

TIANRUI "TERI" ZHANG

GAME DESIGN PORTFOLIO

OVERVIEW

Ring City Champions
3rd Person Multiplayer Hero Shooter



Chumo 除魔
Alternative Controller + Escape Room Experience



RING CITY CHAMPIONS



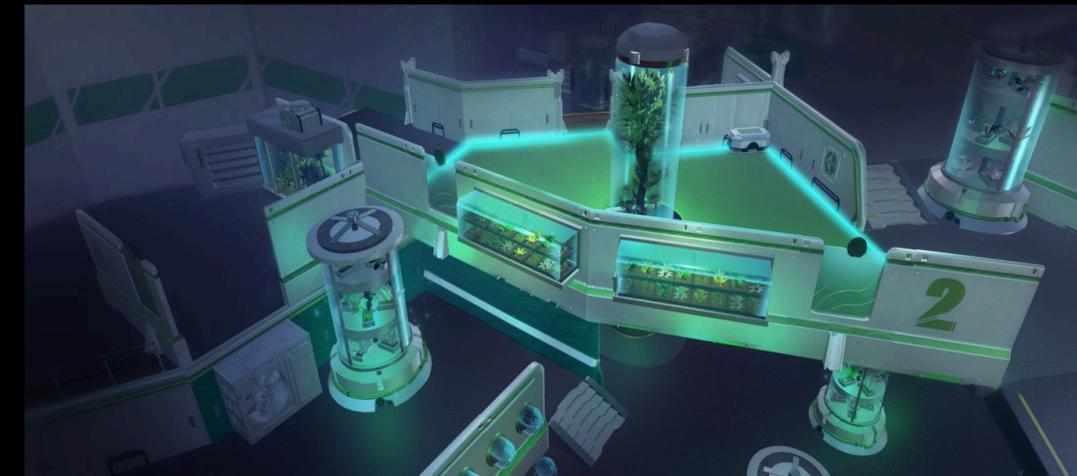
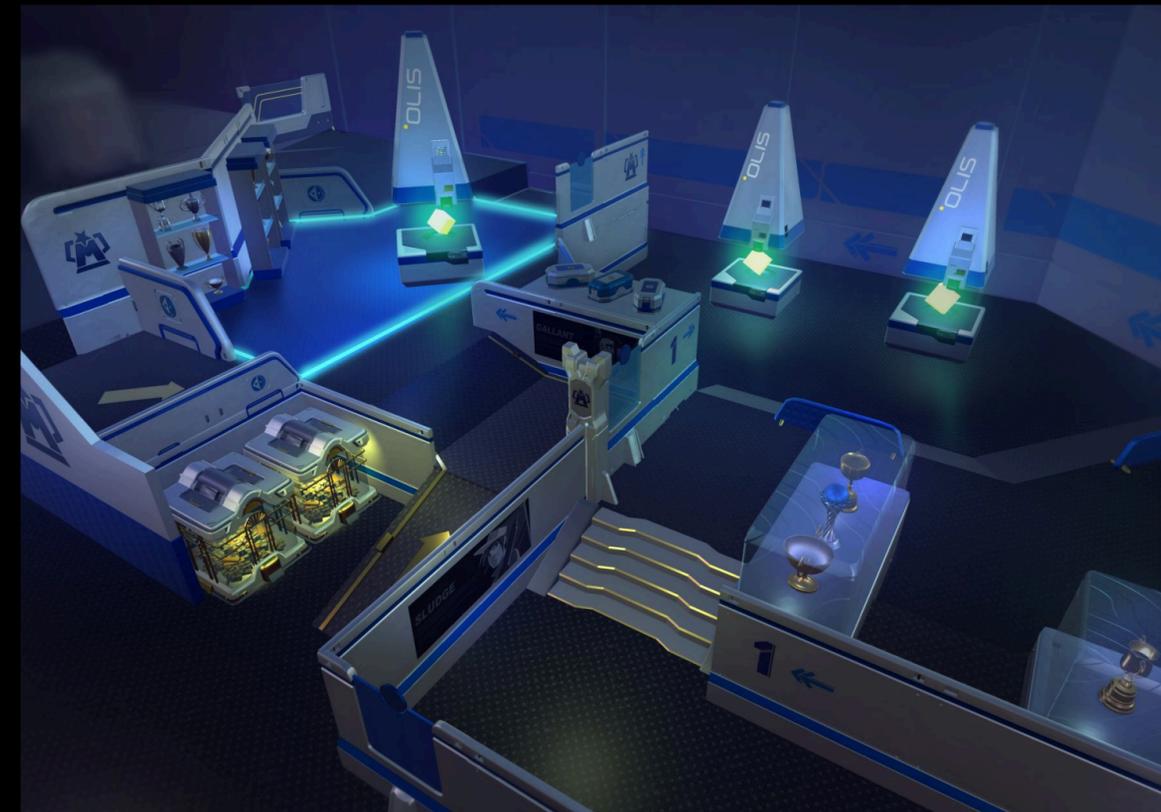
Ring City Champions

3rd Person Multiplayer Hero Shooter

Team Size: 25+

Development Cycle: Dec 2022 - Apr 2024

My Role: Game Director / Game Design Lead / Game Engineer



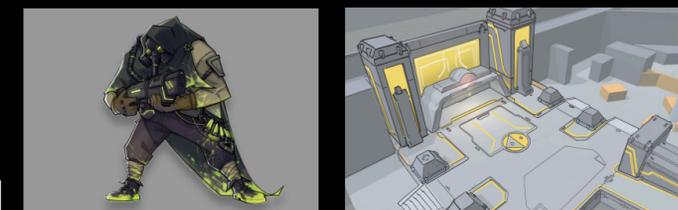
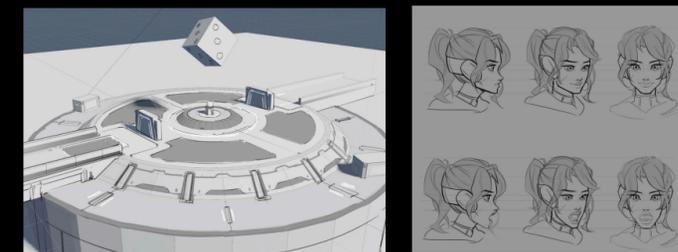
Ring City Champions is a fast paced 3v3 hero shooter inspired by titles such as *Overwatch*, rebuilt around a soccer-like objective system. Player compete inside a massive futuristic coliseum located in **Ring City**: a ring shaped orbital belt that wraps around earth.

