

## GAME OVERVIEW

# EXO-MINER

Exo-miner is an action-platformer game with a side scrolling format. The game is based on resource collection and has a robust system design in place which enable players to use different ways to complete the game thus resulting in an enriching emergent gameplay experience.

Game Link



Game screen

## Gameplay Snippet



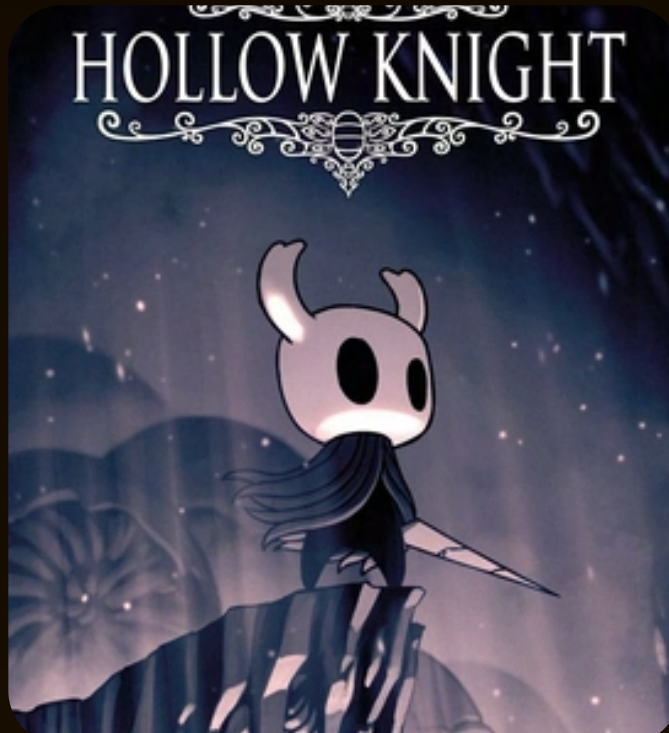
## Inspirations



🔥 Dead Cells



🔥 Blastronaut

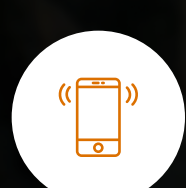


🔥 Hollow Knight



🔥 Wall World

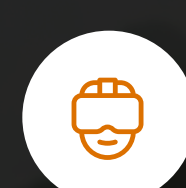
## Overview



Action-Platformer



Developed in GameMaker



Target Audience: 12-40

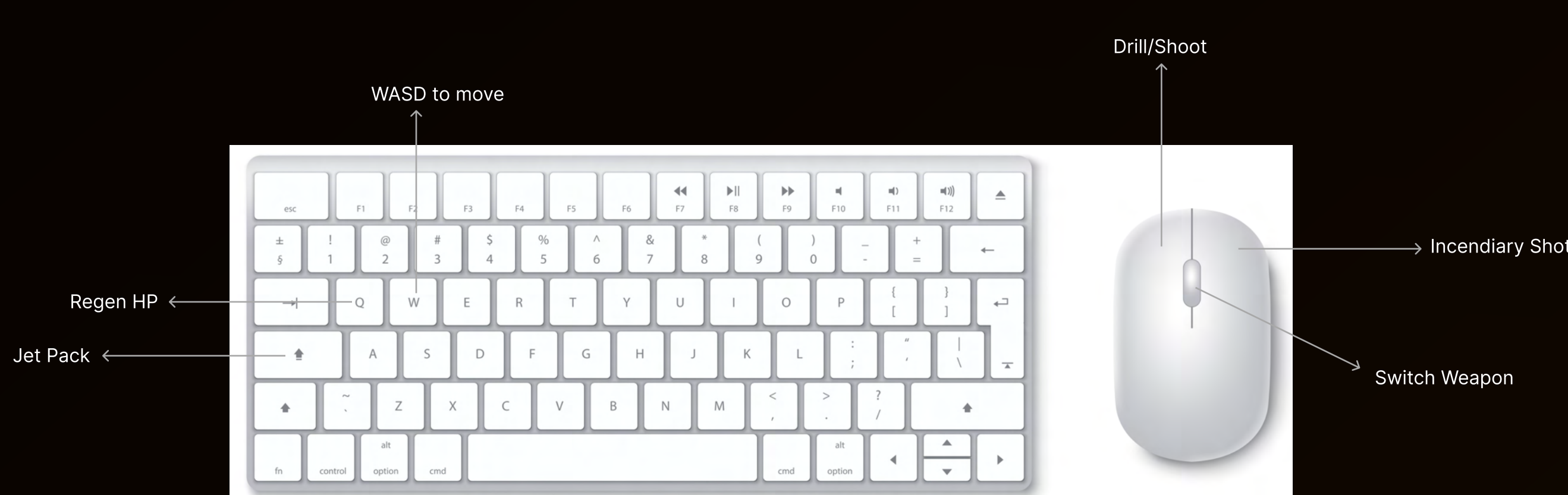


2D Pixel Art



## Controls

We opted for an input combination of both keyboard and mouse. This is because we have both resource management and action-shooting mechanic in place. Hence, there are a number of inputs that need to be mapped. This actually gives us a further scope of optimizing input as part of gameplay and user experience in the near future.



## Our Team

This game is designed and developed by a team of two members.



🔥 Debjyoti Bhowmik



🔥 Bhaskarjyoti Bora



# GAME SETTING

## Location

The game is set in a far away planet where our protagonist crash landed as he was venturing through space.



## Story

### Survival and escape

Our protagonist was scouring the galaxy in search of a valuable mineral deposits. As he pinpointed the location of a mineral deposit, he got caught in an asteroid field. Though he successfully navigated through the asteroid belt, his spaceship was damaged by trailing asteroid shards. He somehow was able to crash land into a nearing unknown planet. He now is stranded in an unknown planet with a sabotaged spaceship, but little did he know that the planet itself was a massive deposit of the valuable mineral he was looking for. Hence, he took about an expedition into this unknown planet, facing unknown dangers with one thing in his mind: harvest as much valuable mineral as he can and repair his spaceship to get out of there.

