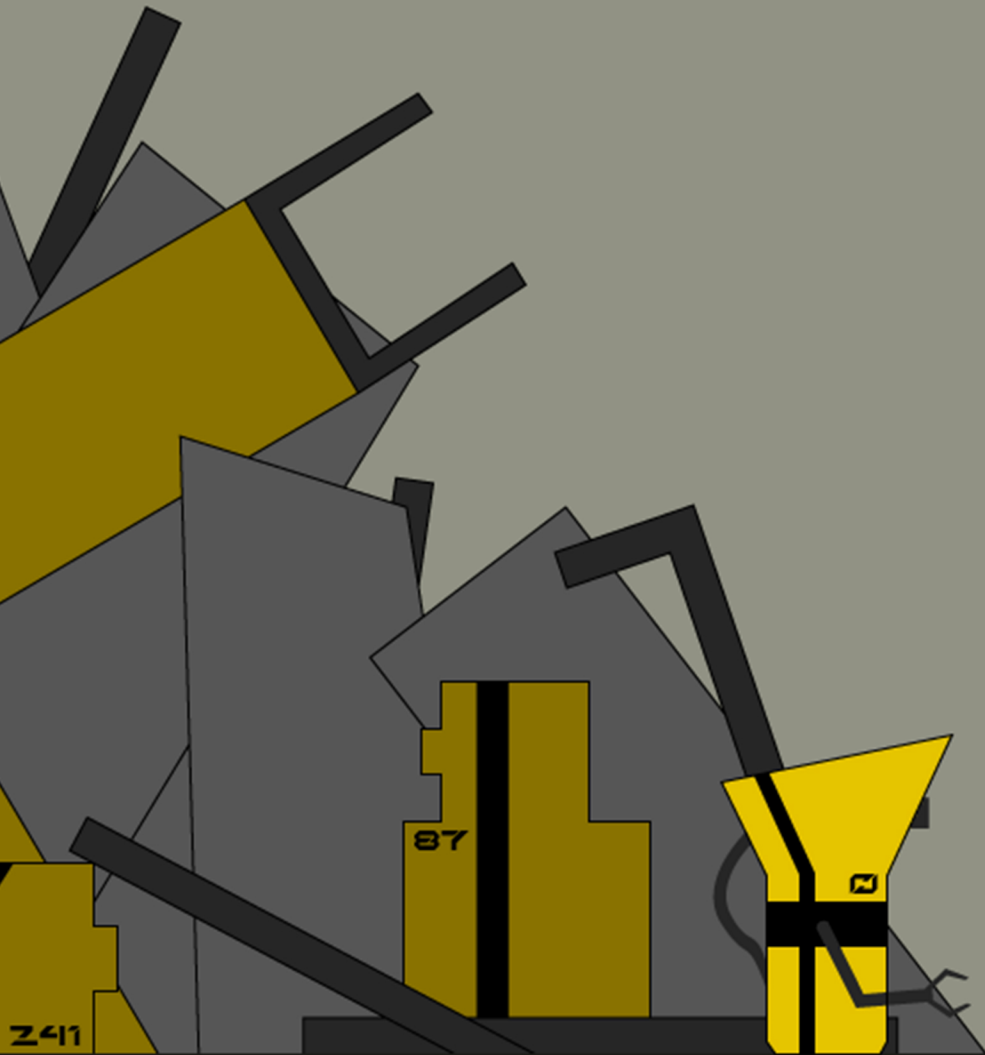# ZER0

Team IDK

Division of Work

This Iteration

All: Redesign game structure based on feedback from last milestone
Alex: Level design, asset design (factory, factory background, lightning, core, jump platform), redesign story concept
Ruilin: Asset design (scientist, doors, consoles, laser, pipe platform, obstacle, moving platform, elevator), and GDD
Brandyn: Asset design(ZER0, other robot, background, crates, platforms, junk pile), and GDD
Ishpreet: Programming, level design

Concept Summary

Narrative

The narrative of our game follows a robot named ZER0. The game starts within a flashback where ZER0's creator, Dr. White, is told to deactivate all of the previous iterations of Project Infinity since they are no longer needed and his employers don't want to waste the power in their cores. The flashback ends with ZER0 being powered down.

ZER0 powers on in a scrapyard during a storm after being struck by lightning. He is confused as to why he has been reactivated and decides to seek out Dr. White to find out more information. ZER0's journey will take him through a factory and laboratory to reach the control room where he last saw Dr. White. Along ZER0's path, he will encounter computer consoles and other robots that will reveal pieces of the story to the player. The player will learn about Project Infinity as well as of a conflict that arose between Dr. White and his employers. The player will also be told about the completion of Project Infinity and the creation of the robot, Infinite.

After successfully navigating the factory and laboratory, ZER0 will reach the control room and meet Infinite. He will uncover that Dr. White is in fact dead and has been killed by Infinite. Infinite will tell ZER0 that he killed Dr. White since Dr. White was disobeying the orders of his employers by reactivating the previously deactivated robots. Infinite will then trap ZER0 in a junk pit to be deactivated and ZER0 will be tasked with stopping Infinite. After defeating Infinite, by removing his power cores, Infinite will tell ZER0 to continue his work having been able to best him. The player will then use the cores to decide if ZER0 will continue Infinite's destruction of the

other robots or if ZER0 will restore power to the factory and repair the other robots as Dr. White was attempting to do.

Plot Structure
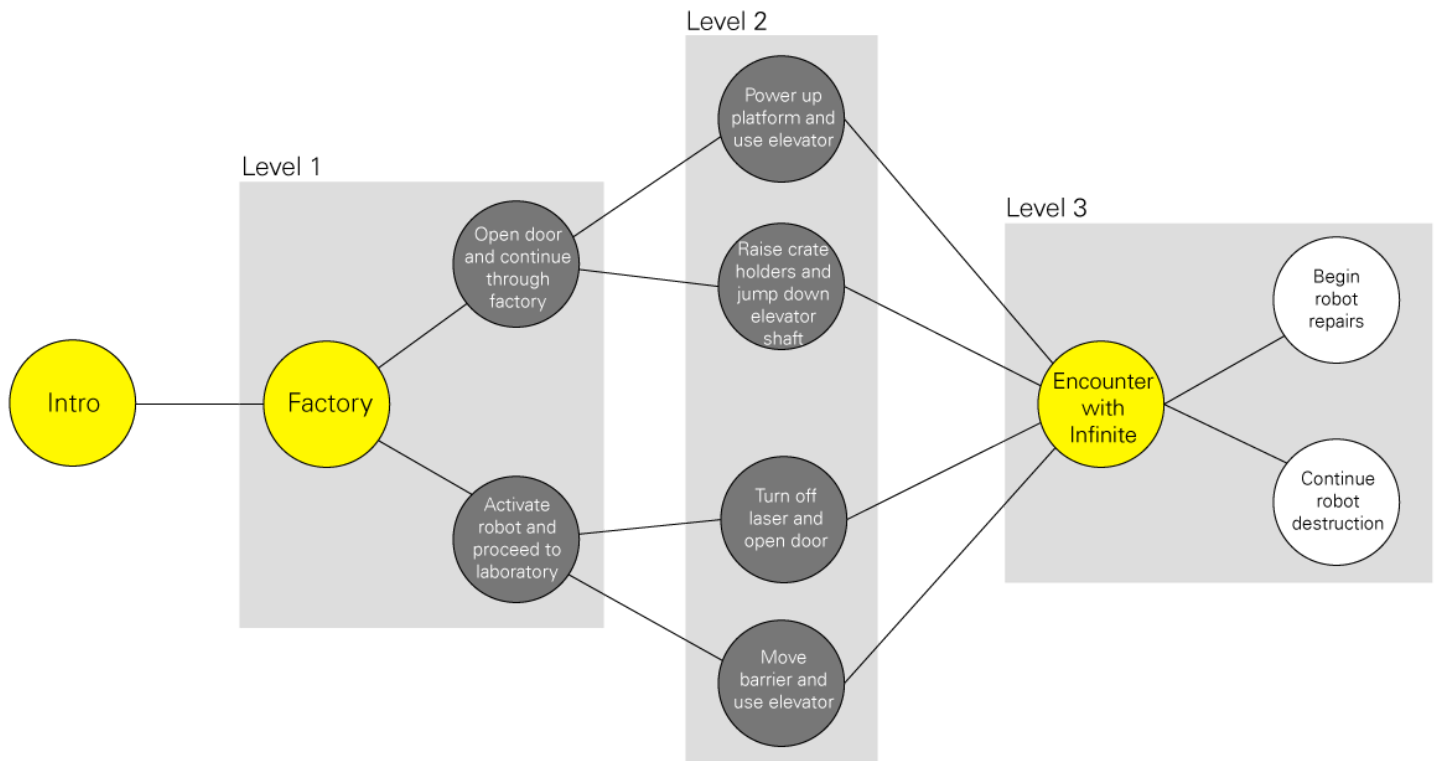
The plot of our narrative follows a branching foldback structure. The plot starts with the introduction and is followed by the player entering the factory. The factory then branches in two directions where the player can choose to continue through the factory or head to the laboratory. Each route then branches again and the player can decide between one of two different paths. All these paths then lead back to the control room. In the control room, the player encounters Infinite which is followed by another branch where the player is able to decide on the ending of the game.

