Mental Health Assistant App - Requirements Documentation

Functional Requirements – Mental Health Assistant App

1. User Management

1.1 The system must allow secure registration and login via email, social media, or biometrics.

1.2 The system must ensure password recovery and protection of personal data.

1.3 The user must be able to configure their profile (name, age, preferences, privacy).

---

2. Emotional and Habit Tracking

2.1 The user must be able to record their **daily mood**, with the option to use colors, emojis, or scales.

2.2 The calendar must display the mood with a **color code per day** (e.g., green = calm, red = crisis).

2.3 The system must allow the **recording of basic habits** such as sleep, nutrition, exercise, and stress level.

2.4 The user must be able to view evolution graphs (weekly, monthly, yearly) to identify patterns.

---

3. Personal Journal

3.1 The user must have a **private journal** space for gratitude notes, reflections, or venting.

3.2 The journal must allow attaching text, images, or simple audio files.

3.3 The system must offer journal locking with a password or biometrics.

---

4. Reminders and Notifications

4.1 The system must send **personalized notifications** configured by the user (motivational phrases, habits, routines).

4.2 The system must offer automatic reminders suggested by the app (e.g., "Record your mood").

4.3 The system must allow enabling/disabling reminders according to preference.

5. Recommended Actions

5.1 The system must suggest **practical actions** (breathing exercises, meditation, journaling, walking) based on user data.

5.2 Suggestions must adapt to detected patterns (e.g., recurrent stress → recommend guided meditation).

5.3 The user must be able to accept, postpone, or discard recommendations.

6. Statistics and Monitoring

6.1 The system must generate **progress reports** with graphs and summaries of moods and habits.

6.2 The user must be able to consult detailed statistics by time period.

6.3 The system must allow the export/summary of statistics to share with a professional.

7. Communication with Professionals

7.1 The user must be able to **contact a center or professional** only if they decide to.

7.2 The system must recommend verified professionals or centers, classified according to the user's profile.

7.3 Centers/professionals must be **certified and validated** within the platform.

7.4 Communication can be done via chat, call, or external appointment link (according to professional availability).

8. Configuration and Personalization

8.1 The system must allow **changing the visual theme** (dark mode, relaxing colors, basic customization).

8.2 The user must be able to manage their privacy: choose which data to share or keep private.

8.3 The system must offer quick access in case of crisis (e.g., emergency numbers).

Non-Functional Requirements – Mental Health Assistant App

1. Security and Privacy (Maximum Priority)

1.1 All sensitive data (journal, emotions, habits, clinical history) must be **encrypted (protected)**.

1.2 The system must implement **secure authentication** (strong password, PIN, etc.).

1.3 The user must be able to configure the **privacy of their data**, choosing what to share or not with professionals.

1.4 The app must comply with data protection regulations.

---

2. Usability

2.1 The interface must be **intuitive and minimalist**, reducing the user's cognitive load.

2.2 The app must use **soft colors and customizable themes** (dark mode, relaxing themes).

2.3 The main flows (register mood, write journal) must require a **maximum of 3 steps**.

2.4 Accessibility must be guaranteed: legible texts, support for users with low vision, compatibility with screen readers.

---

3. Availability and Reliability

3.1 The application must be available **24/7**.

3.2 Records and journals must be **automatically saved in the background** (e.g., if the app closes suddenly, the note is not lost).

---

4. Multiplatform Compatibility (Future)

4.1 The app must be **compatible with Android and iOS** in the first stable version.

4.2 The app must be **responsive and scalable**, considering future progressive web support.

4.3 Versions must be consistent in design and basic functionalities.

5. Performance

5.1 The response time for critical operations (register emotions, save journal notes, load graphs) must be ¡ 2 **seconds**.

5.2 The system must be optimized to work even with **slow internet connections**.

5.3 Battery and mobile data consumption must be minimal (optimization of background processes).

---

6. Scalability and Maintenance (Strategic NFR)

6.1 The system must allow adding new functionalities (e.g., more types of reports or activities) without rebuilding the entire app.

6.2 The backend must be scalable to support **growth in the number of users** without affecting performance.

6.3 The system must allow regular updates without loss of user data.

---

7. Ethics

7.1 The app must be transparent about what data it collects and how it uses it.

7.2 It must never issue **automatic clinical diagnoses**; only suggestions of habits and general support.

7.3 In critical situations (e.g., recording self-harm thoughts), it must suggest immediate help: **emergency lines and available professionals**.

Priorities

- **Priority (MVP must-have):** Security and Privacy, Usability, Availability, Basic Performance.
- **Medium term:** Multiplatform Compatibility, Scalability.
- **Differentiators:** Ethics and trust (fundamental for the product's credibility).

User Stories:

Title	User Story	Acceptance Criteria
Enable user registration via mobile APP	As a new user, I want to register an account so that I can manage my progress in a personalized way	• The system must allow secure registration and login via email, social media, or biometrics. • Users must be able to configure their profile (name, age, preferences, privacy).
Receive reminders and notifications	As a registered user, I want to receive notifications and reminders about my daily tasks so that I can have a good process	• The system should allow reminders to be enabled/disabled according to preference. • The system must offer automatic reminders suggested by the app.
Personal journal	As a user, I want to have a private diary space so that I can reflect and unburden myself	• The diary must allow simple text, images, or audio files to be attached. • The system must offer diary locking with password or biometrics.
Control of emotions and habits	As a user, I want to register my daily mood, with the option to use colors, emojis, or scales. So that I can view graphs showing trends over a defined period of time	• The system must allow for the recording of basic habits. • The calendar should display moods using a color code for each day.