## Protagonist



Our protagonist is wearing a space suit equipped with jet pack and a powerful drill for mining.

## Enemies

The deep mines are infested by a number of alien creatures .



### Scourers

These creatures scour the floors of the deep mines in search of food.



### Toxic Globule

An extremely aggressive entity. Will follow you the depth of hell if he lock you down under his vision.



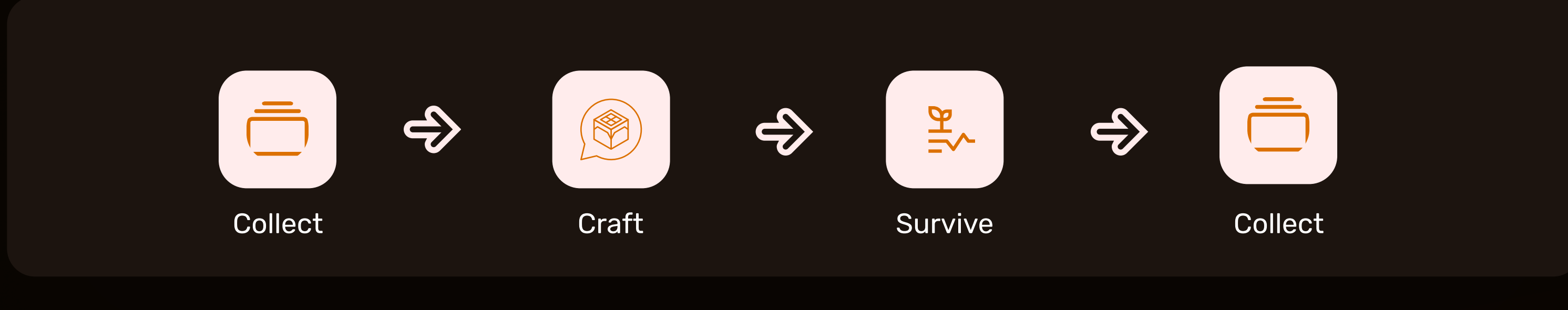
### Demogorgon

A sentient being of the deep. Can create small distortions in time and space at will for teleportation.



# GAMEPLAY AND MECHANICS

## Core Loop



The idea of the proposed core loop revolves around more on resource gathering than actual platforming. This is so because the primary focus is on executing a robust system design upon which the game is built on. The main loop does contain other small gameplay loops like:



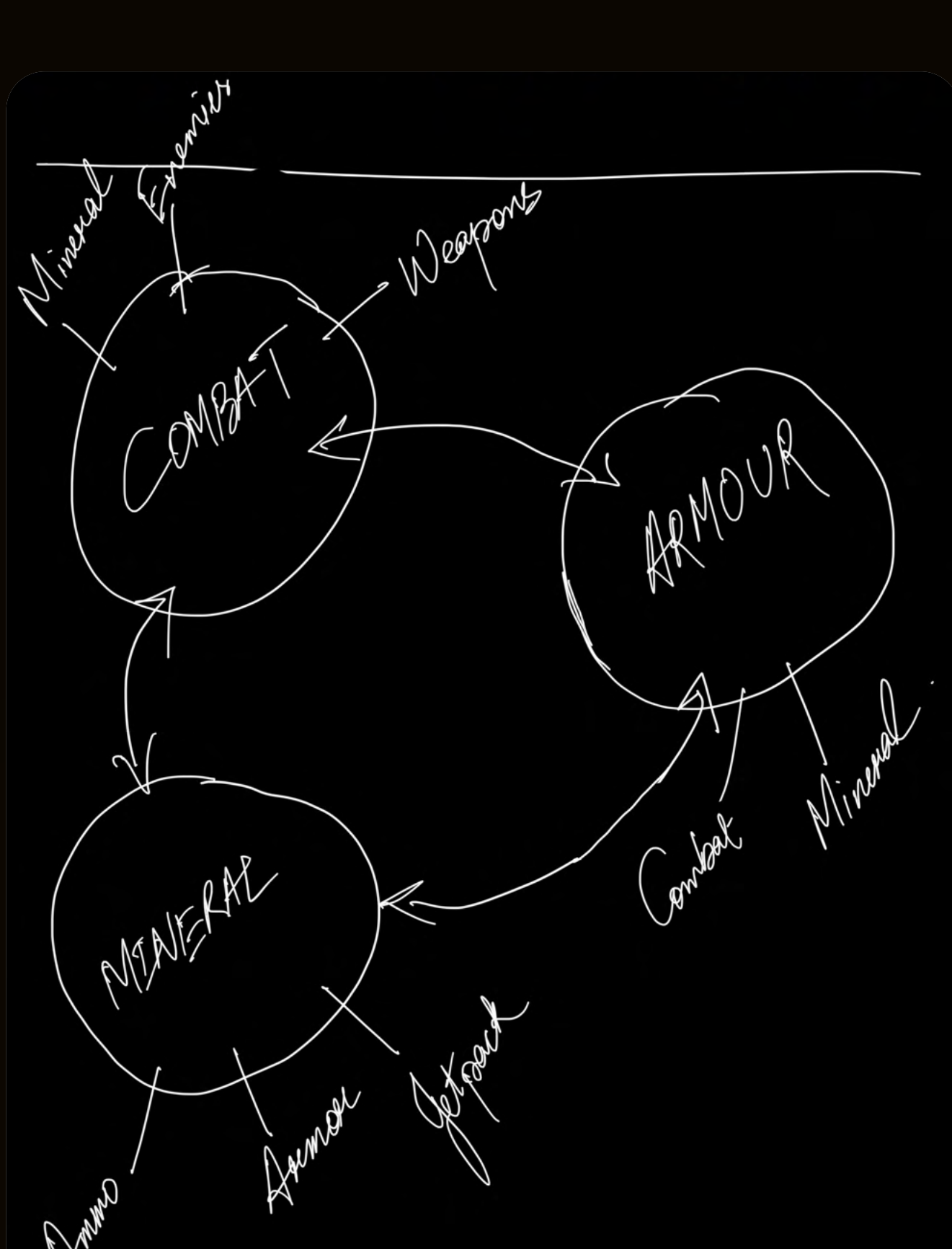
Platforming: Move-Jump-Move



Jet Pack: Thrust-Move-Thrust



Mining: Drill-Collect-Use Resource-Drill



## System Design(Ideation)

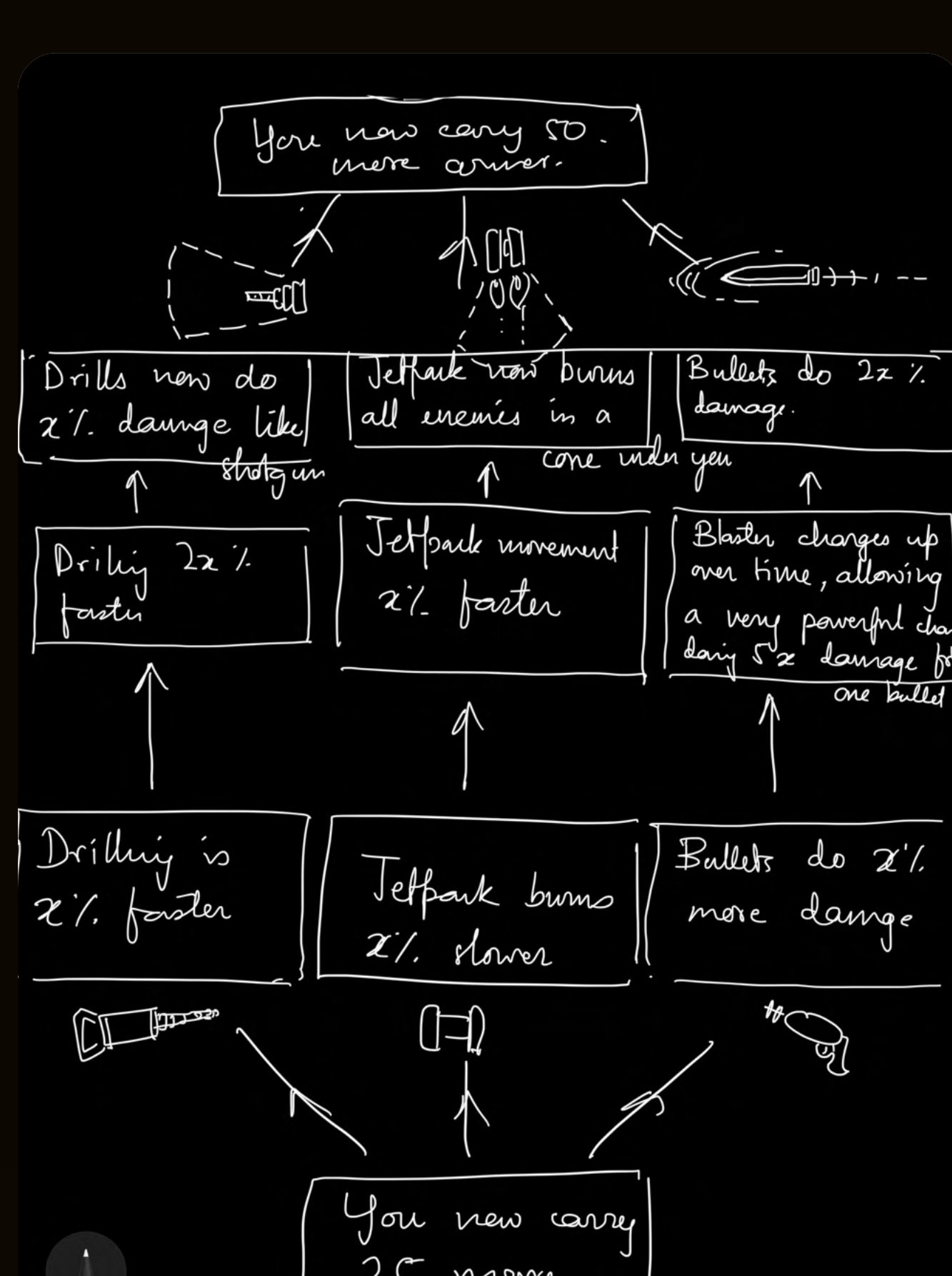
The idea was to design a core system which would enable us to achieve a gameplay which is in a way emergent. Hence, we decided to go for a resource collection system which would sit at the core and every other system be it combat, HP or movement would be interlinked and dependent on it.

## System Design(Iteration)

Keeping in mind things like emergent gameplay and systems we came up with a 'skill tree'. The skill forced the player to buff up any one of the following mechanic:

- i. Jet-pack upgrades: Your Jet-pack consumes less minerals for refueling. Also, gets movement bonuses and AOE damage capabilities.
- ii. Laser gun upgrades: Your laser shots do more damage, given that you need yellow mineral to reload your gun.
- iii. Drill upgrades: Your mineral mining is faster. Also, it can be used as a melee/short-ranged weapon.

