Practical-1
Aim: Develop the Software Requirements Specifications (SRS) document for a specific system.

Propre - Cuisine

1.1 Introduction:
1.1.1 Purpose of the system:
"Propre Cuisine" aims to revolutionize the cooking experience by providing a user-friendly platform that offers an innovative way to utilize leftover ingredients. This application is designed to enhance culinary creativity, reduce food waste, and provide users with personalized recipe recommendations. By leveraging digital technologies, "Propre Cuisine" contributes to sustainable cooking practices while catering to the needs of both users and the culinary community.

1.1.2 Scope of the system:
"Propre Cuisine" is a sophisticated food recipe application designed to transform the way people cook by utilizing leftover ingredients effectively. The system's primary goal is to provide users with a diverse collection of recipes that match the ingredients they have on hand. This innovative approach promotes sustainability, reduces food waste, and encourages users to explore new culinary possibilities. Through its user-friendly interface and personalized recommendations, "Propre Cuisine" aligns with the principles of resourcefulness and culinary creativity.

1.2 General description of the system:
1.2.1 Overall description:
"Propre Cuisine" is a cutting-edge food recipe application that empowers users to create delicious meals using leftover ingredients. Through its intuitive interface, the application offers a comprehensive database of recipes from various cuisines. Its standout feature is the ability to suggest recipes based on the ingredients users already have, fostering a sustainable and innovative approach to cooking. By minimizing food waste and encouraging experimentation, "Propre Cuisine" transforms ordinary kitchens into centers of culinary exploration and creativity.

1.2.2 Feasibility study:
"Propre Cuisine" demonstrates strong feasibility across technical, operational, and economic aspects. Its utilization of digital technologies, coupled with user-friendly features, showcases its technical viability. The operational benefits include reduced food waste and enhanced user experiences. Economically, the long-term savings from efficient ingredient utilization outweigh the initial setup costs.

1. Technical Feasibility:
"Propre Cuisine" demonstrates a high level of technical feasibility due to its reliance on existing technologies and tools. The implementation of features like ingredient entry, recipe matching, and user profiles is well-supported by web development frameworks, databases, and algorithms. The technologies chosen, such as Python, Django, HTML/CSS, and JavaScript, are

widely used and offer robust solutions for building web applications. Additionally, the use of intelligent matching algorithms can be achieved through programming and data manipulation techniques. Integrating secure authentication and data encryption mechanisms is also technically feasible, ensuring the protection of user data and privacy.

2. Operational Feasibility:

From an operational standpoint, "Propre Cuisine" presents several benefits that make it feasible for both users and the application's administrators. The application streamlines the process of cooking with leftover ingredients, fostering a sustainable and resourceful culinary approach. It offers an intuitive user interface that is easy to navigate and provides users with valuable recipe recommendations. The operational benefits include reduced food waste, enhanced culinary creativity, and increased user engagement. However, adequate training and support may be required to familiarize users with the system's features, and ongoing maintenance and updates will be necessary to ensure a seamless experience.

3. Economic Feasibility:

"Economic Feasibility" examines the cost-effectiveness of the project in comparison to the potential benefits it offers. While there will be upfront costs associated with development, design, testing, and initial setup, the long-term benefits outweigh the initial investment. The application's primary revenue stream could include a combination of advertisement partnerships, premium subscription models, and in-app purchases. The economic feasibility is enhanced by the fact that the application addresses a real-world problem (food waste) and offers users tangible value (creative cooking solutions). Additionally, the potential to attract a substantial user base and retain users over time contributes positively to economic viability.

1.3 Functional Requirements:

1.3.1 Module description:

1. Ingredient Entry Module:
This module empowers users to input the list of leftover ingredients they have on hand. By leveraging this module, users can efficiently manage their available items, fostering a resourceful approach to cooking. Users can easily add, edit, or remove ingredients from their list, ensuring accurate and up-to-date ingredient data.