Each player select a **Champion**, each with distinct abilities, movement styles, and combat roles. Team can score points by either eliminating the opposing Team or by escorting the power ball into the enemy team base.

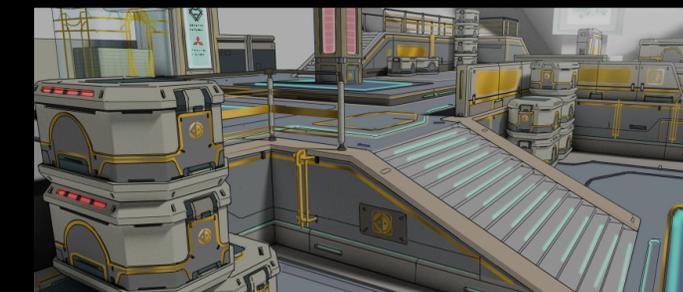
● PRODUCTION TIMELINE

Pitching Phase

- Created **Initial Game Design Document**, including early **Game Pillars**, core mechanics, etc.
- Collaborated with **Two Artists** on **Art Direction** and visual style
- Prepared a **Formal Pitch** to Game Design and Entertainment Design Faculty
- **Selected** as one of the four titles (out of twelve) to advance into further production



Dec 2022 - Apr 2023



Initial Production

- Team expanded to **20+ Members**
- Created **1 Year Production Timeline** for art, engineering, and game design.
- **Refined Core Game Design** with new designers.
- **Solo Developed** a playable multiplayer prototype.

Aug 2023- Dec 2023

Final Production

- **Oversaw Final production of Assets and Gameplay Implementation** across all departments
- **Onboard** new engineers, who implemented fully playable champions
- **Collaborated** with UI/UX designers on player interface

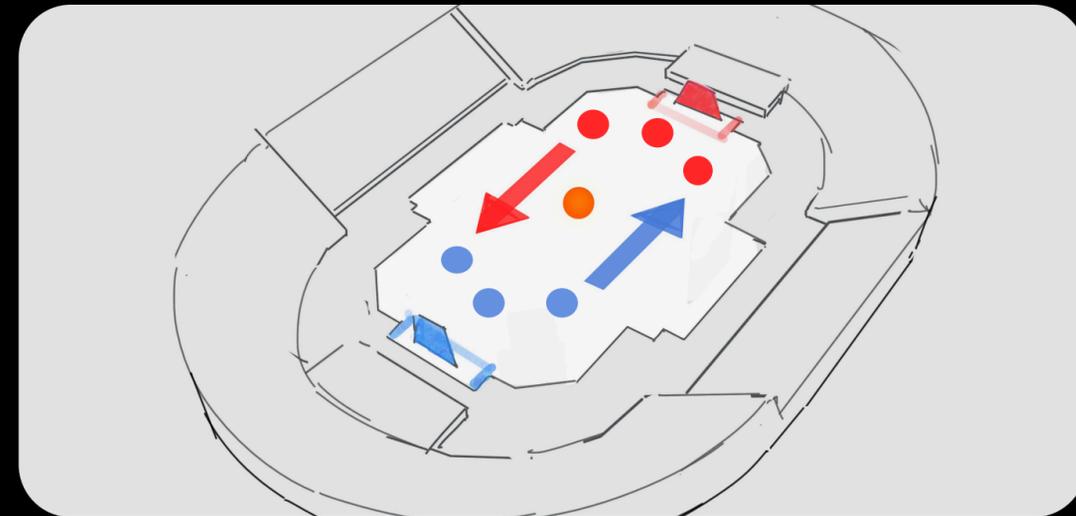


Dec 2023 - Apr 2024



● CORE GAME MECHANIC

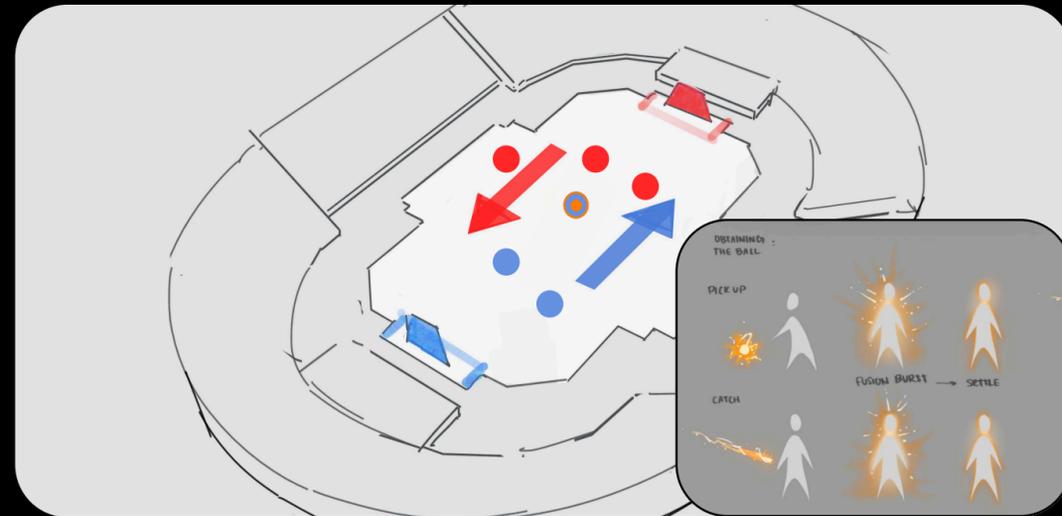
How does a match work? What are players' main objective? How do they win?



