

Team Submission:
Team User Testing Report 2
Project MNPUL8R
Team 34

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Implemented Test Results:

User Test 1 Storyline

User Test Findings:

1. Suggestion: Option between Start and Quit
 - a. To incorporate this finding, we will test an options feature in the main menu. We will consider adding several options such as volume, brightness and full screen versus windowed mode.
2. Suggested Gestures
 - a. To incorporate this finding, we will consider the subject's proposed gestures in the design of our final gestures for the in-game actions, input through the Leap Motion Orion.
3. Subjects unsure of the motive behind changing environment
 - a. To incorporate this finding, we will create an introduction sequence explaining that this game is a walking simulator with optional environment manipulation features and simple puzzles
4. Controller tutorial
 - a. To incorporate this finding, we will implement a controller section in the tutorial level to inform and instruct the user on how to operate the Leap Motion Orion.
5. The concept is confusing and may hinder enjoyability
 - a. To incorporate this finding, we will develop higher fidelity mockups in order to better communicate our ideas and concept to test subjects.

Aggregated Test Results:

User Test 2 Hardware/Software VR

User Test Findings:

1. Suggestion: Have a tutorial for how to use the controllers
 - a. Suggested by Amelia
 - b. As a first time user of the Vive, having to be explained how to use it would have been the only way I would've known how to move or how to select objects
 - c. Make sure there is a tutorial for the game, that way the users understand how to move
 - d. Make sure there is more than one tutorial, and that the users can rewatch them during the game in case they're confused
2. Suggestion: Have a backstory for the user to comprehend
 - a. Suggested by Kira
 - b. To place a user inside of a game without any context is disorienting
 - c. There needs to be some kind of intro for the user to understand where they are or what is happening
3. Suggestion: Make sure that the user's hands are visible
 - a. Suggested by Amelia
 - b. It's disorienting for users to not be able to see their bodies, especially their hands.
 - c. Make sure when we have a user interact with his/her hands we also include the hands themselves
4. Suggestion: Make sure the first thing you see is a gem
 - a. Suggested by Kira
 - b. In a game that requires such a large learning curve for first time users, having a highlighted gem right in front of you to interact with when you get to the first part of the game is important
5. Suggestion: Have a positive assurance within the level
 - a. Suggested by Zephyr
 - b. Have a hole next to the cave that lights up
 - c. This lets the user know when there has been a positive effect in the game

Incorporation of Feedback:

User Finding Number 1 Incorporation:

To incorporate this finding, we will create a tutorial for manipulating and moving an object, as well as moving through the environment, especially through portals.

User Finding Number 2 Incorporation:

To incorporate this finding, we will have a beginning animation along with the tutorials so the user knows not only how to complete the story, but why they should complete the story as well.

User Finding Number 3 Incorporation:

To incorporate this finding, we will implement hands that the user can see when using the vive controllers or the LeapMotion Orion software for hand detection.

User Finding Number 4 Incorporation:

To incorporate this finding, we will have a gem to the right of the user when they first enter the environment. This will showcase that the gem is important and should be interacted with.

User Finding Number 5 Incorporation:

To incorporate this finding, we will let the user know positive effects after they have completed one of the objectives in the level. This might be through a progression bar or a positive sound occurrence.

User Profiles:

Persona 1: Zephyr Wenrich

- Age: 22
- Race: White
- Gender: Male
- Profession: College Student
- Hobbies: Gaming, Ultimate Frisbee, Animal care
- Tech Level: Medium - plays video games often, with a controller, but has never used a Vive

Persona 2: Amelia Weller

- Age: 21
- Race: White
- Gender: Female
- Profession: College Student
- Hobbies: Writing, Reading, listening to Classical Music
- Tech Level: Low - has never used a Vive controller before, does not play video games

Persona 3: Kira Bushman

- Age: 18
- Race: White
- Gender: Female
- Profession: High School Student
- Hobbies: Photo Manipulation, 3D Art, Gaming (HTC Vive - PC Computer)
- Tech Level: Medium - has used VR hardware and understands the principles of gaming