Characters

The game features three main characters:

ZER0: ZER0 is the protagonist in the story. He was the first robot created by Dr. White as a part of Project Infinity. He is the first version of the project and was deactivated by Dr. White when Project Infinity was nearing completion.
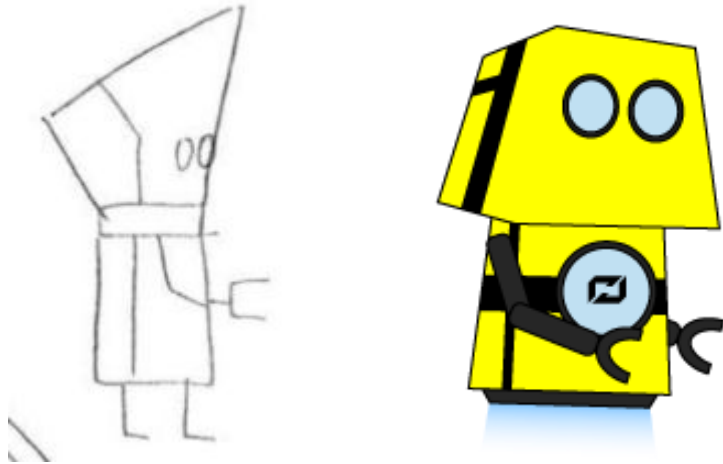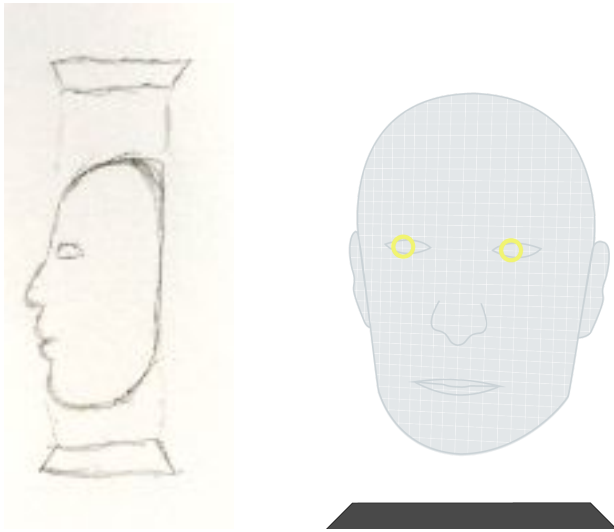
Sketch and design of ZER0.

Dr. White: Dr. White is the scientist working on Project Infinity. He created ZER0, Infinite, and all the other robots within the facility.

Sketch and design of Dr. White.

Infinite: Infinite is the antagonist in the story. He was created by Dr. White and is the final result of Project Infinity.
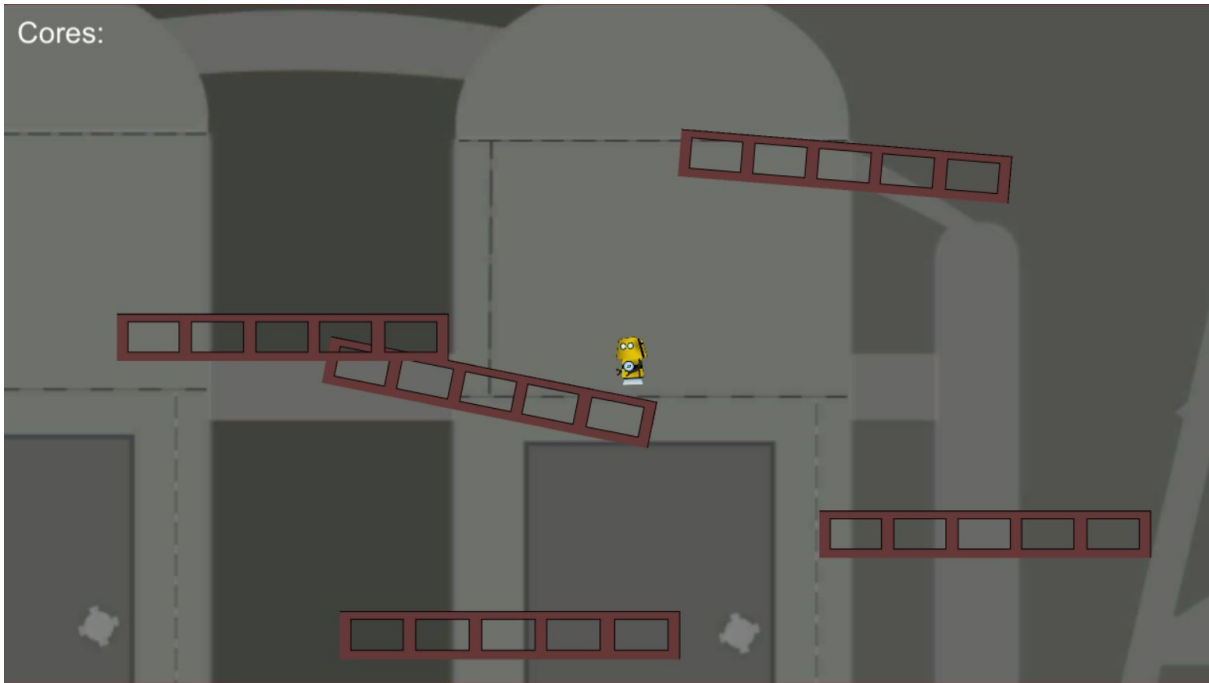
Sketch and design of Infinite.