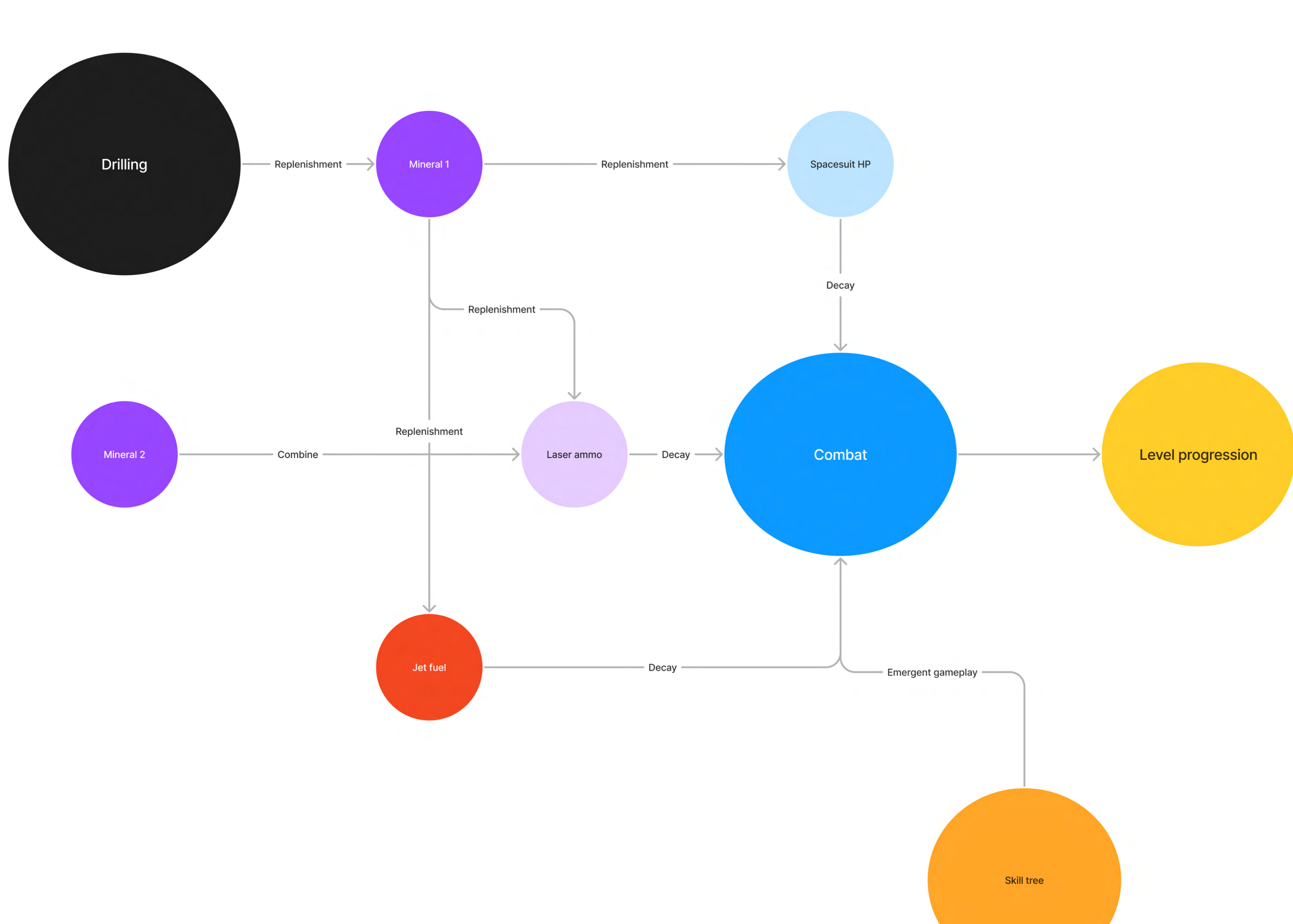
All these options would force a player to adapt to a different play-style each run, thus increasing both emergence and re-playability.



## Final System

The final system has three interrelated core systems:

- i. Drilling/Resource gathering
- ii. Combat
- iii. Space Suit HP
- iv. Skill Tree(Optional)



## The Mineral Economy

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum is simply dummy .

**Mineral Ore**

This is the basic mineral ore found in the game. It is spread throughout the levels. When Mined it ejects two constituent minerals.

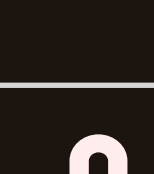
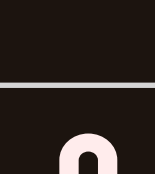


**Organic Blue Mineral**

The occurrence of this mineral is in abundance as it is responsible for basic mechanics like movement and HP.

**Volatile Yellow Mineral**

This mineral is rarer and is responsible for the combat system.



