

Minotaur's Might



(Wharton, Caleb. "Minotaur's Might Overhead.", 2023.)

Introduction

The following documentation uses data collected from playtesting the level "Minotaur's Might". 5 unique testers, who met the games marketing demographic, played the level for their first time. Each tester was told the level's background, story, basic movement controls, and given the option to playthrough the level 1-2 times. While playing, the game collected data internally from players to better enhance the level and players were observed by the designer, for the designer to take notes and collect various external data.

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Level Information

- Medium: 3D
- Gameplay: Single Player
- Camera: Third Person
- Genre: Stealth, Action/Adventure
- Main Objective:
 - Find and escort King Minos to safety
- Optional Objectives:
 - Save a citizen's cat
 - Complete an activation puzzle/ Unlock Abilities (x2)
 - Shadow Ability
 - Haste Ability
 - Collect Relics (x6)
 - Die to minotaur

Test #1

Tester Information

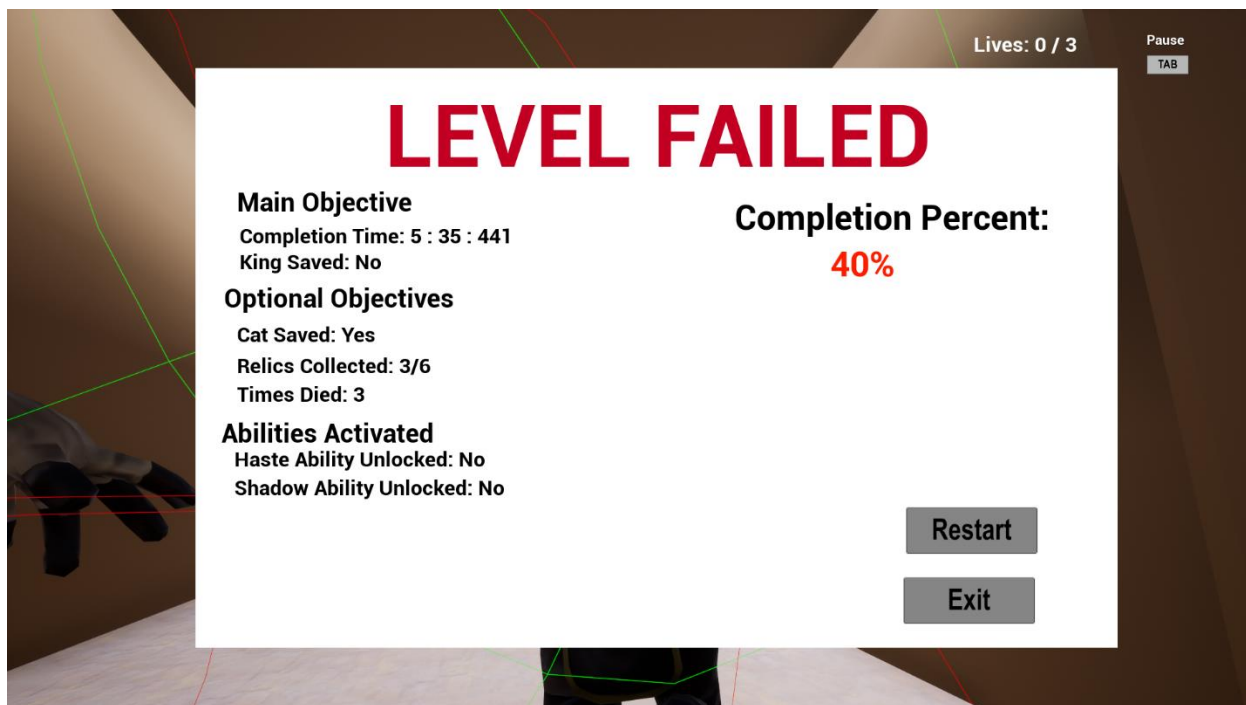
Name: Chelsie Endicott

Age: 27

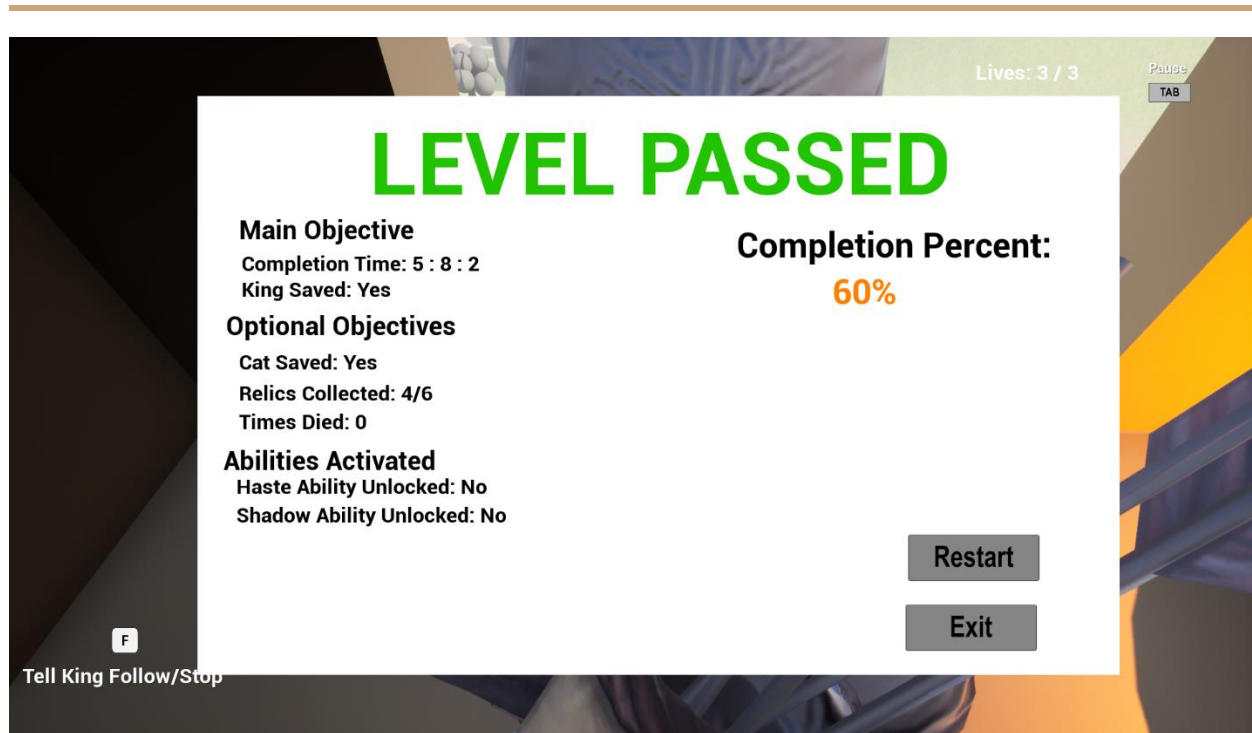
Gender: Female

Gaming Experience: Simulation, RPG, Action/Adventure

Data Screenshot



(Chelsie E., Minotaur's Might Attempt 1)



(Chelsie E., Minotaur's Might Attempt 2)

Notes

- How can the player sprint?
- How can the player dodge?
- Does the NPC not offer a reward after returning their cat?
- King follows too close.
 - Sometimes corners players.
- The player needs to be told to click the screen when the ability unlock widget populates the screen to allow the hover on ability to show details about each ability.
- Lamp Activation Statue allows players to interact numerous times after unlocking and offers no exit when players access it for the third time.
- If players mash the E key while interacting with the Axe puzzle it will overlap the input on occasion causing the axes to not rotate properly and making the puzzle unsolvable.

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- Player gets lost running from NPC's.
 - Player struggling finding exit and main objective.
 - The player explored various areas and commented on empty nooks scattered throughout the level.
 - The end area (Staircase) could be better lit.
 - The lack of Gates and Valves left the map open and allowed the player to backtrack.

Designer Notes

- Insert designer/developer notes...what will be updated/fixed in the level. This could be for the next test, or after all the testing is completed.
- Controls widget is a necessity for basic movement controls.
- During first encounter with AI when they attack, necessary to slow/pause gameplay and bring up text onto HUD that reads "Press a direction + space bar to dodge". This should slowly flash and won't go away until the player inputs space bar to dodge. This should help introduce the mechanic more naturally to players.
- The NPC should give the player some relics to reward them for finding their cat.
- The king should only move within a certain radius of the player instead of moving directly to the player's location.
- When the unlock ability widget is first displayed, having text that says "(click screen and hover over icon for details)" to direct players.
- Lamp Activation statue needs to mark the redeemed bool to fix the widget being able to populate multiple times.
- The Axe puzzle could use the same delay timer used by the haste and shadow ability to fix player input mashing.
- Various nooks should be populated throughout the level to make the level look more inhabited.

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- Using a combination of Gates, Valves, and leading lines should help guide the player and reduce the number of times the player gets lost and backtracks through the level.

Test #2

Tester Information

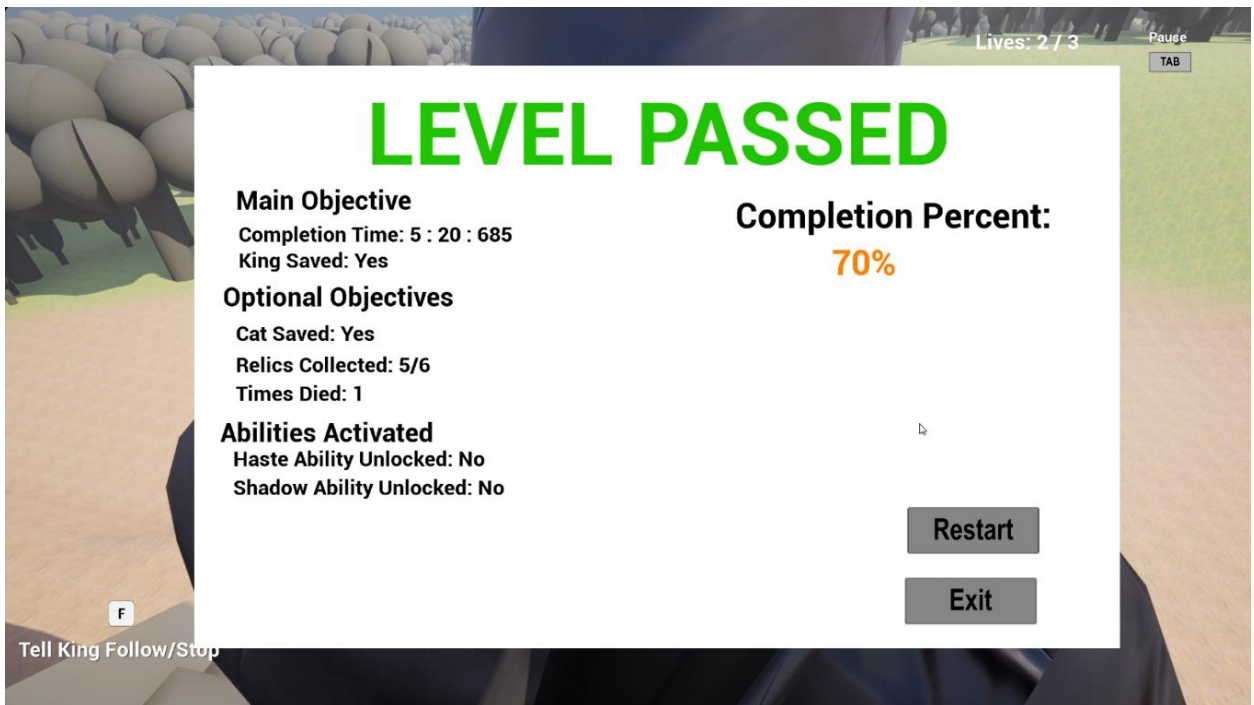
Name: Kendrick Grunden

Age: 23

Gender: Male

Gaming Experience: FPS, Action/Adventure, Online Competitive

Data Screenshot



(Kendrick G., Minotaur's Might Attempt 1)

Notes

- How can the player dodge?
- After entering the NPC interact collision if players leave this collision area they will still have the interact text displayed on the HUD
- Player unsure of exit direction
- Lamp puzzles need negative player feedback for when they're incorrect.
- Lamp puzzles are difficult for the player to decipher.
- Minotaur AI perception and attack state need to be tweaked.
- Lack of gates and valves allowed for unnecessary backtracking.
- Minotaur AI can kill the player by attacking multiple times in rapid succession.

Designer Notes

- Introducing the dodge ability is critical.
- Increasing the call out distance of the NPC to call for the player at a greater distance and changing the interact text to be shown when entering the inner collision volume and be hidden upon exiting this volume.
- Gates, Valves, and leading lines should help guide players and reduce players getting lost.
- Adding a negative feedback SFX to the lamps when interacted with in incorrect order should help player understanding.
- Increasing the puzzle sequence size above the activation statue will help with puzzle understanding.
- Minotaur AI perception needs to be increased and tweaked to notice players more naturally.
- Minotaur AI needs a collision volume around them to check for the player when in their targeting state to be able to track player when the player dodges out of their line of sight.

