Team 2: Chaddius Maximus

Level Design Document

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Year 2 - Block D

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Research

Research: Super Metroid (Game Design)

Research Question

What are the most prominent game elements in Super Metroid that defined the genre "Metroidvania"?

Purpose

To get a good understanding of what the vague term "Metroidvania" really means. This entry provides surface level conclusions and does not dive too deep into the game's design.

Observations

- There are two kinds of shooting: one of which has infinite ammo, the other (Missiles) is an unlockable ability that requires Missiles.
- Some enemies or interactables require Missiles instead of normal fire.
- Weapons are used for more than combat; they have a secondary function of opening doors, interacting with objects, destroying the environment, etc.

- The player unlocks new abilities throughout the entire game.
- Abilities are required to progress through certain areas.
- Some doors require five Missiles to be opened.

Conclusions

- Having two different weapons that the player needs to switch between offers simple puzzles that keep the player thinking about how they use their weapons, instead of mindlessly shooting enemies with their primary fire. It also emphasizes a core idea of Super Metroid and a lot of other Metroidvanias: when in doubt, just shoot. It'll probably solve 90% of your problems.
- The main way of enforcing backtracking and going through rooms multiple times is primarily by requiring the player to have a certain ability unlocked and have them find this ability before allowing them to progress, and secondarily having them spend certain collectible resources to progress which, if they do not have enough to proceed, they have to find by backtracking and killing enemies until they have enough to continue.

Research: Super Metroid (Level Design)

Research Question

How is the player onboarded to new mechanics?

Purpose

The Level Designers must know how and when the player is introduced to new abilities, a crucial aspect of Metroidvanias, so that we can take those conclusions and apply them to our own levels.

Observations

The game starts in a small area consisting of multiple rooms all lined up after each other.

- The very first room is vertical and has the player falling down from platform to platform, only having to move left and right. At the bottom, the player has to jump on top of a very small ledge in order to reach a door, which has an arrow pointed at it.
- The second room literally only has a slightly raised floor, and a lot of walking on flat surfaces.
    - The first two rooms onboard the player by introducing only a few mechanics at a time, starting at the fundamentals. Back in the day, this was necessary; nowadays, with our target audience already having experience in games, we can skip most of this.
- Eventually the player reaches the first boss, which is also the first enemy they encounter in the game. Players cannot die to this boss, as it flies away when the player has low health.
    - This boss is a safe space for players to experiment with shooting. They can't possibly die which allows them to shoot to their heart's content without being punished.
- A countdown then starts, and the player must make their way back to where they started the game.
    - The player's platforming skills are put to the test, as they have to traverse through a familiar environment but now with time pressure, in addition to the camera tilting and gusts of wind in the last room.

The player then proceeds to the area in which the remainder of the game takes place.

- Usually players walk to the right to progress, but here, they are met with a closed off tunnel that requires an ability to progress through. The player finds more of these blocked off routes when they walk to the left, too.
  - This sets the tone for the progression throughout the entire game, and the genre as a whole.
- The first ability the player acquires (Morphing Ball) is needed to escape the room it is found in.
  - Whenever an ability is found, the player is forced to use it immediately to progress. It introduces purpose to this ability and when paired with proper visual cues the player will know where to use this ability in other places in the game.
  - The player is then forced to backtrack to the point where the previously inaccessible paths were. They will now recognize that they can use their ability to access this path.
- After fighting off some weak enemies and getting familiar with the new mechanics, players then have to fight a boss. They unlock a new ability prior to starting this fight.
  - Like the previous ability, the player immediately has the opportunity to use this new ability.

Conclusions

- Introducing core or new mechanics and especially new abilities is best done in an environment as safe as possible. This allows players to focus all their attention to understanding this new mechanic, without the need for text or assuming the player will understand it instantly.
- In order to set the tone for a Metroidvania, the world ideally poses its first obstacle/closed door requiring a certain ability right after the player has familiarized themselves with the core mechanics. The more obstacles like this there are in the world, the more the player is encouraged to explore the world.

Planning
Restrictions & Guidelines

1. General Guidelines

    a. Every level needs to be 40x45 or 80x23.

    b. Every room should be traversable within 60 seconds; clear, noticeable distinctions in areas and tension may increase this number.

    c. Write Scene-specific Atomic Parameters and a Difficulty Matrices to define challenges formally and create a systematic increase in difficulty for each room and Scene.

    d. Write Scene-specific intended gameplay and player behaviours, and set guidelines to reach these goals.

   e. If during a playtest testers get frustrated at a level-specific thing, find the inconsistency and fix it ASAP.

