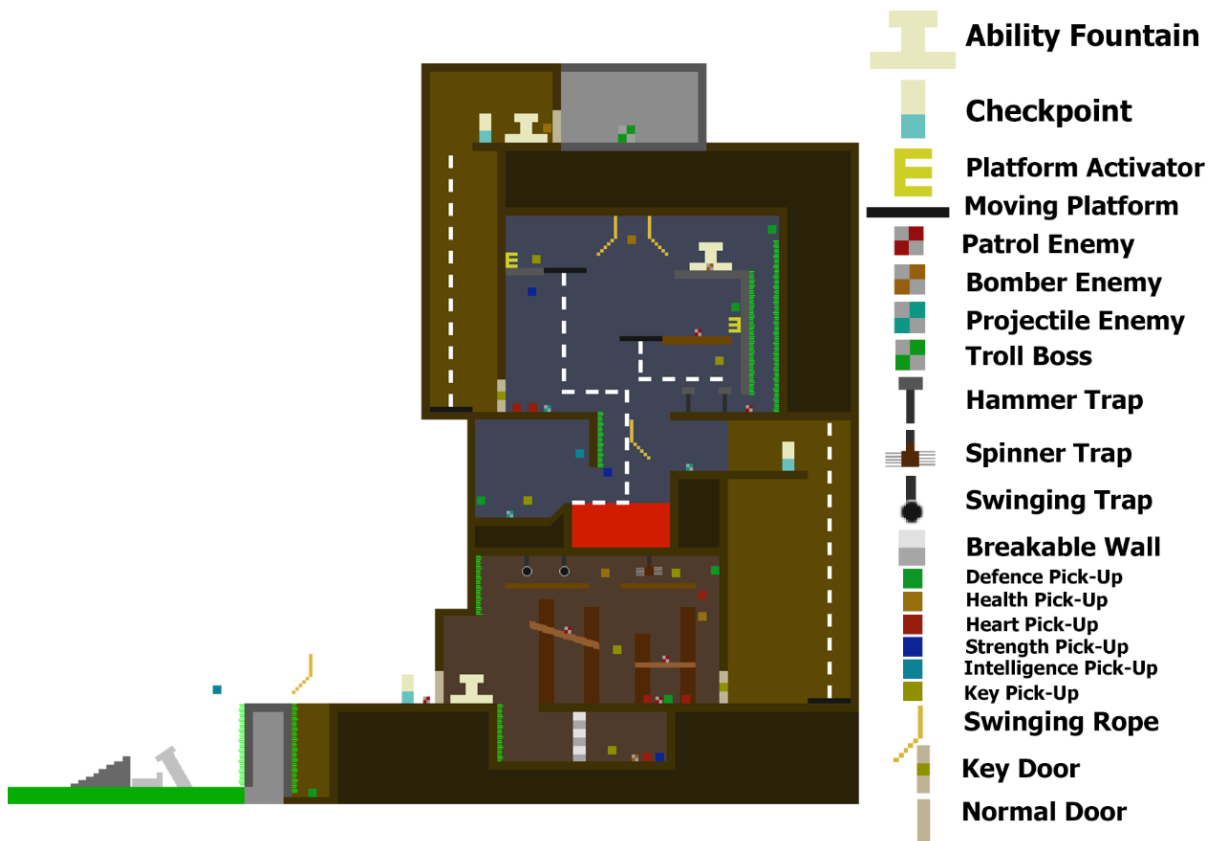


Level Maps

Pixel Map - Terrain

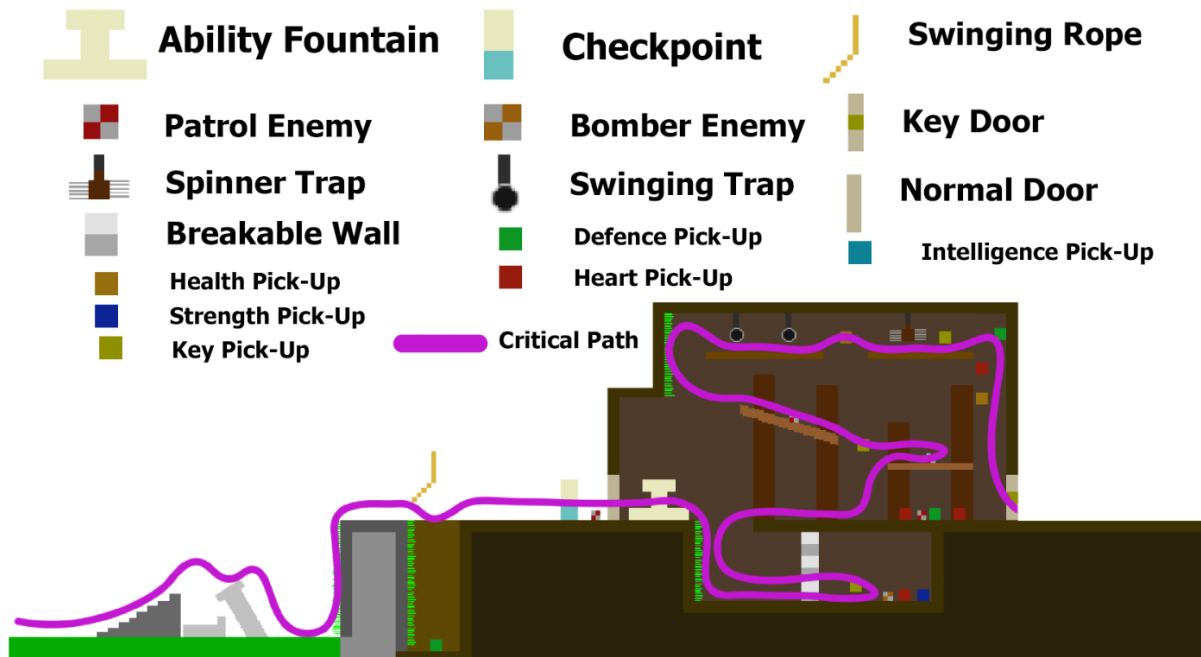


Pixel Map – Environment Mechanics & Enemies