Script

1. Introduction:

- a. Hello, What is your name?
- b. What is your occupation, what do you do?
- c. If you had to guess how many hours a week you spend playing video games?
- d. If so, what kind of games? What kind are your favorite?
- e. Do you have any previous experience using virtual reality systems?
- f. If so, what VR game/experience did you have?
- g. Excellent, now that we have some background info out of the way, let's take a look at the game!
- h. We're going to show you a basic level mockup, and cover some of the game's concepts.
- i. Once we are done with a concept, we will ask you for some input.
- j. Everything goes here, we're still early in development and we're looking for anything you could possibly have to say.
- k. Please be open and don't worry about hurting our feelings, we want to improve the game and realize there are still lots of tweaks to be made.
- l. Okay, ready? Let's begin!

2. Testing:

- a. *Starts up game and user is dropped into environment*
 - i. Please look around in your new environment *pause*
 - ii. What are your first thoughts?
 - iii. Explain what you see, think, hear.
 - iv. What is your first instinct when in this environment?
 - v. What do you like? What bothers you?
 - vi. Okay, let's move on.
- b. Looking left and right
 - i. Here is an example of the type of environment in this game.
 - ii. Please look to the left and explain what you see.
 - iii. Please look to the right and explain what you see.
 - iv. Where do you think you are?
- c. Moving - currently only works with Vive controllers
 - i. You can move through the game by pushing the trigger with your pointer finger, and removing your finger when the desired area is selected
pause
 - ii. First thoughts?
 - iii. Do you see anything that you don't understand?

- iv. What do you think about this type of movement?
- v. Is there anything about this movement that bothers you?
- vi. Is there anything about this movement that is disorienting?
- vii. Awesome, let's move on to the game objective!
- d. Game objectives/exploring environment
 - i. Explore the environment a little more, what do you see?
 - ii. Do you see the cave? If not, please explore the environment until you do.
 - iii. What does the cave look like?
 - iv. Can you go anywhere inside of the cave?
 - v. Why do you think the cave is like this?
- e. Game objectives/gem interactivity
 - i. Do you see a purple gem anywhere around you? If not, please explore the environment until you do.
 - ii. What does the gem mean to you?
 - iii. When you point your controller at the gem, what does it do?
 - iv. When the gem is highlighted, please click on it.
 - v. After the gem is clicked on, what do you think your next
- f. Game objectives/endgame
 - i. What do you believe the objective is for this game?
 - ii. How do you believe you complete that objective?

3. Concluding Remarks

3. Okay, now you have a pretty good idea of the game and it's environment.
4. Do you have any questions about the game?
5. Did you find anything to be confusing?
6. Does anything need more description to make sense?
7. What things do you like about the environment?
8. Could any of these concepts be improved? How so/why?

Individual User Test: Zephyr

1. Introduction

- a. Hello, What is your name?
 - i. *Zephyr Wenrich*
- b. What is your occupation, what do you do?
 - i. *I am a full time Student*
- c. If you had to guess how many hours a week you spend playing video games?
 - i. *Probably around 10, 10+*
- d. If so, what kind of games? What kind are your favorite?
 - i. *N/A*
- e. Do you have any previous experience using virtual reality systems?
 - i. *No, I've never used one before*
- f. If so, what VR game/experience did you have?
 - i. *N/A*
- g. Excellent, now that we have some background info out of the way, let's take a look at the game!
- h. We're going to show you a basic level mockup, and cover some of the game's concepts.
- i. Once we are done with a concept, we will ask you for some input.
- j. Everything goes here, we're still early in development and we're looking for anything you could possibly have to say.
- k. Please be open and don't worry about hurting our feelings, we want to improve the game and realize there are still lots of tweaks to be made.
- l. Okay, ready? Let's begin!
- m.

2. Testing:

- a. *Starts up game and user is dropped into environment*
 - i. Please look around in your new environment *pause*
 - ii. What are your first thoughts?
 1. *In the middle of nature, kind of out in a park. Woods and mountains*
 - iii. Explain what you see, think, hear.
 1. *Lot of trees and I see of mountains in the distance and the sun.*
 - iv. What is your first instinct when in this environment?
 1. Go explore
 - v. What do you like? What bothers you?
 1. *No, I like the hardware. The (hand controllers) are pretty easy to you.*
 - vi. Okay, let's move on.
- b. Looking left and right

- i. Here is an example of the type of environment in this game.
 - ii. Please look to the left and explain what you see.
 - 1. *N/A*
 - iii. Please look to the right and explain what you see.
 - 1. *N/A*
 - iv. Where do you think you are?
 - 1. *N/A*
- c. Moving - currently only works with Vive controllers
 - i. You can move through the game by pushing the trigger with your pointer finger, and removing your finger when the desired area is selected
pause
 - ii. First thoughts?
 - 1. *Used to normal video games where you use a keyboard to move forward and back. Not really used to a button to teleport.*
 - iii. Do you see anything that you don't understand?
 - 1. *No, it's pretty straightforward.*
 - iv. What do you think about this type of movement?
 - 1. *N/A*
 - v. Is there anything about this movement that bothers you?
 - 1. *No, it'll probably take awhile to get used to it.*
 - vi. Is there anything about this movement that is disorienting?
 - 1. *A little but it's fine, I'll probably get used to it.*
 - vii. Awesome, let's move on to the game objective!
- d. Game objectives/exploring environment
 - i. Explore the environment a little more, what do you see?
 - ii. Do you see the cave? If not, please explore the environment until you do.
 - iii. What does the cave look like?
 - 1. *It looks inviting but it's blocked off.*
 - iv. Can you go anywhere inside of the cave?
 - 1. *No*
 - v. Why do you think the cave is like this?
 - 1. *Probably have to unlock it or something.*
- e. Game objectives/gem interactivity
 - i. Do you see a gem anywhere around you? If not, please explore the environment until you do.
 - ii. What does the gem mean to you?
 - 1. *N/A*
 - iii. When you point your controller at the gem, what does it do?
 - 1. *It glows.*
 - iv. When the gem is highlighted, please click on it.
 - v. After the gem is clicked on, what do you think your next move in the game?

1. The gem is still glowing, I should probably check the cave again to see if it's unlocked or go find more gems.

f. Game objectives/endgame

i. What do you believe the objective is for this level?

1. Click on all the gems to get into the cave.

ii. How do you believe you complete that objective?

1. Exploring and clicking on all of the gems.

3. 3. Concluding Remarks

a. Okay, now you have a pretty good idea of the game and it's environment.

b. Do you have any questions about the game?

i. No, it's pretty straightforward.

c. Did you find anything to be confusing?

i. N/A

d. Does anything need more description to make sense?

i. It's pretty straightforward. If the barrier had like a progress bar it could be better for the user.

e. What things do you like about the environment?

i. I like the nature feel.

f. Could any of these concepts be improved? How so/why?

i. If there was audio to go with it, maybe birds chirping or music.

Individual User Test: Amelia

1. Introduction:

- a. Hello, What is your name?
 - i. *Amelia Weller*
- b. What is your occupation, what do you do?
 - i. *Full Time student, Informatics and French*
- c. If you had to guess how many hours a week you spend playing video games?
 - i. *Probably at most 1 hour a week if less*
- d. If so, what kind of games? What kind are your favorite?
 - i. *I really enjoy puzzle games*
- e. Do you have any previous experience using virtual reality systems?
 - i. *No, I do not which is why this experience is so cool and weird for me.*
- f. If so, what VR game/experience did you have?
 - i. *N/A*
- g. Excellent, now that we have some background info out of the way, let's take a look at the game!
- h. We're going to show you a basic level mockup, and cover some of the game's concepts.
- i. Once we are done with a concept, we will ask you for some input.
- j. Everything goes here, we're still early in development and we're looking for anything you could possibly have to say.
- k. Please be open and don't worry about hurting our feelings, we want to improve the game and realize there are still lots of tweaks to be made.
- l. Okay, ready? Let's begin!
- m.

2. Testing:

- a. *Starts up game and user is dropped into environment*
 - i. Please look around in your new environment *pause*
 - ii. What are your first thoughts?
 1. *It all looks really nature-y theres a tree and a mountain.*
 - iii. Explain what you see, think, hear.
 1. *I see something you would expect in nature, except it's all trippy-looking. Everything looks very cube-y and like crystal-y.*
 - iv. What is your first instinct when in this environment?
 1. *I want to walk around in it and see more. I don't see much movement right now and I want to see if there's anything else to explore.*
 - v. What do you like? What bothers you?

1. *I really like the way it looks so realistic using the headset. Looking up is fine but not being able to see my own hands is really disorienting.*
- vi. Okay, let's move on.
- b. Looking left and right
 - i. Here is an example of the type of environment in this game.
 - ii. Please look to the left and explain what you see.
 1. *I see trees and a pond.*
 - iii. Please look to the right and explain what you see.
 1. *I see more trees and an opening in the trees that could be described as a path I guess?*
 - iv. Where do you think you are?
 1. *I think I'm in a glenn or valley of some sort on another planet.*
- c. Moving - currently only works with Vive controllers
 - i. You can move through the game by pushing the trigger with your pointer finger, and removing your finger when the desired area is selected
pause
 - ii. First thoughts? (after having successfully completed it)
 1. *It's pretty cool. I wish I could walk around in it because my natural instinct in a new environment is to move my feet, not my hands.*
 - iii. Do you see anything that you don't understand?
 1. *Not really, not yet anyway.*
 - iv. What do you think about this type of movement?
 1. *It's very cool and very colorful, I love the different objects.*
 - v. Is there anything about this movement that bothers you?
 1. *Not really, it's pretty normal*
 - vi. Is there anything about this movement that is disorienting?
 1. *When I move my head around a lot I kind of get woozy but if I do it slowly it's fine.*
 - vii. Awesome, let's move on to the game objective!
- d. Game objectives/exploring environment
 - i. Explore the environment a little more, what do you see?
 1. *I see some trees and clouds and mountains and gems.*
 - ii. Do you see the cave? If not, please explore the environment until you do.
 - iii. What does the cave look like?
 1. *The cave looks like uh, a cave I guess. Just a place I could go into and it's dark.*
 - iv. Can you go anywhere inside of the cave?
 1. *No I can't, it's not letting me move into it.*
 - v. Why do you think the cave is like this?
 1. *Because you made it that way? I probably need to do something for it to let me in.*

- e. Game objectives/gem interactivity
 - i. Do you see a purple gem anywhere around you? If not, please explore the environment until you do.
 - ii. What does the gem mean to you?
 - 1. *It looks pretty and purple, it doesn't really mean anything.*
 - iii. When you point your controller at the gem, what does it do?
 - 1. *It lights up!*
 - iv. When the gem is highlighted, please click on it.
 - 1. *I'm assuming I click on is using the trigger.*
 - v. After the gem is clicked on, what do you think your next move is?
 - 1. *I should probably go to the cave to see if I can get into it.*
- f. Game objectives/endgame
 - i. What do you believe the objective is for this game?
 - 1. *To highlight all of the gems and open the cave.*
 - ii. How do you believe you complete that objective?
 - 1. *You probably have to move around the environments and highlight them like I did the last one until they're all highlighted.*

3. Concluding Remarks

- a. Okay, now you have a pretty good idea of the game and it's environment.
- b. Do you have any questions about the game?
 - i. *No, it's fun.*
- c. Did you find anything to be confusing?
 - i. *Not really, the moving around was confusing but other than that no.*
- d. Does anything need more description to make sense?
 - i. *Probably how to use the hand controllers.*
- e. What things do you like about the environment?
 - i. *I liked the way the environment looks and the objects.*
- f. Could any of these concepts be improved? How so/why?
 - i. *Not really, it looks cool.*

Individual User Test: Kira

1. Introduction

- a. Hello, What is your name?
 - i. *Kira Bushman*
- b. What is your occupation, what do you do?
 - i. *I am a highschool student in Bloomington, Indiana and*
- c. If you had to guess how many hours a week you spend playing video games?
 - i. *Probably around 7 hours a week*
- d. If so, what kind of games? What kind are your favorite?
 - i. *N/A*
- e. Do you have any previous experience using virtual reality systems?
 - i. *Yes, I play VR games a lot*
- f. If so, what VR game/experience did you have?
 - i. *I own a Vive and have played a couple different demos and games.*
- g. Excellent, now that we have some background info out of the way, let's take a look at the game!
- h. We're going to show you a basic level mockup, and cover some of the game's concepts.
- i. Once we are done with a concept, we will ask you for some input.
- j. Everything goes here, we're still early in development and we're looking for anything you could possibly have to say.
- k. Please be open and don't worry about hurting our feelings, we want to improve the game and realize there are still lots of tweaks to be made.
- l. Okay, ready? Let's begin!
- m.