Setup

At the **Start of Each Round**, two teams of three players spawn on each side of the arena. **A Power Ball (Orange Circle)** is going to be spawned in the center of the field. Each team's **Primary Objective** is to secure the ball and escort it into the opposing goal.

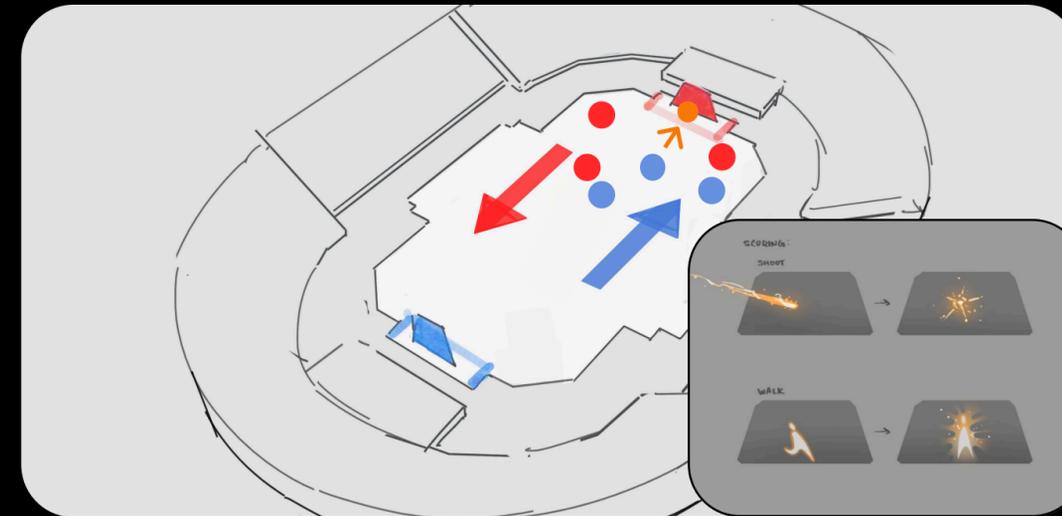
There will be a **Match Timer** and match can contain multiple rounds, at the end of the timer, the team who has the **Most Points** win the game.



Picking Up the Ball

When a player reaches the Power Ball, they can pick it up, converting it into stored energy within their suit. The ball **Reveals** the holder's location to the **Entire Enemy** team, making them a high-priority and vulnerable target.

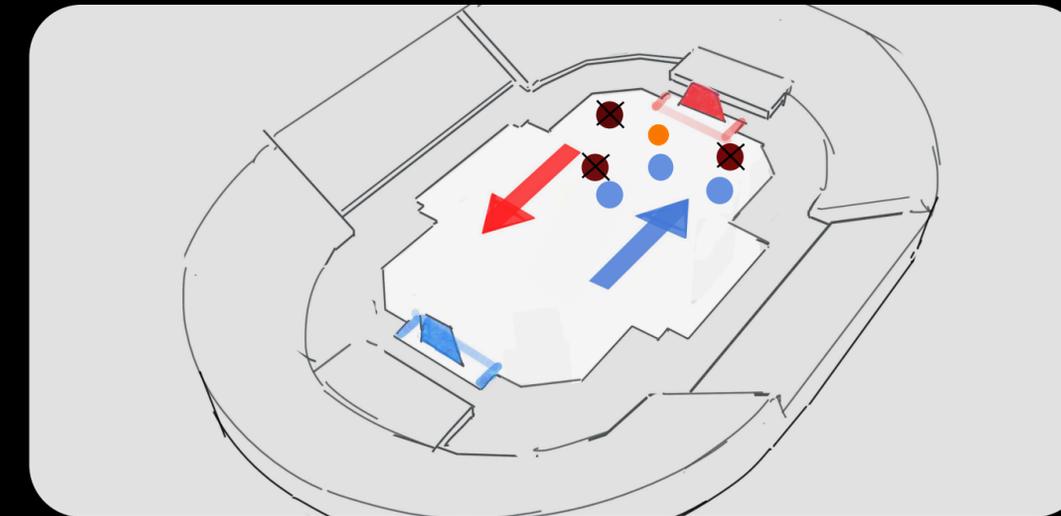
If a player's **Health** reaches **Zero**, they are eliminated and will **Respawn** after a short delay. If the eliminated player was carrying the Power Ball, it is instantly dropped at the point of defeat, allowing either team to immediately try to take control over it.



Shoot the Ball

The ball holder can **Shoot** the **Power Ball** forward. It will travel in a straight line without gravity and bouncing off walls. Other players can deal damage to ball by shooting with their weapons: once the ball takes enough damage, it becomes destabilized and drops to the ground, becoming stationary and contestable.

If the Power Ball collides with a team's goal, the opposing team earns +1 point. For example, hitting the Blue Goal awards Red Team a point. After each goal, the arena resets and the next round begins from the setup phase.



Team Wipe

A team wipe occurs when **All Three Players** on a team are **Eliminated Simultaneously**, with none of them having respawned yet. When this happens, the opposing team is immediately awarded +1 point, and the round resets to setup phase as soon as the final player is defeated.

