Software Requirement Specification (SRS)

Prototype: Ayurvedic Diet Management System

1. Introduction

1.1 Purpose: The purpose of this prototype is to provide personalized Ayurvedic diet recommendations based on food properties (nutrients + Ayurvedic classifications such as rasa, guna, virya, vipaka, dosha effect). 1.2 Scope: The system will allow users (patients/doctors) to: - View Ayurvedic properties of food items - Generate basic diet charts - Provide recommendations for balancing doshas - Prototype scope: static dataset, rule-based logic, no ML integration yet 1.3 Definitions: - Rasa → Taste - Guna → Qualities - Virya → Potency (Heating/Cooling) - Vipaka → Post-digestive taste - Dosha → Vata, Pitta, Kapha

2. Overall Description

2.1 Product Perspective: Prototype app/web module with database (JSON/Firestore) storing Ayurvedic + nutrient values. 2.2 Product Functions: - Food item lookup - Display Ayurvedic & nutrient info - Generate simple Ayurvedic diet chart - Categorize foods by dosha effects 2.3 User Characteristics: - Doctors/Nutritionists → For patient-specific recommendations - Patients → To follow diet suggestions 2.4 Constraints: - Prototype only, not medically certified - Dataset limited to 20–50 common food items - No ML personalization yet

3. Functional Requirements

FR1: Store food data in JSON format with nutrients + Ayurvedic attributes FR2: Search and filter food items by name, category, or dosha effect FR3: Generate a daily diet plan based on selected dosha imbalance FR4: Allow export of a simple diet chart (PDF/Excel)

4. Non-Functional Requirements

NFR1: Must be lightweight (support low-resource devices) NFR2: Should have simple UI (mobile-first) NFR3: Should provide response in < 2 sec for food queries

5. Data Dictionary (Sample JSON)

{ "id": "AF001", "name": "Amla", "category": "Fruit", "nutrients": { "energy_kcal": 44, "carbs_g": 10.2 }, "ayurvedic": { "rasa": ["Sour", "Astringent"], "virya": "Cooling", "guna": ["Light", "Dry"], "vipaka": "Sweet", "dosha_effect": { "pacifies": ["Pitta", "Kapha"], "aggravates": ["Vata"] } } }