

CS-GY 6543/CS-UY 4543 Human Computer Interaction Assignment 4

Team Name: Design Stars

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Goal: Good Health and Well-Being

Institution: New York University

Course: CS-GY 6543/CS-UY 4543

Instructor: Professor Tesh Goyal, Ph.D

Due Date: December 11, 2024

Introduction

The development of our prototype directly aligns with Sustainable Development Goal 3: Good Health and Well-Being, specifically addressing mental health. Our focus is to promote mental well-being through technology by offering accessible, personalized tools for stress management, mindfulness, and PTSD support. Inspired by HCI principles and literature, our design combines self-help functionalities, community support, and professional integration, as outlined in works like Thieme et al. (2015). The prototype encourages preventative care and emotional well-being promotion, addressing gaps in existing solutions. Our iterative, user-centered process ensures inclusivity and usability, ultimately aiming to make mental health resources available and effective for diverse audiences.

Design

The design of the Serenify solution leverages human-centered principles to create an intuitive, accessible, and effective mental health management application. This design is grounded in the personas and tasks developed, ensuring that the most critical user needs are addressed effectively. We have made our app with minimum colours because people dealing with mental health issues find certain colours triggering.

Personas and Tasks

The solution targets a diverse user base, including:

- **Mental health advocates like Sarah**, who need tools to manage client data, track progress, and connect users to communities.
- **Therapists like Dr. Emily**, seeking scientifically validated tools to track and enhance patient progress.
- **Students like Jordan**, requiring user-friendly, low-cost solutions for stress and anxiety management.
- **Corporate professionals and HR managers like Maria**, looking for scalable tools to improve workplace well-being.
- **Retired veterans like Evelyn**, with a need for straightforward interfaces to manage PTSD.
- **High school counselors like Neil**, needing tools tailored for teenagers' mental health education and engagement.

The tasks include emotion tracking, mindfulness practice, stress management, and community engagement, all designed to enable users to achieve their mental health goals effectively.

Design Features

1. **Home Page and Core Navigation:**

- The home page features easily accessible self-help tools, reminders, and quick links to key features like the mood tracker and SOS functionality. This layout simplifies navigation and ensures users can access high-priority tasks immediately.
- 2. **Self-Help Tools:**
 - Helps users to practice mindfulness, meditation, stress management, and PTSD support are structured to cater to varied user needs. These include interactive exercises, timers for anxiety management, and personalized relaxation techniques like music or scribbling.
- 3. **Professional Mode:**
 - Designed for therapists and advocates, this mode allows scheduling appointments, tracking client assessments, and hosting sessions. It integrates client data management with actionable insights.
- 4. **Community Engagement:**
 - Users can join, create, or engage in peer communities, fostering support networks. Community cards enhance accessibility and engagement.
- 5. **Tracker and Goals:**
 - The tracking system logs vitals like cortisol and dopamine levels, helping users visualize their progress. Goal-setting features enable personalized wellness plans, ensuring that users stay motivated and focused.
- 6. **Emergency SOS Functionality:**
 - An emergency button provides immediate assistance, dialing emergency services when activated, underscoring safety and support.

Enabling Critical Tasks

The solution ensures users achieve their key tasks by:

- Offering a **personalized experience**, such as tailored meditation suggestions based on user history.
- Providing **real-time access** to critical tools, like the SOS button and trigger logs for PTSD management.
- Supporting **emotional well-being** through structured tasks and progress tracking.
- Encouraging **community involvement** to foster peer support and reduce stigma.

This design, informed by thorough research, iterative prototyping, and user feedback, creates an inclusive platform that caters to a wide range of mental health needs. It ensures that every user, from students to therapists, can achieve their therapeutic and personal well-being goals effectively.

Lessons Learnt

The iterative design process for the Serenify solution provided valuable insights into user-centered design, collaboration, and the importance of feedback. From the first round of

evaluation, it was not surprising that users were confused with the stress level measurement due to unfamiliarity with cortisol. However, it was surprising to learn that the process of community engagement was not intuitive to some users. Below are the overall key lessons learned:

1. Importance of User Feedback in Iterative Design

- **User-Centered Approach:** Direct user input during prototyping surprisingly revealed several gaps that were previously unnoticed, such as ambiguous labels, misleading wording, and unclear navigation paths. This reinforced the value of incorporating diverse user perspectives to create intuitive designs.