● CHAMPION SYSTEM

Playable Champions are designed to give players clear Strategic Roles in both Power Ball and Combat Encounters.

Each Champion is defined by a unique weapon, ability kit, and base stats that shape how they contribute to the team.

Champions are grouped into four Roles, with each role offering a distinct tactical advantage and enabling diverse team compositions that support a wide range of playstyles.



↘ Striker

High-mobility character who specializes in flanks, burst damage, and evading enemies



⚔ Brawler

Close-range fighter who dominates one on one duels and clears space around the objective.



🎯 Sniper

Long-range assassins who focus on punishing exposed target and forcing enemy positioning

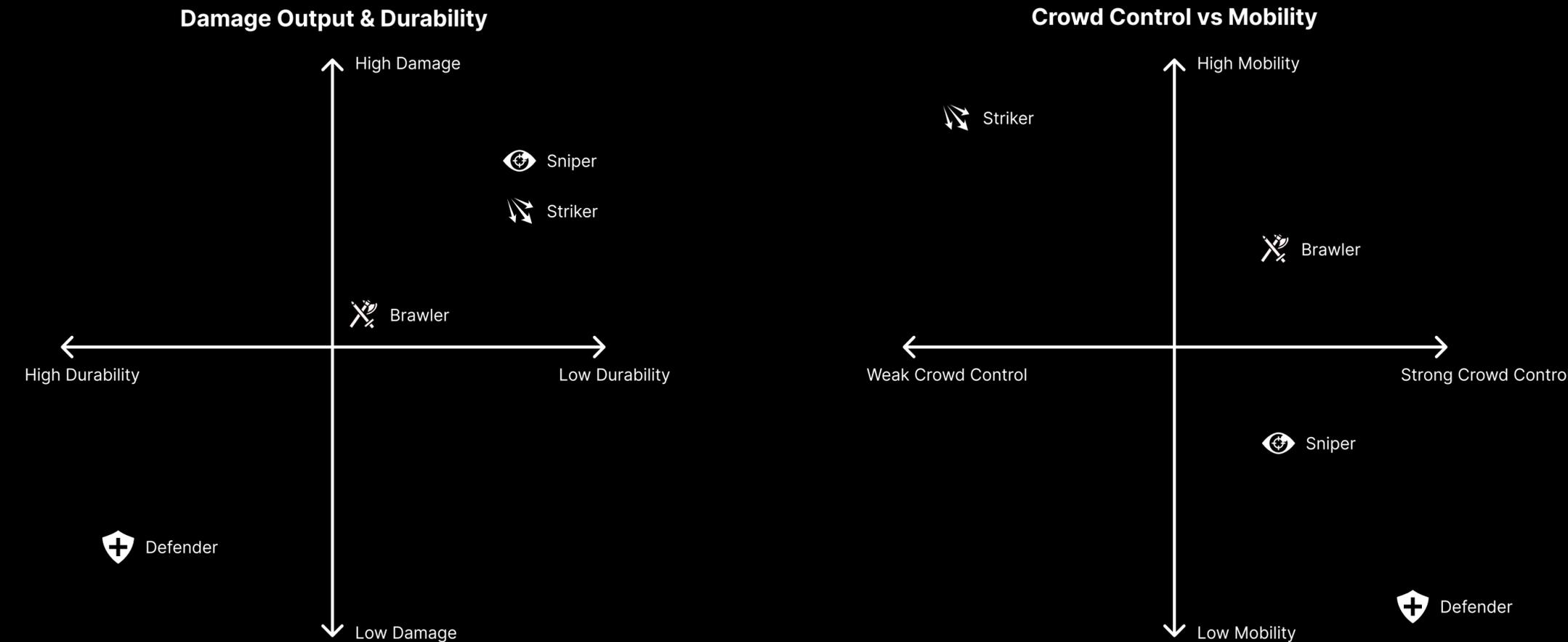


🛡 Defender

Tanks that creates safety zone for allies, blocking enemy attacks with shields, and protecting the goal

● CHAMPION ATTRIBUTE MAPPING

These graphs highlight how my design approach to each Role remains unique through complementary strengths and trade-offs. Even if Roles overlap on one axis, the second axis reveals their distinct identity. The core ideal is to ensure a balanced roster with no dominant or weak Role.



● CHAMPION ABILITIES - BLIZZ

Blizz is a **High Mobility Striker** designed around speed, precision, and evasive combat. She represent the players who want to win my constantly repositioning and kiting enemies, instead of overpowering by brutal force.

She was designed to fill the role of a **High Skill Ceiling** Striker, meaning success playing her will require player to have fast reflexes and high mechanical mastery. She is intended to be designed as a double edged sword, where high risk plays make high reward.

Blizz's **Signature Abilities** is called **Curve Ball**. While carrying the power ball, blizz can perform a precision throw that **Bends Along A Controlled Arc** instead of traveling in a straight line.

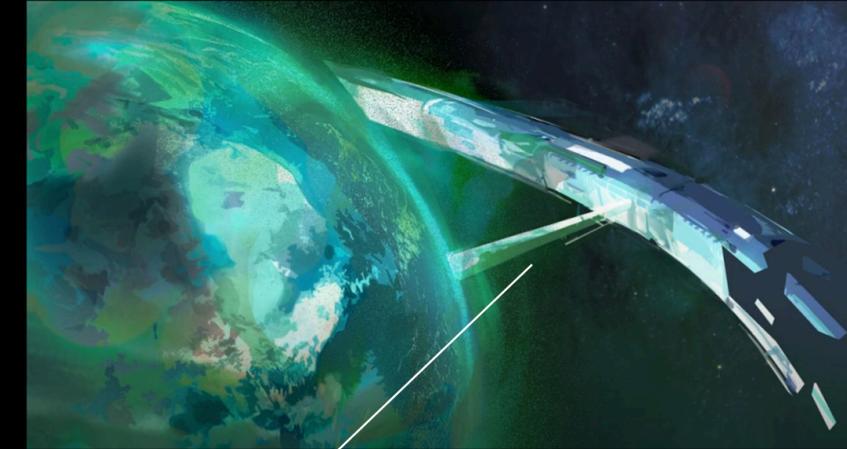
Despite its simplicity, Curve Ball serves multiple purposes: Blizz can curve shots to score from unexpected angles, safely pass the ball to teammates, or redirect threat to escape complex situations then use her speed to recover the ball.