<u>Level Design</u>
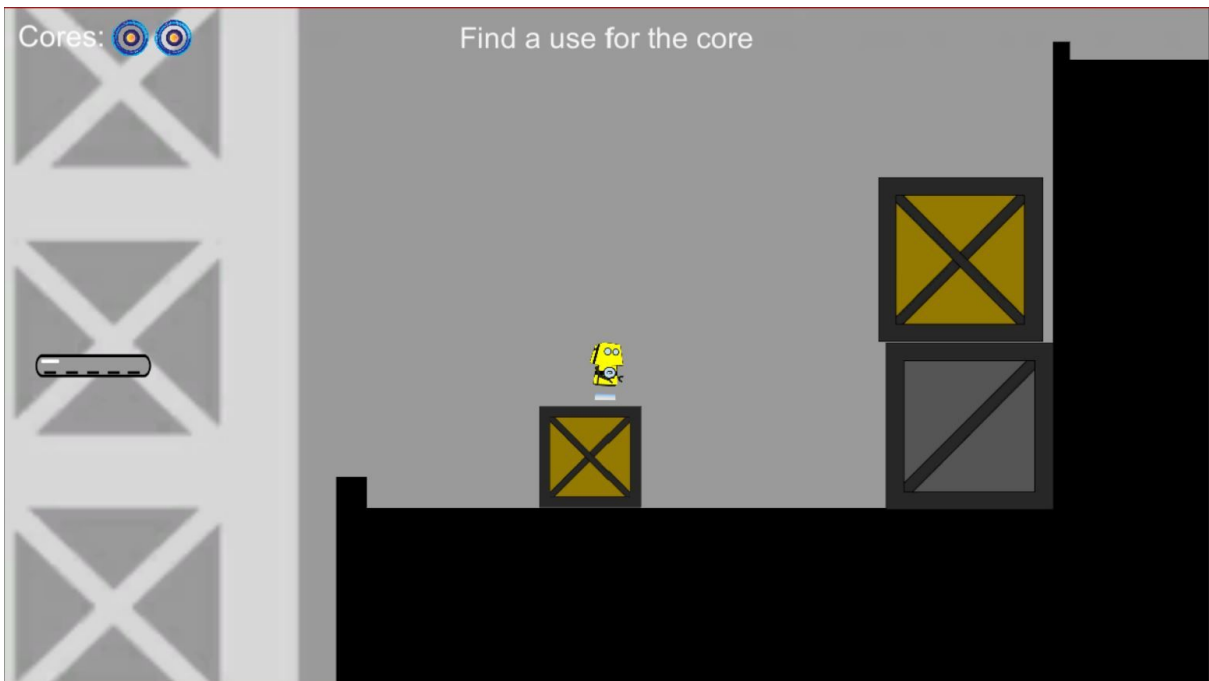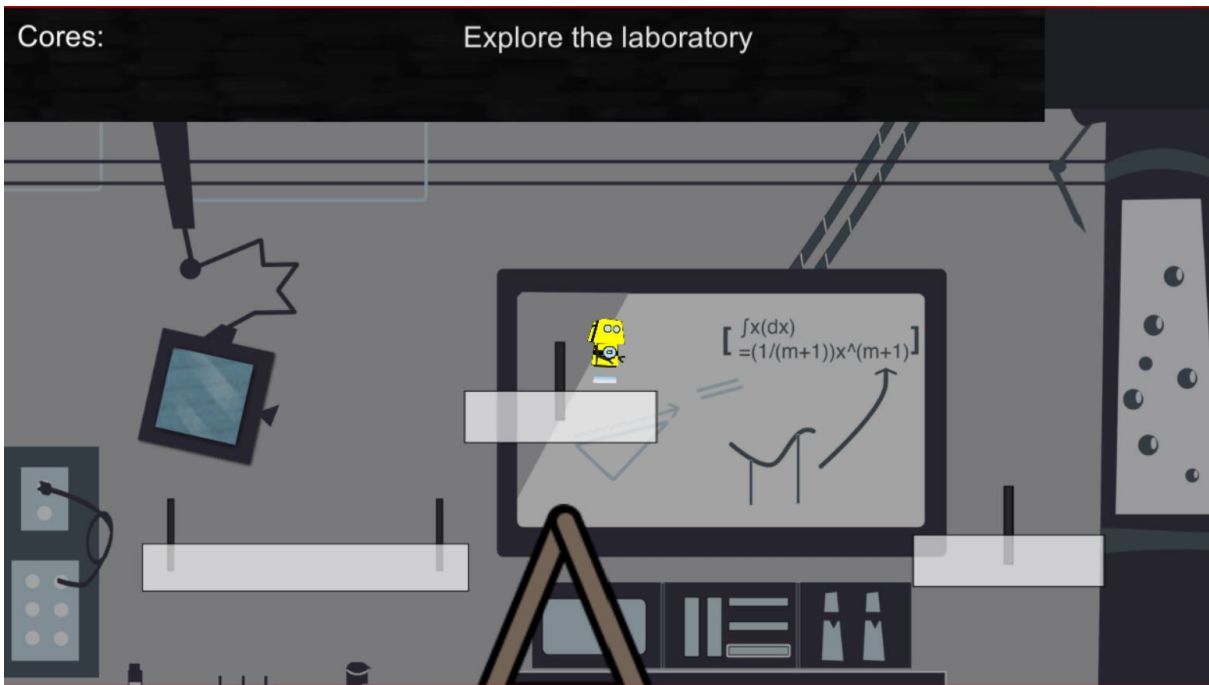
Game World

A screenshot of the introductory level of the game.
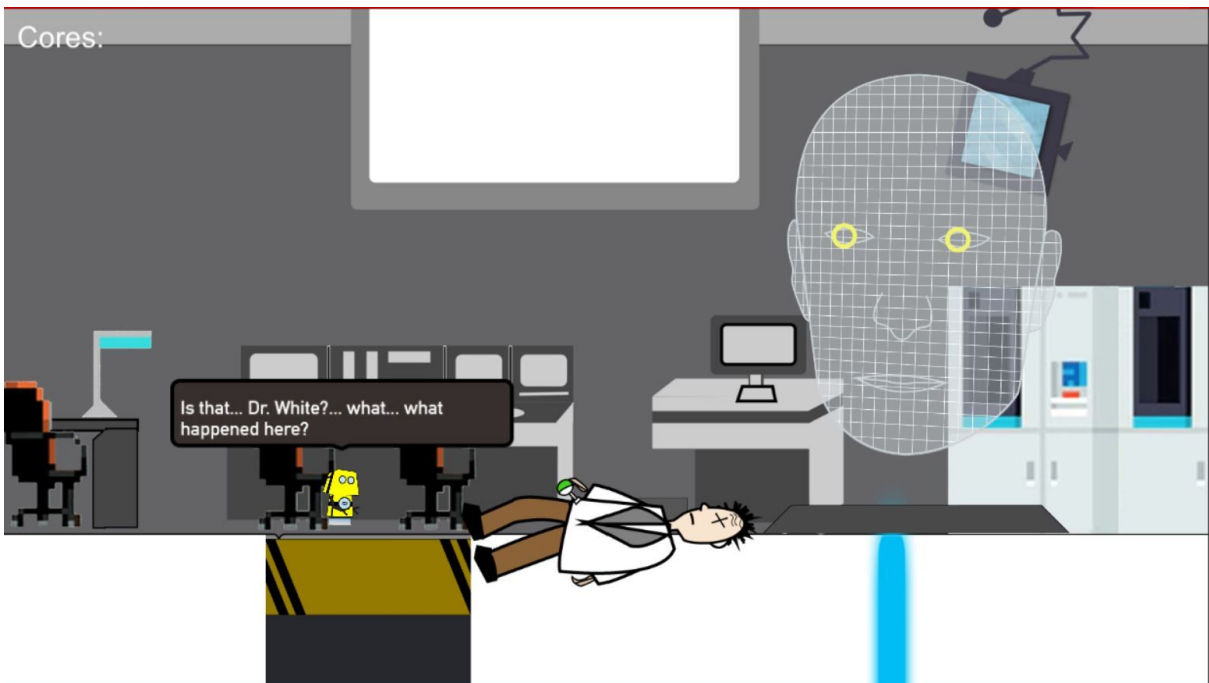
A screenshot of the first factory level of the game.

A screenshot of the second factory level of the game.

A screenshot of the laboratory level of the game.

A screenshot of the control room level of the game.