- **Specific Feedback:** Feedback about the mindfulness, professional mode, and community page emphasized the need for precise labels, comprehensive wording, intuitive process, and user-friendly interfaces, driving improvements in those areas.

2. Prototyping and Iteration: A Refinement Process

- **Paper vs. Medium-Fidelity Prototypes:** Moving from paper to medium-fidelity prototypes highlighted the importance of visual clarity and functionality. It also revealed the challenges in balancing simplicity with comprehensive features.

- **Evolution Through Testing:** Each round of prototyping allowed us to refine the interface, ensuring that the design aligns with the needs of diverse users, including professionals, students, and veterans.

3. Accessibility and Inclusivity Are Paramount

- **Diverse User Needs:** Designing for personas like therapists, students, and veterans showed the importance of building accessible tools that cater to a broad audience with varying technological proficiencies.

- **Clear Terminology:** Issues with ambiguous terms, like "Relaxation" and "Anxiety Management," emphasized the need for clear, user-friendly language that resonates with diverse audiences.

4. Collaboration and Team Dynamics

- **Role-Based Strengths:** Dividing responsibilities based on team member strengths, such as Dhruv and Archit's focus on self-help tools and progress tracking, and Saniya and Harry's work on professional mode and therapist matching, enhanced efficiency and creativity.

- **Cross-Functional Understanding:** Playing multiple roles (moderator, wizard, and user) allowed each team member to understand the prototype from different perspectives, enriching the overall design.

5. Balancing Functionality with Simplicity

- **Feature Overload vs. Usability:** The temptation to include extensive features like community engagement tools and therapist integration required careful balancing to maintain usability without overwhelming users.

- **Prioritization:** Key features like the SOS button and professional mode were prioritized to ensure the prototype addressed critical mental health needs effectively.

6. Challenges in Professional and Community Features

- **Calendar Usability:** Feedback on the professional mode's calendar highlighted the challenges of designing an intuitive scheduling system that balances simplicity with functionality.

- **Community Engagement:** Clarifying the distinction between personal and general community posts helped address potential confusion and enhanced user experience.

Revision section

Changes Made After Round 1 of Paper Prototyping

Based on user feedback from the first round of prototyping, we implemented several key changes to address usability concerns and improve the overall experience:

1. **Addition of a Menu Icon:**
 - Introduced a clear and easily accessible menu icon to streamline navigation and reduce confusion about accessing various features.
2. **Feedback Functionality in the Mindfulness Section:**
 - Integrated a feedback option in the mindfulness tools, allowing users to reflect on their experiences and track progress, enhancing the sense of accomplishment.
3. **Clarification of the "Create" Option in the Community Page:**
 - Clarified whether the "Create" option was for creating a post or a community. This adjustment eliminated confusion and improved the usability of the community features.
4. **Replacing Client ID with Client Name (or Both):**
 - Replaced input box for client IDs with dropdown menus with names to create a more user-friendly and relatable reference for professional users such as therapists and mental health advocates.
5. **Refinement of the Scribbling Feature for Relaxation:**
 - Improved the functionality of the scribbling tool by adding clearer options for saving or discarding work, ensuring that users could engage with this feature without stress or confusion.

Changes Made After Evaluation of Medium-Fidelity Prototype

1. **Clarify the "Anxiety Management" Tab:**

- Clearly label the "Anxiety Management" tab as a breathing exercise to avoid confusion about its purpose.

2.Improve Community Posts Distinction:

- Clarify whether posts on the Community page belong to the user or are part of a general feed.

3.Simplify the Calendar in Professional Mode:

- Address confusion by improving the layout and functionality of the calendar in professional mode.
- Consider reorganizing "Host a Session" and "Appointment" to a more intuitive structure, such as accessing appointments first and then hosting a session.

4.Enhance Therapist Matching:

- Integrate a calendar for therapists in the therapist matching section to make scheduling more transparent and efficient.

5. Rename the Relaxation Tab:

- Change the name of the "Relaxation" tab to "Journaling" to better represent its functionality.

Individual Performance

The script for conducting interviews and the physical prototype were a team effort. Every group member developed an interview script for two personas each.

Dhruv and Archit:

For the paper-prototype Dhruv and Archit worked together on building the **Self-Help Tools** (Meditation, Anxiety Management, Stress Management, Mindfulness Practices, Relaxation, and PTSD Support), **Progress Tracker** (to set personal wellness goals and monitor hormone trends and vitals), **Communities** (to join or create communities and engage with posts), and the **Home Page**. Archit played the role of the moderator, and Dhruv played the role of the wizard.

For the medium-fidelity prototype, Archit and Dhruv worked on creating the **Therapist Matching**, **Community**, **Settings**, and **Progress Tracker**. They also refined the **Professional Mode**.

Saniya and Harry:

For the paper-prototype Saniya and Harry worked on the **Professional Mode** (Schedule Management, Client Information, Client Assessments and Reports, and Session Hosting), **Therapist Matching** (sending requests to therapists based on credentials and specialties),

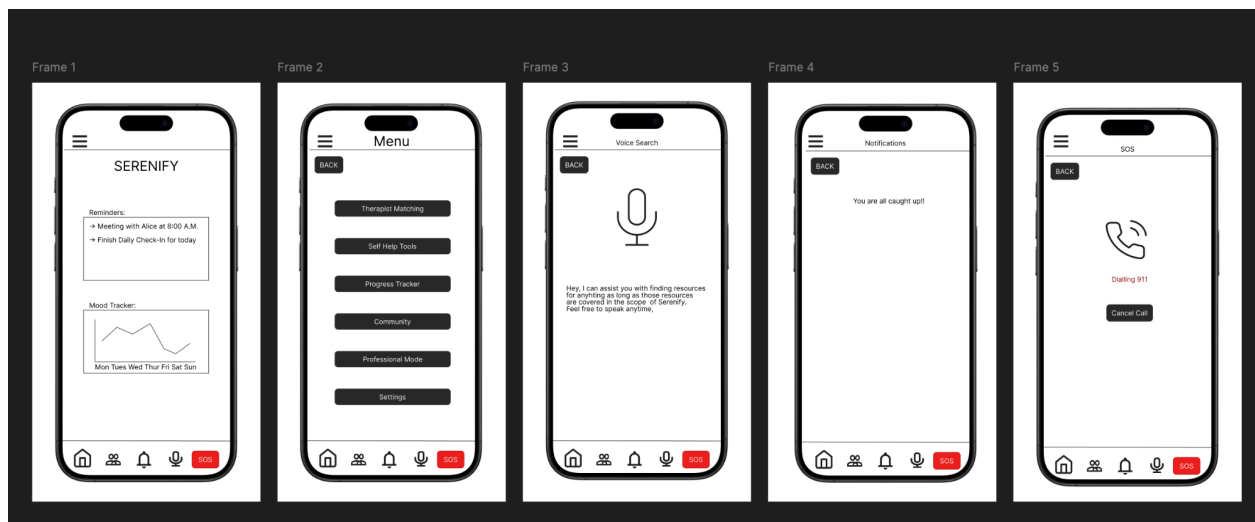
Emergency Support, and **Settings**. Saniya played the role of the moderator, and Harry played the role of the wizard.

For the medium-fidelity prototype, Saniya and Harry worked on creating the **Self-Help Tools** and **Professional Mode**. Each member of the group has played the role of user and moderator.

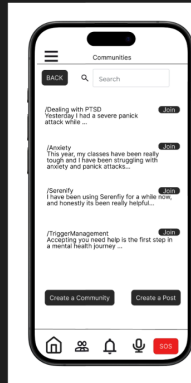
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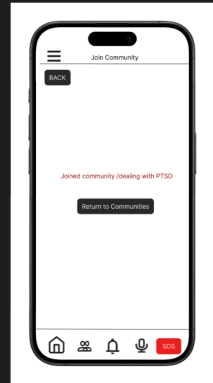
Prototype images



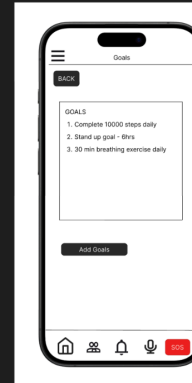
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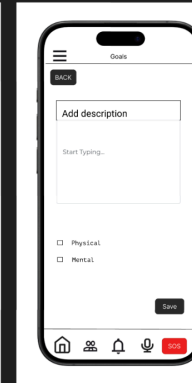
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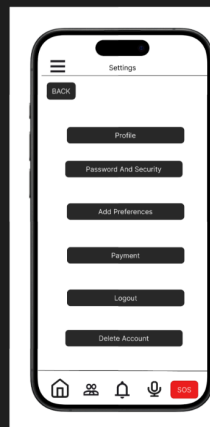
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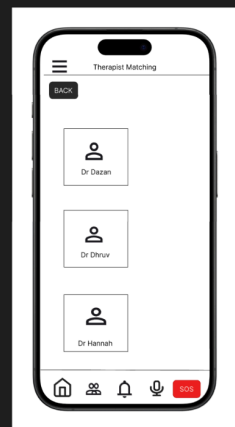
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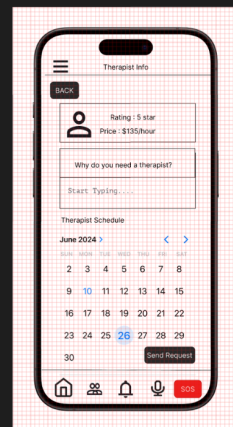
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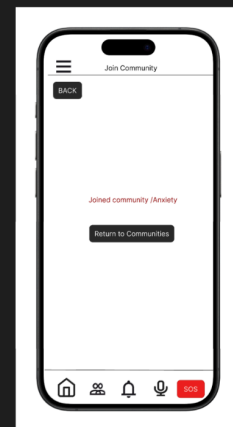
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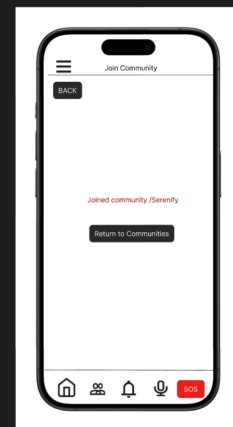
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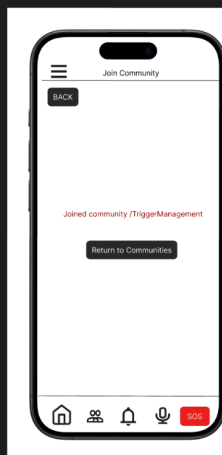
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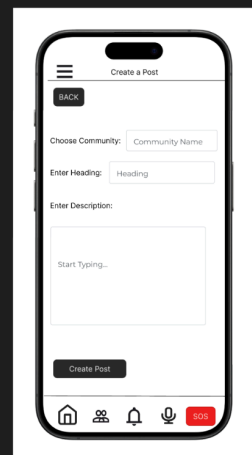
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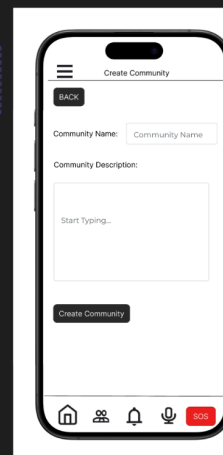
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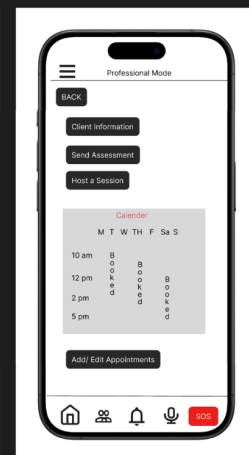
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Heading

