Project Design Phase-II

FUNCTIONAL REQUIREMENT DOCUMENT

Date	29 Oct 2022
Team Id	PNT2022TMID05115
Project Name	AI –Powered Nutrition Analyzer For Fitness Enthusiasts
Marks	4 Marks

Overview

The functional requirements document (FRD) is a formal statement of an application's functional requirements. It serves the same purpose as a contract. The developers agree to provide the capabilities specified. The client agrees to find the product satisfactory if it provides the capabilities specified in the FRD.

Quality is meeting requirements. For that reason, the FRD is the central document in system development. It is used for the following:

- Designing and developing tile application system.
- Evaluating the product in all subsequent phases of the life cycle.
- Determining the success of the project.

GENERAL

1.1Project Description

Food is essential for human life and has been the concern of many healthcare conventions. Nowadays new dietary assessment and nutrition analysis tools enable more opportunities to help people understand their daily eating habits, exploring nutrition patterns and maintaining a healthy diet. So we created a solution to help fitness enthusiasts. This solution helps fitness enthusiasts to do Nutritional analysis of food which provides information about the chemical composition, processing, and quality control of food.

1.1.1 Background

To run the nutrition-based analyzer, they need a smartphone or laptop that supports the app to run on their device.

1.1.2 Purpose

- Nutritional analysis is the process of determining the nutritional content of food. It is mainly created for the people who are in need for their dietary management to know what nutrition composition is contained in the food they eat.

1.1.3 Assumptions and Constraints

The future situation of the project is, there are chances that many people may depend on this innovative idea. Apart from how much this project is created efficiently and effectively, our contribution lies on the back end like creating and maintaining. It is mainly based on the people who get to know about this application and how they feel about this.

The following are examples of assumptions:

- Availability of a hardware/software platform
- Pending legislation
- Court decisions that have not been rendered
- Developments in technolog

1.2 Points of Contact

- Industry mentors.
- Project mentors.
- Project leader.
- Project members.

2 FUNCTIONAL REQUIREMENTS

The functional requirements describe the core functionality of the application.

This section includes the data and functional process requirements.

2.1USER REGISTRATION

- Registration through Gmail
- Registration through Mobile Number
- Registration through Face-book

2.2 USER CONFIRMATION

- Confirmation via Email
- Confirmation via OTP

2.3 USER REQUIREMENTS

The user simply inputs your recipe ingredients and amounts. The software will instantly produce an accurate readout of your dish in terms of nutritional analysis in a readable format that consumers are familiar with.

-With already given details the system can alert the consumer if any content of their allergies, it can alert the consumer.

3 OPERATIONAL REQUIREMENTS

Operational requirements describe the non-business characteristics of an application.

3.1 SECURITY

- AI powered nutrition analysers for fitness should contain more security in which our data which entered or maintained should be more security.
- With the help of the username and password it provides more security in which it can access more securable and the data is private.
- It should be social-economic which should have access to sufficient and safe to use.

3.2 USABILITY

- No training is required to access the Nutrition Analyzer.
- The results should be loaded within 30 seconds.
- It should be user friendly and comfortable.
- It should be simple and easy to use.

- The results should be self-explanatory so that it can be understood by common people.

3.3 RELIABILITY

- It is Important that the AI powered nutrition analyser for fitness should be reliable.
- How can a person find it is reliable? It is easy to find that if he/she can compare nutrition-based food with other nutrition related applications, it can easily rectify whether it is reliable or not.
- But it takes too much time, to avoid this a reliable application should be made in which it itself produces whether we can get the correct solution or not. So, it is necessary that the AI powered nutrition analyzer for fitness should have proper data and information in which we can get the correct information about it and also get proper guidance about it.
- With the proper guideless and proper information in which we can get nutrition properly and we can have got a proper fitness plan.
- It should also provide the information on nutrition and health which it should prevent from health information on diseases, health risks and prevention guidelines. It should also provide an extension of a research based online learning network with several resource areas, so it provides more reliability in that area. For more reliability it can also contain the calorie information, balanced diet plans, what type food can consume at what time etc..... So, by this way it can be reliable.

3.4 PERFORMANCE

- It should provide a greater number of users to consume at any time and at any place.
- It should provide Reliability, Scalability, Security and Usability.
- It should contain minimum data while over-paging the websites or application and it is necessary that it should not exceed more than 20mb.
- While consuming the page it should provide the response as much as possible without any delay or time traffic.
- The connection should be properly maintained so that it can be used while traveling or in remote places.
- The nutritious food to meet their dietary needs and the food preferences for an active and healthy life.
- It should consistently access, availability and affordability of foods and beverages that promote well-being and prevent diseases.
- It should be suitable in all situations that exist to all people, at all times.

3.5 AVAILABILITY

- Easy to access Data.
- Avoids Data redundancy and inconsistency.
- Fast and Efficient.
- User Friendly.

3.6 SCALABILITY

- The architecture for AI powered Nutrition Analyzer for fitness provides the clear procedure daily consumption of food and helps the user to maintain a healthy diet.

- According to their tracking system implemented in architecture, they provide the proper mechanism to every individual of their nutrient intake which can be increased or decreased.

  The premium amount for analyzer is very much optimum.

4 REQUIREMENTS TRACEABILITY MATRIX

The requirements traceability matrix (RTM) provides a method for tracking the functional requirements and their implementation through the development process. Each requirement is included in the matrix along with its associated section number. As the project progresses, the RIM is updated to reflect each requirement's status. When the product is ready for system testing, the matrix lists each requirement, what product component addresses it, and what test verifies that it is correctly implemented.

Include columns for each of the following in the RTM:

- Requirement description
- Requirement reference in FRD
- Verification Method
- Requirement reference in Test Plan