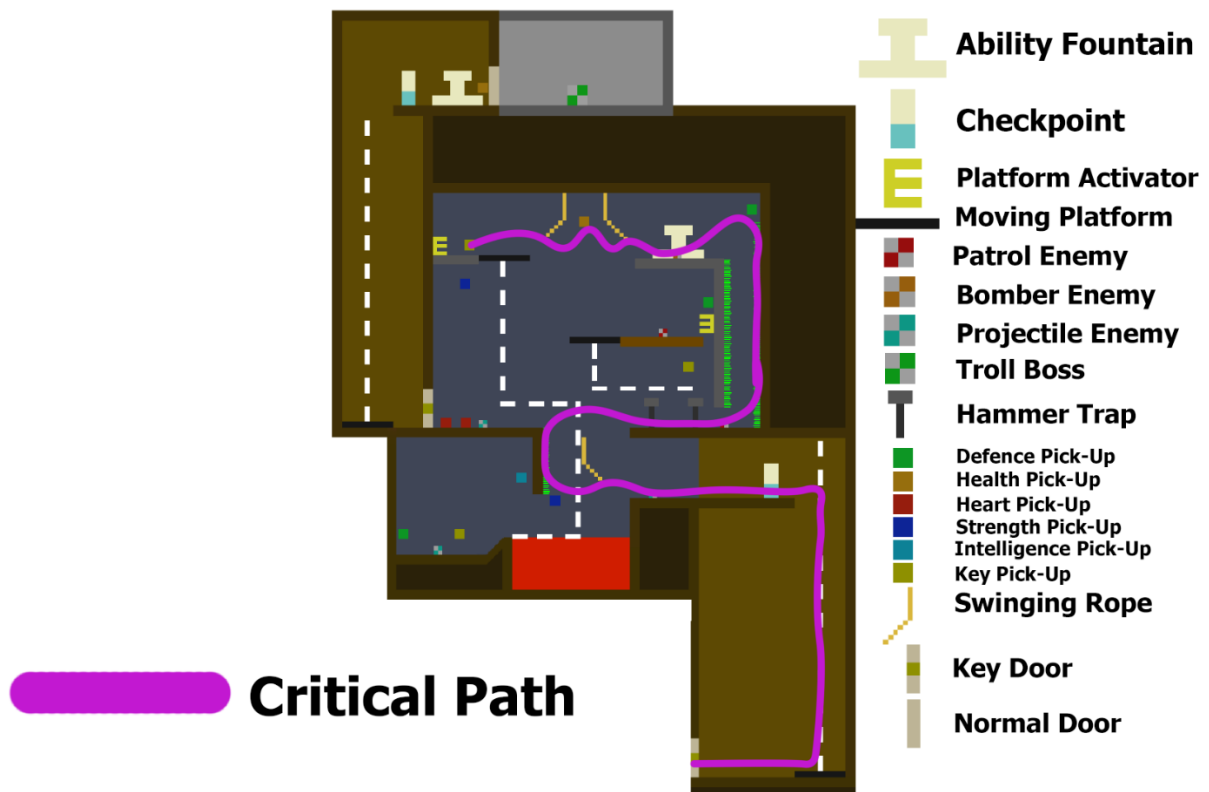


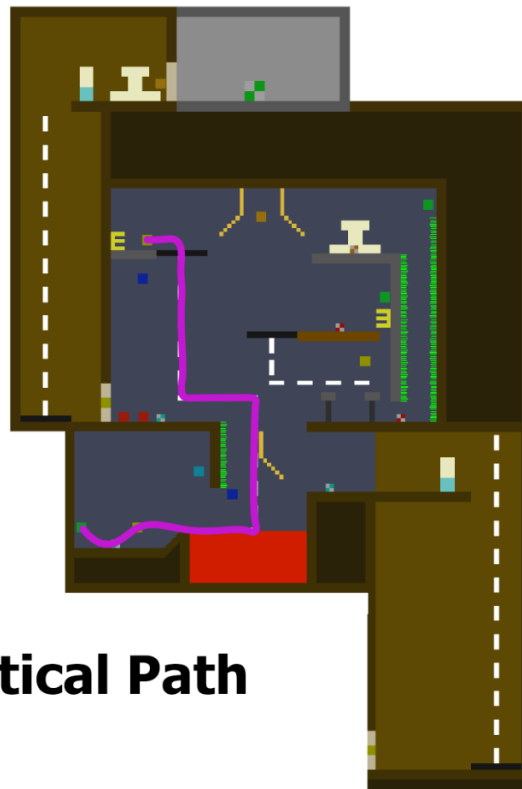
Critical Path



















Tutorial Section & Room 1



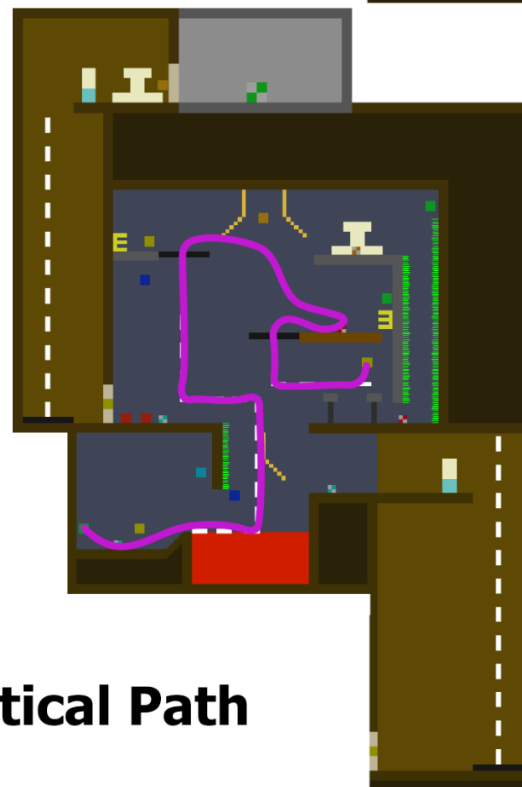
Room 2 & Final Boss Room