**Used to:**

- Refuel HP
- Refuel Jetpack

**Used to:**

- Fire incendiary shots
- Reload gun



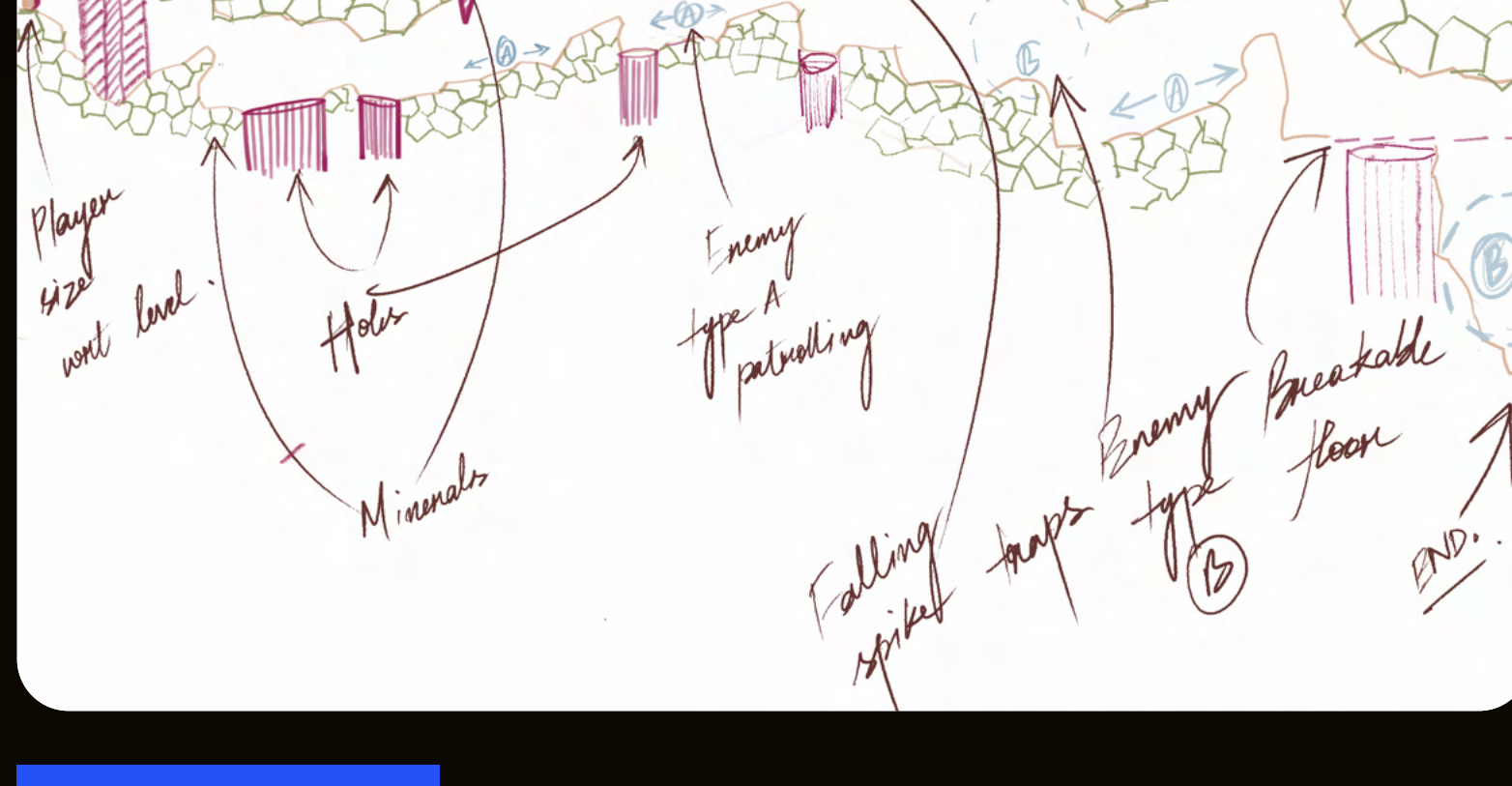
# LEVELS

## Concept behind level design

The basic idea for level design was to create levels which emphasize on resource collection alongside basic platforming. One can say that resource collection/management is the strategic part of the game while platforming helps in maintaining flow of the game.

## Initial Ideation

Initially the game was supposed to be a three-level game. Even though we have a fairly non-complex system in place, in-game we had to make a lot of key bindings. Hence, we planned the first two levels to be tutorial levels with slow pacing while the third level as a level with high tempo and flow.



### Level 1

Every level starts off with abundant minerals in the vicinity so that the player gets a fair chance to explore without worrying about resource management. The basic mechanics to be explained in this level were mining and knowing about the mineral system and also basic platforming along the jet-pack mechanic.

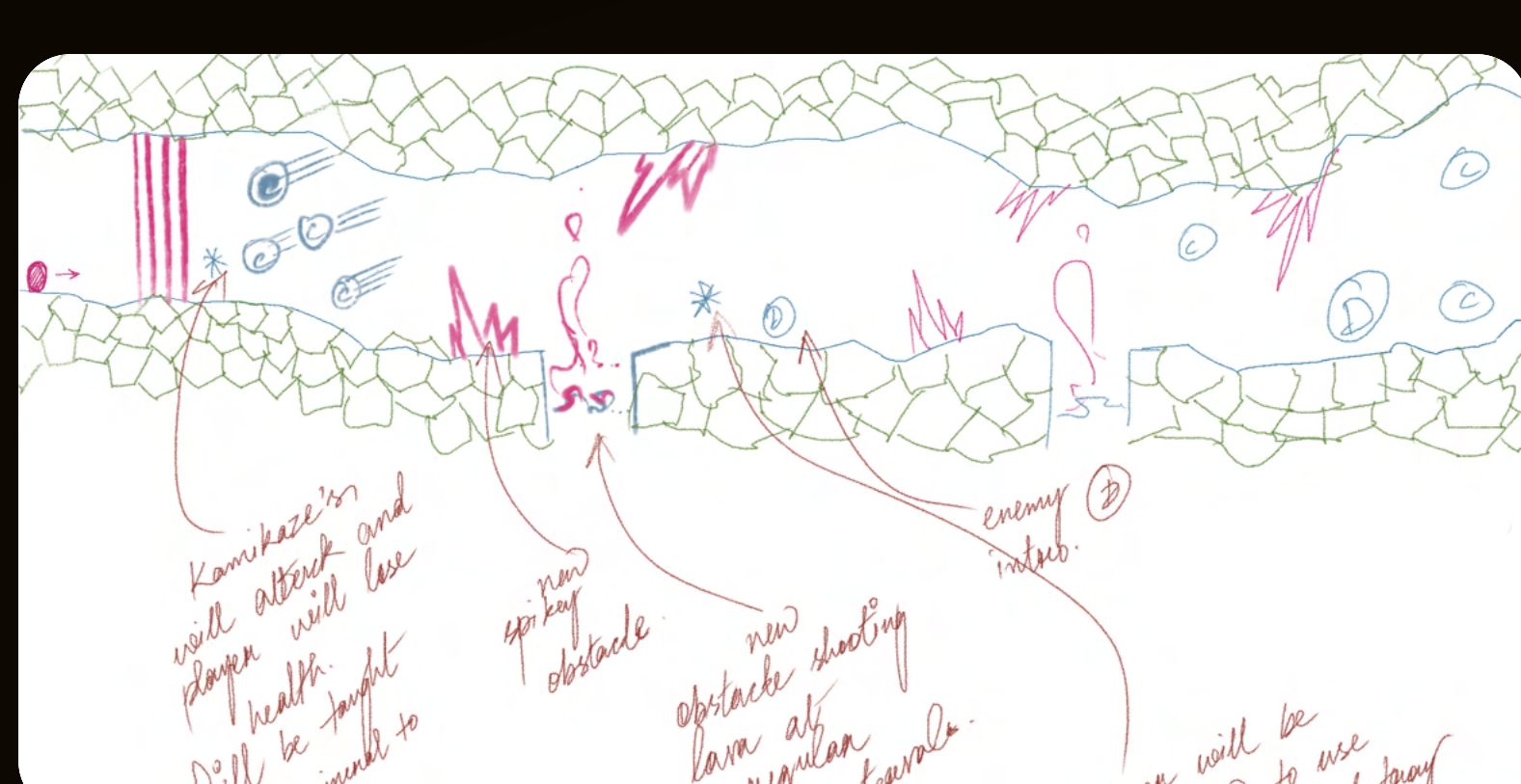
The pacing of this level was done by introducing two types of obstacles and enemies which make the player think in lines of the mineral system and movement system.