Overview Map
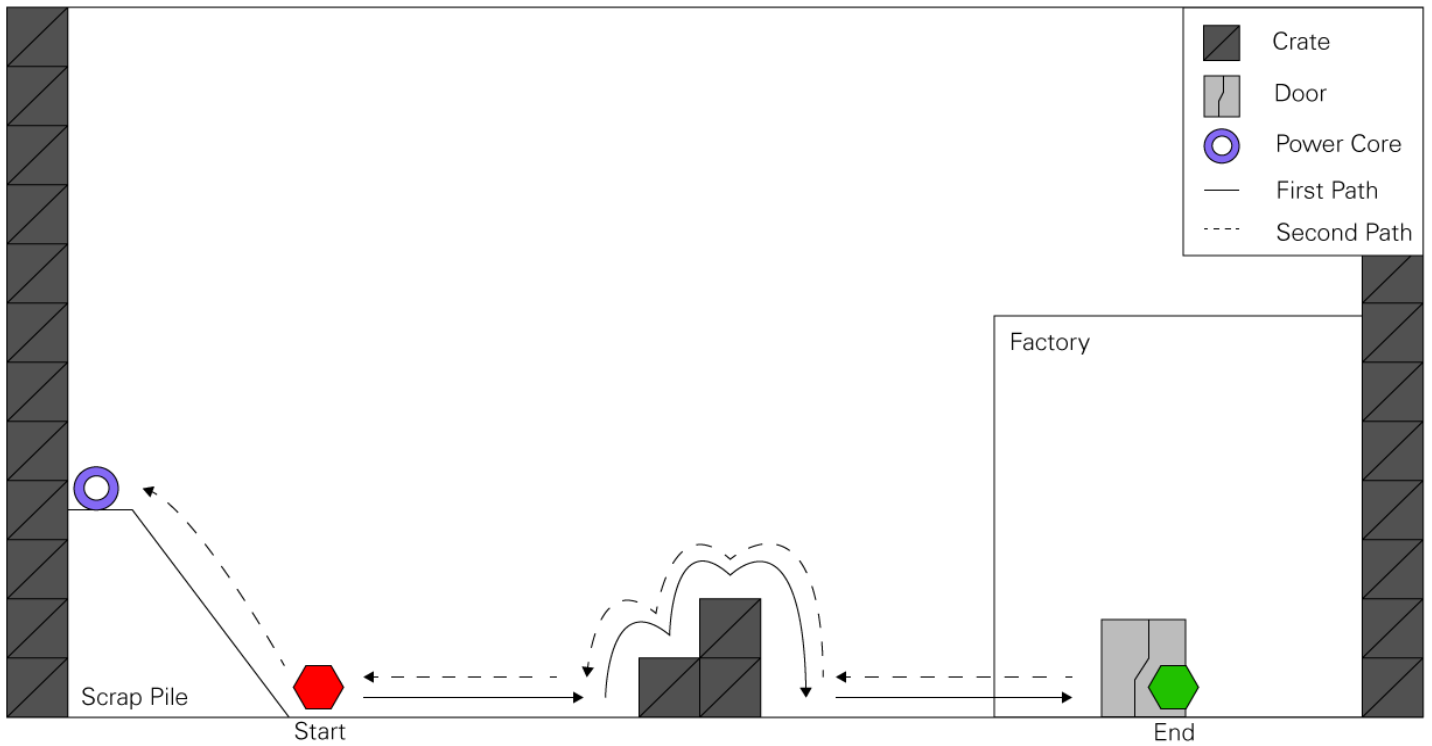
A map of the introductory level of the game.
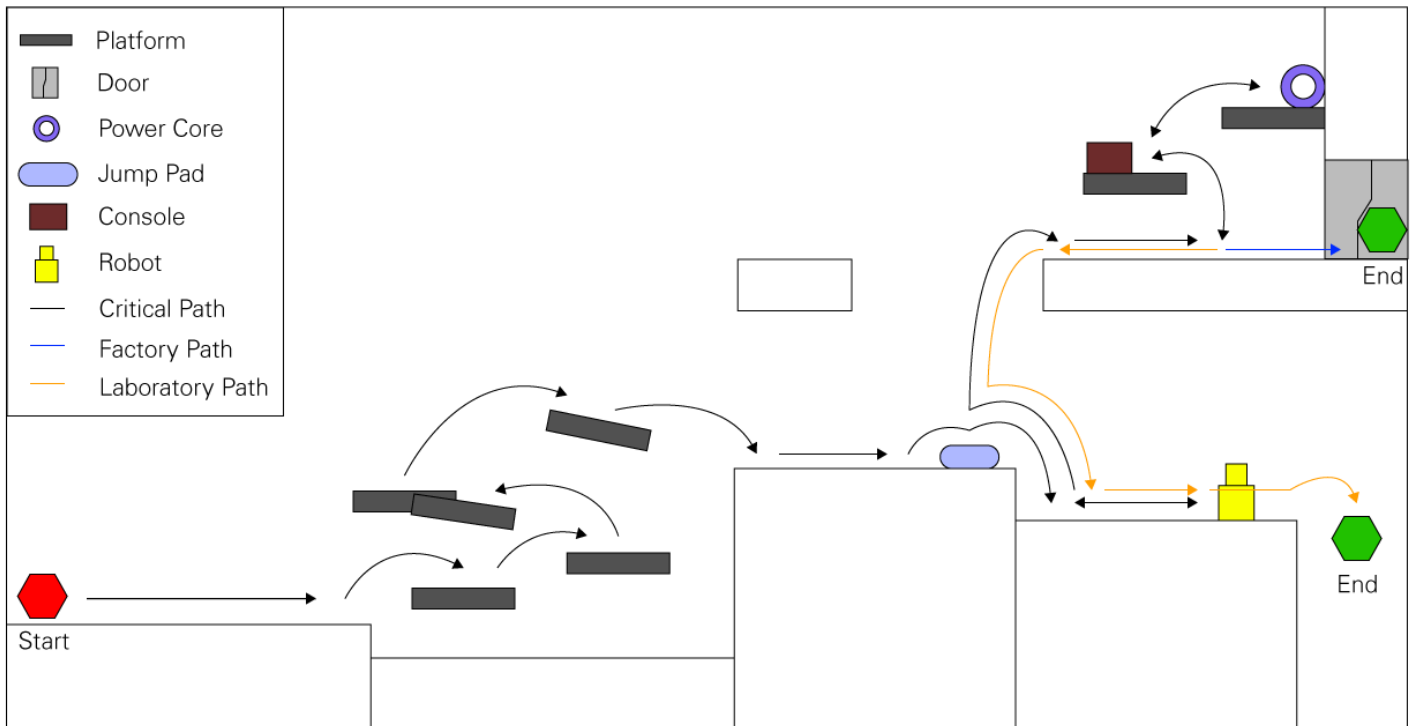
A map of the first factory level of the game.

A map of the second factory level of the game.

Legend (top map):
- Platform
- Door
- Power Core
- Jump Pad
- Console
- Core Holder
- Elevator
- Crate Holder
- Critical Path
- First Path
- Second Path

Start

End

End

Legend (bottom map):
- Platform
- Door
- Power Core
- Console
- Laser
- Obstacle
- Barricade
- Critical Path
- First Path
- Second Path

