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ABSTRACT

In response to the escalating challenges of stress, anxiety, and mental health concerns in contemporary workplaces, this project introduces a cutting-edge mental health application. This initiative is centered around fostering a positive work environment by addressing employees' well-being. Key features include goal tracking, an Employee Assistance Program (EAP), mental health questionnaires, engaging activities, daily self-care prompts, and a comprehensive achievement tracking system. The application leverages a sophisticated tech stack comprising HTML5, CSS3, JavaScript, MaterialUI, React.js, and Redux for the front end, with Node.js powering the backend and MongoDB Atlas serving as the database solution. Version control is managed through Git. Furthermore, the application seamlessly integrates with third-party services such as Google Fit, Calendly, and Google Authentication offering a multifaceted approach to employee well-being that transcends traditional boundaries.

MARKET SURVEY REPORT

The mental health app market is witnessing significant growth due to increasing awareness about mental health issues and the rising demand for convenient and accessible solutions. This report provides an in-depth analysis of the current landscape of mental health apps, including market trends, key players, user demographics, and future projections

Present Apps Used:

In today's scenario of mental health services, the emergence of digital solutions, particularly mental health apps, has revolutionized the way individuals access support, guidance, and resources to manage their mental well-being. As demand for convenient and accessible mental health tools continues to surge, an array of competitors has entered the market, each vying to carve out its niche and offer innovative solutions to address the diverse needs of users. Many apps offer meditation, therapy, and other resources. Some of them are:

1. **Headspace:** This app provides a variety of meditation options for beginners and experienced users, and is equipped with a seven-day-free trial.
2. **Calm:** Offers meditation, sleep techniques and breathing exercises to reduce stress.
3. **Moodfit:** Helps the users to assess their feelings and recognize negative thinking, and offers mindfulness and cognitive behavioural techniques.
4. **Happify:** A free app that focuses on mood and anxiety relief.
5. **Talkspace:** An online therapy option with 24/7 access to a mental health professional.
6. **Sanvello:** An app that offers a meditation library, guided journeys, and cognitive behavioural therapy tools, that help in stress relief.

Negative Aspects of Existing Solutions:

Overwhelming Features: The large number of features offered by the website may overwhelm some users, especially those unfamiliar with mental health management tools. Simplifying the user interface and providing guided tutorials could mitigate this issue.

Privacy Concerns: Given the sensitive nature of mental health data, users may have concerns about data privacy and security. Ensuring data encryption and transparent privacy policies is essential to building trust among users.

Accessibility Challenges: While the website aims to provide accessible mental health support, barriers such as language preferences or technological limitations may hinder some users' ability to fully utilize its features. Providing multi-language support and ensuring compatibility across devices can address these challenges.

Cost Implications: Employers or organizations considering implementing the website may encounter cost considerations, especially for large-scale deployments. Providing flexible pricing options and improved productivity could make less severe these concerns.

Positive Aspects of Our Project:

Addressing a Growing Need: The website addresses a pressing need in today's fast-paced workplace environment. With increasing levels of stress, burnout, and mental health challenges, there's a growing demand for tools and resources to support employees' mental well-being.

Comprehensive Features: The website offers a wide range of features aimed at improving mental health and overall well-being. From goal tracking to access to mental health professionals, it provides users with a holistic approach to managing their mental health.

Flexible Assistance: The website allows users to connect with mental health care providers based on their availability and schedule. This flexibility enhances accessibility to mental health support, which is crucial for individuals facing sudden emotional challenges or requiring urgent therapy.

Engagement and Personalization: The website includes engaging activities tailored to individual preferences, such as music, reading, or meditation. This personalization encourages users to take breaks and prioritize their mental health, ultimately reducing burnout and increasing productivity.

Promotion of Positive Habits: The website encourages users to establish positive habits through daily self-care reminders and goal tracking. By including healthy competition via leaderboards and providing educational resources, it promotes a culture of support and accountability for mental health in the workplace.

FEASIBILITY STUDY

1. Technical Feasibility :

- Strengths:

- The chosen technology stack (HTML5, CSS3, JavaScript, MaterialUI, React.js, Redux, Node.js, MongoDB Atlas, Git) is widely adopted and well-supported by developer communities.
- Integration with existing services like Google Fit, Calendly, and Google Authentication simplifies development and enhances user experience.

- Weakness:

- Building a robust and secure application requires a team with expertise in mobile app development, backend development, API integration, and data security.
- Maintaining and updating the application necessitates ongoing development resources.

- Considerations:

- Develop a Minimum Viable Product (MVP) with core features like goal tracking, self-care prompts, and mental health questionnaires to test user demand and gather feedback before full-scale development.
- Utilize cloud-based solutions like MongoDB Atlas for scalability and cost-efficiency.
- Implement robust security measures to protect user data, complying with relevant data privacy regulations.