2. Enemies

    a. Every level should have enemies.

    b. Always have at least one enemy on screen.

    c. There needs to be at least a 1:1 platforming-combat ratio with preference to combat.

    d. Only have one short enemy-free platforming moment/challenge before bringing back enemies.

    e. Depending on the enemy HP, the player needs enough space to properly fight this enemy; the more HP the enemy has, the more space the player should have.

    f. At least two destructibles per enemy to offer player health pickups.

3. Geometry, Layout & Flow

    a. Do not place small, random, pointless ledges, jumps, or enemies; every action the player does should have purpose and shouldn't be a chore.

    b. Based on player flow, clean up any obsolete geometry, platforms, etc.

    c. Do not create any depth in the collidable layer alone, but use the back layer, to avoid players being confused about what is collidable.

    d. Create short- and long-term goals (enemies, places of interest, landmarks, etc) to motivate the player.

    e. If the player falls down into a gap where they came from and/or there is a room underneath it, the player falls back down to that room. Otherwise, hazards must be placed to make it clear the player will get damage when they fall.

    f. Don't force the player to jump in cramped areas.

    g. Minimum of one secret per room.

    h. Incorporate more exploration earlier in the game; introduce dead ends sooner, place secrets or secret areas behind destructibles/front layer, reward optional backtracking to earlier levels, etc.

Pipeline
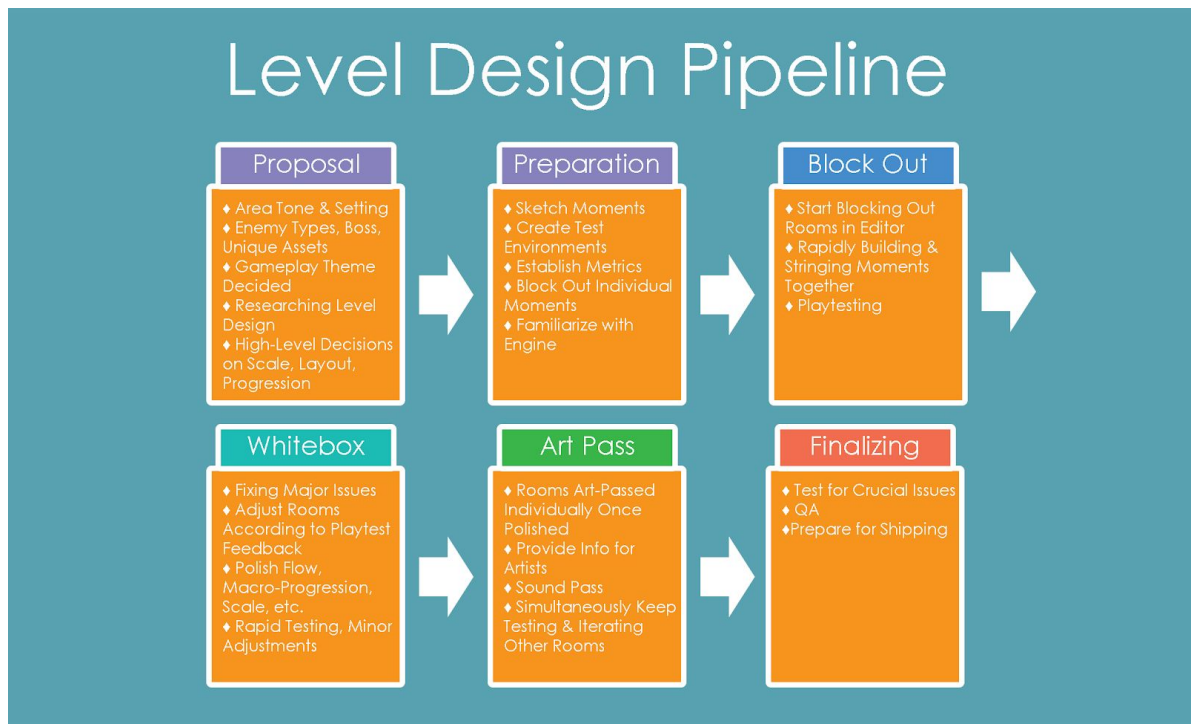
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Hour Estimation

| PHASE	HOURS	PERCENTAGE OF TOTAL
Area Proposal	4	5%
Preparation	16	21%
Block Out	20	26%
Whitebox	16	21%
Art Pass	8	11%
Finalizing	12	16%

Gameplay Themes

Scene 1: Forest

- Familiarize players with core gameplay (onboarding).
- Pose long-term goal (story/narrative) and short-term goals (progressing to next Scene).
- Introduce players to all enemy types.
- Mostly linear progression.
- Easy difficulty slowly progressing to medium.
- Combine platforming and enemies into challenging moments; prepare for higher difficulty in next Scenes.

