

MPL Lab 1

"DocuTrack" - Document Expiry Manager App

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Problem Statement

People often miss document renewal deadlines, leading to penalties or disruptions. A reminder-based system is needed to alert users about document expiry in advance, giving them enough time to take action.

Description

The Document Expiry Manager app enables users to securely sign up, store expiry details for important documents, and receive timely reminders. Users can set how many days before expiry they want to be notified via app alerts or email. The app makes document tracking and renewal easy and stress-free.

Technology Stack

- Frontend: Flutter Framework (Dart)
- Backend: Firebase Firestore for storing user document data
- Authentication: Firebase Authentication for secure login
- Notifications: Firebase Cloud Messaging (for push alerts) and Email APIs (for email reminders)

Key Features

1. Login Required: Secure sign up and login using email or social accounts via Firebase Authentication.
2. Add Document Details: Users can enter document name, expiry date, category (e.g., license, ID), and reminder settings.

3. Custom Notification Time: Users specify how many days in advance to be reminded of expiry.
4. Automated Reminders: Get notifications via push or email before expiry.
5. Manage Documents: View, update, or delete saved documents at any time.
6. Privacy Ensured: Only document-related data is stored; user identity is securely handled by Firebase.

Firebase Setup

- Firestore: Stores user documents with fields like name, expiryDate, category, reminderDays, and userID.
- Authentication: Handles secure user login and signup via Firebase Authentication.
- Cloud Functions & Messaging: Automatically triggers notifications/emails based on reminder settings.

Basic Flow

1. Login/Signup: Secure user access to the app.
2. Add Document: Input document details and set reminder days.
3. Manage Documents: Edit or delete existing document entries.
4. Get Notified: Receive timely alerts or emails before expiry.

Conclusion

The Document Expiry Manager is a useful app designed to help users stay ahead of important document deadlines. Built using Flutter and Firebase, it ensures privacy, timely notifications, and easy document management in one simple solution.