Test Plan Document

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1. **Introduction**

This document outlines the testing approach for the Water Intake Reminder App built using Flutter. It defines test objectives, scenarios, and detailed test cases to ensure the reliability and performance of the application features.

* 1. **Purpose**

The purpose of this test plan is to validate the core functionality of the application, ensure it meets the defined requirements, and is free of critical bugs that could affect user experience or data consistency.

* 1. **Scope**

This test plan covers the scope of registration and survey functionality, logging of water and other drinks, goal calculation and modification, reminder notifications, viewing hydration history, profile editing, and database integration for user persistence.

1. **Test Scenario 1**
   1. **Test Cases: User Registration and Initial Survey**

| **Test Case ID** | **Test Case Desc** | **Functional Req Code** | **Test Data** | **Expected Result** |
| --- | --- | --- | --- | --- |
| TC01 | Register with valid email and password | FR01 | -email: name@example.com  -password: test123 | User is successfully registered and saved in Database |
| TC02 | Submit survey with user’s information | FR02 | -Age: 20  -Weight: 65kg  -Activity level: moderate | Hydration goal is calculated and displayed and saved |
| TC03 | Register with missing fields | FR03 | email only | Error message. |

1. **Test Scenario 2**

**3.1 Test Cases: Profile Management**

| **Test Case ID** | **Test Case Desc** | **Functional Req Code** | **Test Data** | **Expected Result** |
| --- | --- | --- | --- | --- |
| TC04 | Update weight and activity level | FR4 | -Weight: 68kg -Activity level: high | Goal is recalculated |
| TC05 | Change name and age in profile | FR5 | Name: Sarah  Age: 30 | Profile updates are saved |
| TC06 | Set a manual hydration goal | FR6 | Goal: 3000ml | Manual goal overrides auto-calculated one |

1. **Test Scenario 2**

**4.1 Test Cases: User Scenarios**

| **Test Case ID** | **Test Case Desc** | **Functional Req Code** | **Test Data** | **Expected Result** |
| --- | --- | --- | --- | --- |
| TC07 | Log 250ml of water | FR7 | drink type: water  volume: 250 ml | Water intake updated and reflected in daily progress |
| TC08 | | Set reminder frequency to every 2 hours | | --- | | FR8 | | frequency: 2 hrs | | --- | | Notification received every 2 hrs |
| TC09 | | Navigate through past days | | --- | | FR9 | | navigate to day 3 | | --- | | Correct data for selected day is shown |
| TC10 | | No data recorded | | --- | | FR10 | new user, no drinks logged | Display message: “No data available, Start logging your drinks!” |