#### Traps used

- Basic holes in platforms to jump over.
- Falling spikes near mineral deposits.

#### Enemies used

- Enemy type A: Patrols from point A to point B.
- Enemy type B: Follows player when he enters enemy's AOE.



### Level 2

This level aimed at familiarising players with HP regen mechanic and using laser gun to shoot down enemies at a distance.

The idea of adding UI prompts became clearer during the ideation of this level. For example: after mining the initial mineral stash the player is attacked by multiple enemies. Hence, the player loses HP and we prompt him to use the button 'Q' to regen his HP using the blue mineral he collected.

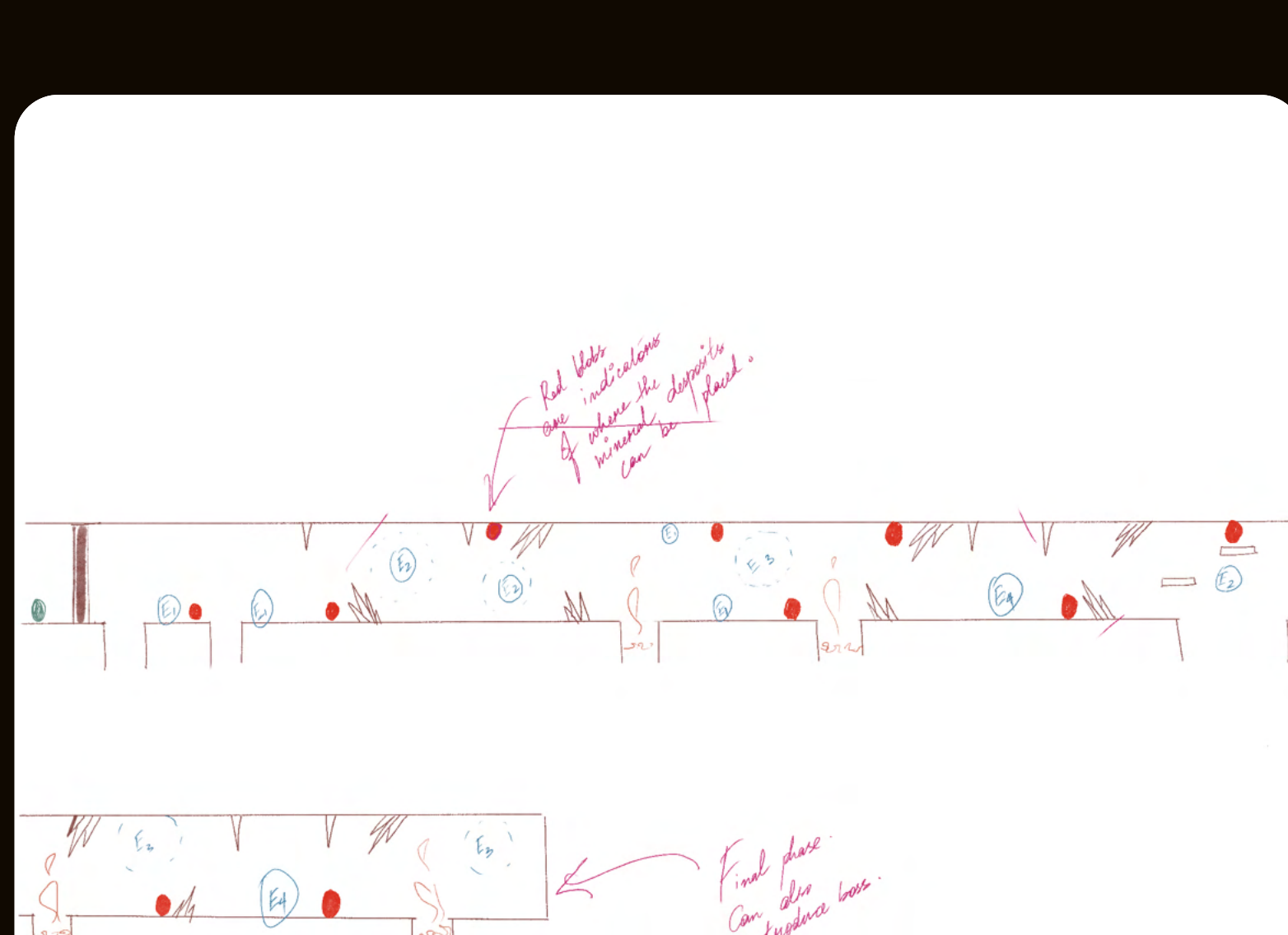
The level pacing of this level is done by combing two new obstacle and enemy types which make the player think in lines of the HP system and combat system.