Start

End

End
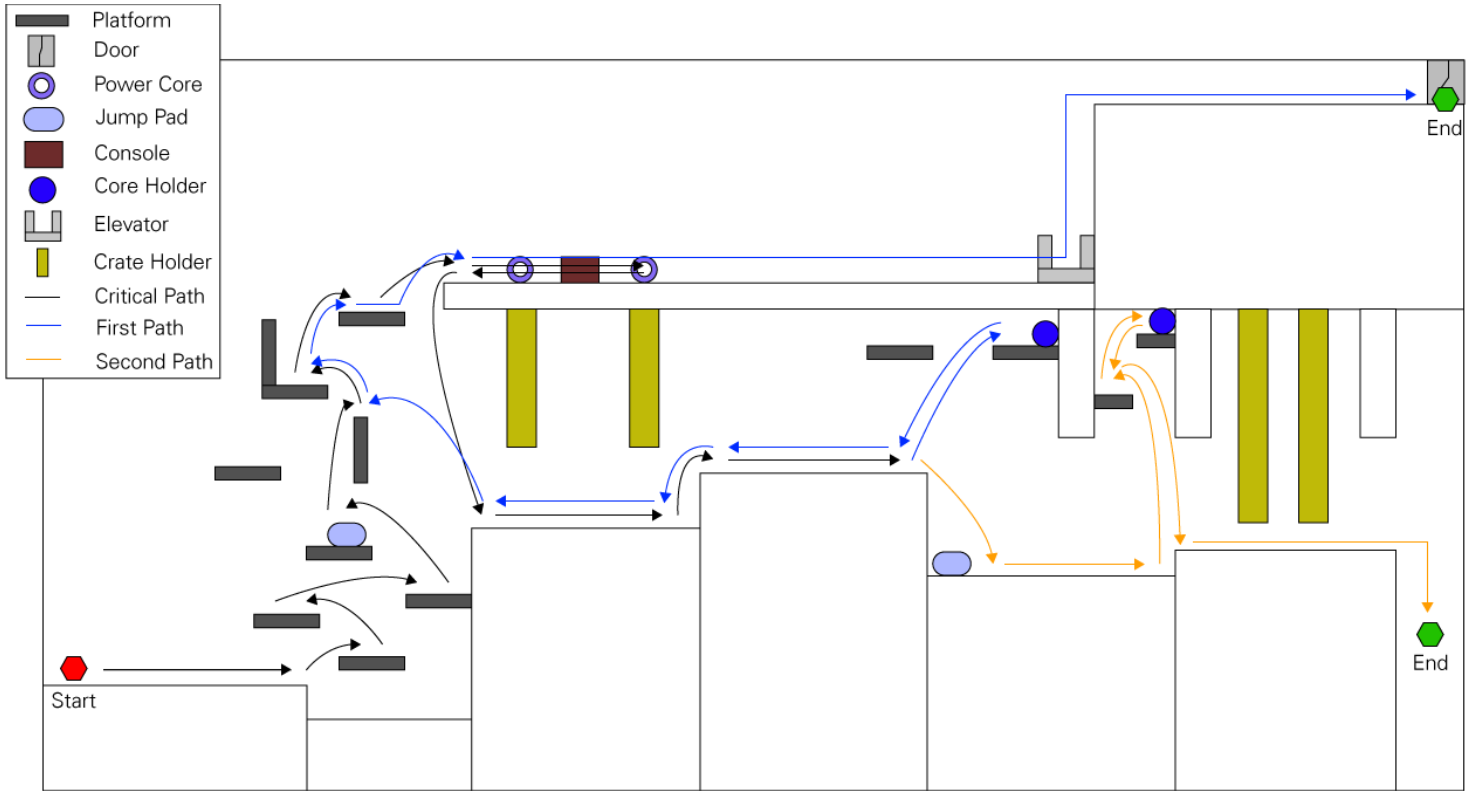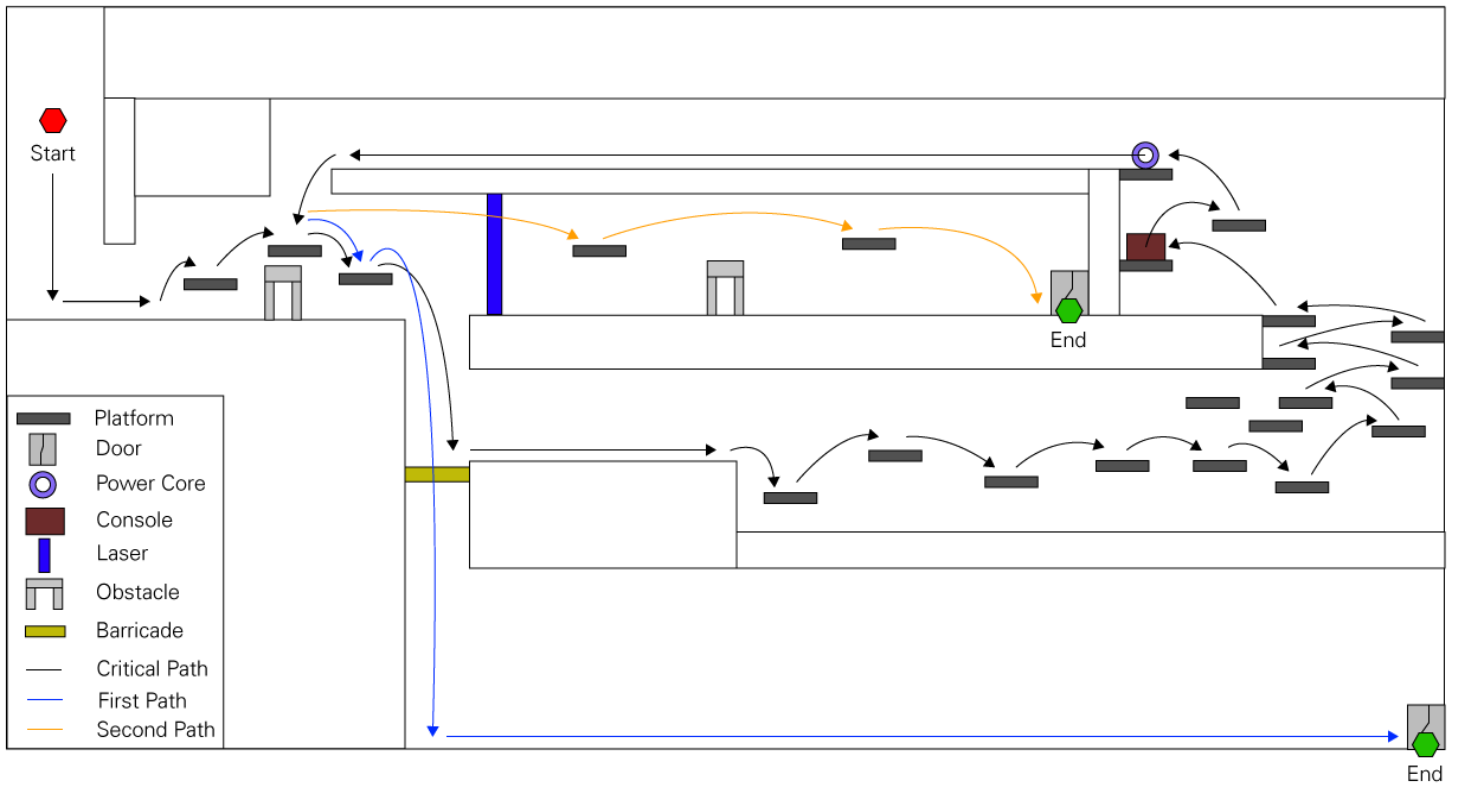
A map of the laboratory level of the game.
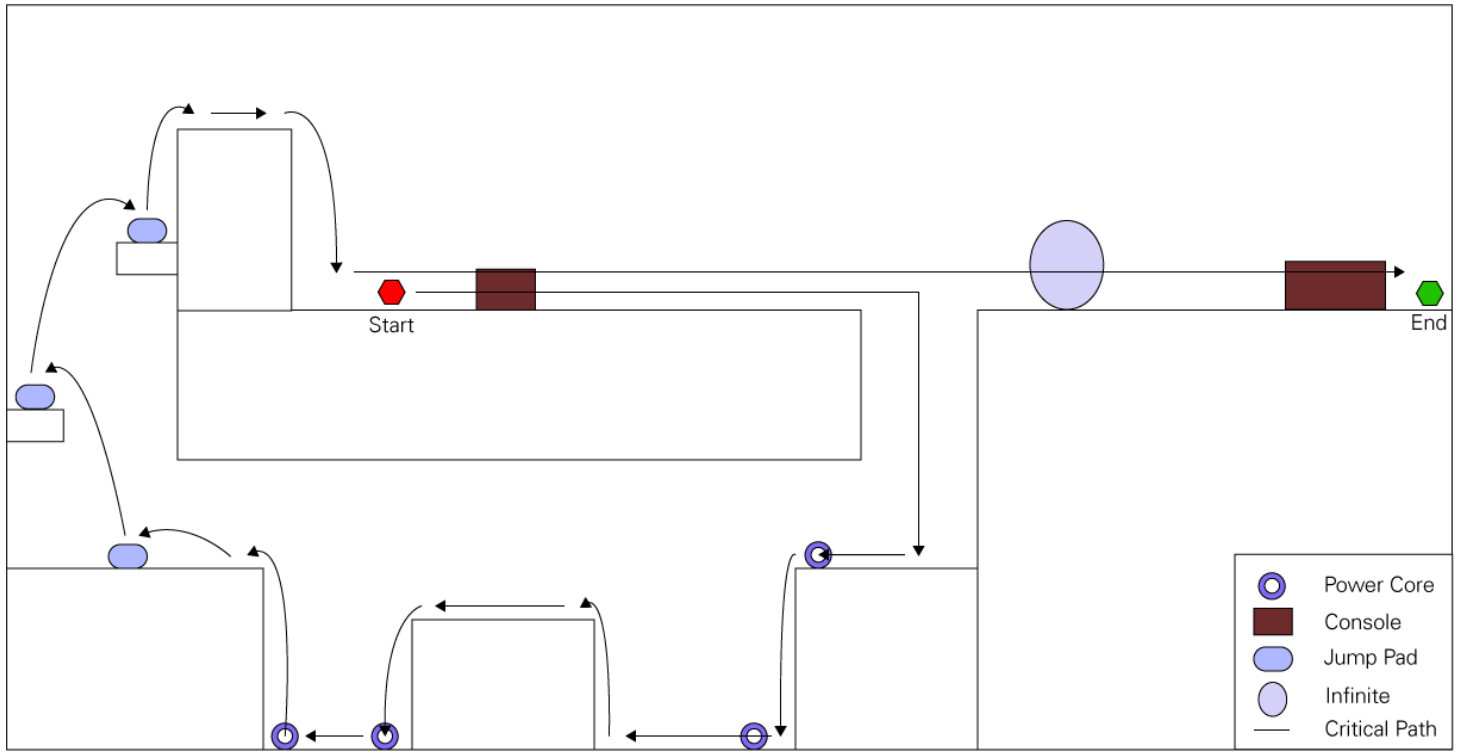
A map of the control room level of the game.

Gameplay and Narrative Beats

Act 1	Gain access into factory	Act 2	Figure out a way to continue through the factory or into the laboratory	Find a path through the factory or laboratory to reach the control room	Act 3	Encounter Infinite	Act 4	Defeat Infinite	Act 5	Repair or destroy robots

Exposition	Complication	Climax	Resolution	Conclusion
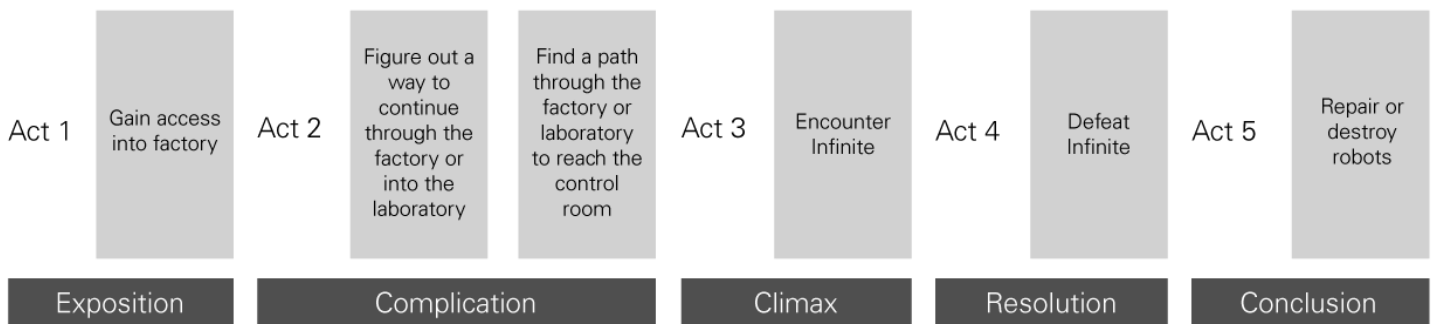
Act 1

In Act 1, the player must gain access to the factory by finding a power core to open the factory door.