2. Financial Feasibility :

- Costs:

- Development costs:

Internal development team salaries and benefits.

Freelance developer or agency fees if outsourcing development.

- Operational costs:

Cloud hosting fees for backend and database.

API integration fees (if applicable).

Maintenance and update costs.

Marketing and user acquisition costs.

- Revenue:

- Subscription model:

Organizations pay a monthly or annual fee per user.

- Freemium model:

Offer a basic version with limited features and a premium version with advanced features (goal tracking, analytics) for a fee.

Partnerships with Employee Assistance Programs (EAPs) to integrate services within the app (revenue sharing model).

- Considerations:

- Conduct market research to determine target pricing for subscriptions based on competitor analysis and user willingness to pay.
- Project the number of potential customers and user base growth to estimate revenue potential.
- Develop a financial model with projected costs and revenue streams to assess profitability and break-even point.

Conclusion:

Developing a mental health application for workplaces appears technically feasible with a skilled development team and the chosen technology stack. Financial viability depends on securing funding for development, operational costs, and user acquisition. A well-defined pricing strategy and successful marketing efforts are crucial for generating revenue and achieving profitability.

REQUIREMENT GATHERING

Requirement gathering, also referred to as requirements elicitation, is a crucial initial phase of any project, especially in software development. It's the process of uncovering and documenting the exact needs of a project from various stakeholders' perspectives. Here's a breakdown of what requirement gathering entails:

1. Functional Requirements:

User Management – User registration and login with secure authentication (e.g., email, Google Authentication). User profile management (name, organization, preferences)

Mental Health Resources - Self-assessment questionnaires for anxiety, stress, and depression. Access to educational materials on mental health topics. Guided meditations and mindfulness exercises.

Goal Setting and Tracking - Ability to set personal and professional goals related to well-being. Progress tracking features with visualizations (charts, graphs). Goal reminders and motivational prompts.

Self Care Activities - Library of self-care activities categorized by focus (mindfulness, relaxation, physical activity). Daily or scheduled prompts for self-care activities. Integration with third-party wellness apps (e.g., Google Fit) to track activity data.

Professional Therapy Booking - Secure access to EAP resources and contact information. Appointment scheduling functionality.

Data and Analytics - Track user progress and engagement with features. Generate personalized insights and recommendations.

Relaxation Features - Curated library of relaxation videos (nature scenes, calming visuals) with customizable playback options (duration, background music). Integration with music streaming services to create personalized relaxation playlists. Recommendation system for relaxation techniques (guided imagery, deep breathing exercises) based on user preferences and self-assessment results. E-reader functionality with access to a curated collection of self-help books and articles on stress management, mindfulness, and relaxation techniques (consider partnerships with publishers or eBook platforms).

Daily Activity Tracking - Integration with wearable devices (e.g., fitness trackers) to automatically track exercise data (steps, activity duration, calories burned). Manual workout logging functionality for activities not tracked by wearables. Water intake tracking with daily reminders and progress visualization.

Meditation timer with guided audio tracks for different meditation styles (mindfulness, focused attention). Integration with meditation apps to offer a wider range of guided meditations.

2. Non-Functional Requirements:

Performance - The application should be responsive and load quickly on various mobile devices. Data synchronization between devices should be seamless.

Security - Implement robust security measures to protect user data (e.g., encryption, access controls). Comply with relevant data privacy regulations (e.g., GDPR, HIPAA).

Usability - The user interface (UI) should be intuitive, user-friendly, and visually appealing. The application should be accessible to users with disabilities.

Scalability - The application should be able to accommodate a growing user base without performance degradation.