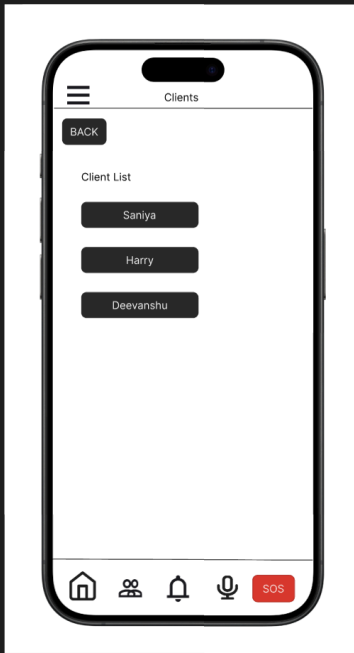
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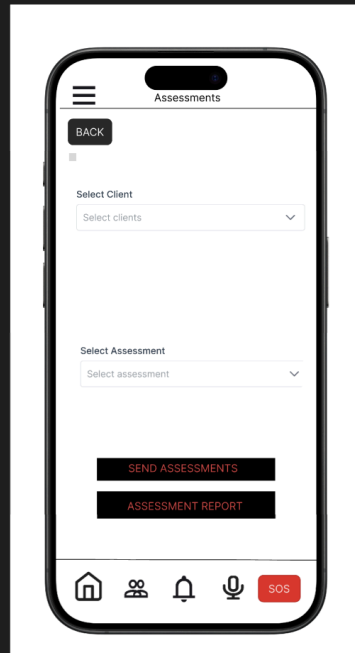
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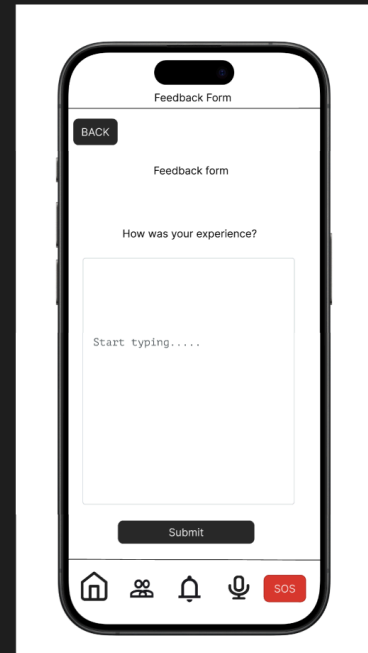
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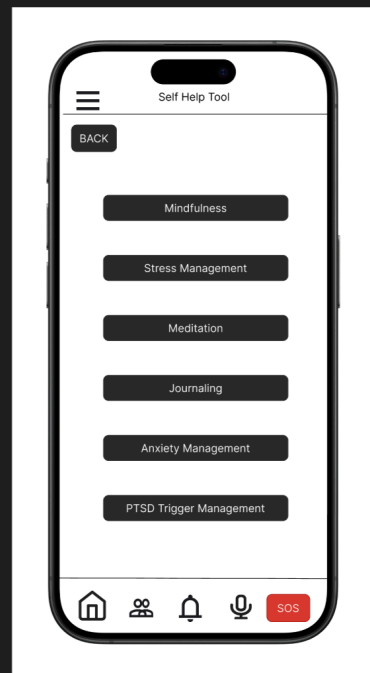
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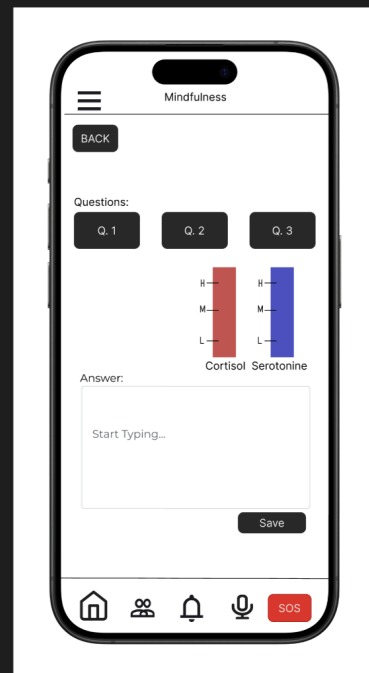
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Frame 28



Frame 29



Frame 60

Look around and notice 5 things you can see. Now, notice the colours, textures and shape.

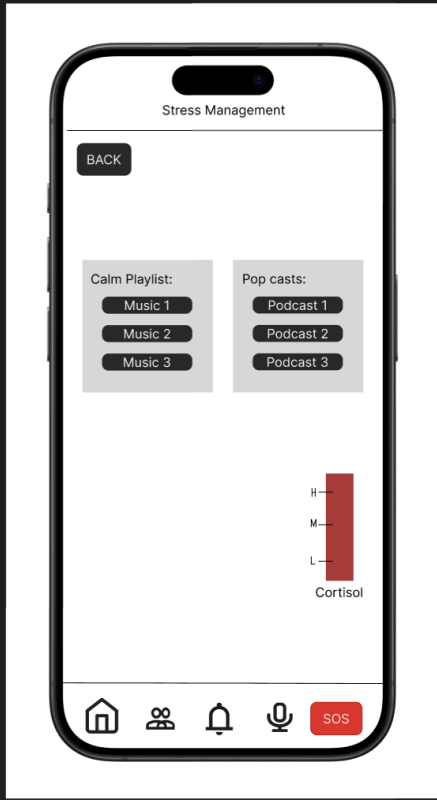
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Notice the sounds around you. Filter the noise and listen to the calm in the soothing sounds.