Act 2.1

In Act 2.1, the player must figure out a way to progress through the factory or to the laboratory. This is done by finding a power core to open a door to the next part of the

factory, or by using the core to power up a robot which will open a vent to the laboratory.

Act 2.2
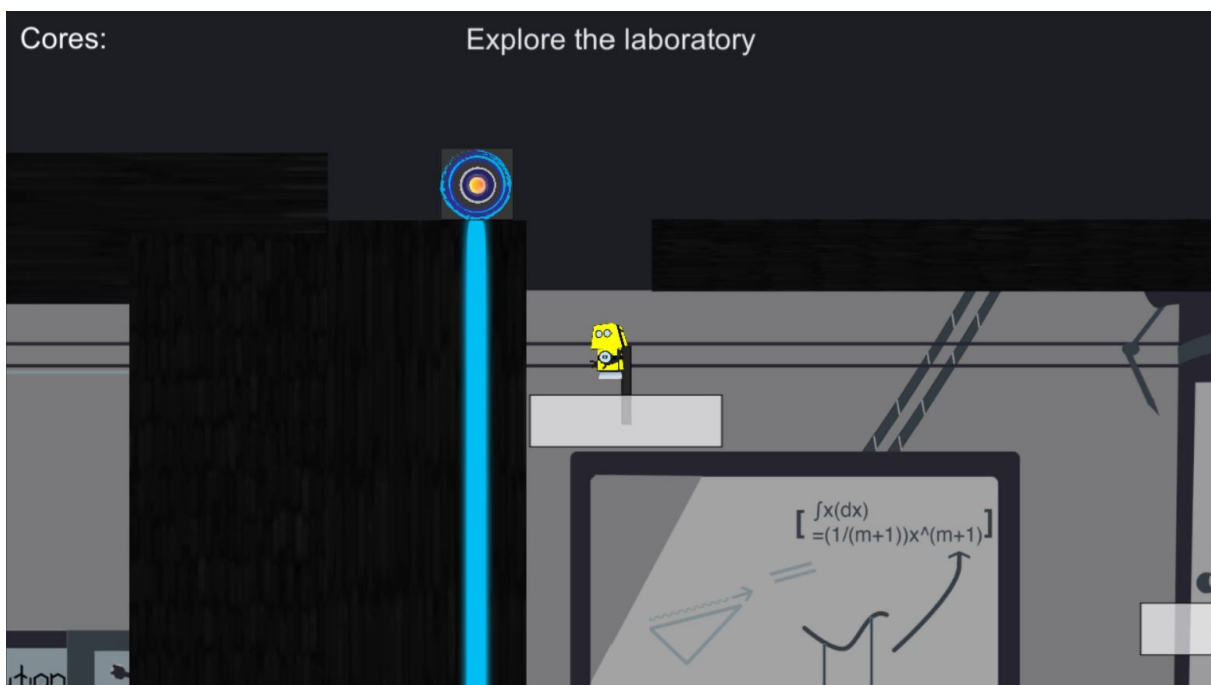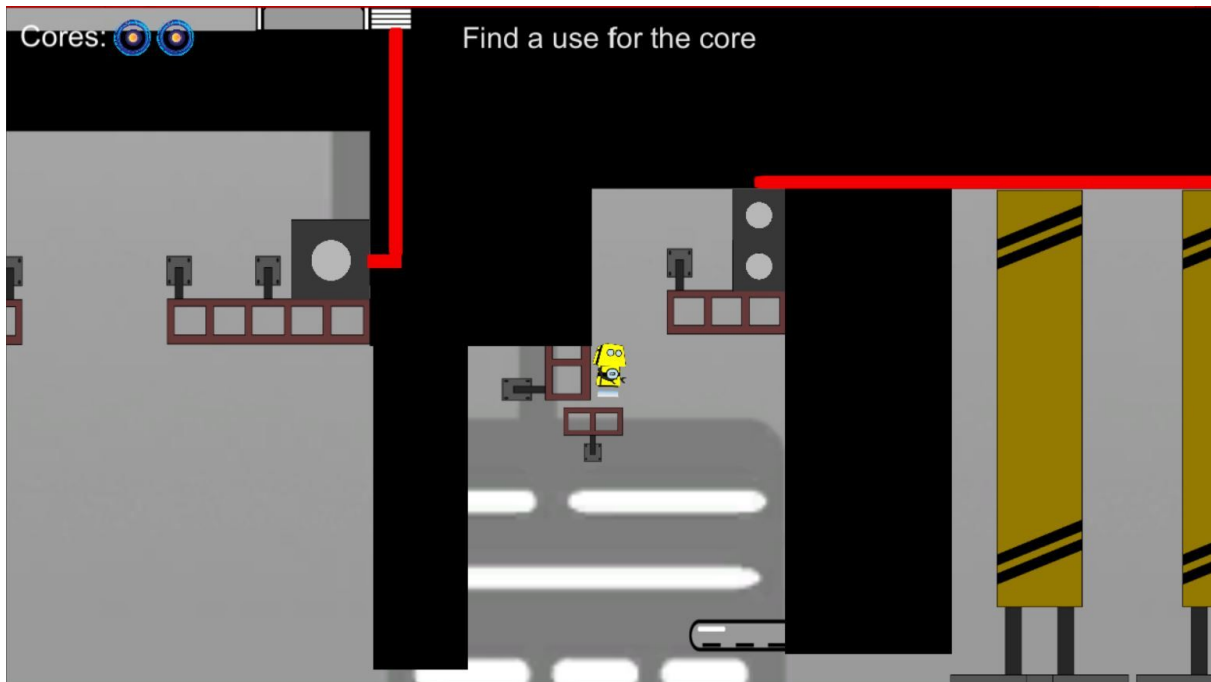
In Act 2.2, the player must find a way to continue to the control room through either the factory or the laboratory. If the player chose the factory branch, then they would have to activate a platform and use an elevator or move two crate holders and jump

down an elevator shaft. If the player chose the laboratory path, then they would have to disable a laser and open a door or deactivate a barrier and use an elevator.

Acts 3, 4, 5

In Acts 3, 4 and 5, the player will encounter Infinite who will then trap them. The player must then escape and deactivate Infinite. The player will then be given the choice to begin repairing the robots or to continue destroying the robots.
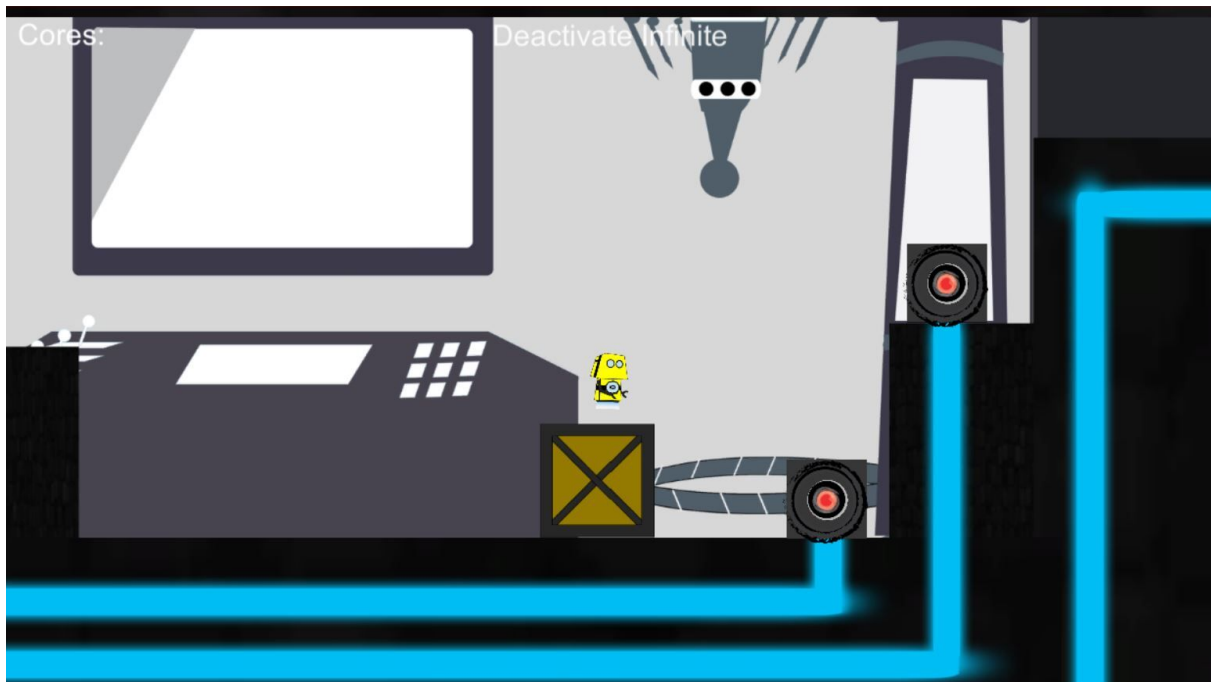
Rewards