Scene 2: Under the Bridge

- Acquire Spear Throw and introduce new challenges using this ability.
- Backtracking by using newly acquired Spear Throw in typical Metroidvania style.
- Combine platforming and combat into new challenges, with a focus on combat.
- Feature all enemies in different situations and combinations.
- Less downtime between moments, more tension.

World Layout
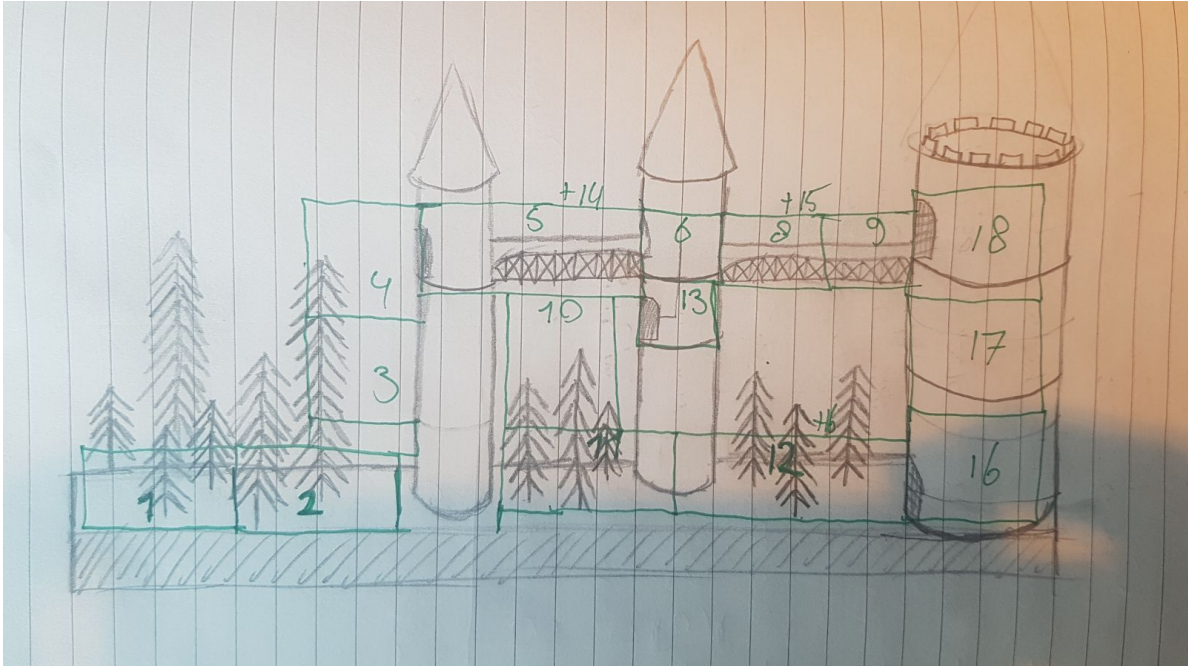
Scene 0: Room 1 to 4   *Scene 1: Room 5 to 9*
Scene 2: Room 10 to 12   *Scene 3: Room 13 to 15*
Scene 4: Room 16 to 18

Progression Through World

In typical Metroidvania style, we want to encourage players to explore and occasionally backtrack by not only rewarding taking optional routes and finding secrets, but also by placing obstacles in their way, and having them find a way around it.

The way we achieve this is by first onboarding the player to the game's core mechanics in Scene 0, offering glimpses of what is to come in Scene 1, and at the end of Scene 1, place an obstacle the player needs to traverse in the form of a closed castle gate.

Players must then backtrack to a duplicate version of the previous room, which we will alter to provide an exit that was not there before. The first time players reach Room 5, they will cross a poorly constructed bridge, but when they return after having reached the castle gate, they will notice the bridge has collapsed and they can now descend to Scene 2.

At the end of Scene 2, the player will acquire the Spear Throw ability, which they can use to backtrack through Scene 2 and climb over the closed castle gate of Scene 1. The room also features a locked door the player cannot open.

However, when reaching the castle gate, players will notice a boss is now guarding the gate. After defeating this boss, the monster falls down and breaks the bridge. Players jump down and reach a duplicate room of the level where they found the Spear Throw ability, but now completely destroyed, and the locked door busted open.

After following the trail of destruction into the tower, players ascend through Scene 4 to eventually reach the second phase of the boss they fought before.