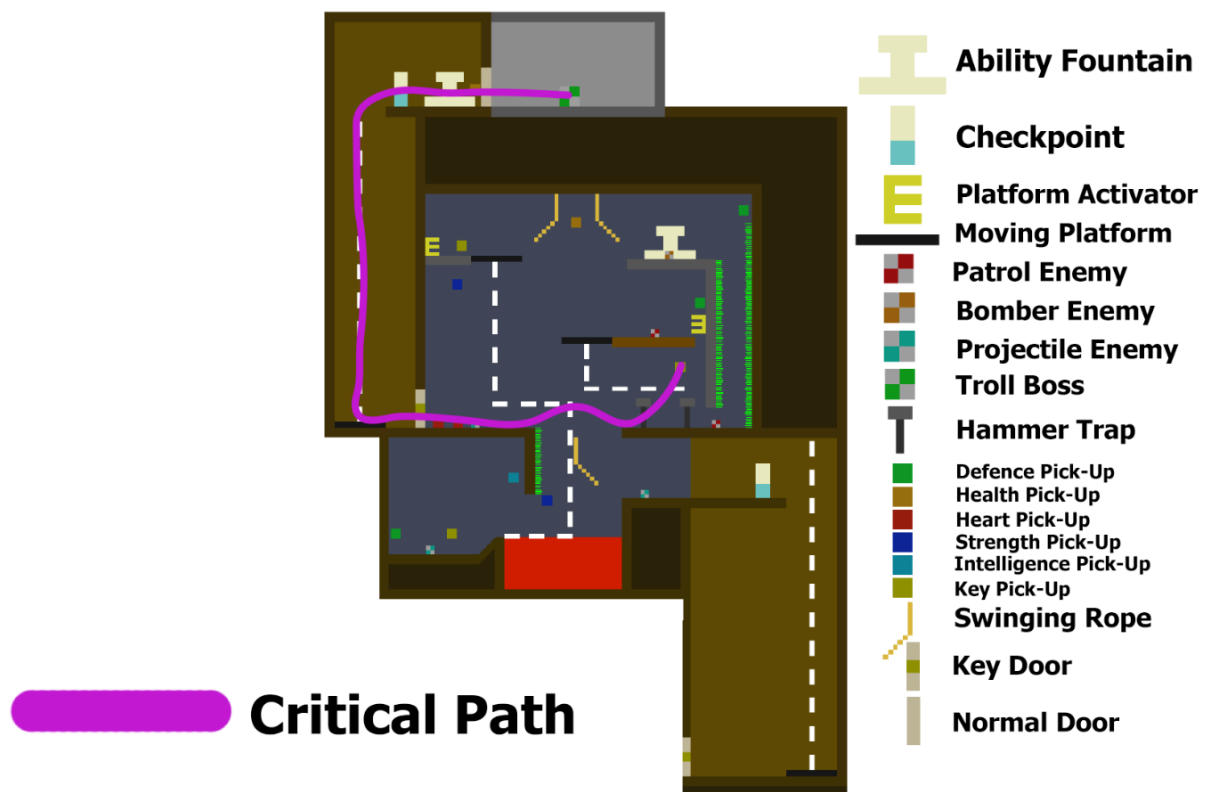
-  Ability Fountain
-  Checkpoint
-  Platform Activator
-  Moving Platform
-  Patrol Enemy
-  Bomber Enemy
-  Projectile Enemy
-  Troll Boss
-  Hammer Trap
-  Defence Pick-Up
-  Health Pick-Up
-  Heart Pick-Up
-  Strength Pick-Up
-  Intelligence Pick-Up
-  Key Pick-Up
-  Swinging Rope
-  Key Door
-  Normal Door