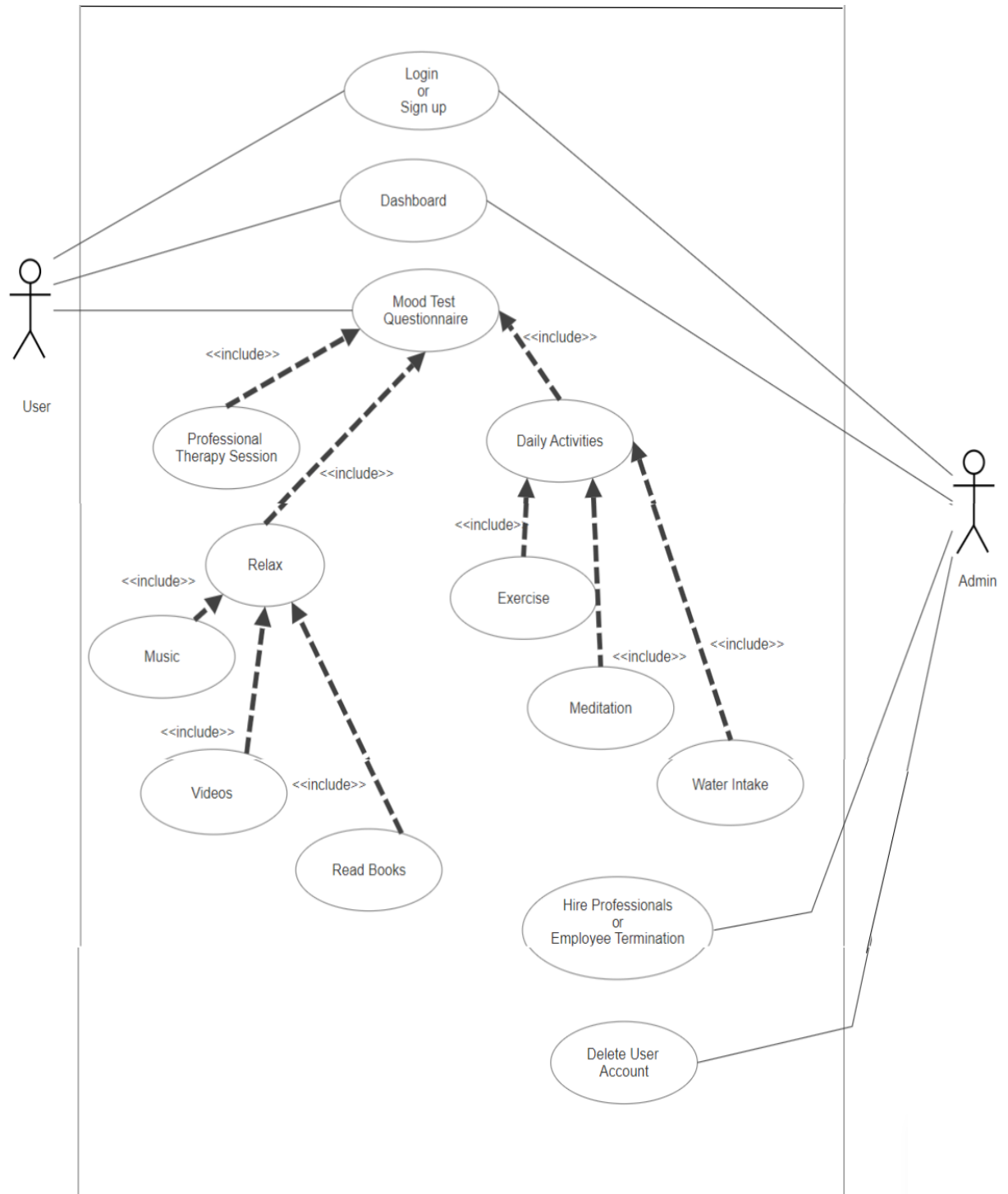
Maintainability - The code base should be well-documented and easy to maintain for future updates and improvements.

Content Management System (CMS) - Implement a CMS to allow administrators to easily update the relaxation video library, recommended reading lists, and other content.

Push Notifications - Utilize push notifications for reminders, goal updates, and motivational messages (with user consent).

Personalization - Personalize the user experience by recommending relaxation techniques, self-help resources, and daily activities based on user preferences, self-assessment results, and progress data.

USE CASE DIAGRAM :



USE CASE DESCRIPTION :

1. User Interaction :

ID: WEL_UC_1	
Title:	User Login or Sign Up
Description:	This use case focuses on the user's interaction to log in or sign up for the Wellness Application.
Created By:	Tapojita Kar
Primary Actor:	User
Preconditions:	The user is accessing the application.
Postconditions:	The user is successfully logged in or signed up.
Main flow:	<ul style="list-style-type: none">• The user launches the Wellness Application.• The system presents the login or sign-up page.• If User Chooses to Log In:<ul style="list-style-type: none">○ User enters valid credentials (username and password).○ The system validates the credentials.○ Upon successful validation, the user is directed to the dashboard.○ End of use case.• If User Chooses to Sign Up:<ul style="list-style-type: none">○ User provides necessary information (name, email, password, etc.).○ The system validates the information.○ Upon successful validation, a new account is created, and the user is directed to the dashboard.○ End of use case.
Alternative flows:	<ul style="list-style-type: none">• Invalid Login Credentials:<ul style="list-style-type: none">○ If the credentials provided during login are invalid, the system displays an error message, and the user is prompted to re-enter the information.• Failed Signup:<ul style="list-style-type: none">○ If there are errors during the signup process, such as incomplete information, the system provides appropriate error messages, and the user corrects the information.• Accessing Specific Sections:<ul style="list-style-type: none">○ Users can choose to access specific sections directly from the dashboard, leading to the corresponding pages.
Frequency of Use:	The frequency of use for the "Login or Sign up" and "Dashboard" pages is expected to be high, as users will access these pages regularly to log in, sign up, and navigate to various sections of the application.
Status:	The development status for these pages is in progress.