Week 5 Update

As of Week 5, due to the feature- and content lock, everything beyond the first boss fight has been scrapped. This is due to the Gameplay Feature Team not having enough time to finish the boss art and functionality, the Environment Artists not having enough time to make Scene 4 stand out from the rest, and the Level Designers not being able to playtest those levels enough to assure acceptable release quality.
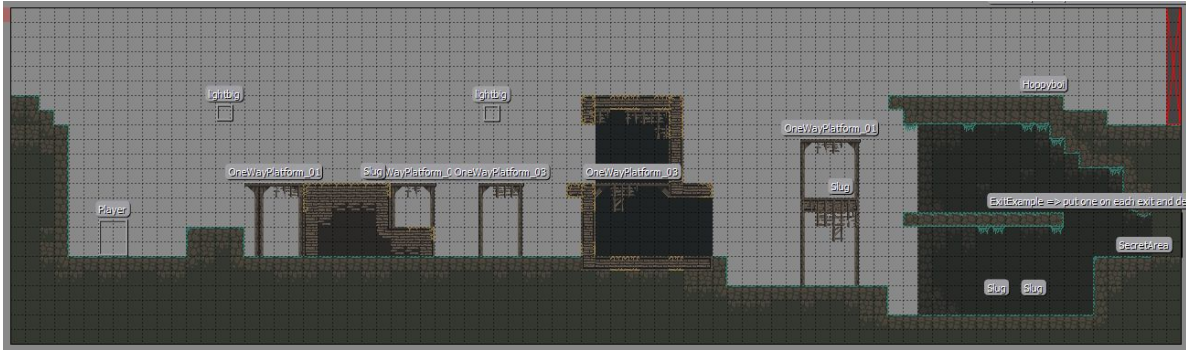