2. Recipe Matching Module:
The core functionality of "Propre Cuisine" lies within this module. It employs a sophisticated and intelligent matching algorithm to identify recipes that align with the user's entered ingredients. By analyzing the ingredients provided by the user, the module generates a list of recipe suggestions that utilize those ingredients. This module serves as the heart of the application's innovative approach to cooking with leftover ingredients.

3. Recipe Details Module:

This module provides users with comprehensive insights into selected recipes. Users can access detailed information about a chosen recipe, including ingredient lists, step-by-step cooking instructions, and valuable cooking tips. Additionally, users can bookmark their favorite recipes and create collections, facilitating easy access to their preferred culinary inspirations. Through this module, users can engage deeply with recipes and experiment with a variety of dishes.

4. User Profile Module:

The User Profile Module facilitates user account management and personalization. Users can create accounts, enabling them to log in and access the application's features seamlessly. This module allows users to update their personal information, manage communication preferences, and tailor their experience to suit their culinary preferences. By maintaining user profiles, "Propre Cuisine" ensures a tailored and user-centric journey for each individual.

1.3.2 Functions of various user of the system:

There are mainly 3 users of the product: customer, chef & admin

1. User:

Users can create accounts or log in to access the application. Enter a list of leftover ingredients. Receive personalized recipe recommendations based on entered ingredients. View detailed recipe instructions, ingredient lists, and cooking tips. Bookmark favorite recipes and manage their collections.

2. Chef:

Chef user is granted the permission to add new recipes to the application. This role-based approach allows the application to differentiate between different types of users and their corresponding capabilities.

3. Customers:

Manage user accounts, ensuring data accuracy and security. Monitor system performance and resolve technical issues. Review and moderate user-submitted recipes and content.

1.4 Non- Functional Requirements:

1.4.1 Security:

Implement robust encryption mechanisms to safeguard user data. Use secure authentication methods for user logins and transactions. Regularly update security protocols to prevent unauthorized access.

1.4.2 Reliability:

Ensure accurate recipe recommendations and reliable system performance. Regularly test and optimize the matching algorithm for accurate results.

1.4.3 Availability:

Maintain a stable server environment to ensure uninterrupted access. Implement load balancing to distribute traffic efficiently during peak usage.

1.4.4 Maintainability:
Design the application with a modular structure for easy updates and maintenance. Provide regular updates with bug fixes, new recipes, and features.

1.5 Interface Requirements:
1.5.1 GUI
GUI 1: Home Page
- o The home page serves as the entry point for users. It provides a welcoming interface that encourages users to enter their leftover ingredients.

GUI 2: Ingredient Entry Module
- o This module allows users to enter their leftover ingredients by typing or selecting from predefined options. Users can add, edit, or remove ingredients as needed.

GUI 3: Recipe Matching Module
- o Upon entering ingredients, this module displays a list of matching recipes. Users can see recipe titles, images, and a brief description. Clicking on a recipe opens its detailed view.

GUI 4: Recipe Details Module
- o The detailed view of a recipe provides users with step-by-step instructions, ingredient quantities, cooking time, and related information.

GUI 5: User Profile
- o In the user profile section, users can manage their account information, preferences, and saved recipes. They can also edit their personal details and set communication preferences.

1.5.2 Hardware Interface
- Computer / Processor: Intel(R) Core (TM) i3-3110M CPU @ 2.40GHz
- Minimum RAM Requirement: 500 MB or higher recommended
- Hard Disk: 256 GB

1.5.3 Software Interface
- Operating System:
  - o Windows 7.0 or above
- Front-end:

        o   Language: HTML, CSS, JavaScript
        o   Framework: Bootstrap
- Back-end:
        o   Server-Side Scripting: PHP
        o   Database Management: phpMyAdmin

1.6 Data Dictionary:

1.6.1   Table Name: tbl_recipe

Description: To store information related to ration cardholders, including their details, family members, and ration card number.

