**STATEMENT OF WORK (SOW)**

**Project Title: Coping with Anxiety Using VR  
Date: 07/02/2025  
Prepared By: Aditya Rachakonda, K Revanth Reddy, Karvan Deekshitha, Geethika Choudhary Yadlapalli, Keshav Rao**

**1. Introduction**

**1.1 Purpose**

**The primary objective of this project is to develop a VR-based therapeutic solution that helps individuals manage and reduce anxiety through immersive and interactive experiences. By leveraging Occulus Quest and laptop, this project aims to provide an accessible, cost-effective, and engaging tool for anxiety relief.**

**1.2 Overview**

**This project will create virtual environments that promote relaxation through soothing audio, guided meditation, interactive games, and mindfulness exercises. The VR application will integrate evidence-based therapeutic techniques such as progressive muscle relaxation, paced breathing, and gratitude journaling to aid in anxiety management.**

**This initiative seeks to bridge technology and mental health by providing an immersive, user-friendly, and scientifically supported solution that individuals can use anywhere at any time.**

**2. Scope of Work**

**2.1 Project Description**

**This project involves the development of an Android-based VR application that creates a calming, interactive experience designed to help individuals cope with anxiety. The application will allow users to engage with customized therapeutic environments, guided exercises, and interactive activities.**

**2.2 Objectives**

* **Develop a user-friendly VR application that aids in anxiety management.**
* **Provide customizable, immersive environments that cater to individual relaxation preferences.**
* **Enable users to integrate calming music for a personalized experience.**
* **Introduce interactive elements and mini-games to encourage mindfulness and focus.**
* **Ensure an intuitive and accessible interface for seamless user engagement.**
* **Lay the foundation for a future metaverse transition, allowing for a more social and immersive experience.**

**2.3 Key Activities**

**Research & Design:**

* **Conduct research on VR therapy techniques for anxiety relief.**
* **Develop mockups and storyboards for user interaction.**
* **Design immersive VR environments (e.g., beaches, forests, waterfalls) with realistic visuals and ambient sounds.**

**Implementation:**

* **Guided Meditation & Breathing Techniques:** 
  + **Develop audio-guided meditations with paced breathing.**
  + **Integrate calming narration and ambient music.**
* **Progressive Muscle Relaxation (PMR):** 
  + **Create interactive prompts for muscle relaxation exercises.**
  + **Provide visual cues to enhance effectiveness.**
* **Visualization Exercises:** 
  + **Implement therapeutic environments to encourage relaxation.**
* **Gratitude Journaling (Interactive):** 
  + **Develop an in-VR journaling feature where users can document positive thoughts.**
* **Paced Breathing Exercises:** 
  + **Utilize animated visuals (inflating/deflating shapes) to guide breathing rhythms.**
* **Guided Nature Walks:** 
  + **Simulate calming walks with mindfulness narration.**
* **Binaural Beats & Audio Therapy:** 
  + **Incorporate relaxing sound frequencies to enhance meditation and sleep quality.**
* **Exposure Therapy (Optional):** 
  + **Design controlled exposure scenarios (e.g., public speaking simulation).**

**Testing & Refinement:**

* **Conduct user testing with a target audience.**
* **Gather feedback to refine features and optimize user experience.**
* **Ensure smooth performance across various Android devices.**

**Future Scalability:**

* **Plan for a metaverse-based expansion for broader therapeutic use.**
* **Document development insights for future feature additions.**

**3. Deliverables**

| **Deliverable** | **Description** | **Due Date** |
| --- | --- | --- |
| **VR Environment Prototype** | **Initial prototype featuring immersive VR scenes with guided meditation and relaxation exercises.** | **04/04/2025** |
| **Interactive Therapeutic Module** | **Fully functional therapeutic interaction module (breathing, journaling, games).** | **Early May 2025** |
| **Final Android VR Application** | **Complete, fully integrated app with all therapeutic techniques and user documentation.** | **20/05/2025** |
| **Documentation & Testing Report** | **Comprehensive user guide, technical documentation, and usability testing reports.** | **20/05/2025** |

**4. Timeline and Milestones**

| **Milestone** | **Description** | **Due Date** |
| --- | --- | --- |
| **Project Kickoff** | **Initial team meeting, task assignments, and development planning.** | **04/02/2025** |
| **Phase 1 Completion** | **First prototype review, feature evaluation, and user testing.** | **04/04/2025** |
| **Mid-Development Milestone** | **Integration of therapeutic modules (breathing, journaling, games).** | **Early May 2025** |
| **Final Delivery** | **Submission of complete VR app, documentation, and reports.** | **20/05/2025** |

**5. Roles and Responsibilities**

| **Team Member** | **Role** | **Responsibilities** |
| --- | --- | --- |
| **Aditya Rachakonda** | **Project Manager/Lead Developer** | **Manage project timeline, team coordination, and development.** |
| **K Revanth Reddy** | **VR Environment Design Lead** | **Design immersive VR scenes and enhance user interaction.** |
| **Karvan Deekshitha** | **UI/UX & Features Developer** | **Develop interactive modules and optimize user interface.** |
| **Geethika Choudhary Yadlapalli** | **QA & Testing Lead** | **Conduct usability testing and refine features based on feedback.** |
| **Keshav Rao** | **Research & Content Developer** | **Integrate research-backed techniques and curate therapeutic content.** |

**Client Contact: Software Engineering Course, Mahindra University**

**6. Assumptions and Constraints**

**Assumptions:**

* **All team members have access to necessary hardware and development tools.**
* **Audio-visual content is licensed or sourced appropriately.**
* **Users will engage with VR in a controlled environment for maximum therapeutic effect.**

**Constraints:**

* **Technical Limitations:** 
  + **Limited processing power of mobile devices impacts graphics fidelity and responsiveness.**
  + **Interaction mechanisms rely on head tracking and gaze-based inputs.**
* **Time & Budget Constraints:** 
  + **Short development timeline may limit advanced features.**
  + **Budget constraints affect additional functionality expansion.**
* **Platform Constraints:** 
  + **The solution is Android-only (not cross-platform at this stage).**
  + **Variability in laptop specs may affect performance.**
* **User Experience Constraints:** 
  + **VR motion sickness must be mitigated through smooth interactions.**

**7. Technical Environment**

* **Development Environment: Unity Editor**
* **Game Engine: Unity**
* **VR Framework: OpenXR plugin**
* **Programming Language: C#**

**Final Note**

**This project aims to provide an accessible, immersive, and research-backed approach to anxiety management through virtual reality. The team is committed to delivering a high-quality product that effectively integrates mental wellness techniques with emerging VR technology.**