Placement and Training (PAT)
Project Work

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Project Title :

Mental health tracker
(using flutter and firebase)

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Problem Statement

Design and develop a mobile application using Flutter and Firebase that serves as a comprehensive mental health tracker. The application should provide users with a platform to monitor and manage their mental well-being effectively.The mental health tracker will aim to create a supportive and user-friendly environment for individuals to track, understand, and improve their mental well-being. The ultimate goal is to empower users to take proactive steps towards their mental health while promoting self-awareness and offering valuable insights into their emotional journey.

Existing System

Base Paper : A Question Answering and Quiz Generation Chatbot for Education
DOI : 10.1109/GHCI47972.2019.9071832

A Question Answering and Quiz Generation Chatbot that allows a user to upload relevant documents and perform two main functions on them, namely answer extraction and question generation.

The uploaded document is converted into a knowledge base through a number of data cleaning and preprocessing steps.

The Question Answering module uses ranking functions and neural networks to extract the most appropriate answer from the knowledge base and the Quiz Generation module identifies key sentences and generates question-answer pairs, which can be used to generate a quiz for the user.

Proposed System

The proposed mental health tracker aims to provide a comprehensive and user-friendly platform for individuals to monitor and improve their mental well-being. It will be built using Flutter for the frontend development and Firebase for the backend infrastructure. Here are the key components and features of the proposed system:

1. **User Authentication:**
   - **Users will be able to create an account and log in securely using email and password authentication or other authentication methods provided by Firebase, such as Google Sign-In or Facebook Login.**

2. **Mood Tracking:**
   - **The application will allow users to track their moods on a regular basis.**
   - **Users can record their mood using predefined categories (e.g., happy, sad, anxious) or custom entries.**
   - **The recorded mood entries will be stored in the Firebase database, associated with the user's account.**

3. **Journaling:**

- Users will have the option to maintain a personal journal within the application.
- They can write and save their thoughts, experiences, and emotions.
- The journal entries will be securely stored in the Firebase database, allowing users to access and update them across multiple devices.

4. **Goal Setting and Tracking:**

- The mental health tracker will enable users to set goals related to their mental well-being.
- Users can define specific objectives such as practicing mindfulness, engaging in regular exercise, or maintaining a sleep routine.
- The application will provide reminders, progress tracking, and visual representations of goal achievements to keep users motivated.

5. **Resources and Support:**

- **The system will offer a curated collection of mental health resources, including articles, tips, coping techniques, and relaxation exercises.**
- **Users can access these resources within the application to gain insights, learn strategies, and find support for managing their mental health effectively.**

6. **Analytics and Insights:**

- **The mental health tracker will utilize Firebase Analytics to gather user data and generate valuable insights.**
- **Analytical data will help identify usage patterns, popular features, and user engagement, enabling continuous improvements to the application.**

7. **Cloud Storage:**

- **Firebase Cloud Storage will be utilized to securely store and manage user-generated media files, such as images or audio recordings associated with journal entries or goal achievements.**

Objective

1. **Promote Mental Well-being: The primary objective of the mental health tracker is to promote and support mental well-being for users. The application should provide tools and resources that help individuals track, understand, and improve their mental health.**
2. **Mood Tracking: Enable users to track and monitor their moods on a regular basis. This objective involves providing an intuitive interface for users to record their moods, store the data securely, and visualize their mood patterns over time.**
3. **Journaling and Reflection: Facilitate journaling and reflection for users to express their thoughts, emotions, and experiences. The objective is to provide a private space within the application where users can write and save journal entries, fostering self-awareness and emotional expression.**
4. **Goal Setting and Progress Tracking: Allow users to set mental health goals and track their progress towards achieving them**

Two-Week Plan for Implementation

Week 1:

Project Setup and Firebase Configuration

- **Set up a new Flutter project with necessary dependencies.**
- **Configure Firebase in the project by adding required packages and initializing Firebase services (Authentication, Firestore/Realtime Database).**

User Authentication

- **Design and implement user authentication screens (login, signup, forgot password) using Firebase Authentication.**
- **Integrate Firebase Authentication to handle user registration, login, and session management.**

Mood Tracking

- **Design and create the UI for mood tracking, including mood selection options and input forms.**
- **Implement logic to capture and store mood entries in Firebase Firestore/Realtime Database.**

Week 2:

Goal Setting and Tracking

- **Create screens for users to set and manage their mental health goals.**
- **Implement functionality to store and track user goals in Firebase Firestore/Realtime Database.**

Testing, Refinement, and Deployment

- **Conduct extensive testing, including unit tests and user acceptance tests.**
- **Refine the application based on user feedback and make necessary improvements.**
- **Prepare the application for deployment, ensuring it meets platform-specific requirements for both iOS and Android.**

Thank You!