● WORLD BUILDING / NARRATIVE

As Earth becomes uninhabitable, humanity constructs Ring City, a **Massive Orbital Habitat** built to preserve civilization. Limited space turns the station into a refuge only for the wealthy, the powerful, and those considered essential for its survival, while leaving everyone else behind

Within Ring City, a new competitive sports emerges to entertain it citizens; **Ring City Overdrive**, a high-stakes combat sport centered around the **Ring City Colosseum**. Competitors from across the globe, even desperate challengers from Earth, enter the arena seeking their own goals, whether it's money, fame, redemption, or revenge.



Ring City is divided into many sectors, and each sector's residents have their own distinct culture and identity.

Ring City Citizens	High Class	District 2	Abandoned Earth
<ul style="list-style-type: none"> • Fashion • Futuristic 	<ul style="list-style-type: none"> • Elite • Luxurious 	<ul style="list-style-type: none"> • Industrial • Technology 	<ul style="list-style-type: none"> • Toxic • Scraps



Chu Mo 除魔
Alternative Controller + Escape Room Experience

Team Size: 15
Development Cycle: Dec 2022 - Dec 2023
My Role: Game Designer / Game Engineer

Chu Mo is a Chinese horror themed experience, where player role plays as three entry level exorcism students, where their main objective is to defeat the demon that possess the room.

Players need to **Observe** the **Environment** to identify curses, and **Utilize Relics** to undo them, in order to defeat the demon.



2023 Indiecade
Live-Action
Award

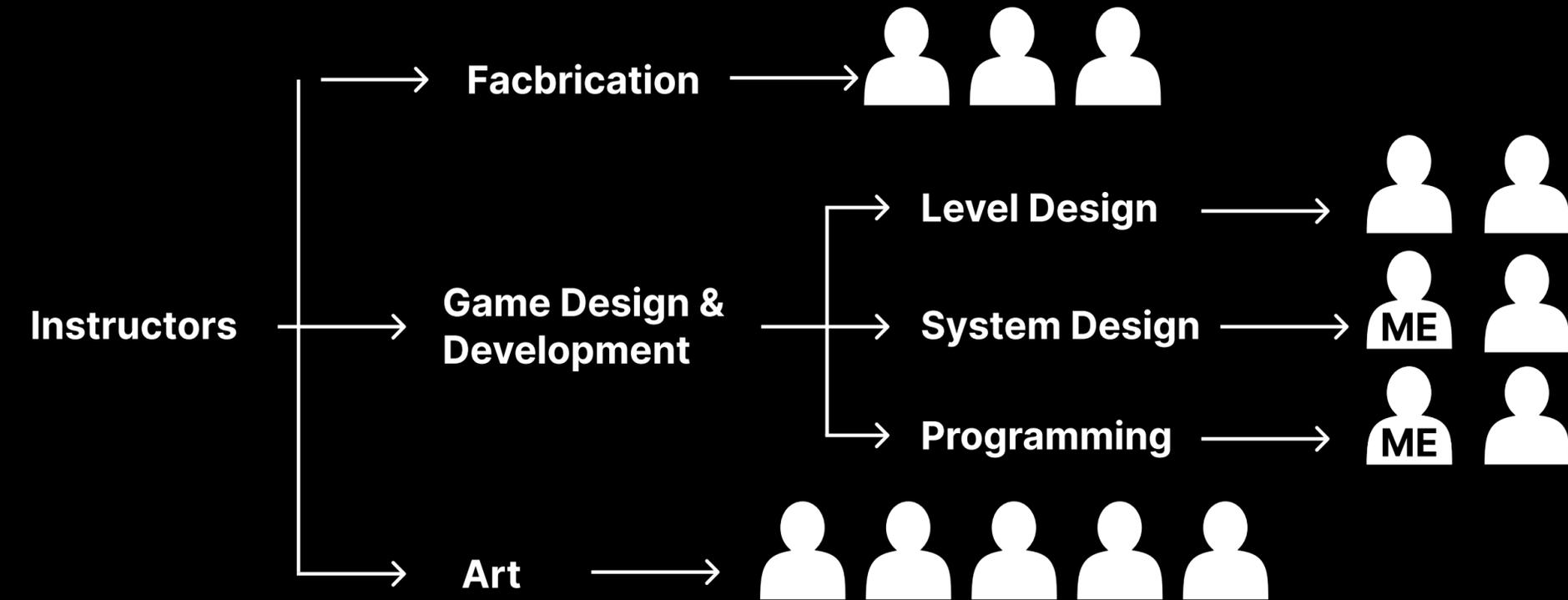


2024 GDC
Alt-Controller
Award



● TEAM STRUCTURE & MY ROLE

Chu Mo was built through close collaboration with multi-discipline talents. As part of the game design and development team, my main responsibilities include designing the core flow of the experience and implementing game play elements through coding.