Primary Key: recipe_id

Sr. No.	Attributes	Data Type	Constraints	Description
1	recipe_id	int(11)	Primary key	Unique ID for each recipe
2	recipe_name	varchar(255)	Not null	Name of the recipe
3	ingredients	varchar(1000)	Not null	List of ingredients required for the recipe
4	instructions	text	Not null	Cooking instructions for the recipe
5	prep_time	varchar(20)	Not null	Preparation time for the recipe
6	cook_time	varchar(20)	Not null	Cooking time for the recipe
7	servings	int(11)	Not null	Number of servings the recipe yields
8	difficulty	varchar(20)	Not null	Difficulty level of the recipe
9	cuisine_type	varchar(50)	Not null	Type of cuisine the recipe belongs to
10	rating	float	Default 0.0	Average user rating for the recipe
11	total_ratings	int(11)	Default 0	Total number of user ratings for the recipe

1.6.2 Table Name: tbl_users

Description: To store information about the registered users of the "Propre Cuisine" application, including their personal details and login credentials.

Primary Key: user_id

Sr. No.	Attributes	Data Type	Constraints	Description
1	user_id	int(11)	Primary key	Unique ID for each user
2	username	varchar(50)	Not null, Unique	Username for user login
3	email	varchar(100)	Not null, Unique	Email address of the user
4	password	varchar(100)	Not null	Password for user login
5	full_name	varchar(100)	Not null	Full name of the user
6	date_joined	datetime	Not null	Date and time of user registration
7	profile_image	varchar(255)	Default 'default.png'	Profile image of the user

1.6.3 Table Name: tbl_chef
Description: To store information about the registered chef of the "Propre Cuisine" application, including their personal details and login credentials.
Primary Key: chef_id

Sr. No.	Attributes	Data Type	Constraints	Description
1	chef_id	int(11)	Primary Key	ID of the chef.
2	username	varchar(255)	Foreign key	Name of the chef.
3	password	password	Not null	password for the chef account
4	email	email	Not Null	email of chef
5	full_name	vachar(255)	Not Null	full name of chef
6	date_joined	date	Not Null	date chef joined
7	profil_image	varchar(255)	Not Null	profile picture of chef

1.6.4 Table Name: tbl_favorites
Description: To store the favorite recipes of users, indicating the recipes they have saved for future reference.
Primary Key: favorite_id

Sr. No.	Attributes	Data Type	Constraints	Description
1	favorite_id	int(11)	Primary key	Unique ID for each favorite entry
2	user_id	int(11)	Foreign key	ID of the user who favorited the recipe
3	recipe_id	int(11)	Foreign key	ID of the favorited recipe

1.6.5 Table Name: tbl_reviews
Description: To store user reviews and ratings for recipes.
Primary Key: review_id

Sr. No.	Attributes	Data Type	Constraints	Description
1	review_id	int(11)	Primary key	Unique ID for each review
2	user_id	int(11)	Foreign key	ID of the user who posted the review
3	recipe_id	int(11)	Foreign key	ID of the reviewed recipe

1.6.6 Table Name: tbl_ingredients
Description: To store information about various ingredients used in recipes.
Primary Key: ingredient_id

Sr. No.	Attributes	Data Type	Constraints	Description
1	ingredient_id	int(11)	Primary key	Unique ID for each ingredient
2	ingredient_name	varchar(100)	Not null	Name of the ingredient

1.6.7 Table Name: tbl_chef_recipes
Description: To store new recipe added by the chef.
Primary Key: chef_id

Sr. No.	Attributes	Data Type	Constraints	Description
1	recipe_id	int(11)	Primary key	Unique ID assigned to each recipe.
2	chef_id	int(11)	Foreign key	ID of the chef who added the recipe.
3	recipe_name	int(11)	Foreign key	Name of the recipe.
4	ingredients	float	Not null	List of ingredients required for the recipe.
5	instructions	text	Null	Step-by-step cooking instructions for the recipe.
6	date_added	date	Not Null	Date and time when the recipe was added.