

VR Therapy Module for Stress Management

1. Project Summary

This VR Therapy Module is designed to assist users in managing stress through mindfulness and guided breathing exercises. The immersive experience includes a calming environment with natural elements and interactive features that promote relaxation and mental well-being.

2. Design Choices

1. Environment:

- Setting: A serene natural landscape with elements such as flowing water, gentle wind, and lush greenery.
- Audio: Soothing background sounds like birds chirping, rustling leaves, and water flowing to enhance relaxation.
- Lighting: Soft, warm lighting to create a tranquil atmosphere.

2. Interactive Elements:

- Pink Markers: Visual indicators to guide users to interactive zones.
- Breathing Circle: A graphical circle that expands and contracts, guiding users through the 4-7-8 breathing technique:
 - Inhale: 4 seconds
 - Hold: 7 seconds
 - Exhale: 8 seconds
- Feedback Panel: Appears at the end of the session with options to express how the user feels (Happy, Calm, Sad).

3. User Flow:

- Start in a calming environment.
 - Locate and reach the first pink marker to begin the breathing exercise.
 - Follow the breathing instructions three times using the visual breathing circle.
 - Explore the environment post-session.
 - Trigger the feedback panel by returning to another pink marker.
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3. Implementation Details

1. Environment Setup:

- Used Unity's terrain editor for natural landscape creation.
- Added wind zones and particle effects to simulate flowing water and gentle breezes.

2. **Audio Integration:**
 - Integrated 3D spatial audio for immersive soundscapes using Unity's Audio Source and Audio Listener components.
 3. **Breathing Exercise:**
 - Scripted a dynamic UI circle using Unity's Canvas system.
 - Timed the expansion and contraction to match the 4-7-8 breathing pattern.
 - Displayed text prompts to guide users ("Inhale," "Hold," "Exhale").
 4. **Feedback Mechanism:**
 - Created a UI panel triggered by proximity to the final pink marker.
 - Used Unity's Event System to capture user input.
 5. **Session Flow Management:**
 - Utilized state machines to handle session progression.
 - Implemented triggers and colliders for marker interactions.
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4. User Feedback

Collected through playtesting sessions:

1. **Positive:**
 - The calming environment and soundscapes were highly appreciated.
 - Users found the breathing circle intuitive and easy to follow.
 - The feedback panel added a personalized touch to the experience.
 2. **Constructive Criticism:**
 - Some users suggested the breathing circle animations could be smoother.
 - The environment could include more interactive elements (e.g., animals or moving clouds).
 - A few users requested adjustable session durations.
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5. Reflection and Future Improvements

1. **Improving Visuals and Interactions:**
 - Enhance the breathing circle with smoother animations and customizable pacing.
 - Add more interactive natural elements, such as fish in water or birds flying overhead.
2. **Personalization:**
 - Allow users to adjust the session duration and breathing patterns to suit their preferences.
 - Introduce alternate environments (e.g., mountain or desert).
3. **Accessibility Enhancements:**
 - Include visual cues for users who may not rely on sound.
 - Provide multi-language support for instructions and feedback.
 - Include more Exercises and activities for stress management

4. Feedback Analysis:

- Store user feedback anonymously to analyze trends and refine the experience.
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6. Conclusion

This VR Therapy Module successfully provides a calming and engaging experience for stress management. Feedback has highlighted areas for improvement, including more interactivity and customization options. Future iterations will focus on making the experience more inclusive and adaptable to individual user needs.

Game Flow: How to Play

1. Objective Initiation:

Start by heading toward the **pink marker** located in front of you in the verandah.

2. Breathing Exercise:

Upon reaching the pink marker, follow the on-screen instructions to perform the designated **breathing exercise**. This is a mandatory step to unlock further exploration.

3. Explore the Environment:

After completing the breathing exercise, you're free to roam around the environment. Interact with objects, explore the surroundings, and immerse yourself in the experience.

4. Ending the Game:

To end the game, return to the **pink marker**. Standing on the marker will trigger the game's conclusion sequence.

Screenshot of the game

- 1) Start of game



- 2) Complete the breathing exercise



3) Explore the Environment:





3) Provide the Feedback by reaching the pink marker