● PRODUCTION TIMELINE



Dec 2022 - Jun 2023
Early Prototyping + Hardware Production



Jun 2023 - Nov 2023
Iteration, Room Redesign, Testing



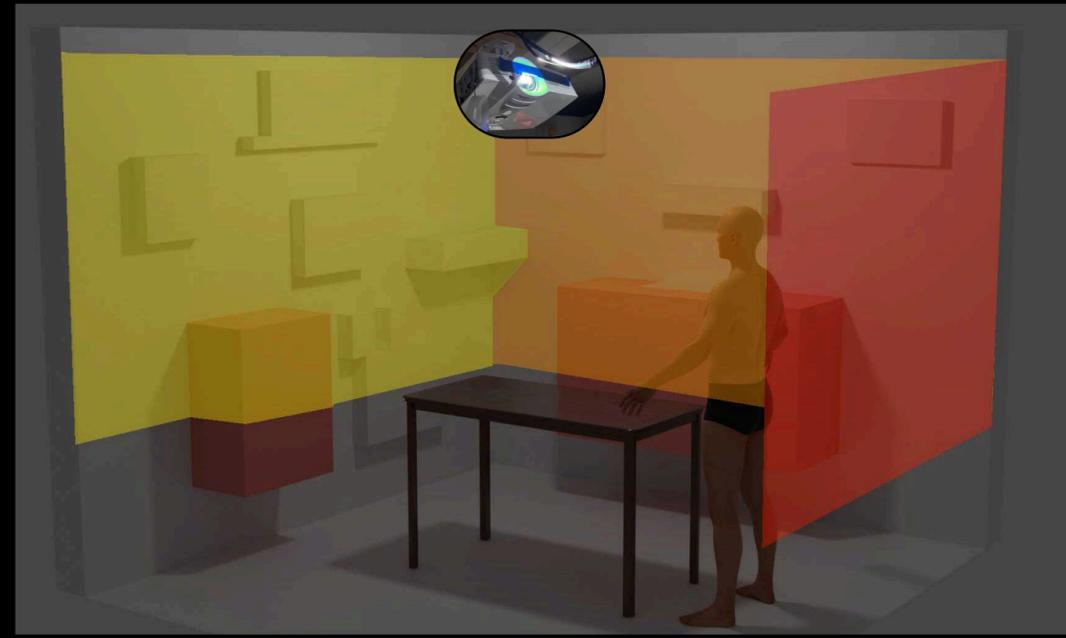
Dec 2023 - Apr 2024
Final Polish & Public Showcase

● INSPIRATION

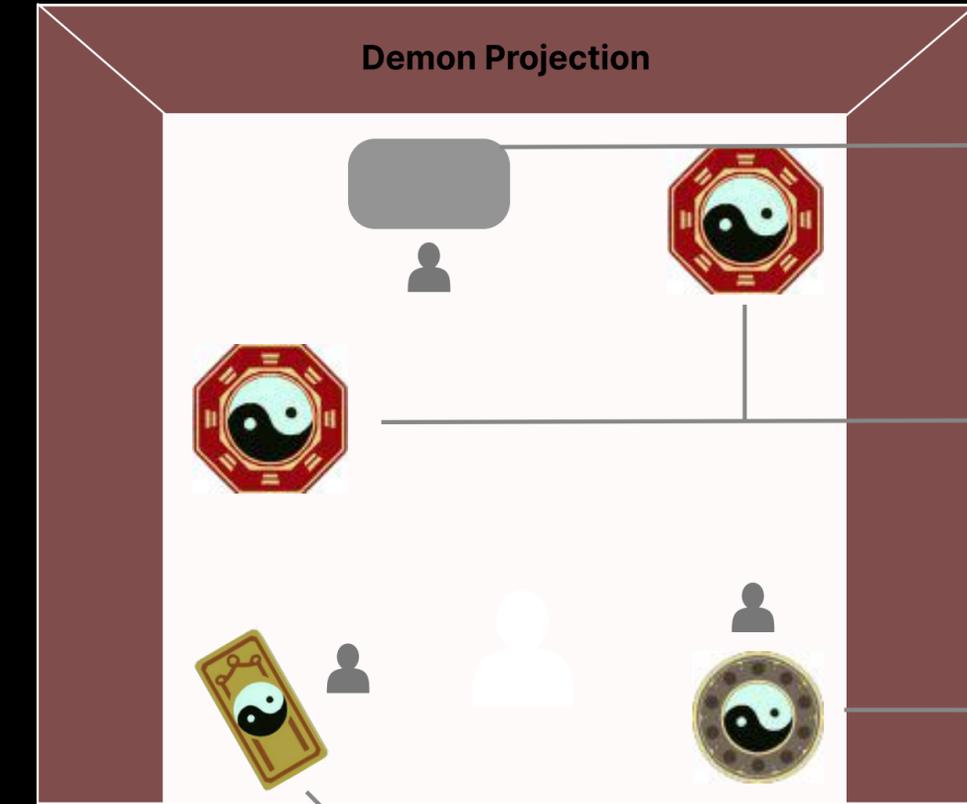
Chu Mo core inspiration come from traditional **Taoism** and **Chinese Exorcism** culture. Our goal was to represent this unique culture through a immersive and interactive experience in a modern way.



● ROOM LAYOUT DESIGN



To enhance immersion, we designed the room to be fully enveloped by visual effects using three ceiling-mounted projectors. Each projector casts dynamic VFXs onto the surrounding walls, creating the illusion of demonic cursives spreading throughout the environment. This setup transforms the physical space into a reactive ritual chamber, allowing players to feel the curse intensify around them as they interact with the experience.



Database
A PC placed on a table, it contains a cheat sheet where player can see the pattern and solutions of all curses

Relic Station
Players revert curses by pressing the correct relics in order

Drum Station
Player seals curses by playing correct drum pattern

Talisman Station
Player revert curses by drawing the correct talisman

● MY CONTRIBUTION - CORE GAME LOOP / FLOW

Our main intention for the experience is to fully immerse player into their exorcist student roles, through medium such as VFXs, projection images, and live events. Using time constrains to create cooperation within players.