2. Dashboard

ID: WEL_UC_2	
Title:	Dashboard Interaction
Description:	This use case outlines the user's interaction with the dashboard.
Created By:	Tapojita Kar
Primary Actor:	User
Preconditions:	The user is successfully logged in.
Postconditions:	The user explores available activities or chooses to log out.
Main flow:	<ul style="list-style-type: none">• The user is presented with the main dashboard interface.• The user can see available activities categorized as:<ul style="list-style-type: none">○ Mood Test Questionnaire○ Professional Therapy Session○ Relaxation:<ul style="list-style-type: none">▪ Music▪ Videos▪ Read Books○ Daily Activities:<ul style="list-style-type: none">▪ Exercise▪ Meditation▪ Water Intake○ Chatbot• The user selects an activity of interest.• The system navigates the user to the chosen activity page.
Alternative flows:	<ul style="list-style-type: none">• <i>Log Out:</i><ul style="list-style-type: none">○ The user can choose to log out from the dashboard, returning to the login or sign-up page.• <i>Return to Dashboard:</i><ul style="list-style-type: none">○ At any point during an activity, the user can choose to return to the dashboard.
Frequency of Use:	The "Dashboard" page is designed to be a central hub for users, allowing them to navigate to various sections of the application. Users are expected to access the dashboard frequently to explore different features and functionalities. The frequency is considered moderate to high.
Status:	The "Dashboard" page is currently in the deployment phase. The core functionality has been implemented, and user interface elements are being refined based on feedback. The page will be deployed once these refinements are complete.

3. Relaxation : Videos, Music , Books

ID: WEL_UC_3	
Title:	Relaxation Activities
Description:	This use case details the user's interaction with relaxation activities such as listening to music, watching videos, and reading books.
Created By:	Tapojita Kar and Basabdutta Konar
Primary Actor:	User
Preconditions:	The user is on the Relaxation section of the dashboard.
Postconditions:	The user completes the relaxation activity.
Main flow:	<ul style="list-style-type: none"> The user selects the "Relaxation" category from the dashboard. The system displays sub-categories: Music, Videos, Read Books. If User Chooses Music: <ol style="list-style-type: none"> User indicates their current mood. The system determines mood-specific music recommendations. The system redirects the user to an external music platform (e.g., Spotify). The external music platform displays curated playlists based on the user's mood. The use case ends. If User Chooses Videos: <ol style="list-style-type: none"> User specifies their video preferences. The system determines video recommendations. The system redirects the user to an external video platform. The external video platform displays a selection of videos based on the user's preferences. The use case ends. If User Chooses Read Books: <ol style="list-style-type: none"> User specifies their book preferences. The system determines book recommendations. The system redirects the user to Wattpad. Wattpad displays a selection of books based on the user's preferences. The use case ends.
Alternative flows:	<ul style="list-style-type: none"> <i>Exit Activity:</i> <ul style="list-style-type: none"> At any point during a relaxation activity, the user can choose to exit and return to the Relaxation category. <i>Return to Dashboard:</i> <ul style="list-style-type: none"> The user can choose to return to the dashboard from any relaxation activity.
Frequency of Use:	The "Relaxation" page is likely to be used periodically, depending on the user. The frequency is expected to be moderate.
Status:	The "Mood Test Questionnaire" page is currently in the deployment phase.

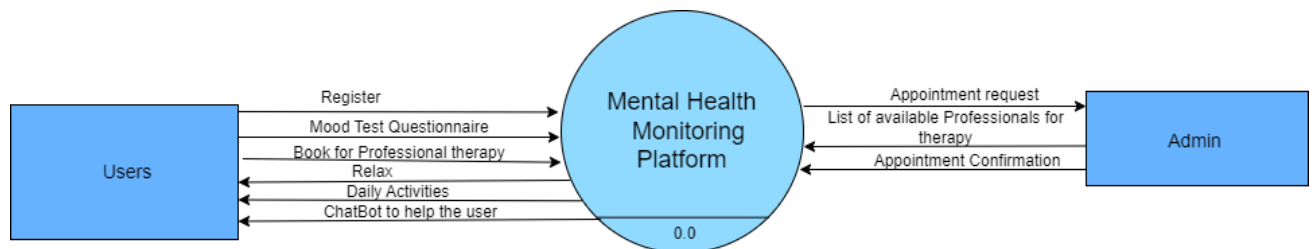
4. Daily Activities : Exercise, Meditation , Water Intake