#### Traps used

- Lava holes which spurt lava periodically.
- Spikes near mineral deposits.

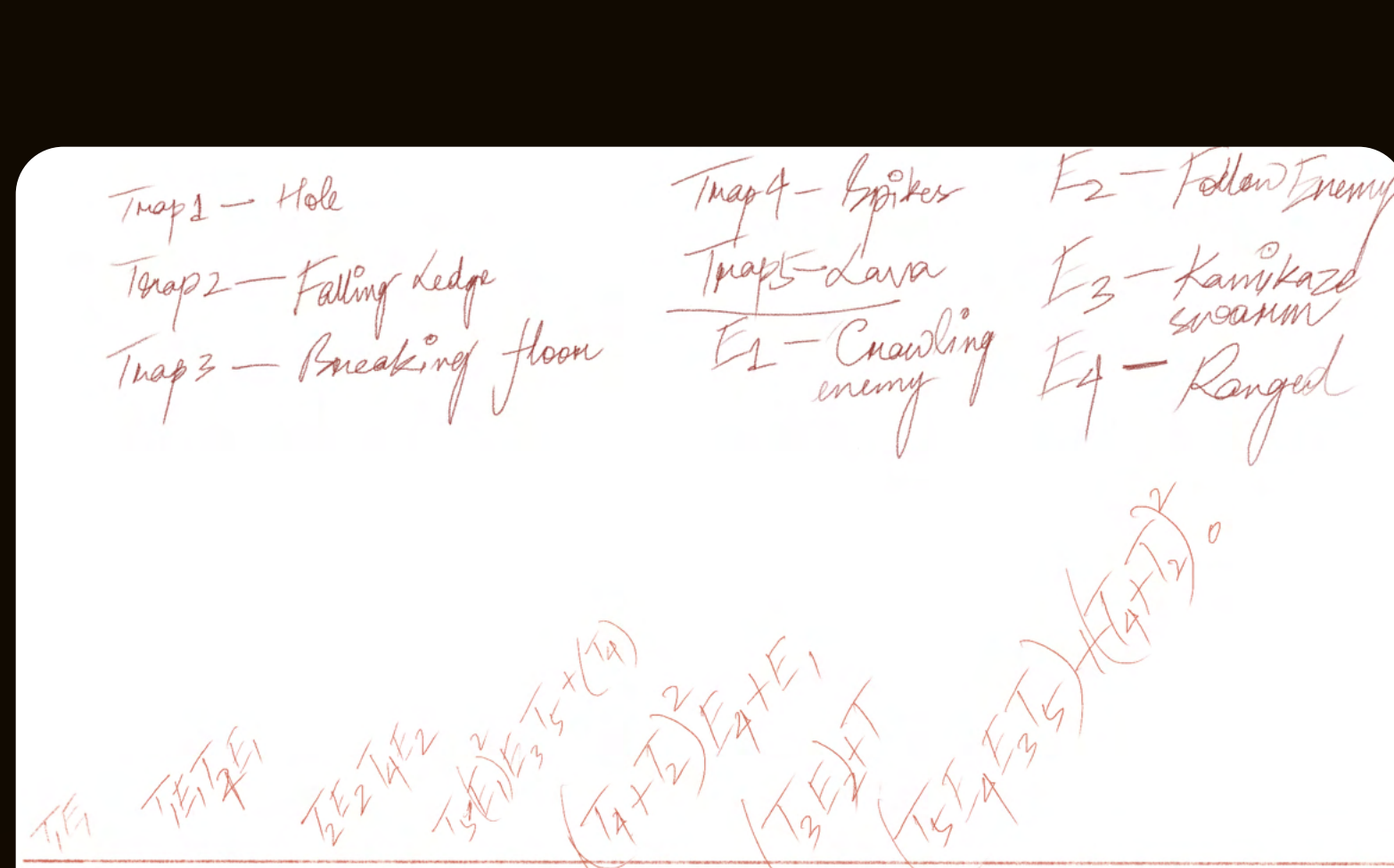
#### Enemies used

- Enemy type C: A swarm which charges towards player and bursts upon contact.
- Enemy type D: Throws projectile at player from range and teleports to a different place if player gets too close.



### Level 3

This level aimed at creating a flow experience for players by combining the traps and enemies from previous levels. Mineral ores were meticulously placed to enforce strategical platforming.