The experience is structures around to major stages: **Tutorial Phase** and **Gameplay Phase**.

Tutorial

Onboarding

Players are introduced to the setting and their exorcist student role through a brief guided explanation by our team members.



Duration: 2 Minutes
Mood: **Calm**

Introduction

Players enter the room. Their instructor BeiDou will guide players through the room. Going through the usage of each station.



Duration: 3 Minutes
Mood: **Calm**

Cut Scene

A thematic moment where the chained demon break free from its seal, where students will face off this powerful demon for the first time.



Duration: 2 Minutes
Mood: **Suspense / Scared**

Core Gameplay

Identify Curses

Player look around the room to find hints of curses and finding correct solutions in database. A collaborative moment that requires constant communication.



Duration: 2 Minutes
Mood: **Nervous**

Reverse Curses

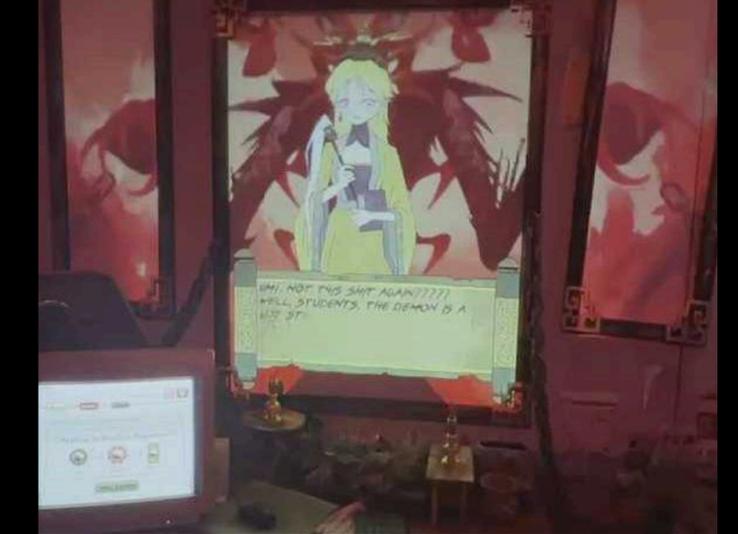
Players play mini game within stations in room to revert the curses, with the support of the database.



Duration: 3 Minutes
Mood: **Slightly Relieved**

Defeat Demon

After certain amount of curses reverted, players face a final showdown with the demon, eventually sealing the demon by shouting. A powerful moment that concludes the game.