ID: WEL_UC_4	
Title:	Daily Activities
Description:	This use case outlines the user's engagement with daily activities, including exercise, meditation, and water intake.
Created By:	Basabdutta Konar and Tanistha Panda
Primary Actor:	User
Preconditions:	The user is on the Daily Activities section of the dashboard.
Postconditions:	The user completes the chosen daily activity.
Main flow:	<p>1. The user selects the "Daily Activities" category from the dashboard.</p> <p>2. The system displays sub-categories: Exercise, Meditation, Water Intake.</p> <p>3. If User Chooses Exercise:</p> <ul style="list-style-type: none"> -The user can able to see if the weekly target of exercise is reached or not . <p>If user wants to start exercise:</p> <ul style="list-style-type: none"> - The user selects the start button of the exercise timer. - The user performs the exercise. - The user can mark the activity as complete. -The system ends the timer for that exercise. - The user can return to the dashboard or log out. - End of use case. <p>4. If User Chooses Meditation:</p> <ul style="list-style-type: none"> -The user can able to see if the weekly target of meditation is reached or not. <p>If user wants to start meditation:</p> <ul style="list-style-type: none"> - The user selects the start button of the meditation session. - The user completes the meditation. - The user can mark the activity as complete. -The system ends the timer for that exercise. - The user can return to the dashboard or log out. - End of use case. <p>5. If User Chooses Water Intake:</p> <ul style="list-style-type: none"> -The user can able to see if the weekly target of water intake is reached or not. <p>If user wants toad water intake:</p> <ul style="list-style-type: none"> - The user sets a water intake . - The system provides reminders throughout the day. - The user logs water consumption. - The user can mark the activity as complete. - The user can return to the dashboard or log out. - End of use case.
Alternative flows:	<p>1. Exit Activity:- At any point during a daily activity, the user can choose to exit and return to the Daily Activities category</p> <p>2. Return to Dashboard: - The user can choose to return to the dashboard from any daily activity.</p>