There are two rewards that are introduced to the player within our game:

Cutscenes

The first reward for the player is cutscenes that explain the story in the game. The cutscenes follow a fixed ratio reward schedule as they are awarded at specific points in the game, one at the beginning and one in the final level. They are positive reinforcers as they reward the player with story and incentivize them to progress through the game until the final level to uncover the ending. We decided to reward players with cutscenes and place them at the beginning and end of the game to provide an overarching goal that they can follow throughout the game.

Power Cores

The second reward provided for the player is power cores that open up various paths within the game. The cores follow a variable ratio reward schedule as there are varying amounts of power cores available in each level. The power cores are positive reinforcers as they open up new areas for the player to explore once they are used. We included power cores as a reward to provide tasks within each level for the player

to work towards as well as to give the player a sense of progression in the game whenever a power core is used.

Revisions to Game Design

Player description

The target player remains the same as the previous iteration.

Age: 16 - 30
Gender: Any
Gamer Type: Casual
Player Type: Explorers as defined by Bartle. The game focuses on exploring the environment in order to discover the various paths and solutions to reach the control room.
Fun Keys: Easy fun. The focus of the game is to immerse the player in the game world and provide an interesting story. While there is platforming and puzzle-solving, they are not overly complicated.

Mechanics

The core, secondary mechanics and level features remain the same as the previous iteration.

Core: Moving and Jumping
Secondary: Double Jump and Power Core Usage

Level features: Collecting a certain amount of cores in order to open next level's door, and also collecting informations about scientist or infinite from the game console or by saving the robot.

Design Revisions

Revision 1:

Design question will be tested: Does the assets and background combination seem consistent and make sense contextually?

In the previous iteration, some of the assets feel not unified and some feel out of place. So we redesigned some of the assets to keep the same art style. And we have also adjusted the background, in order to provide a clear visual difference between the platforms.

Revision 2:

Addressed design problem from Milestone 2 playtesting: The player wasn't able to see their current status.

In this iteration, we have added the UI in order to make sure that the player can always be able to identify the amount of their cores in all of the levels. And also there will be a text displaying at the top center to indicate what's the goal for this level is.

Revision 3:

Addressed design problem from Milestone 2 playtesting: The clarity of where the player should go is not clear enough.

In this iteration, we have added another camera view to help the player to address their location in the gameplay. So that they will know where the exit for next level will be, and won't get lost in the platforms.

Revision 4:

Design question will be tested: Besides elementary objects, we have some more intractable objects like elevators, laser obstacle. Do they function properly in the game?
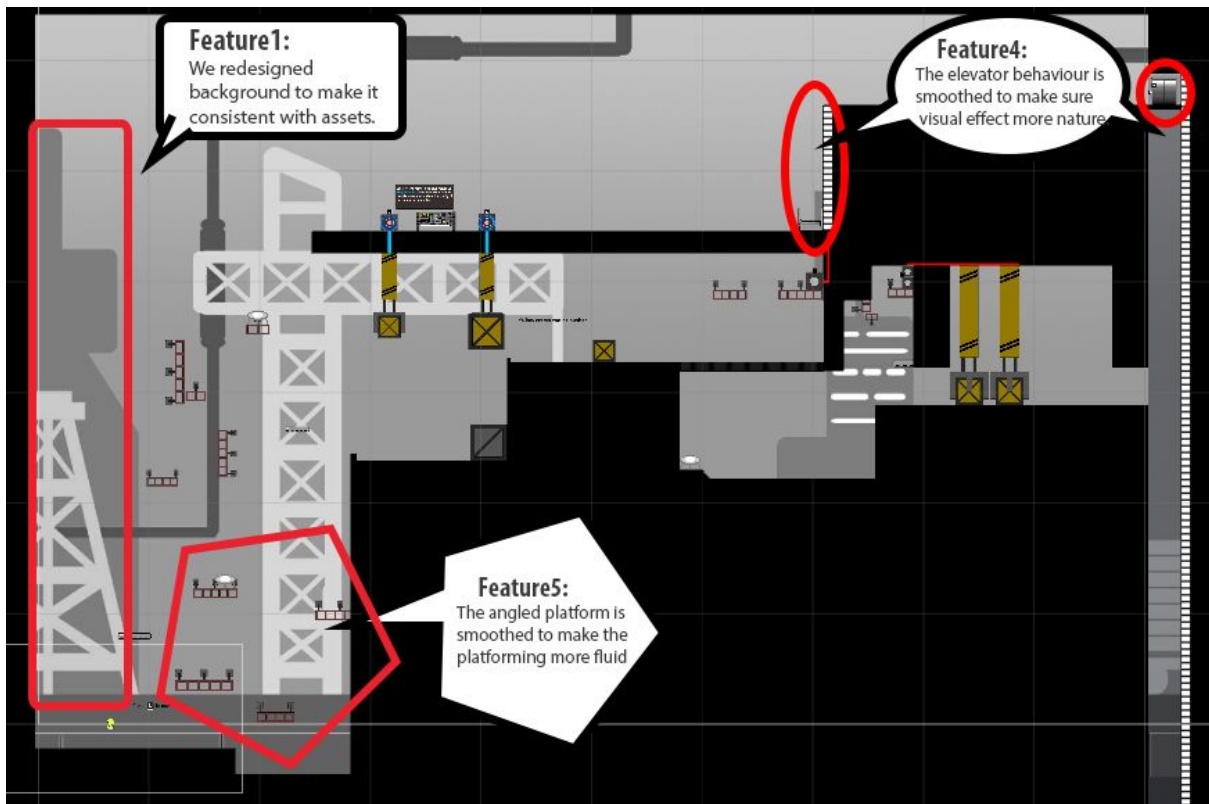
In previous iteration, the player won't be able to jump after getting off the elevator. We have smoothed the elevator behaviour, so that the visual effect looks more natural and the player won't lost their mechanics after they got off the elevator.

Revision 5:

Addressed design problem from Milestone 2 playtesting: The players had issues with a specific platform in the factory level, which caused some frustration.

In this iteration, we have smoothed the angled platform movement to make the platforming feels more fluid. There is a angled platform in level 1, and once the player gets on the platform, their speed will get affected by the gravity which is not the case we want. So for the rest of the levels, we have smoothed the angled platforms in order to avoid this situation.

Storyboard of Revised features:

Feature1:
We redesigned background to make it consistent with assets.

Feature4:
The elevator behaviour is smoothed to make sure visual effect more nature.

Feature5:
The angled platform is smoothed to make the platforming more fluid

Cores:

Explore deeper in the factory

Feature 2: UI indicates the amount of player's cores in the level.

Feature 2: Text indicates the goal for this level.

Playtesting

Design Questions

Fun

1. Do the branching decisions feel meaningful to the player? Does the player feel compelled to pick one over the other?
2. Does the final branching decision provide the player with closure to the story, no matter which branch they select?
3. Do you like the ideas of interacting objects with cores that you find on the map?
4.

Functional

1. Does the movement of the player feel fluid and easy to control?
2. Is the interactivity of objects clear to the player in that it is obvious to them what can be interacted with?
3. Besides elementary objects, we have some more intractable objects like elevators, laser obstacle. Do they function properly in the game?

Complete

1. Does the dialogue and text convey enough information for the player to be able to follow the story?
2. Does the narrative grab the player's attention and make them interested to learn more about it?
3. Does the difficulty scaling in successive levels feel as if it is increasing at an appropriate pace? Does the game become too hard and fast, or is it too easy and doesn't become difficult enough?
4. Does the background picture help players immerse in the game world?