 **Critical Path**



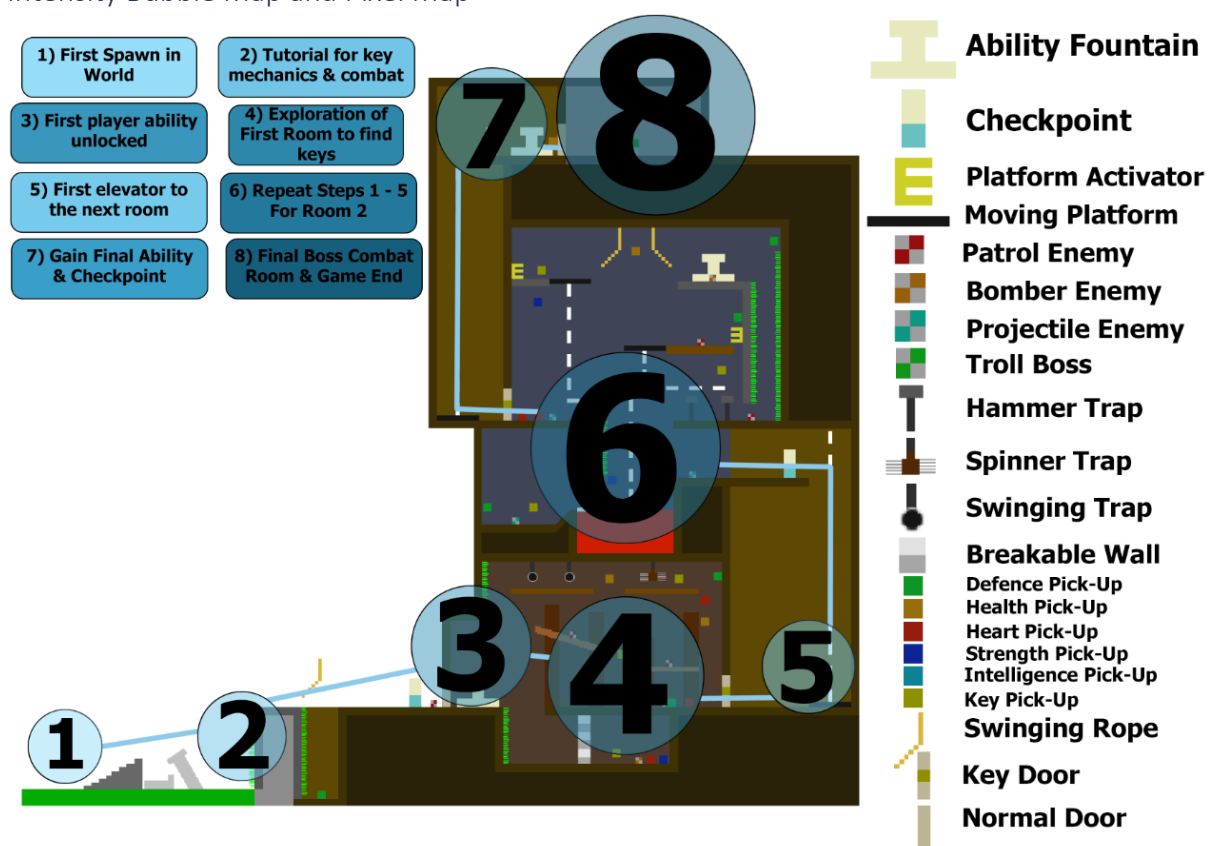
-  Ability Fountain
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-  Hammer Trap
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-  Health Pick-Up
-  Heart Pick-Up
-  Strength Pick-Up
-  Intelligence Pick-Up
-  Key Pick-Up
-  Swinging Rope
-  Key Door
-  Normal Door

 **Critical Path**



Maps & Flow

Intensity Bubble Map and Pixel Map



Environmental Bubble Map and Pixel Map

