Recipe Book Database Project

A Project Report Submitted

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by

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ABSTRACT

Our recipe platform addresses the growing demand for a sustainable and user-friendly solution to diverse dietary preferences, healthy eating habits, and environmental concerns. With a focus on inclusivity, the platform offers a seamless browsing experience with recipes categorized into vegan, vegetarian, and non-vegetarian options, accompanied by detailed ingredient lists and cooking instructions. To enhance convenience, we have integrated external Google Maps API, allowing users to locate ingredients and even order dishes from nearby establishments. A chatbot feature serves as a virtual guide, assisting users in navigating recipes and providing personalized recommendations.

Community engagement is fostered through features such as commenting, liking recipes, and adding sticky notes for personal memos, facilitating interaction and culinary exchange among users. In summary, our sustainable recipe platform aims to revolutionize food consumption by empowering individuals to make informed choices that promote both personal health and environmental sustainability. Through intuitive design and innovative features, we strive to create a space where users can explore, learn, and contribute to a healthier and more eco-conscious lifestyle.

ACM taxonomy

1. Multimedia Information Systems: Recipe browsing involves multimedia content (images, videos) related to recipes.
2. Information Search and Retrieval: Users search and retrieve recipes based on their preferences (vegan, vegetarian, non-vegetarian).
3. Online Information Services: Providing online access to recipes and related information.
4. Systems and Software: Integration of external API for ordering dishes.

Sustainable Development Goals

1. Goal 2: Zero Hunger - Promoting sustainable food production and ensuring access to nutritious food choices, including vegan and vegetarian options, aligns with efforts to eliminate hunger and achieve food security.
2. Goal 3: Good Health and Well-being - Offering a variety of recipes, including healthy and balanced options, supports individuals in making nutritious food choices, leading to improved health outcomes.
3. Goal 12: Responsible Consumption and Production - Encouraging users to explore vegan and vegetarian recipes promotes sustainable consumption patterns and reduces the environmental footprint associated with meat production.
4. Goal 9: Industry, Innovation, and Infrastructure - Integrating external APIs for ordering dishes contributes to the development of innovative digital platforms and infrastructure for e-commerce in the food industry.

Table of Contents

List of Tables

S. No	Table Name	Attributes
1	User	**User_id** int Username varchar(10) Email varchar(20) Password varchar(15)
2	Recipe	**Recipe_ID** int Title varchar(20) Desc varchar(10) Instruction varchar(200) Unit int
3	Likes	**Like_id** int User_id int Recipe_id int
4	Unit	**Unit_id** int Name varchar(20)
5	Ingredients	**Ingredients_id** int Name varchar(20)
6	Recipe_Ingredients	**Recipe_Ingredients_ID** int Recipe_id int Ingredients_id int Quantity int
7	Recipe_categories	Recipe_Ingredients_ID int Category_name varchar(20)
8	Comment_create	**Comment_id** int User_id int Recipe_id int Create_Text varchar(255)
9	Comment _delete	**Comment_id** int User_id int Recipe_id int Delete_Text varchar(255)
10	Comment_edit	**Comment_id** int User_id int Recipe_id int Edit_Text varchar(255)

List of Figures

Abbreviations

1. SDG – