**Recipe Recommendation System(RRS)**

**Software Requirements Specifications**

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**1. Introduction**

**1.1 Purpose**

The purpose of the Recipe Recommendation System is to provide users with personalised recipe suggestions based on the ingredients they have available.

This system aims to assist users in meal planning and cooking by offering convenient and relevant recipe options.

Also this system helps to identify which Recipe or meal is most healthy and users will be able to access those recipes.

**1.2 Scope**

The Recipe Recommendation System will allow users to input a list of ingredients they currently have in their kitchen. Based on this input, the system will analyse and search through a database of recipes to recommend dishes that can be prepared using the provided ingredients.

Users will have access to detailed information about each recommended recipe, including ingredients, instructions, and estimated preparation time.

Also users will be able to know those recipes that can be made by adding one or two ingredients which are more healthy.

**1.3 Overview**

The remaining sections of this document provide a general description about RRS, including characteristics of the users of this project, the functional and data requirements of the product. General description of the project is discussed in section 2 of this document. Section 3 gives the functional requirements, data requirements and constraints and assumptions made while designing the RRS. It also gives the user viewpoint of the product. Section 3 also gives the specific requirements of the product. Section 3 also discusses the external interface requirements and gives detailed description of functional requirements. Section 4 is for supporting information.

**2. Overall Description**

Here Problem Statement is that nowadays people are eating junk food so much that it affects their health, So provide software will help users to find different delicious and healthy recipes that they can make at home with available resources.

The Recipe Recommendation System aims to offer a user-friendly interface where users can input their available ingredients and receive personalised recipe recommendations. The system will utilise a database of recipes, categorising them based on ingredients and other attributes to facilitate efficient search and recommendation processes.

**3. Specific Requirements**

**3.1 Functional Requirements**

3.1.1 Recipe Recommendation

* The system should analyse the input ingredients and recommend recipes from the database that utilise those ingredients.
* Also some more healthy recipes that can be made by adding one or two ingredients should be shown to users.

3.1.2 Recipe Details

* Users should be able to view detailed information about each recommended recipe, including ingredients, instructions, and estimated preparation time.
* Also if users search any recipe then they should get the full details of that recipe.

3.1.3 Ingredients Classification

* Ingredients should be classified into categories such as spices, fruit, Vegetables etc. so that users have clarity.

3.1.4 Food Classification

* Software should classify food into different categories on the basis of taste, Country, temperature. For eg. sweet,sour or spicy in taste etc.

3.1.5 Health Report of Recipe

* Software should show different attributes such as calorie, taste, percentage of any toxic chemical etc.
* On above criteria software should display percentage of healthiness.

3.1.6 Search Facility

* Users should be able to search a recipe and software should result in whole details of that recipe.
* Software should show a recipe if it is found in the database and if it is not found then show a match not found.
* Software should provide different categories to select while searching recipe.

3.1.7 Maintain customer profile

* The software shall allow the user to create a profile and set his credential.
* The software shall authenticate user credentials to view the profile.
* The software shall allow users to update the profile information.

3.1.8 Provide personalised profile

* The software shall display the recent history of recipes.
* The software shall display the detailed information about the selected recipe.
* The software shall display the most frequently searched food category by the user in the profile.
* The software shall display the starred recipe by user in the profile.
* Software should store the names of friends.

3.1.9 Uploading Recipes from Users

* Software should allow users to upload their own new recipes on site and software should authenticate recipes and add to its database.
* Software should allow users to select categories and provide an interface to classify spices, vegies, fruits etc.

3.1.10 Sharing Recipes

* Software should allow users to share recipes to their friends.

3.1.11 Download Recipes

* Software should allow users to download pdf of recipes.

3.1.12 User’s Feedback

* There should be a separate section for taking feedback from users.

3.1.13 Like and comment

* A user should be able to like or comment on anyone’s recipe post.

3.1.14 Personal category choices

* Software when ingredients are taken as input should show users personal category choices first.

3.1.15 Order of Recipe

* Software should provide order considering personal choices and healthiness of food.
* Software should show 5 recipes in one page.
* Users should be able to select on what basis he/she wants to sort Recipes.

3.1.16 Providing different filters

* Software should provide different filters after searching such as taste(sweet or spicy), country, course(starter,main,dessert etc.)

3.1.17 Detail About Electric Equipments

* Software should display a list of needed electrical equipments to make a Recipe.
* Any Other specification about electric equipments should be made visible to users.

3.1.18 Display Images

* Software should display images of food.

**3.2 Non-Functional Requirements**

3.2.1 Graphical User Interface

* The system shall provide a uniform look and feel between all the web pages.
* The system shall provide a digital image for each recipe in the catalogue.
* The system shall provide use of icons and toolbars.

3.2.2 Accessibility

* The system shall provide handicap access.
* The system shall provide multi language support.

3.2.3 Reliability & Availability

3.2.3.1 Back-end Internal Computers

* The system shall provide storage of all databases on redundant computers with automatic switchover.
* The system shall provide for replication of databases to off-site storage locations.

3.2.3.2 Internet Service Provider

* The system shall provide a contractual agreement with an internet service provider for T3 access with 99.9999% availability.
* The system shall provide a contractual agreement with an internet service provider who can provide 99.999% availability through their network facilities onto the internet.

3.2.4 Performance

* The product shall be based on the web and has to be run from a web server.
* The product shall take initial load time depending on internet connection strength which also depends on the media from which the product is run.
* The performance shall depend upon hardware components of the client/customer.

3.2.5 Security

* User data should be protected to maintain privacy and prevent unauthorised access.
* Data encryption, secure authentication mechanisms should be implemented.

**3.3 Interfaces**

3.3.1 User Interfaces

* The user interface for the software shall be compatible with any browser such as Internet Explorer, Mozilla or Netscape Navigator by which the user can access the system.
* The user interface shall be implemented using any tool or software package like Java Applet, MS Front Page, EJB etc.

3.3.2 Hardware Interfaces

* Since the application must run over the internet, all the hardware required to connect to the internet will be the hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable.

**4. Supporting Information**

* Use Case Diagrams
* Sequence Diagrams
* Entity-Relationship Diagrams
* Activity Diagram
* Class Diagram