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- Setting a delay after the minotaur's attack montage will help ensure only one attack is happening at a time.

Test #3

Tester Information

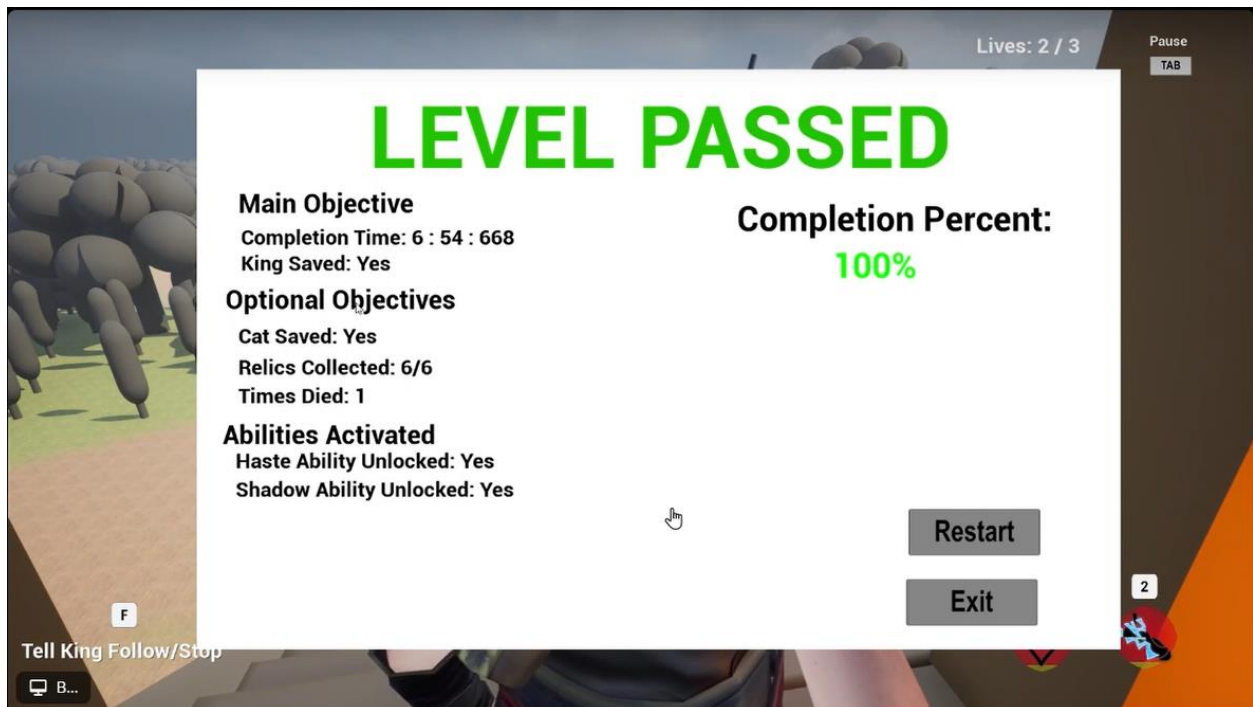
Name: Tristan Abshire

Age: 25

Gender: Male

Gaming Experience: MMORPG, Action/Adventure, Online Competitive, FPS

Data Screenshot



(Tristan A., Minotaur's Might Attempt 1)

Notes

- Player having difficulty finding the cat.
- Player able to complete all puzzles.
- Player has retraced and backtracked numerous times.
- Addition of gates and valves should alleviate backtracking.
- The player is able to understand dodge mechanic and learned dodge timing fairly quick.

Designer Notes

- Gates and valves will be added to fix backtracking.
- The dodge timer will be adjusted to make dodge mechanic more precise and create a more difficult shorter period to successfully dodge attacks.
- More leading lines and guidance to the stairs for players to find the NPC's cat.

Test #4

Tester Information

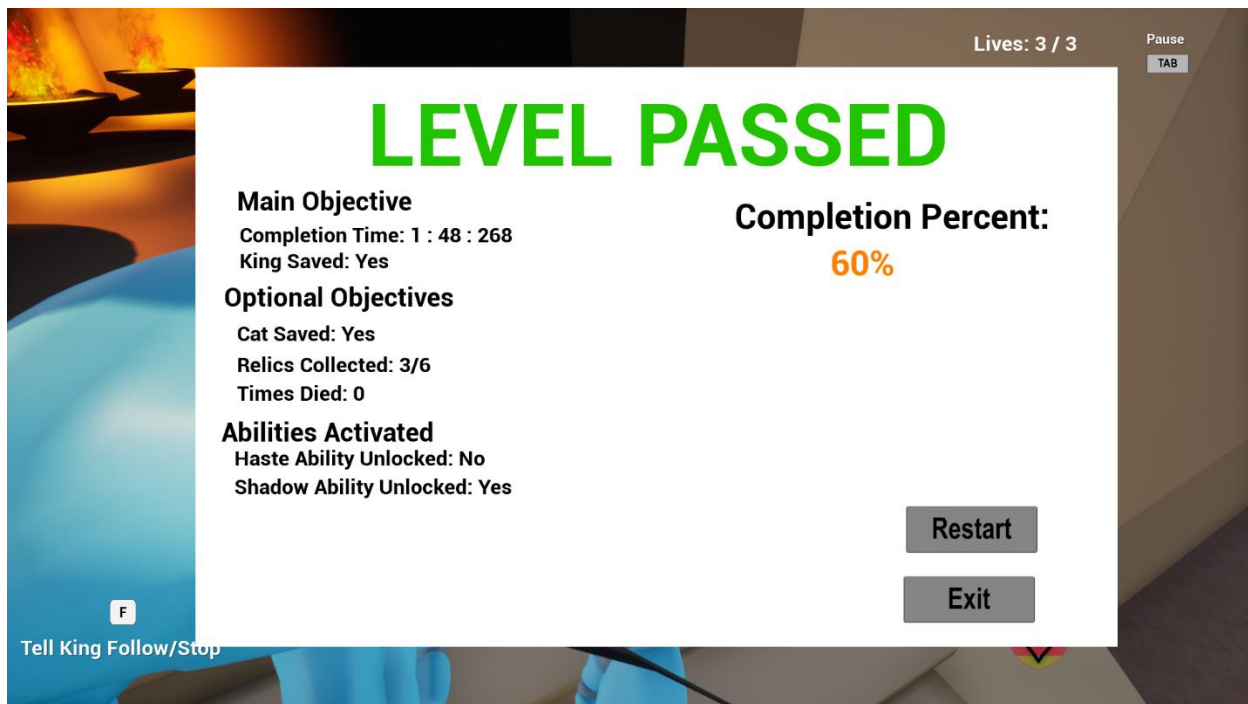
Name: Locke Wallen

Age: 26

Gender: Male

Gaming Experience: FPS, Action/Adventure, Online Competitive, MMORPG

Data Screenshot



(Locke W., Minotaur's Might Attempt 2)

Notes

- First test, player ran around and collected a relic then proceeded to the exit without the king.
- Player was able to make it through the exit and into the rest of the map.
- Player didn't go for very many of the objectives, instead opting to find the exit immediately.
- The player continuously used the roll mechanic.

