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TEAM NO. 6

Software Requirement Specification (SRS) Document

Diet Planner App

1. Brief Description of Project

The **Diet Planner App** is designed to provide **personalised meal recommendations** based on users' **health data, dietary preferences, and calorie requirements**. The app helps users make **informed food choices** by suggesting appropriate recipes while considering **ingredients, allergies, and dietary restrictions**.

2. Purpose / Goal

- Assist users in **determining daily calorie needs** based on weight, height, age, and fitness goals (bulk, cut, maintain). Provide **optimised meal plans** with **ingredient-based recipe recommendations**.
- Ensure **dietary compliance** for different restrictions (vegetarian, halal, vegan, Jain, etc.).
- Enable **efficient meal selection** through a **graph-based recipe connection system**.

3. Usefulness / Benefit

1) For Customers:

Personalised meal recommendations based on health data.
Allergy-friendly and diet-specific suggestions.
Helps track **nutritional intake efficiently**.

2) Health & Wellness Benefits

Helps users **maintain balanced nutrition** based on their personal dietary needs.
Assists in **weight management** (bulk, cut, or maintain goals).
Ensures **dietary compliance** (vegetarian, vegan, halal, Jain, etc.).
Avoids allergens by **filtering unsafe ingredients** for individuals with food allergies.

3) Convenience & Time-Saving

Provides **quick recipe suggestions** based on available ingredients.
Eliminates the need to **search for meal options manually**.
Offers **structured meal planning**, reducing food waste

4) Scalability for Restaurants & Food Services

Can assist in **menu planning**, ensuring meals align with diverse dietary needs.
Helps **delivery services** efficiently cater to customers with specific food preferences.
Enhances **restaurant offerings** by suggesting customizable meal options

4. Hardware / Software Involved

Hardware Requirements:

- Standard PC/Laptop
- Minimum 2GB RAM
- 500MB disk space

Software Requirements:

- Programming Language: C, Python
- Compiler: GCC (MinGW (64-bit), Python (64-bit)
- Operating System: Windows

5. Detailed Feature List

User Module:

- Input Health Data
- Input Ingredients
- Get the Recipes and Ingredients needed for Recipe
- Get the calories required

6. Test / Demonstration Plan

- **Integration Testing:** Ensure seamless interaction between different modules.
- **System Testing:** Validate the system's overall functionality.
- **User Acceptance Testing:** Test with sample users to check usability and performance.

7. Expected Interaction Interface and Sample Use Cases

Interaction Interface:

- GUI built with Python tkinter:
 - Checkboxes for dietary restrictions
 - A drop-down list for gender and goal type
 - Text-based input for height, weight, age, ingredients, and allergies
- Structured outputs with clear order status

Sample Use Cases:

1. An individual who wants to create a customized diet plan but has multiple allergies or health restrictions will find this app useful and can stay fit.

Individual member contribution:

Student 1 Name: Zia Kadajah—wrote the header file (diet planner.h) and the graph-based structure for the recipes (functions connectRecipes(), addConnection(), suggestRecipes()), and pushed the repo to Github.

Student 2 Name: Yeshaswinie D- wrote hasAllergy(),isTagRestricted(),hasIngredients() functions.

Student 3 Name: Vekaasini N- loadSampleRecipes() code.

Student 4 Name: Vivek R- GUI Interface for the Diet Planner