

BloodInsight Documentation

Project Description

BloodInsight is a Flutter-based mobile application that helps users track and analyze their bloodwork results. The app provides personalized health insights, trends analysis, and recommendations based on bloodwork data and user profiles.

Key Features

- Secure authentication system
- Dashboard with recent results overview
- Comprehensive bloodwork history
- AI-powered health insights using Gemini API
- Test reminder system
- Laboratory location mapping

Integrations

Firebase Services

- **Authentication:** Email/password, Google Sign-In
- **Firestore:** Main database

External APIs

- **Firebase/Firestore API** Authentication and storage
- **Google Maps API:** Healthcare locations and maps
- **Gemini API:** Health insights generation

Database Schema

Firestore Collections

```
users/  
└─ {userId}/  
  │  
  └─ name: string  
  └─ dateOfBirth: timestamp  
  └─ gender: string  
  └─ height: number  
  └─ weight: number  
  └─ bloodType: string  
  │  
  └─ bloodwork/  
    │  
    └─ {bloodworkId}/  
      │  
      └─ labName: string  
      └─ dateCollected: timestamp  
      │  
      └─ markers/  
        │  
        └─ {markerId}/  
          │  
          └─ name: string  
          └─ value: number  
          └─ unit: string  
          └─ minRange: number  
          └─ maxRange: number  
          └─ category: string  
      │  
      └─ reminders/  
        │  
        └─ {reminderId}/  
          │  
          └─ labName: string  
          └─ notes: string  
          └─ scheduledDate: timestamp  
          └─ isFasting: boolean
```

Optional requirements

Multi-Platform Support

- Mobile (Android)

Animations

- Animations using Lottie:
 - Animation controller with segment looping support
 - Implementation of welcome screens
 - Loading state animations

Authentication System

- Firebase Authentication:
 - Email/password authentication
 - Google Sign-in integration

Multi-step Registration Form

- User credentials validation:
 - Personal information collection
 - Health data initialization

Data Persistence

- Offline Storage Implementation via:
 - Firestore offline persistence
 - SharedPreferences

Platform Integration

- Platform Feature Packages:
 - Local notifications
 - Geolocation services
 - Native splash screen

Permission Requirements

- Internet access
- Location access
- Notification access

Test Account

Email: test@bloodinsight.dev
Password: Test@123