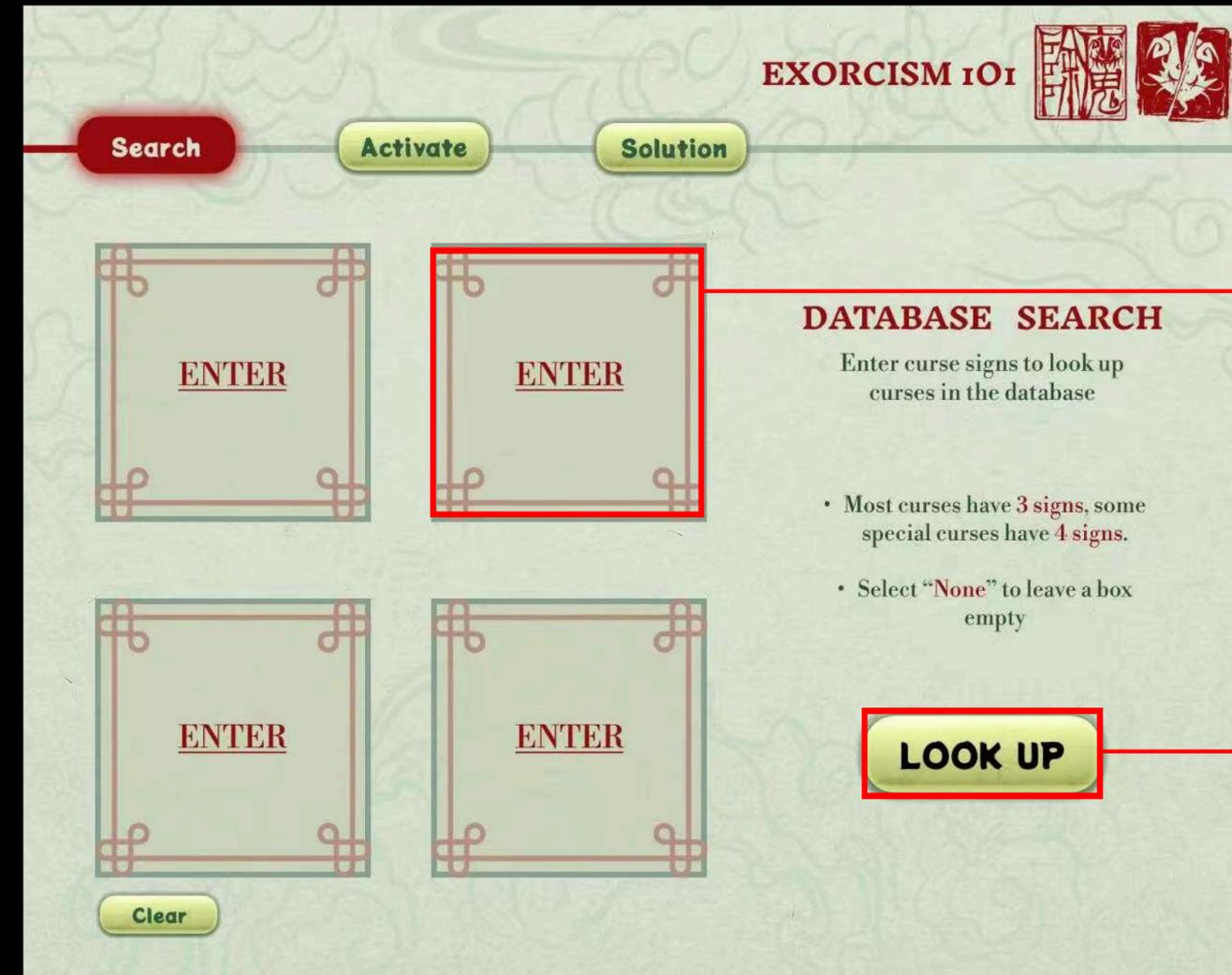


Duration: 3 Minutes
Mood: **Proud**

● MY CONTRIBUTION - DATABASE

The database, a system that I designed and programmed independently, sits at the front of the room and serves as the players only **Tool for Finding the Correct Solution** and **Revert Curses**.

Player must utilize the hints they gathered within their surrounding and determined the correct curse type, then eventually finding solutions to revert it. It is a tool that eventually foster player communication and coop.



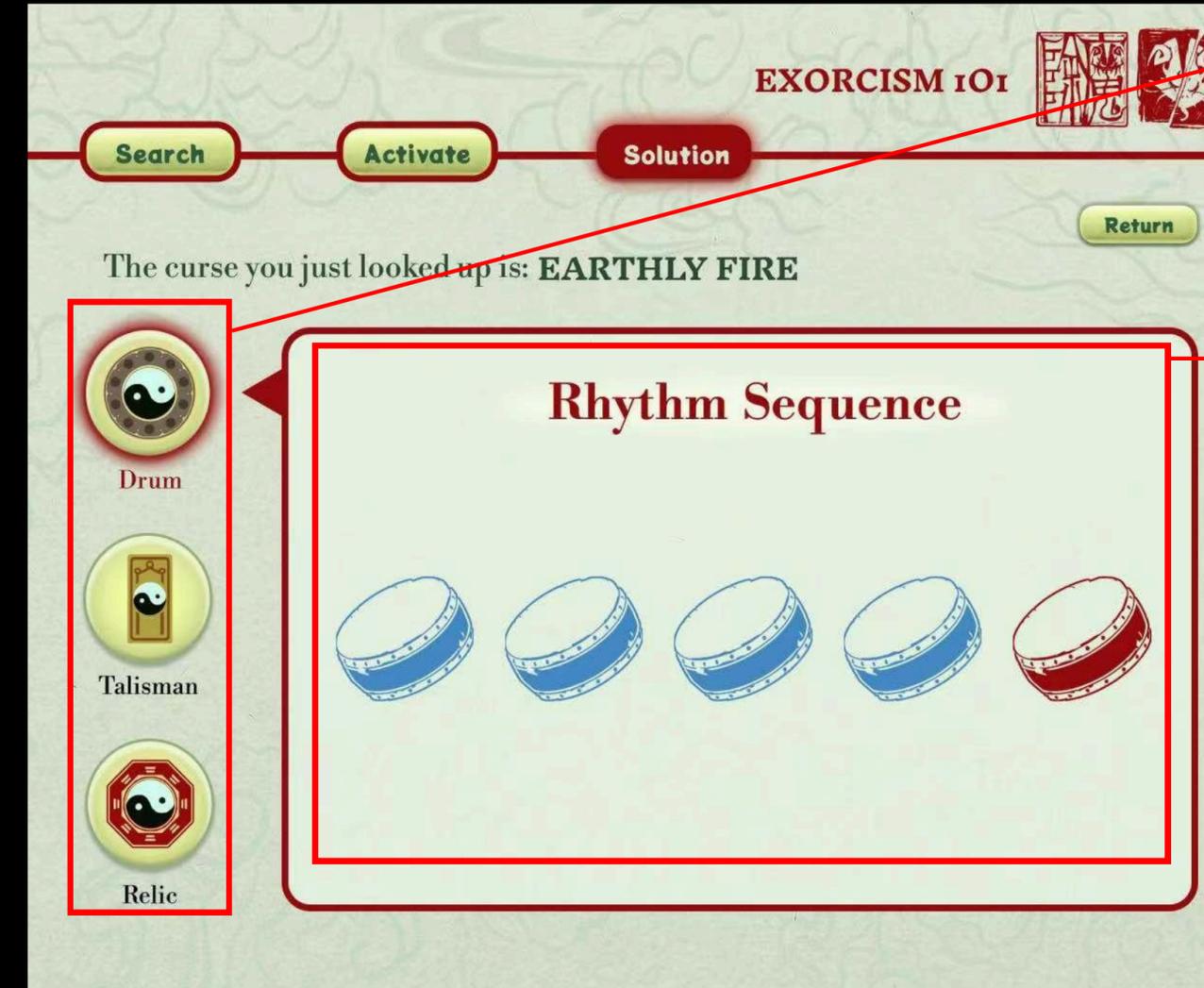
Step 1:

In order to find the correct curse time, players need to observe **Visual** and **Audio** cues around the room and put all of them in the left area.



Step 2:

After inputting all hints, player can hit the **Look Up** button to check if they observed all hints correctly. If yes, they will be guided to the solutions page, which is shown on the left side.



Step 3:

Player can switch between the solution for each station using these button. However, since only 1 station's solution can be shown at once, players need to **Coordinate** and **Remember the Solution** for their station.

Step 4:

Players will view the details of the **Solution for Their Station**. They will all be a pattern that they would need to remember and input that back on their own station.

Using the **Drum Station** as an example, player would need to play the left pattern on the drum shaped controller to revert part of the curse