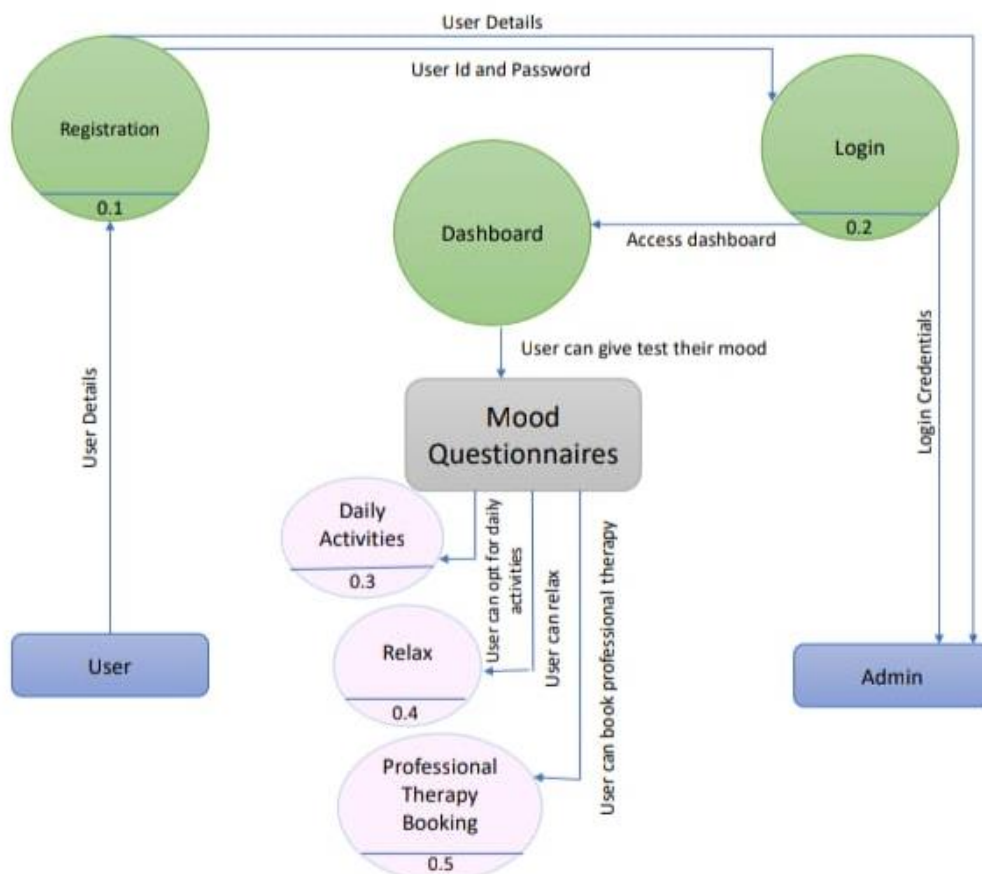
5. Admin Functionalities

ID: WEL_UC_5	
Title:	Admin Tasks
Description:	This use case focuses on the administrative functionalities available to the admin.
Created By:	Basabdutta Konar and Tanistha Panda
Primary Actor:	User
Preconditions:	The admin is successfully logged in.
Postconditions:	The admin completes the chosen administrative task.
Main flow:	<ol style="list-style-type: none">1. The admin selects the "Admin" section from the dashboard.2. The system displays administrative options:<ul style="list-style-type: none">- Hire Professionals or Employee Termination- Delete User Account3. If Admin Chooses to Hire Professionals or Employee Termination:<ul style="list-style-type: none">- The admin selects the desired option.- The system prompts for necessary information.- The admin submits the information to execute the task.- End of use case.4. If Admin Chooses to Delete User Account:<ul style="list-style-type: none">- The admin selects the "Delete User Account" option.- The system prompts for the user account to be deleted.- The admin confirms the deletion.- End of use case.
Alternative Flows	<ol style="list-style-type: none">1. Cancel Task:<ul style="list-style-type: none">- At any point during an administrative task, the admin can choose to cancel and return to the admin section.2. Return to Dashboard:<ul style="list-style-type: none">- The admin can choose to return to the dashboard from any administrative task.

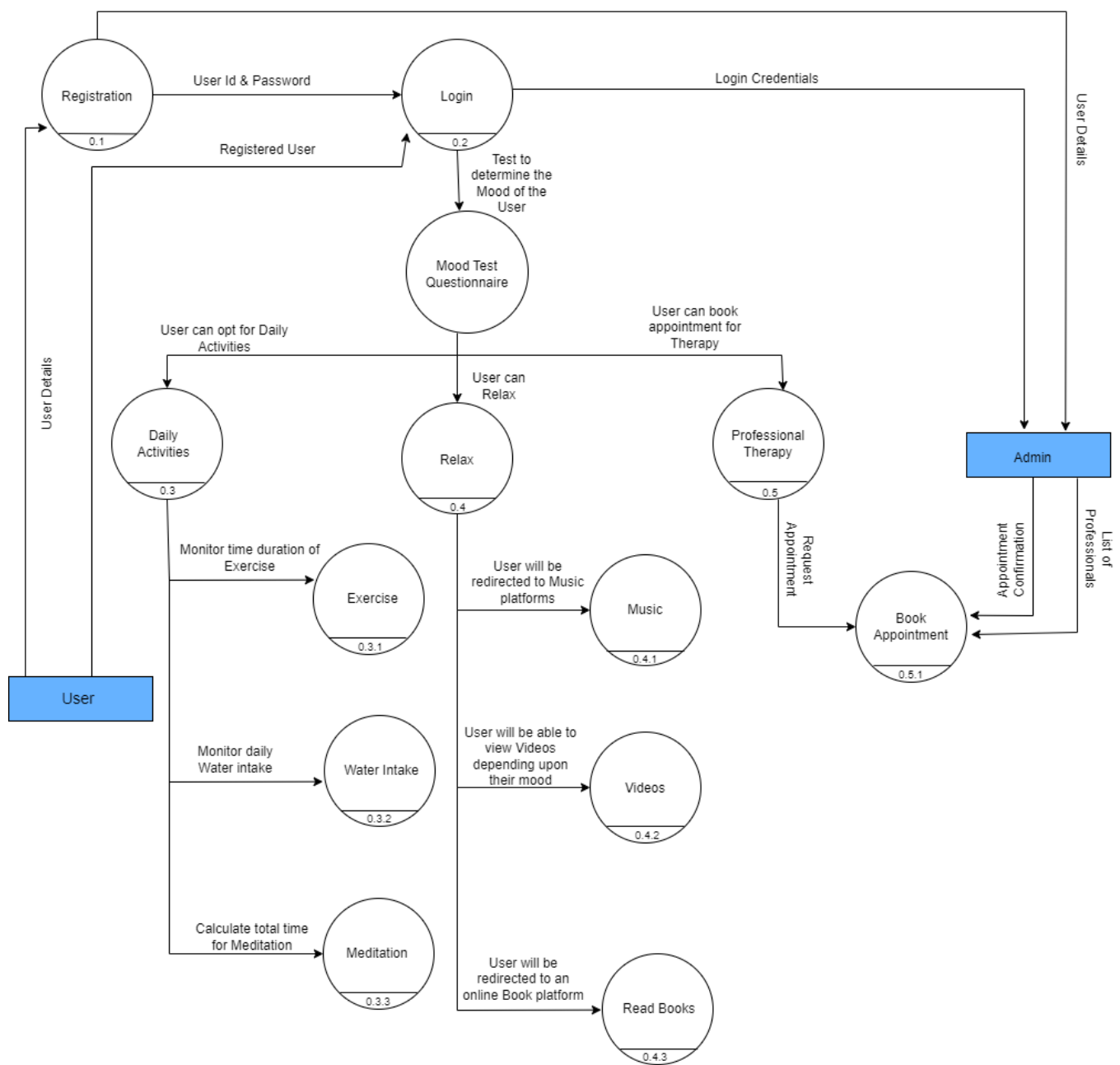
DATA FLOW DIAGRAM :