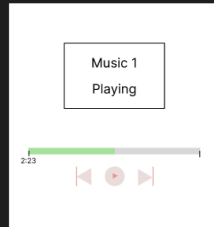
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Close your eyes and try to recall a comforting scene. What memories or feelings come up?

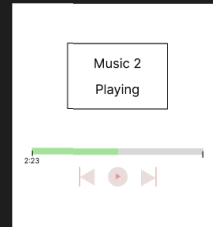
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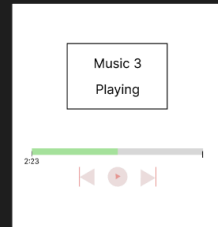
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Frame 65



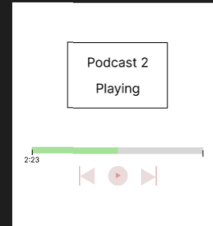
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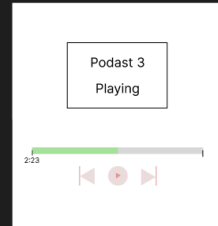
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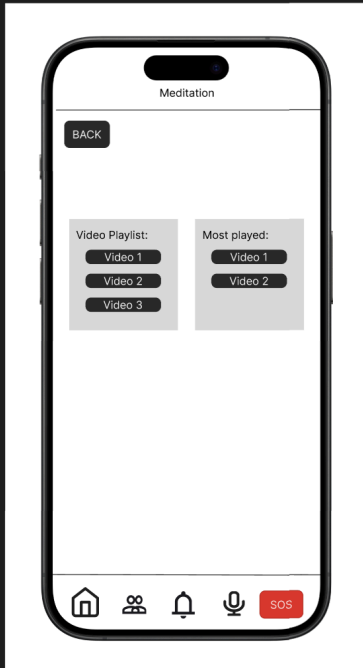
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Frame 69