Balance

1. Does the player feel compelled to use the double jump instead of the regular jump?
2. Are there any sections of platforming that are too difficult for the player to accomplish? Does the difficulty of these sections take the player out of the narrative experience?

Setup

There will be 3 test sessions with 1 participant per session. All of the sessions will be conducted at SFU Surrey Campus within a team room.
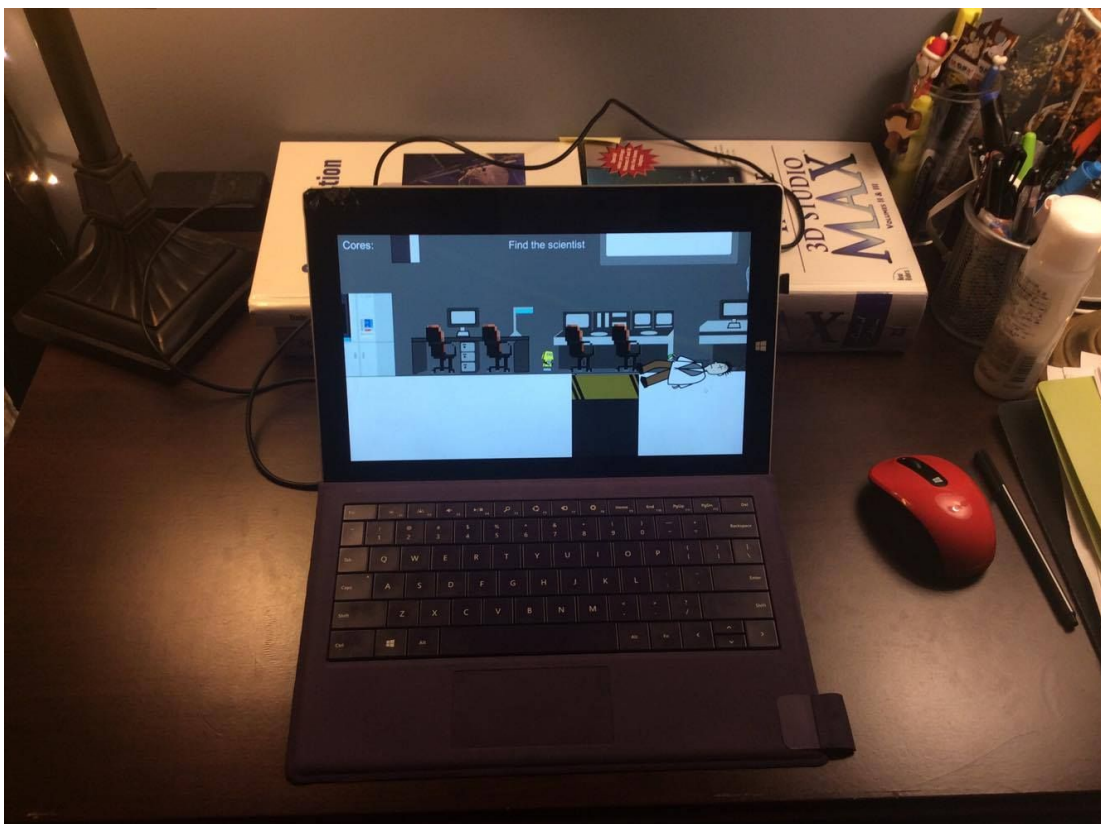
Sessions
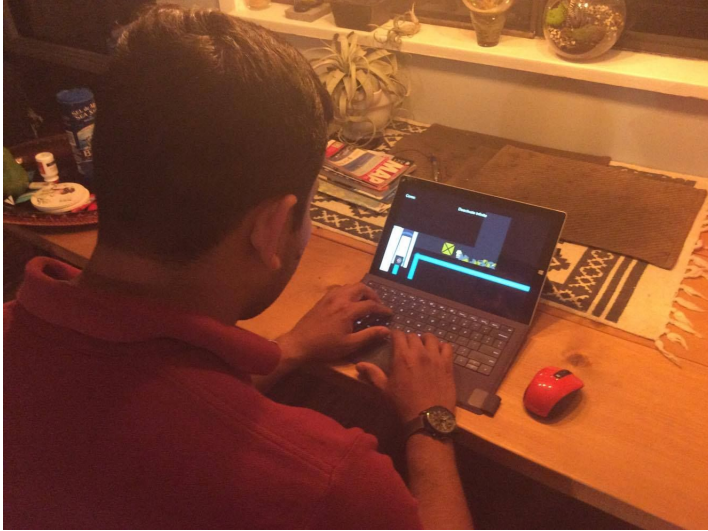
Zoe's Session

Gender: Male
Age: 27
Gamer Type: Casual, favourite games is Mario series.

Play Style: Challenge, Discovery. Enjoys finding the mystery or challenges in the game. Plays games 5 hours a week.
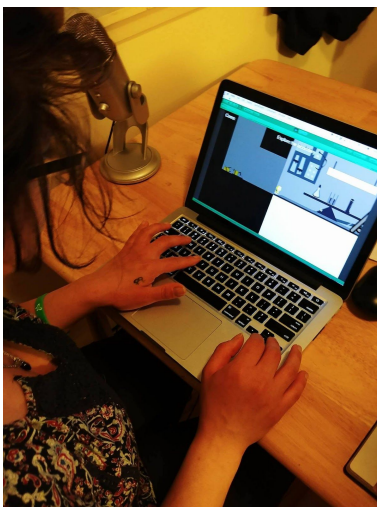

Gender: Male
Age: 21
Gamer Type: Hardcore, favourite game is league of legends.

Play Style: Challenge. Enjoys using strategy to win the game. Play video games to release the stress and spend 15 hours a week on video games.

Alex's Session

Gender: Female
Age: 23
Gamer Type: Socializer and Casual. Likes to hang out with friends and play board games or minigames. Plays games 3 hours a week. Favourite game is Angry Birds.
Play Style: Fellowship, Submission. She prefers easy-fun games and enjoys killing time with friends.

Observations

During the playtest, all of the players were surprised at the appearance of the gameplay, and they were amazed by the graphics of assets and the background music. Some of players suggested that there is some design difference between few assets but they thought these assets all fit with the game environment, so it was fine in a whole. At stage 2.2(laboratory), one player complained the background was slightly distracting resulting in that they couldn't tell which one is the platform that they should jump at at the first place. The other player felt uncomfortable in using double-jump to the higher platform. Actually, it is because he didn't know that they have to wait for a while until the double jump is activated. At stage 3 (infinity), all the players agreed the game play background is visually appealing. While, the dialogue between the robot and infinite took too long to finish. Out of our surprise, one female player lost her patience, and was acting bored. She was anxious to find out what would happen after. In the process of finding 4 cores, two players did not notice the first core. Eventually, they found it out when they reached the final console. Collecting the cores and using them in some ways seem a good way to please our players.

Reflection

From designing this game, we have learned a great deal about level and narrative design. In level design the critical path for the player must be evident and it is important that they understand where they can go, which paths branch and what can be interacted with. There should be some sort of indicator for the player to follow so that they are prevented from getting lost within a level. With narrative design, the narrative should follow either a five or nine act structure so that all elements of the story are present. The story should be interesting for the player and they should feel compelled to follow it through to the end. It was also interesting to learn how both level and narrative design can be combined in a game. Through the environment and using visual cues, the player can be informed of the narrative without explicitly telling them what the story is.

If we were to redo this project, we would have definitely had just one person in charge of asset design so that all the assets would be drawn in a single style as opposed to varying styles. With more time we also would have further fleshed out the story to provide more background information as well as to make the overall narrative more compelling.

References

Rain prefab: Rain Maker by Digital Ruby (Jeff Johnson), Unity Asset Store

https://www.assetstore.unity3d.com/en/#!/content/34938

UI Font: Spaceport by Projeto Tipo da Fonte, dafont.com

http://www.dafont.com/spaceport-2006.font?l[]=10&text=ZER0

Thunder SFX, Crane SFX: Mark DiAngelo, stephan, soundbible.com

http://soundbible.com/1905-Thunder-02.html

http://soundbible.com/1625-Submarine-Creaking.html

Core SFX: Electric Sound Effects Library by Little Robot Sound Factory, Unity Asset Store

https://www.assetstore.unity3d.com/en/#!/content/36990

Prologue Music: RPG & Puzzle Game Music by Red Iron Labs, Unity Asset Store

https://www.assetstore.unity3d.com/en/#!/content/37661

Level 1, 2, 3, Credits Music: Dark Future Music by Daniel Gooding, Unity Asset Store

https://www.assetstore.unity3d.com/en/#!/content/3777

All other assets were created by the team