**Test Plan – IngreScan (OCR Ingredient Scanner App)**

**1. Project Overview**

IngreScan is a mobile application built with React Native that allows users to scan food ingredient lists using OCR (Optical Character Recognition). The app classifies ingredients into **harmful (red)**, **moderate (yellow)**, and **safe (green)** categories. The purpose of testing is to ensure OCR accuracy, validate UI workflows, and verify ingredient classification.

**2. Objectives**

* Validate the OCR functionality for different image qualities (clear, blurred, rotated).
* Verify user interface workflows such as navigation, result display, and error handling.
* Ensure ingredient classification is accurate and consistent.
* Perform regression testing after bug fixes.

**3. Scope**

* Functional Testing (OCR, classification, UI navigation).
* Regression Testing (after bug fixes).
* Usability Testing (basic navigation flow).
* Error Handling (invalid input, non-image files).

**4. Test Approach**

* **Functional Testing**: Verify OCR, classification, and UI workflows.
* **UI/UX Testing**: Check app navigation, layout, and error messages.
* **Smoke Testing**: Validate that major features (scan, classification, results) work.
* **Regression Testing**: Re-execute test cases after bug fixes.
* **Exploratory Testing**: Identify issues not covered by predefined cases.

**5. Test Deliverables**

* Test Plan (this document).
* Test Scenarios & Test Cases (Excel).
* Bug Reports (Excel with screenshots).
* Regression Test Suite (Excel).
* Final Test Summary Report (Word/PDF).

**6. Entry & Exit Criteria**

**Entry Criteria**

* App build is stable and installable.
* Test environment (Android emulator/physical device) is ready.
* Test cases are prepared.

**Exit Criteria**

* All planned test cases executed.
* High severity bugs fixed or workarounds provided.
* Test Summary Report completed.

**7. Test Environment**

* Device: Android Phone
* OS: Android 12+
* Tools: Excel/Google Sheets (for test cases & bug reports)