Designer Notes

- Exit collision needed to reset player and ensure they cannot exit the map.
- Using a mini map could benefit the player's understanding of the map and the objectives around them.
- The addition of gates, valves, and leading lines should help guide the player in the proper directions.
- The roll mechanic needs a cooldown to reduce players spamming this. Perhaps setting the roll mechanic up similarly to how the abilities are setup would benefit this and reduce spamming.

Test #5

Tester Information

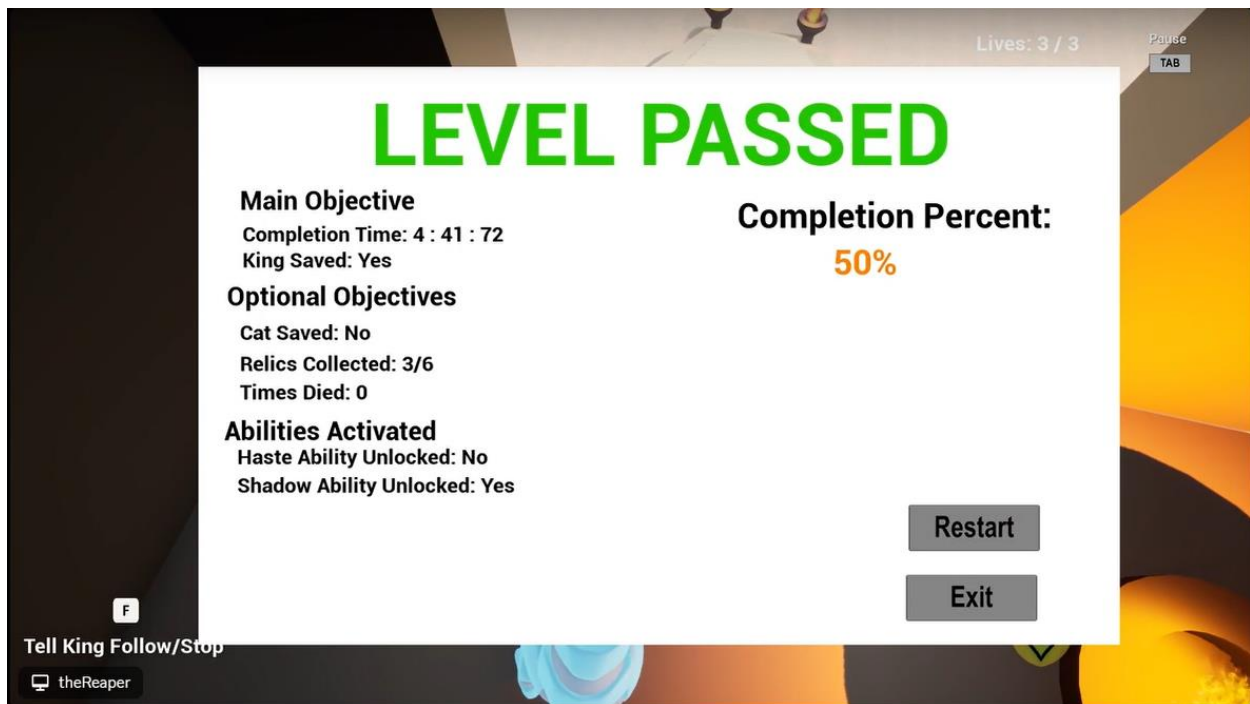
Name: Josh Wharton

Age: 28

Gender: Male

Gaming Experience: FPS, Action/Adventure, Online Competitive, RPG

Data Screenshot



(Josh W., Minotaur's Might Playtest 1)



(Josh W., Minotaur's Might Playtest 2)

Notes

- The first playthrough the player went the right/central route and completed the lamp puzzle to unlock the shadow ability.
- The player was able to find the king but became confused when trying to find the exit.
- The player insisted on doing another playthrough to take part in the cat mission.
- The player completed both puzzles and spent more time exploring the second playthrough to try unlocking/ completing more of the level.
- He spent more time exploring and doing puzzles compared to the first attempt.

Designer Notes

- Puzzles need to have more negative player feedback for when they do something wrong or if the puzzle is incomplete.

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- Puzzles need to attract and draw players in more, perhaps different placement in the level and adding more feedback to them could counter this.

Data Collection

Players were given the option to play through once or twice. The data presented below is from playtest 1 while playtest 2 data will be used to compare to those players first playtest.

Playtest 1

Data	Average
Completion Time	04:52.0
Relics Collected	3
Times Died	1
Hasted Unlocked	No (1/5)
Shadow Unlocked	No (2/5)
Cat Saved	Yes (3/5)
King Saved	Yes (3/5)
Level Passed	Yes (3/5)

Playtest 2

Data	Average
Completion Time	04:44.0
Relics Collected	4
Times Died	0
Hasted Unlocked	No (1/3)
Shadow Unlocked	Yes (2/3)
Cat Saved	Yes (3/3)
King Saved	Yes (3/3)
Level Passed	Yes (3/3)

For playtest 1, completion times averaged around 4 minutes and 52 seconds with the lowest time being 1 minute and 47 seconds and the highest time being 6 minutes and 55 seconds. For playtest 2, completion times averaged around 4 minutes and 44 seconds with the lowest time being 1 minute and 48 seconds and the highest time being 7 minutes and 16 seconds. Comparatively the completion times depend on the player's playstyle. I

noticed that if players went through the second playtest, they would base their playstyle on areas they missed the first time around such as relics lost, times died, etc.

For playtest 1, there were a total of 6 deaths with an average of 1 death per playtest. Whereas playtest 2 only had a total of 1 death with an average of 0 deaths per playtest. Players understood the dodge mechanics and enemy attacks much better the second time playing through the level and were able to better assess their surroundings.

For playtest 1, the average amount of relics collected on playthrough was 3 with a high of 6 and low of 0. For playtest 2 there was an average of 4 relics collected. During the second playtest the players that played for the second time around were able to collect a minimum of one more relic than their first playthrough.

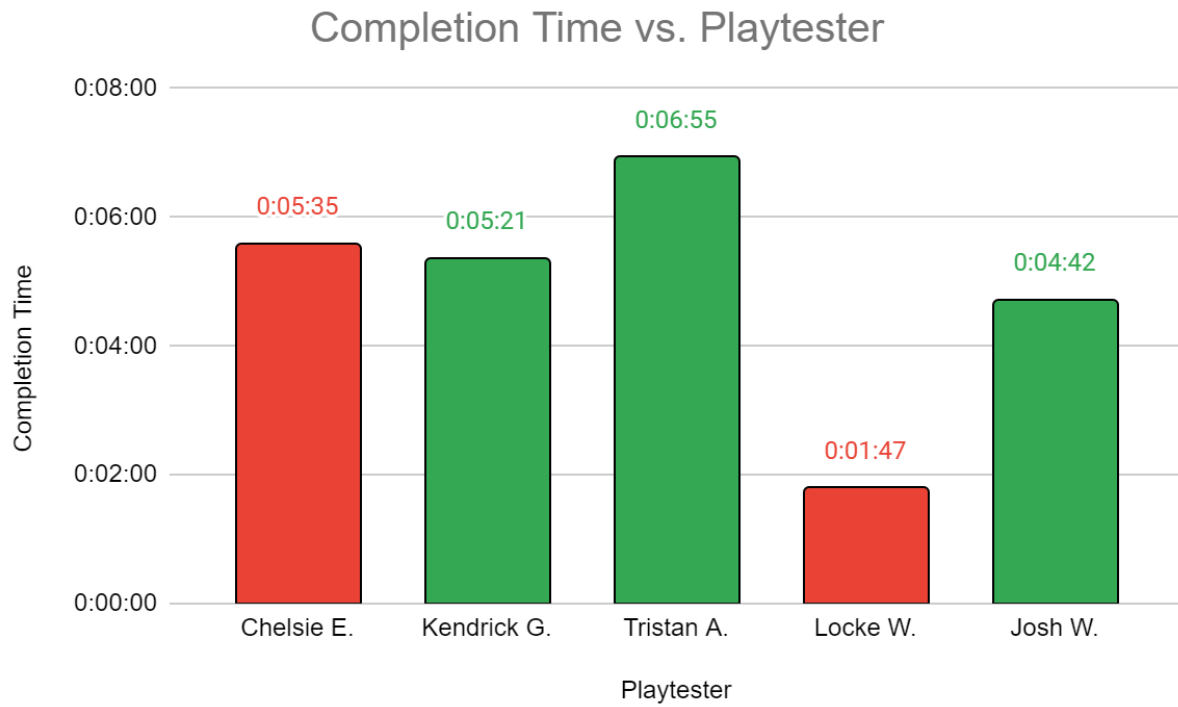
Players needed to solve puzzles to unlock specific abilities and upon solving these puzzles players were given the choice between the Haste and Shadow ability. In the first playtest, 1 out of 5 players activated the haste ability and 2 out of 5 players activated the shadow ability, with only 1 player unlocking both abilities in their playthrough. This shows that it is necessary to emphasize these puzzles to players more in order to catch their attention. Placement could be an issue, so altering puzzle placement could solve this. As well as the puzzles, initial feedback being an issue. Adding new initial player feedback to these puzzles can help draw in players to attempt these.

Players were also given 2 opportunities to interact with NPCs, saving the king and saving an NPC's cat. In the first playtest 3 out of 5 players saved the cat and 3 out of 5 players saved the king, thus making it only 3 out of 5 players passing the level since the players need to save the king to pass the level. Most players were drawn to the NPC with the cat mission and successfully completed this while most players were often searching for the king and the exit. The second playtest showed 100% across the board with all players saving the cat, saving the king, and passing the level. This shows that players were able to absorb much of the information given for these objectives on their first playthrough and were able to use this information to successfully complete the tasks in their second

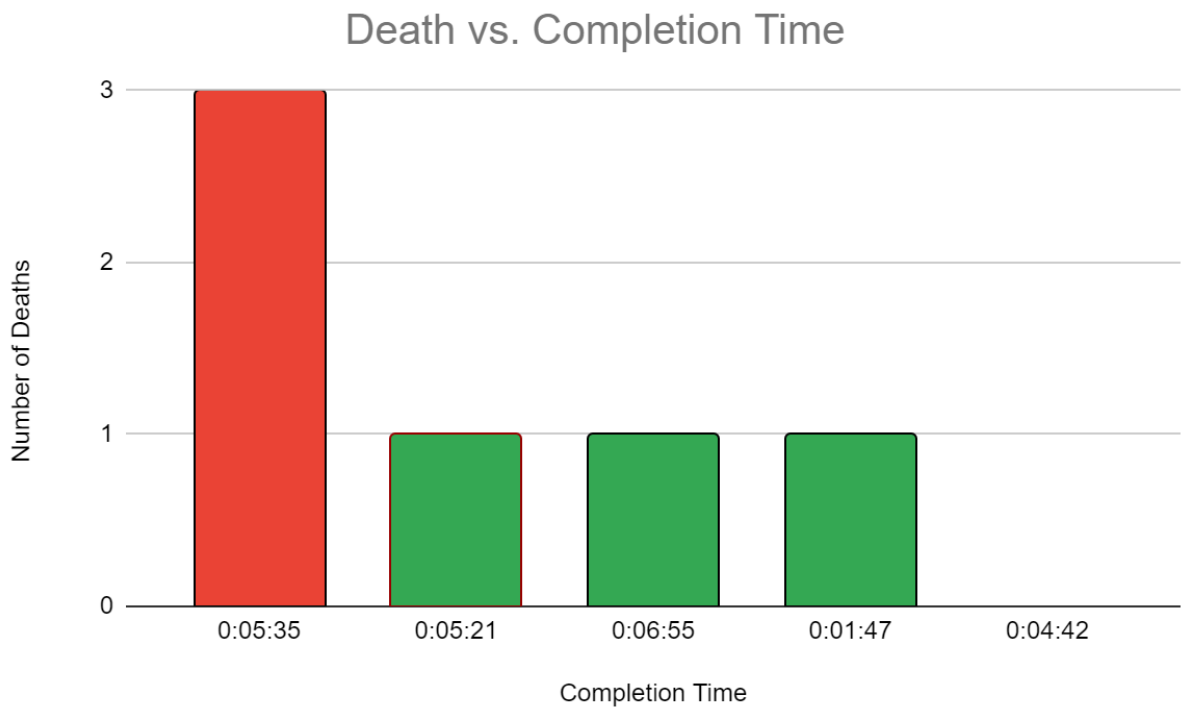
playthrough. Below I have provided various graphs and charts to show/compare the data acquired during these playtests.

Green Bars = Level Passed

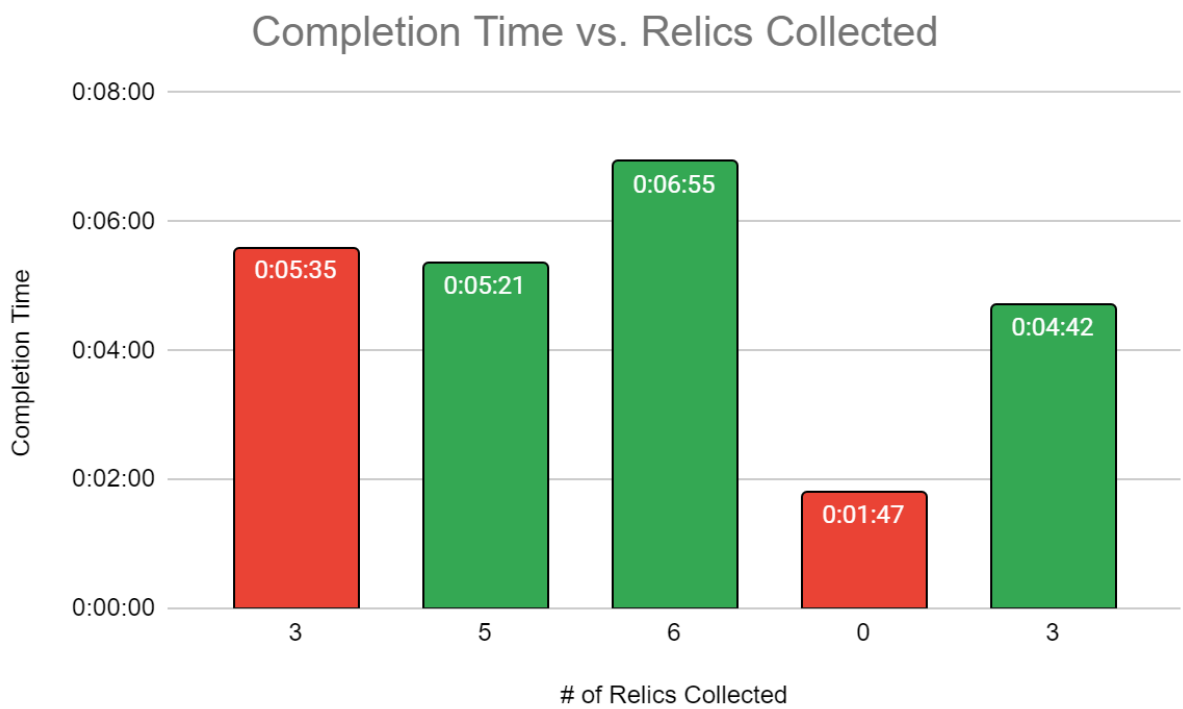
Red Bars = Level Failed



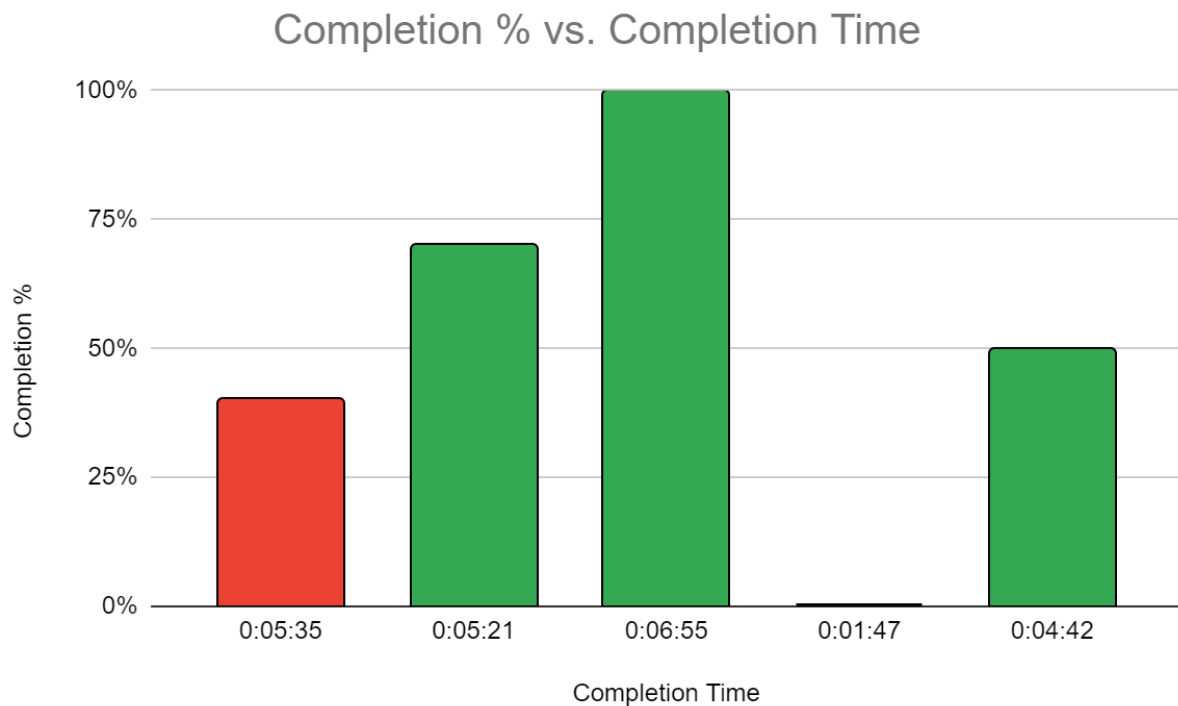
(fig. 1 Completion Time vs Playtester)



(fig. 2 Deaths vs Completion Time)

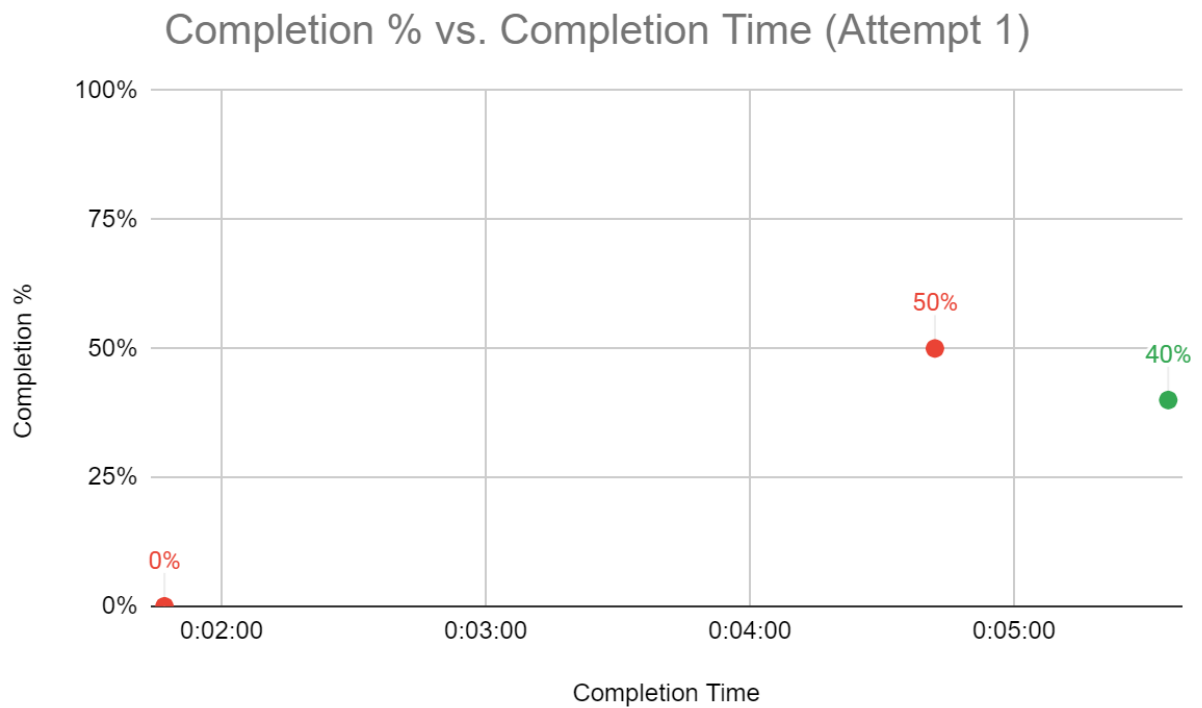


(fig. 3 Completion Time vs Relics Collected)

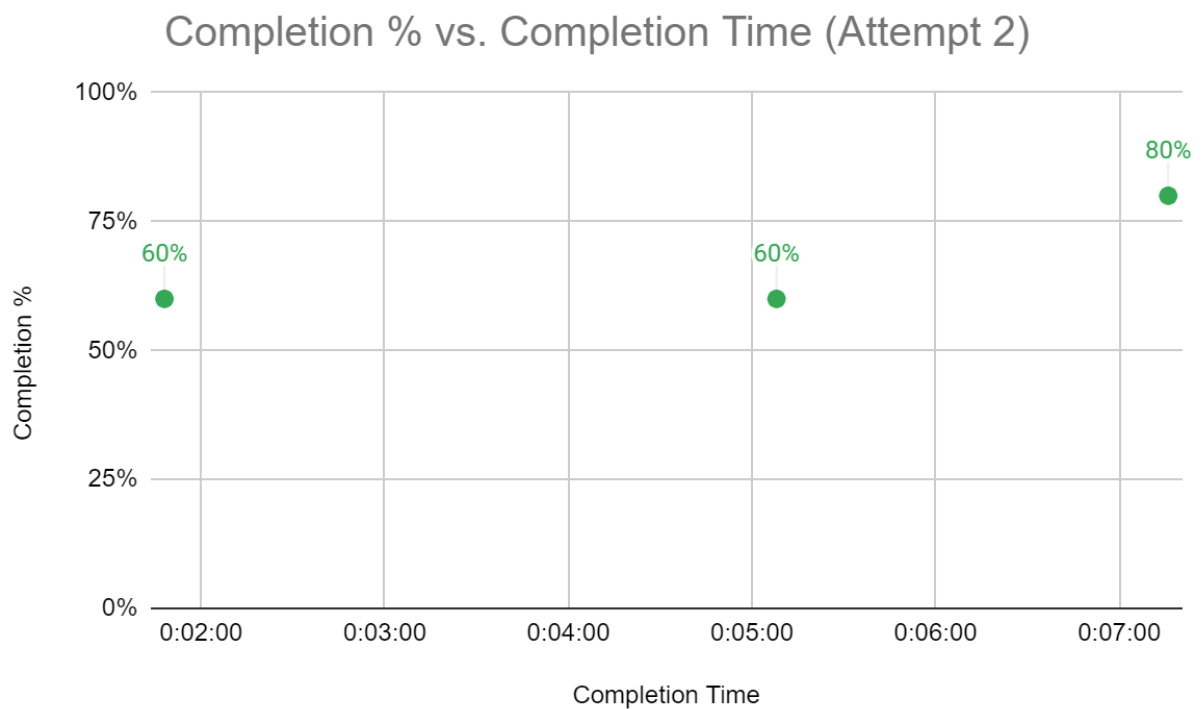


(fig. 4 Completion Percent vs Completion Time)

By comparing the completion times with a variety of data attained a few trends are notable. It was notable that relics collected and completion percent were both comparable to the time taken to complete the level. Players who completed the level and took over 5 minutes to complete it were able to acquire 5 or more relics, whereas those who failed the level or took under 5 minutes acquired 3 or less relics. Players who passed the level were at least achieving 50% completion and those who didn't pass were just under this mark. The only area that a correlation wasn't seen was in the deaths vs completion time. While most players experienced dying 1 time, only 1 play tester died 3 times, thus failing the level and didn't provide substantial data for this variable.

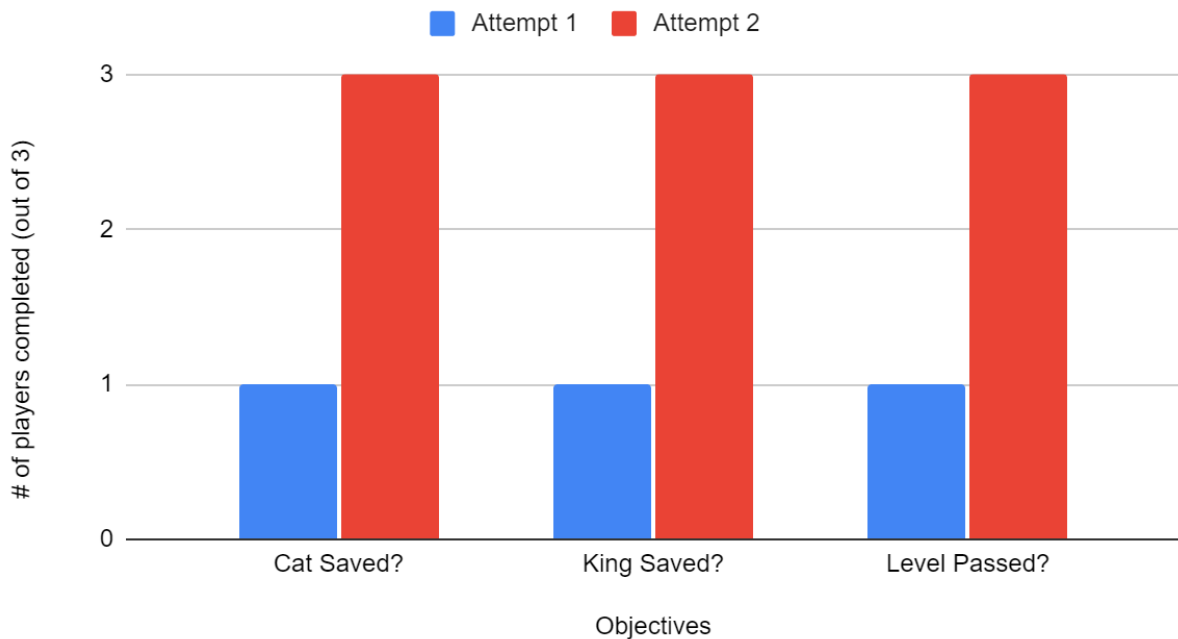


(fig. 5 Completion Percent vs Completion Time (Attempt 1))



(fig. 6 Completion Percent vs Completion Time (Attempt 2))

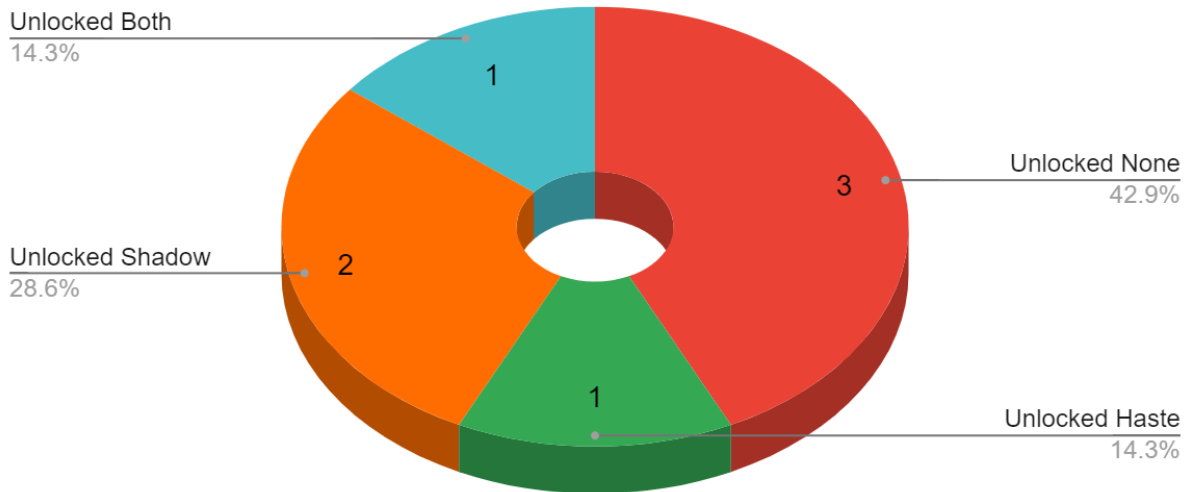
Comparing Objectives Complete Between 1st and 2nd Attempt



(fig. 7 Comparing Objectives Complete Between 1st and 2nd Attempt)

During the playtests I offered players the choice of replaying the level and of the 5 participants 3 chose to play the level for a 2nd time. The chart in figure 5 shows the completion percent compared to the completion time for 1st attempt for these 3 playtesters while the in figure 6 shows the completion percent compare to the completion time for the 2nd attempt. In the 1st chart it's evident that players struggled to complete objectives, having a max completion percentage of 50%, a minimum of 0%, and an average of 30%. In the 2nd chart, there is a notable difference with the max completion percentage of 80%, a minimum of 60%, and an average of 66.6%. This shows over 2x the percentage of completion from attempt 1 to attempt 2. This is further justified in figure 7 where it shows how many players saved the cat, saved the king, and passed the level between attempts 1 and 2. For attempt 1 only 1/3 of the playtesters finished these objectives, whereas all the players finished these objectives during their second attempt.

Abilities Unlocked



(fig. 8 Abilities Unlocked Pie Chart)

The last bit of data that we looked at during these playtests was the comparison of abilities unlocked. Above in figure 8 it shows the percentage and number of players that unlocked each ability, both abilities, and no abilities. I was expecting this mechanic to play a major role in the level, but not many of the players were inclined to use or unlock these abilities. 3 of the 5 playtesters didn't unlock any of the abilities which led us to the question of why. After reviewing the playtests, I noticed that players weren't focusing on the activation statues, and they weren't solving the puzzles. To counteract this, it is imperative that changes are made to the puzzle locations, player feedback, and player agency. This will be a data point that will need further review and testing in the future to better isolate issues within the mechanic.

After Testing - Designer Thoughts

After running these 5 playtests I have narrowed down various issues, some minor while others are critical. Starting with the most critical, it is imperative that I create a new end trigger volume to keep the player within the map and send them to their last checkpoint. The next critical issue that I found was that players could instantaneously be killed 3 times by the minotaur. To fix this I will adjust the targeting state of the minotaur AI and add cooldown timers to their attack montages. The final critical issue was player confusion when trying to do objectives. To better guide the players, I will be incorporating a combination of a mini map and a visual checkpoint system. Not only will this give objectives a better visualization for players, but it can also help players plan their approach when trying to get around the patrolling minotaur. I also plan on adding the destructible wall mechanic back in for the gates and adding various valves where doorways and hallways collapse causing the player to lose entry back to that area. These fixes should help alleviate player confusion and fix player backtracking.

Coming into this test I thought the abilities and puzzles would be better utilized, but it wasn't until most players got to their end screen and saw that there were unlockable abilities that they really became interested in them. This shows me that the puzzle placement in my map isn't drawing players in the way it should be, and it also shows that players are having difficulty completing these puzzles. It is imperative that this is fixed as well to ensure that these mechanics are more accessible for players to use throughout their playthrough. In summation, these playtests were all successful in showing me a multitude of areas that need improvement throughout my level, as well as showing me that players enjoyed themselves enough to replay the level to go back and complete objective they hadn't gotten before.