2. Testing:

- a. *Starts up game and user is dropped into environment*
 - i. Please look around in your new environment *pause*
 - ii. What are your first thoughts?
 - 1. *It looks like I'm near mountains in a park.*
 - iii. Explain what you see, think, hear.
 - 1. *There are trees and clouds and a sun.*
 - iv. What is your first instinct when in this environment?
 - 1. *I want to move and explore more and try and fall off of the edge if I can.*
 - v. What do you like? What bothers you?
 - 1. *I like the low poly environment, it looks good. Nothing really bothers me so far.*
 - vi. Okay, let's move on.
- b. Looking left and right

- i. Here is an example of the type of environment in this game.
- ii. Please look to the left and explain what you see.
 - 1. *I see some trees and nature-y stuff.*
- iii. Please look to the right and explain what you see.
 - 1. *I see the same stuff.*
- iv. Where do you think you are?
 - 1. *In a park or in nature.*
- c. Moving - currently only works with Vive controllers
 - i. You can move through the game by pushing the trigger with your pointer finger, and removing your finger when the desired area is selected
pause
 - ii. First thoughts?
 - 1. *It's pretty normal with the Vive system, that's kind how you move around.*
 - iii. Do you see anything that you don't understand?
 - 1. *Nope*
 - iv. What do you think about this type of movement?
 - 1. *It was hard at first to get it down, but now it's second nature to me.*
 - v. Is there anything about this movement that bothers you?
 - 1. *Nope*
 - vi. Is there anything about this movement that is disorienting?
 - 1. *Nope*
 - vii. Awesome, let's move on to the game objective!
- d. Game objectives/exploring environment
 - i. Explore the environment a little more, what do you see?
 - 1. *There are some gems and stuff around.*
 - ii. Do you see the cave? If not, please explore the environment until you do.
 - iii. What does the cave look like?
 - 1. *It looks like a cave, it looks like that's where I should go next.*
 - iv. Can you go anywhere inside of the cave?
 - 1. *No, it's not letting me in yet.*
 - v. Why do you think the cave is like this?
 - 1. *I probably have to complete some activity for the cave to let me in*
- e. Game objectives/gem interactivity
 - i. Do you see a gem anywhere around you? If not, please explore the environment until you do.
 - ii. What does the gem mean to you?
 - 1. *It doesn't mean anything, but it's probably my way to the next level.*
 - iii. When you point your controller at the gem, what does it do?
 - 1. *It lights up.*

- iv. When the gem is highlighted, please click on it.
- v. After the gem is clicked on, what do you think your next move in the game?
 - 1. *I should probably go to the other gems and click on them as well.*

f. Game objectives/endgame

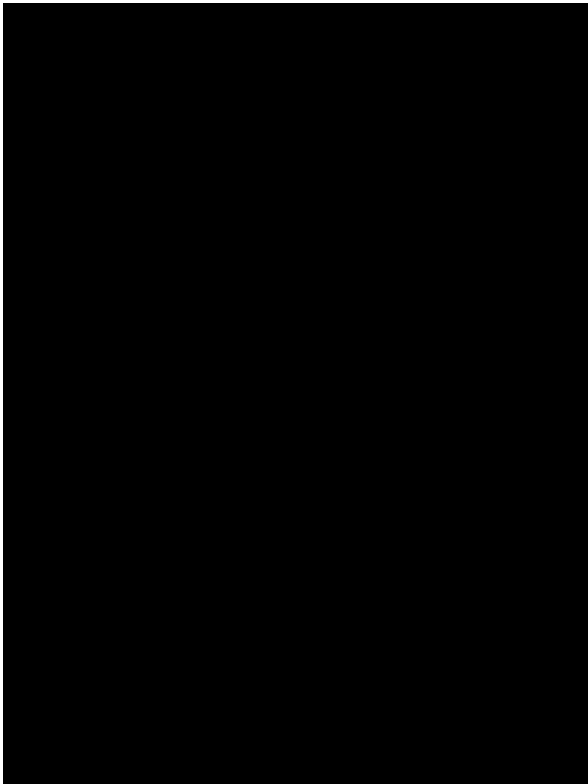
- i. What do you believe the objective is for this level?
 - 1. *To click on all the gems to open up the cave.*
- ii. How do you believe you complete that objective?
 - 1. *By moving to and clicking on the gems.*

