Plant Care App Documentation

1. Team Info

Team Members:

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2. Sprints

1st Week: Firebase Setup and User Authentication

Tasks:

- Set up Firebase and integrate authentication (email/password, social login).
- Configure Firestore for user profiles and plant data storage.
- Test and debug authentication flows.

2nd Week: Onboarding, Plant Search, and Navigation

Tasks:

- Design onboarding screens to guide users through app features.
- Implement navigation between the home screen, plant search, and profile.
- Develop plant search by name functionality.
- Add functionality for users to add plants to their garden.

3rd Week: Home Screen, Plant Guides, and Profile Management

Tasks:

- Develop the home screen (personalized reminders, featured plants).
- Finalize plant care guides (watering, sunlight, pruning) with species details (type, growth rate, origin…etc).

- Implement profile management: edit profiles, add/remove plants, set care schedules.

4th Week: Notifications, Testing, and Finalization

Tasks:

- Implement notifications for plant care tasks (watering).
- Users can add plants to their personal garden by entering the plant's name and uploading an image.
- Perform full testing, bug fixes, and performance optimizations.
- Beta testing with early users and collect feedback.
- Finalize logout feature and wrap up.

3. Idea of the Project

Objective:

The primary objective of this project is to create a comprehensive, user-friendly mobile application that helps plant enthusiasts and gardeners identify, learn, and care for a wide range of plant species. The app will provide species care guides , also serve as a reminder system for plant care activities such as watering and details for different plant species . It also includes user authentication for personalized experiences and notifications.

Technologies:

- Flutter: Chosen for its robust cross-platform capabilities, allowing the app to be deployed on both iOS and Android.

- Firebase: Utilized for backend services, including secure user authentication, cloud data storage, and real-time data sync. Firebase will also support analytics and crash reporting for app stability.

-Local Notifications: API , local storage using hive Integrated for timely care reminders (watering) based on user schedules.

4. Features

1. Authentication

- Firebase Authentication will provide secure login and signup options.

- Users can register via email/password, with the possibility of adding social login options (e.g., Google).
- User authentication allows data to be stored securely in the cloud, making it accessible across multiple devices and ensuring that no plant care data is lost.

2. Onboarding

- The onboarding process will introduce users to the app's features, such as how to add plants, schedule care reminders, and view plant guides.
- The flow will include animations and user-friendly navigation to ensure users are engaged and have a positive first-time experience with the app.

3. Plant Search

- Users can search for any plant by name to quickly access information about the plant, including care instructions and detailed characteristics.

4. Plant Guide and Species Details

- A comprehensive database will provide in-depth care guides for different plant species, including watering schedules, ideal light conditions, pruning instructions.
- The species details will also include photos to help users visually identify plants, type, growth rate, origin, and other relevant attributes will be provided in the same section, allowing users to understand both the care and characteristics of the plant in one view.

5. Add Plant to Garden

- Users can add plants to their personal garden by entering the plant's name and uploading an image.
- AI will analyze the plant based on its name and automatically AI will provide a detailed care guide and all relevant information for that specific plant.

6. Notifications

- Local notifications will be a critical feature to remind users when it's time to water, fertilize, or repot their plants.
- Notifications can be set for multiple plants, ensuring that users don't miss important care activities, even for large plant collections

7. Profile Management

- Each user will have a personal profile where they can manage the plants in their collection.
- Users will be able to add or remove plants, set specific care schedules, and track their plant's health over time.

5. What is Next?

In addition to these features, the team plans to implement:

1. AR Plant Identification

- Augmented Reality (AR) technology will allow users to point their phone camera at a plant, and the app will identify the plant species using machine learning models.
- Once identified, the app will display the species' care guide and provide detailed information on how to care for the plant.
- This feature will be particularly useful for users who want to identify unknown plants in their home or while out shopping for new plants.

2. Community Features

- A community section will allow users to connect with other plant enthusiasts.
- Users can share their experiences, ask for advice, post pictures of their plants, and offer suggestions on plant care.
- Features like upvoting helpful posts or marking comments as solutions will help cultivate an interactive and supportive community for plant lovers.

3. Plant Care Calendar

- The plant care calendar will offer users a visual representation of upcoming care tasks.
- Users will be able to track watering schedules, fertilizing days, pruning needs, and other plant care activities in a clear calendar view.
- The calendar feature will also include historical data, allowing users to review how well they've been maintaining their plants over time and make adjustments as necessary.