Moment Sketches
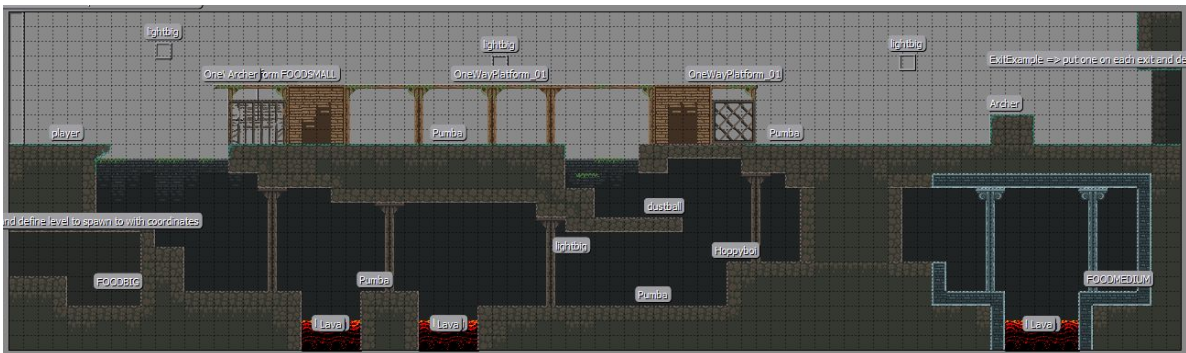
Scene 0
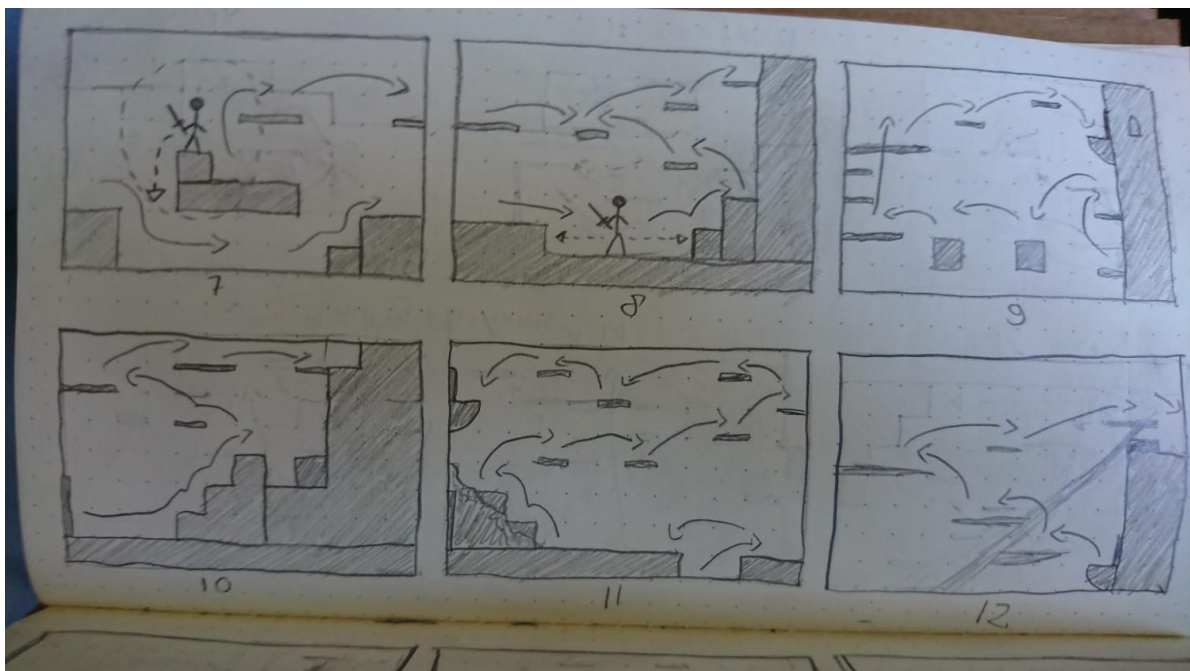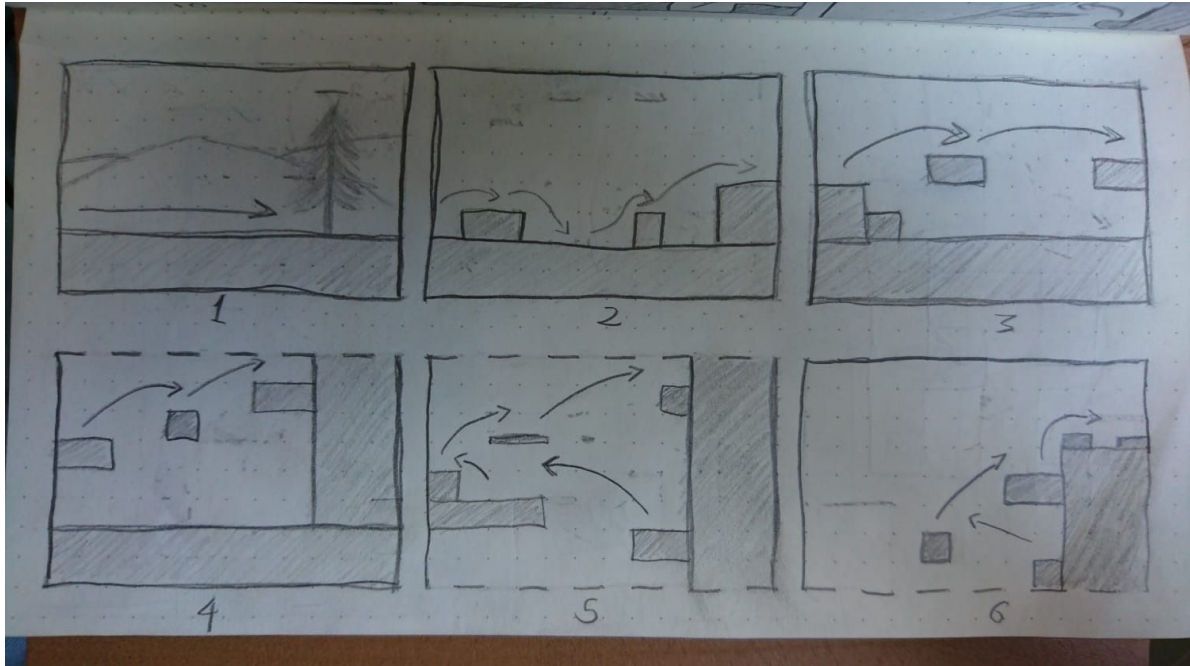
Scene 2
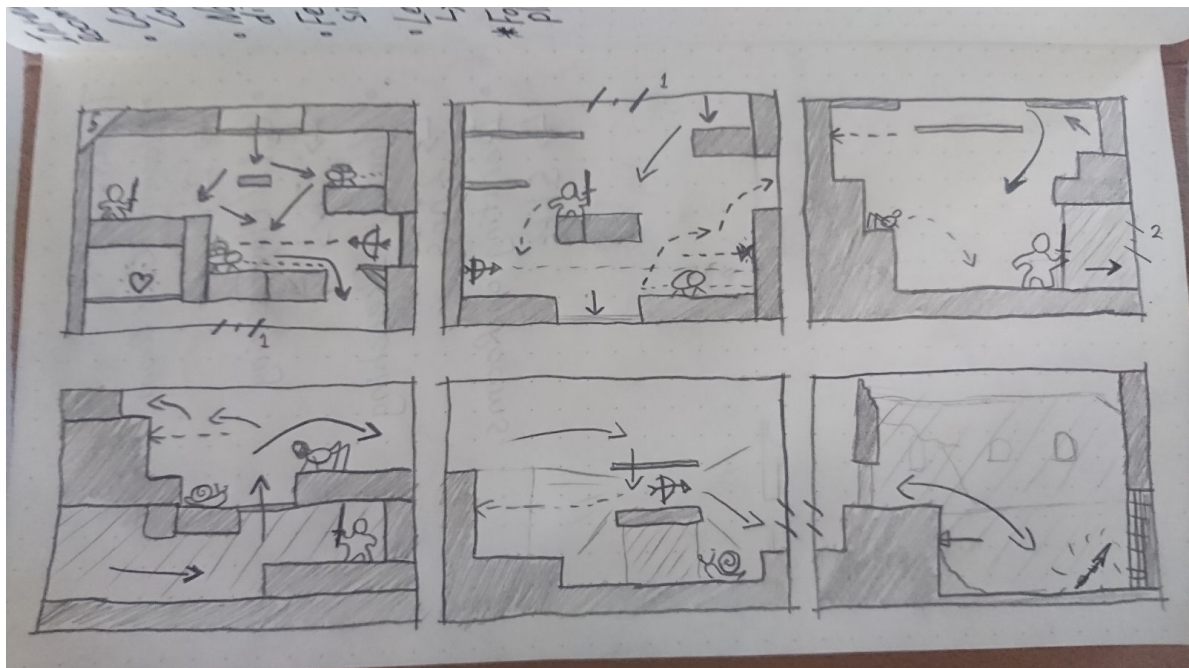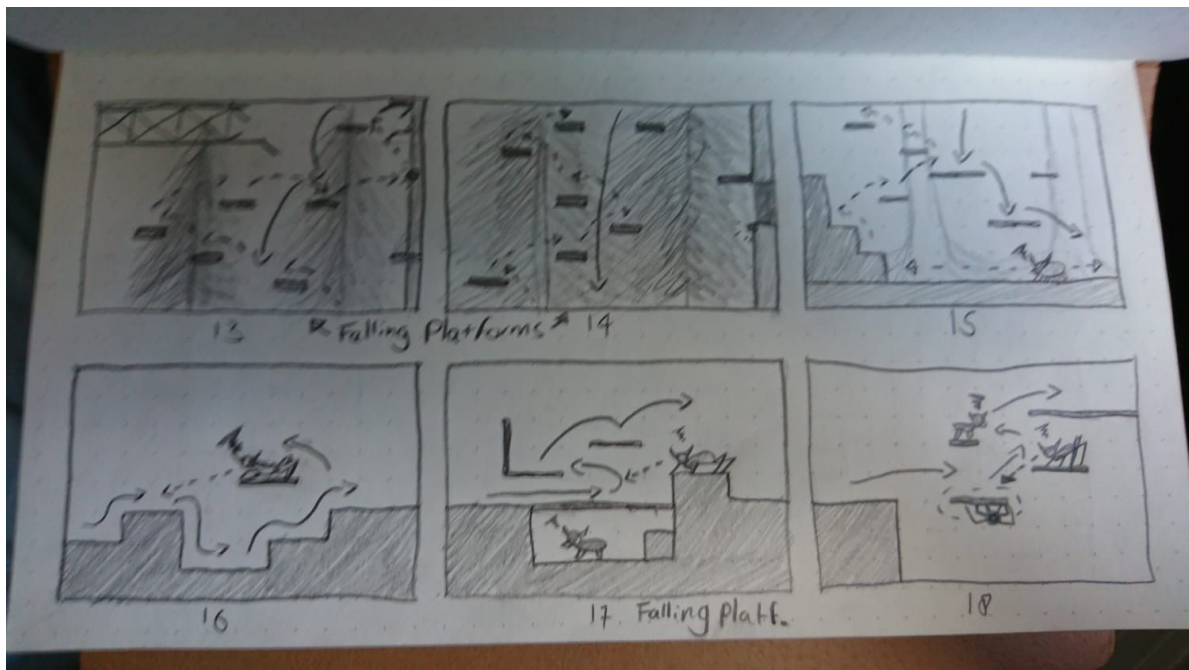
Execution