Level 0

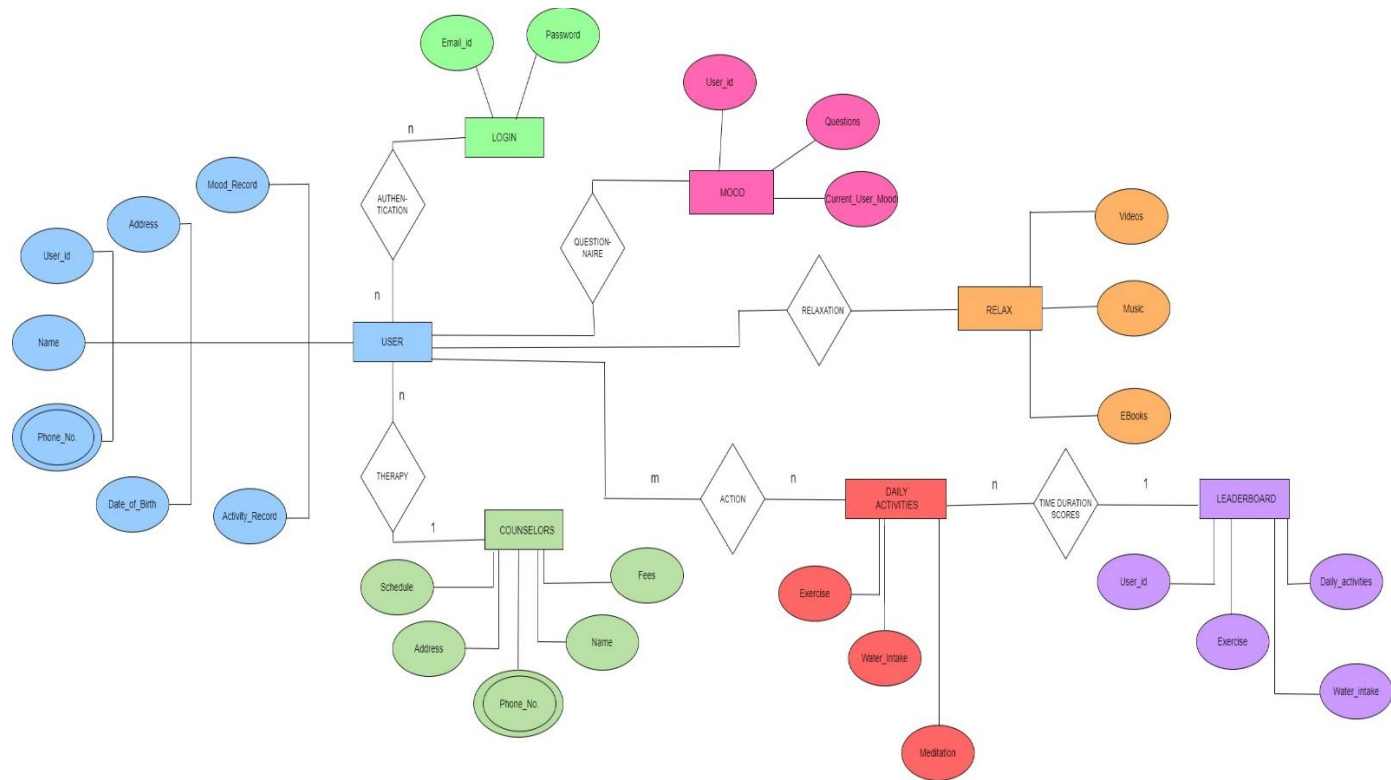


Level 1

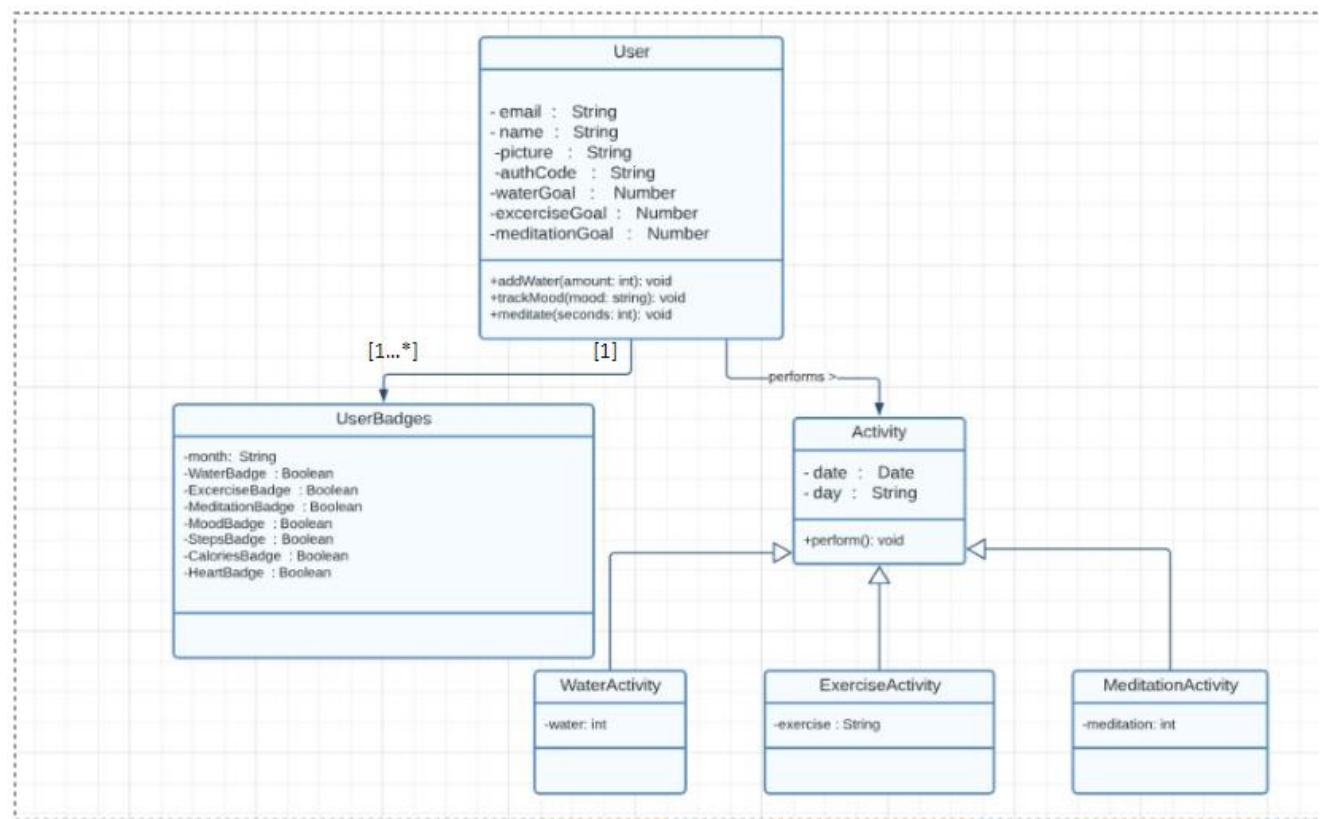


Level 2

E – R DIAGRAM :



CLASS DIAGRAM :



CONCLUSION :

In response to the growing concern around mental health in today's workplaces, this project has proposed a cutting-edge mobile application designed to foster a positive work environment by prioritizing employee well-being. The application offers a comprehensive suite of features to address stress, anxiety, and other mental health concerns, empowering users to cultivate healthy habits and achieve a better work-life balance.

Key functionalities include goal setting and tracking, self-assessment questionnaires, a library of relaxation techniques (videos, music, guided meditations), and daily activity tracking features like exercise, water intake, and meditation timers. The application leverages secure technology and integrates seamlessly with third-party services like Google Fit and Calendly.

The feasibility study conducted within this project indicates that developing this application is technically achievable with a skilled development team and the chosen technology stack. Financial viability depends on securing funding for development, operational costs, and user acquisition. However, with a well-defined pricing strategy and a successful marketing approach, the application has the potential to generate revenue and achieve long-term sustainability.

By prioritizing employee mental health, this application can contribute to a more productive, engaged, and positive work environment for organizations of all sizes. Further research and user testing are recommended to refine the application's functionalities and ensure it effectively meets the needs of its target audience.