Frame 70



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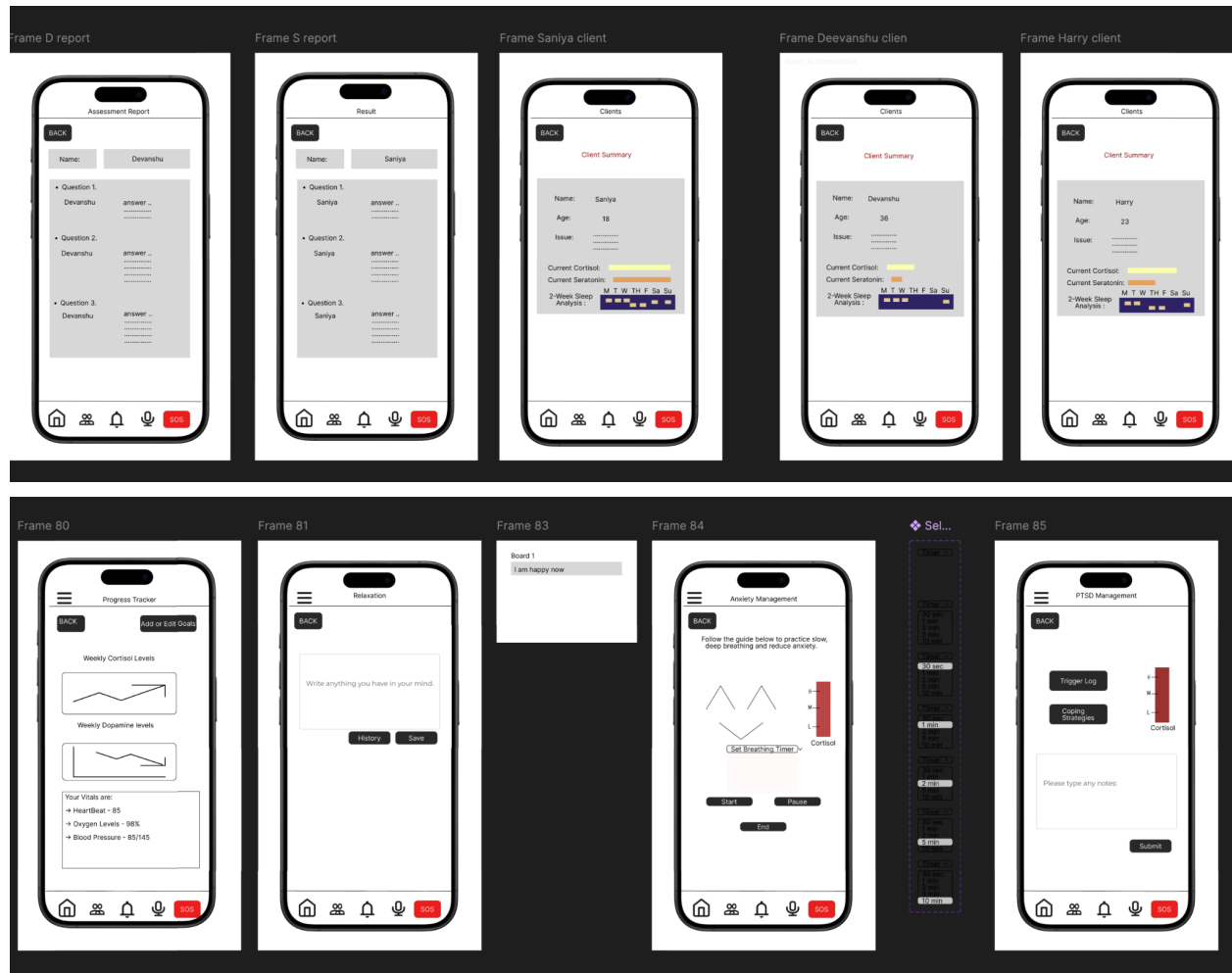


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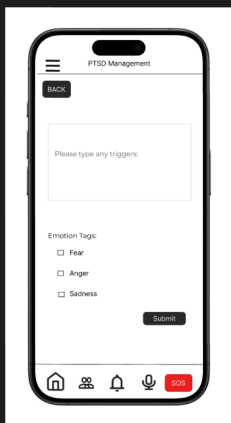


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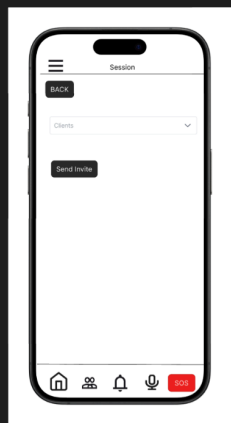
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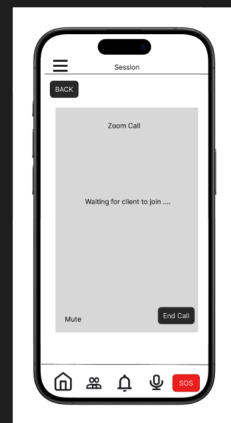
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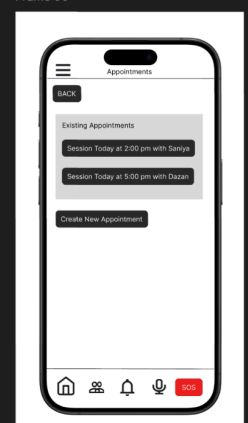
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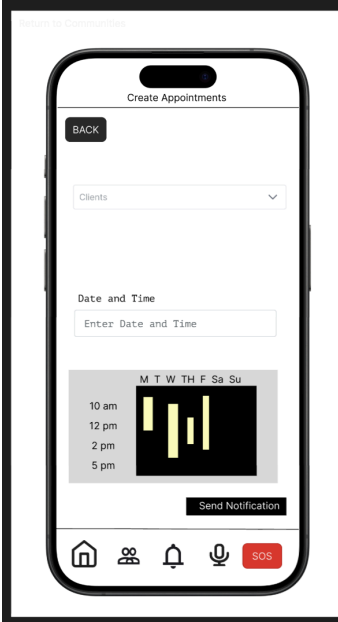
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Frame 92