Level Screenshots & Additional Explanation

Scene 0, Level 0

A very short onboarding level. Only consists of a few easy jumps, the most basic enemy, and an introduction to the Hopper enemy at the end. Also features a destructible wall that leads to the first secret area.
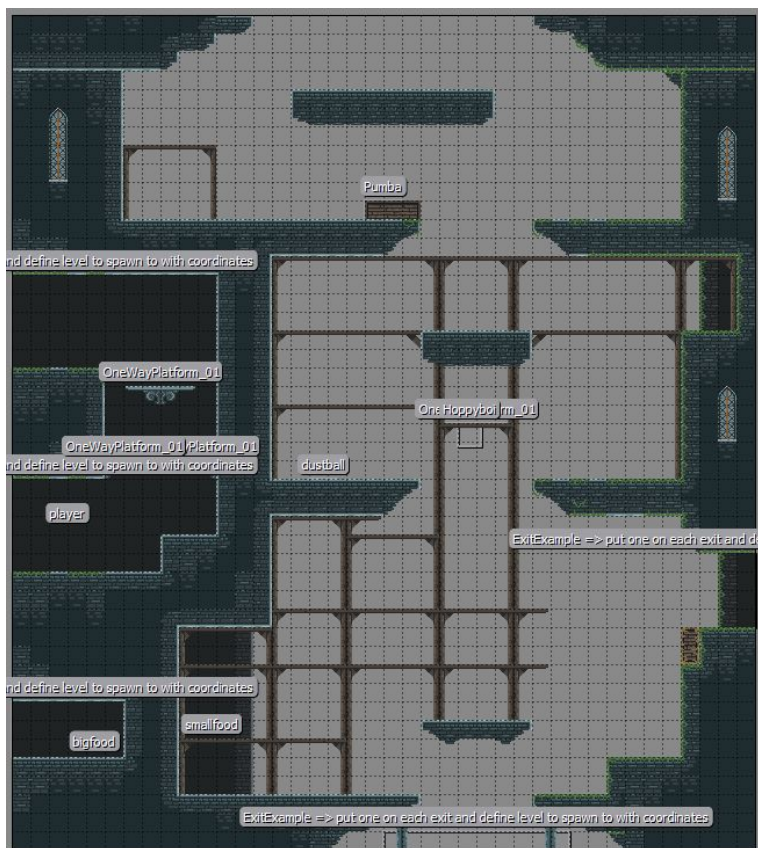
Scene 0, Level 1

Introduction to the ranged enemy and the boar enemy. The boar enemy, when first encountered, charges into the lava to show the player the enemy's behaviour before placing them in actual combat scenarios. The ranged enemy is introduced by placing them just out of reach, and having the player walk around them and offering the player the choice of killing him or skipping him. At the end of the level, the boar and ranged enemy are combined. Also shows the first secret room that is hidden by a non-collidable wall. Players will also notice the secret area on the left to encourage them to go back and search for the entrance.

Scene 0, Level 2

First vertical level, focussing on combining platforming and combat. This level mostly has platforming challenges, with the added difficulty of ranged enemies and hopping enemies. Also offers an optional route at the top to get a health pickup and a secret room at the right.

Scene 0, Level 3

A very short level that offers a glimpse of Scene 2, Level 0.

Scene 0, Level 4

Last level of Scene 0. It features a ramp in difficulty by once more combining platforming and combat, but this time with a focus more on combat, specifically ranged enemies shooting at you while crossing gaps. Also introduces the flying enemy in a fairly safe environment. There is no secret room here, but there are two optional health pickups.

Scene 2, Level 0
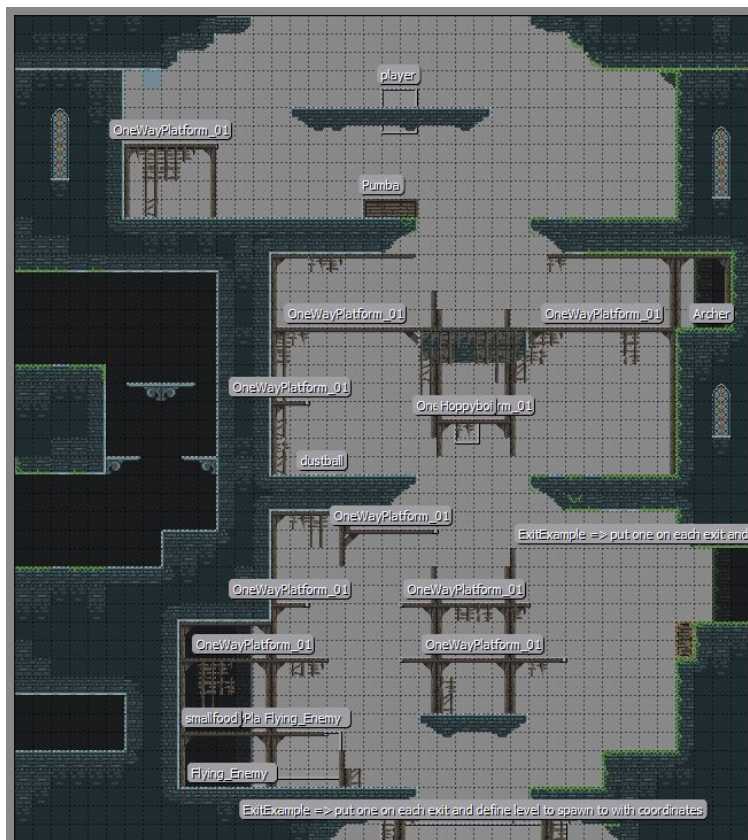
After falling down through the hole in the bridge, players enter Scene 2, Level 0. Players descend down a level that will catch them off-guard if they aren't careful; if they don't deal with the boar at the top, they'll get in trouble when dealing with the ranged enemy below it. If they don't deal with the archer, they'll have to deal with another enemy in addition to the hopping enemy. At the bottom of the level, there is a small vertical structure where

players can more easily deal with the flying enemies.