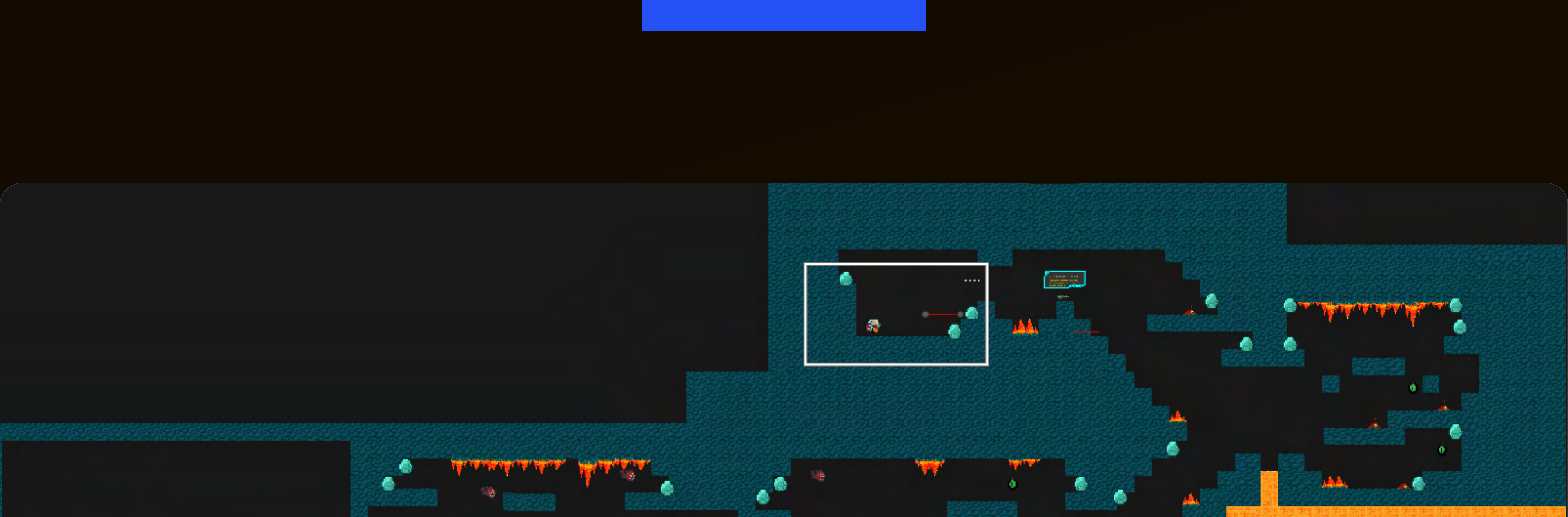
Coming up with formulas using four types of traps and obstacles to maintain player flow.

## Final Levels

For the final iteration we decided to combine level 1 and level 2 into a simple liner level with minimal difficulty to help players get familiarized with the controls. For the third level we changed the linear structure into a rooms branched in a top down fashion to emulate the structure of a mine.



### Tutorial Level



We added a spaceship sprite at the end to show that the player has successfully collected minerals to repair his spaceship! :)

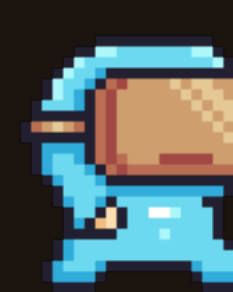
### Main Level



Sprite Sheets and UI



Player Idle



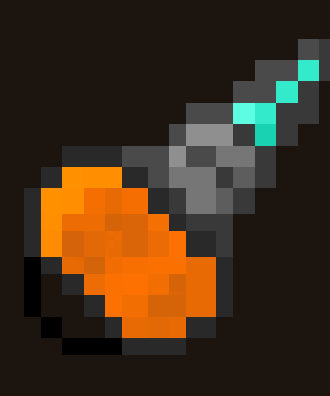
Player Idle



Player Damage



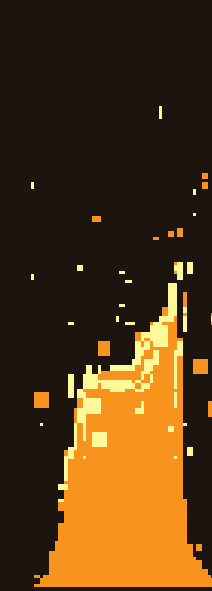
Jet-pack



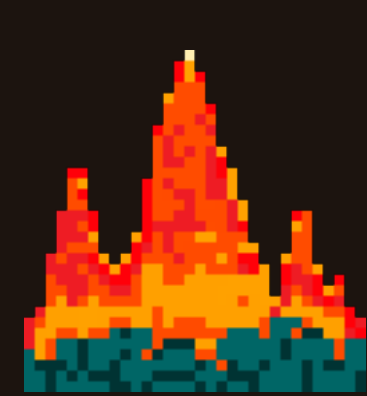
Drill



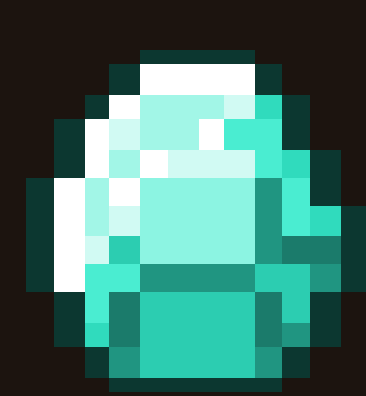
Laser Gun



Volcano



Crystalline Shards



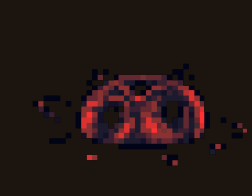
Mineral Destroy



Scourer Idle



Scourer Damage



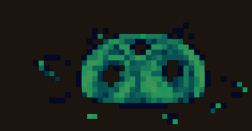
Scourer Death



Toxic Globule Idle



Toxic Globule Damage



Toxic Globule Death



Demogorgon Idle

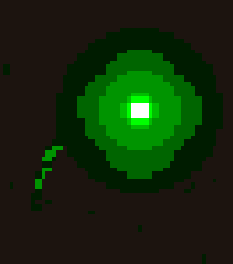


Demogorgon Damage



Demogorgon Shooting

Demogorgon Teleportation

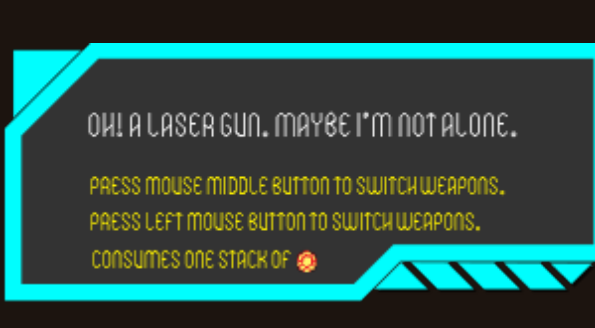


Demogorgon Fireball

Demogorgon Fireball Blast



Spaceship



Tutorial UI



Wall Sprite