3. 3. Concluding Remarks

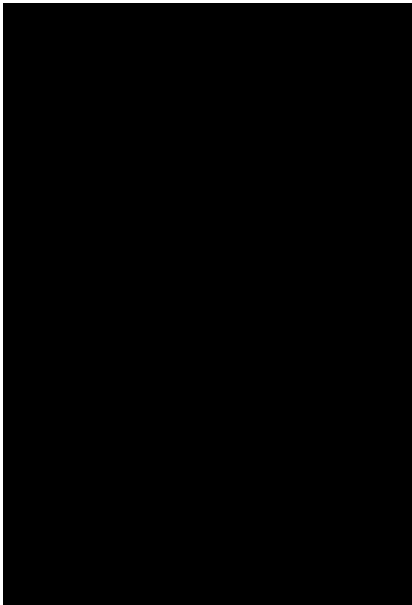
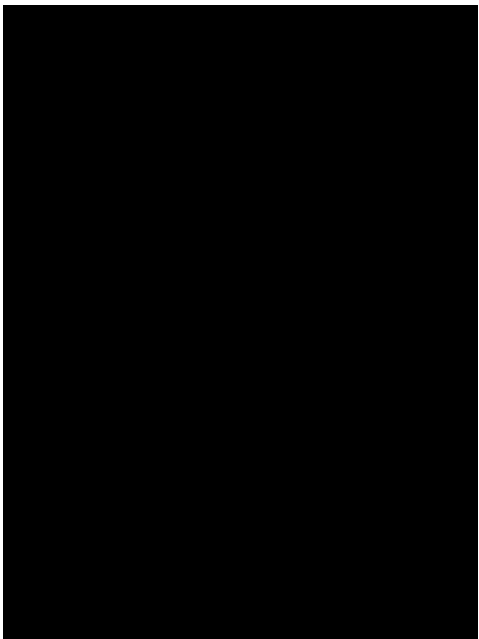
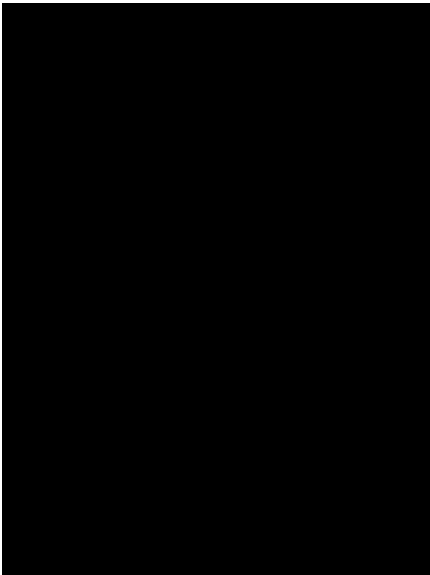
- a. Okay, now you have a pretty good idea of the game and it's environment.
- b. Do you have any questions about the game?
 - i. *Not really.*
- c. Did you find anything to be confusing?
 - i. *I don't know why I'm supposed to be clicking on the gems, and there isn't really a motive except to get out of the first level.*
- d. Does anything need more description to make sense?
 - i. *You should probably include a backstory, some motivation for the user to get to before they realize they have to leave level 1.*
- e. What things do you like about the environment?
 - i. *It looks nice, and I like the colors.*
- f. Could any of these concepts be improved? How so/why?
 - i. *Make sure one of the first things you see is a gem when you first start out in the level. Seeing the gem will make you realize it's important when you try to go to the cave and can't get through it.*

Testing Photos:

Individual User Test - Zephyr



Individual User Test - Amelia



Individual User Test - Kira