Scene 2, Level 1
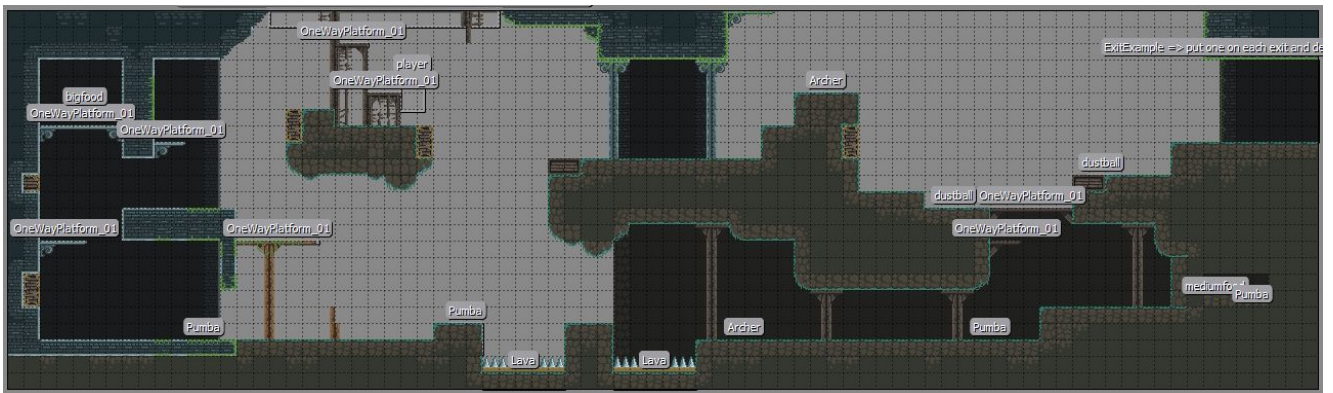
This level features mostly boar enemies in tougher scenarios, combining them with traps and ranged enemies. Players are tested on their patience and foresight; lacking these skills will get them into challenging predicaments. When the player acquires the Spear Throw ability in the next level and goes back to this room, they can use their ability to access the shortcut at the top and escape the level at the top, or optionally try to access the health pickup on the left.

Scene 2, Level 2
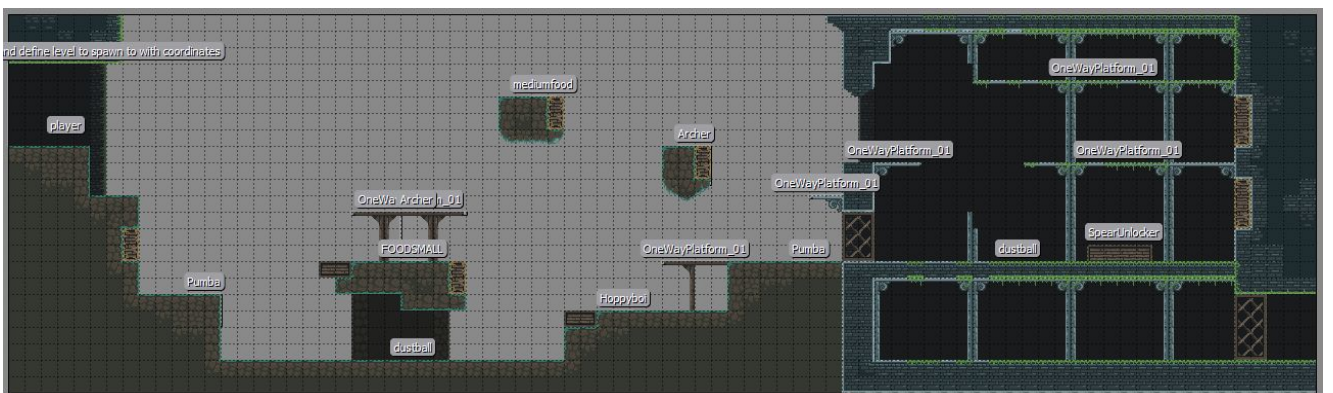
The player acquires the Spear Throw at the end of this level. Loads of enemies are between the player and this ability, testing the player's strategizing skills. With a bit of timing, the player is able to run past all of the enemies without getting hit, showing them that skipping enemies is also a very valid strategy, while also testing the player's control of the character. After acquiring the Spear Throw ability, players have to escape the room by using their ability at the marked areas in the walls. A conveniently placed ranged enemy also introduces the Spear Throw as an offensive ability.