MoodLog: Mood Tracking and Journaling App

Introduction

Mental well-being and emotional health have become increasingly important in our fast-paced lives. Regularly tracking one's mood and maintaining a journal can be instrumental in recognizing behavioral patterns, improving mental health, and promoting emotional intelligence. MoodLog is a mobile application developed using Flutter and powered by Firebase Firestore and Authentication that enables users to:

- Log their daily moods,
- Write journal entries,
- Track mood trends via weekly summaries,
- Manage their day-to-day tasks through a to-do list.

By combining emotional tracking and productivity tools, MoodLog offers an efficient way for users to reflect, plan, and grow.

Objectives

The main objectives of the MoodLog app are:
1. Provide an intuitive interface for users to log their moods and journal entries.
2. Allow secure access through Firebase Authentication.
3. Store and retrieve user data in real-time using Firebase Firestore.
4. Help users plan tasks via a built-in to-do list.
5. Encourage self-reflection and mental wellness through journaling and trend tracking.

App Features

1. Mood Logging: Select from different mood options (happy, sad, stressed, etc.) with optional tags or notes.
2. Journal Entry: Create and save daily reflections.
3. To-Do List: Add, check off, or delete tasks for better daily organization.
4. Secure Authentication: Each user's data is private and securely stored via Firebase Auth.
5. Cloud Storage: All entries are synced in real time and accessible across devices.

Workflow

The user's experience with MoodLog begins at the Landing Page, leading them to the Authentication Screen where they can securely register or log in via Firebase Authentication. Upon successful authentication, users are taken to the Home Screen, which acts as the central dashboard of the app.

From the Home Screen, users can easily navigate to different modules:

- The Journal Page allows users to write, edit, and manage personal journal entries to reflect on their thoughts and experiences.
- The Mood Logging Page enables users to record their current mood by selecting from predefined options and adding optional notes.
- The Weekly Summary Page helps users analyze mood trends ove
- The To-Do List Page offers a space to create and manage daily tasks, with options to add, complete, or remove items for better productivity.

Navigation throughout the app is streamlined using Flutter's BottomNavigationBar, ensuring users can switch between pages effortlessly. Route transitions are managed using Navigator.push() and Navigator.pop() for smooth and responsive navigation.

Mood entries, journal logs, and task data are stored in Firebase Firestore, enabling real-time synchronization across devices.

Technologies Used

- Flutter: UI toolkit for building natively compiled applications for mobile from a single codebase.
- Firebase Firestore: A scalable cloud-hosted NoSQL database.
- Firebase Authentication: To handle secure user login and sign-up.

ER Diagram
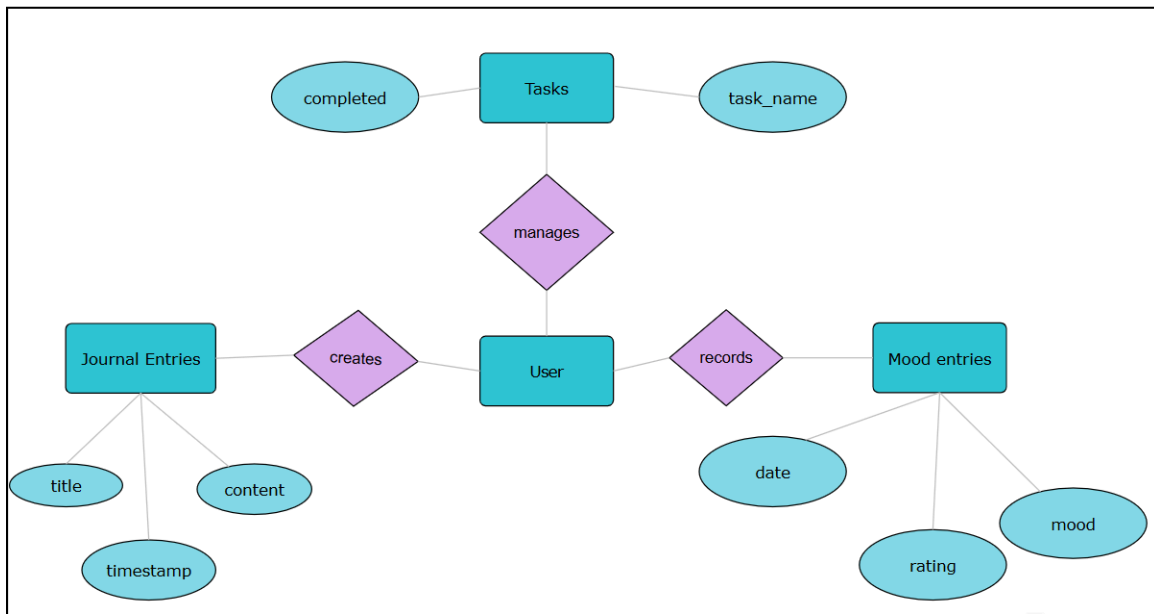
The Entity-Relationship (ER) model is a conceptual data model that graphically represents the structure of a database. In this Flutter application with Firestore backend, the ER diagram illustrates:

- **Entities**: The real-world objects (User, Journal Entries, Mood entries, Tasks) represented as data.
- **Attributes**: The properties that describe each entity (e.g., title, content, timestamp for Journal Entries).
- **Relationships**: The logical connections between entities (creates, records, manages).

Results

What would you like to do?

✏️ Log your Mood

📖 Write Journal

≣ To Do List

Did you know?
Journaling daily can improve your wellbeing by 23%

← Journal Entries

Create New Entry

hello
2025-04-07 21:14:18.535 🗑️

hello
2025-04-07 21:11:34.222 🗑️

hello
2025-04-07 21:07:55.362 🗑️

Create an Account

Full Name

Email

Password

Sign Up

Already have an account? Login

Welcome Back!

Email

Password

Login

Don't have an account? Sign Up

Future scope and enhancements

As MoodLog continues to grow, there are several promising directions for future development and feature expansion:

1. AI-Based Mood Prediction
   Integrating machine learning models to analyze past mood entries, journal content, and activity patterns can enable automatic mood prediction, offering proactive suggestions to improve mental well-being.

2. Sentiment Analysis on Journal Entries
   Using natural language processing (NLP), MoodLog can analyze journal entries to assess emotional sentiment and detect stress, anxiety, or positive emotions, enriching the mood tracking process.

3. Dark Mode and UI Customization
   Adding support for dark mode and customizable themes to improve usability and accessibility, especially for night-time journaling.

4. Notifications and Reminders
   Smart reminders to log moods, complete to-dos, or write in the journal can improve consistency and user engagement.

5. Data Export and Sharing
   Allow users to export their journal and mood data in PDF/CSV format for personal records or sharing with mental health professionals.

Conclusion

MoodLog serves as a personal mental wellness assistant, offering a simple yet powerful way for users to stay connected with their emotions and daily responsibilities. By combining journaling, mood tracking, and task management in one app, it promotes mindfulness, productivity, and emotional awareness. Its practical applications span personal mental health tracking, therapeutic support, daily planning, and educational demonstration of real-time, cross-platform app development. With the integration of Firebase services, MoodLog ensures a seamless, secure, and scalable experience for every user.