Mockups:

MAIN SCREEN

Sign in: The user is already registered.
Create account: The user needs to be registered.

WELCOME TO TEND

- Sign in
- Create account
- Show
- Email
- Password
- Password
- Name
- Create account

REGISTRATION SCREEN

Basic information about the user, like name, email and the password.

TEND

- Insert
- Password
- Sign in

SIGN IN SCREEN

The user can log in to their account of TEND.

MAIN SCREEN OF THE USER

MENU: settings, log out and edit profile
Hello Juliana
SEPTEMBER
1 2 3 4 5 6
7 8 9 10 11 12
13 14 15 16 17 18
19 20 21 22 23 24

2025
Calendar: Each day the user can register about their day.
Indicator: exist four colors to indicate the level of the day.

SCREEN OF EACH DAY

Daily: The user can write anything about the day.
September
How did it go today?
Today I had a calculus exam / _____

Emotions Food Sleep
There are three types of daily registers for the analysis.

REGISTER OF EMOTIONS SCREEN

September
how are you feeling?

Happy Free Angry Worried
Sad Hopeful Worried
Calm Relaxed Lonely “One day at a time, everything will be fine”
Grateful Careful Tired

The user can select any emotions about how you are feeling.
The app will give you a phrase about the emotion.

REGISTER OF SLEEP SCREEN

The user can select how many hours do you sleep.
This is important for the analysis.

September
How many hours did you sleep?

Less than an hour.
1 - 3 hours
4 - 7 hours
8 hours
more than eight hours

REGISTER OF FOOD SCREEN

September
Did you eat well?

I had breakfast
I had lunch
I had dinner
It didn't eat today

sounds

drink water

I had breakfast
I had lunch
I had dinner

save

The user can select what kind of food have you eaten in the day.
Save all information.

ANALYSIS SCREEN

With the above information, the app analyzes the day of user.

Analysis

You had a good day but _____

2

Day

Excellent
Good
Regular
Bad

Recommendations

Edit

save

CRC Cards

1. Class: User

- **Responsibilities:**
  - Authenticate and register.
  - Configure profile (age, name, preferences, privacy).
  - Manage privacy options.
- **Collaborators:**
  - EmotionManager (to register their mood).
  - PersonalJournal (to vent).
  - StatisticsManager (to view evolution).
  - AppConfiguration (to customize the experience).

2. Class: EmotionManager

- **Responsibilities:**
  - Register daily mood (text, emojis, colors).
  - Register habits (sleep, nutrition, exercise, stress).
  - Display calendar with mood encoded by colors.
- **Collaborators:**
  - User (who enters the data).
  - StatisticsManager (to generate reports and graphs).
  - RecommendationEngine (to suggest actions based on patterns).

3. Class: PersonalJournal

- **Responsibilities:**
  - Create and save text, image, or audio entries.
  - Protect the journal with password or biometrics.
  - Allow quick access in crisis situations.
- **Collaborators:**
  - User (author of the entries).
  - AppConfiguration (to apply visual themes and privacy).

4. Class: ReminderManager

- **Responsibilities:**
  - Configure personalized notifications (habits, motivational phrases).
  - Send automatic reminders suggested by the app.
  - Activate/deactivate notifications according to preference.
- **Collaborators:**
  - User (who configures the reminders).
  - RecommendationEngine (to generate intelligent reminders).

5. Class: RecommendationEngine

- **Responsibilities:**
  - Analyze user data (emotions, habits).
  - Suggest activities (breathing exercises, meditation, journaling).
  - Adapt recommendations to detected patterns.
- **Collaborators:**
  - EmotionManager (data source).
  - StatisticsManager (for more complex patterns).
  - ReminderManager (to send the recommendations).

6. Class: StatisticsManager

- **Responsibilities:**
  - Generate progress reports (graphs, summaries).
  - Export or share statistics with a professional.
  - Allow detailed queries by time periods.
- **Collaborators:**
  - EmotionManager (source of states and habits).
  - User (consults reports).
  - ProfessionalCommunication (to send reports).

7. Class: ProfessionalCommunication

- **Responsibilities:**
  - Allow contact with professionals or centers (chat, call, external appointment).
  - Recommend verified professionals according to the user's profile.
  - Validate credentials of centers and professionals.
- **Collaborators:**
  - User (decides whether to contact).
  - StatisticsManager (sending reports).
  - AppConfiguration (management of shared data privacy).

8. Class: AppConfiguration

- **Responsibilities:**
  - Allow changing visual themes (dark mode, relaxing colors).
  - Manage quick access in case of crisis (emergency numbers).
  - Control privacy and user preferences.
- **Collaborators:**
  - User (customizes the app).
  - PersonalJournal (locking and privacy).
  - ProfessionalCommunication (define what data is shared).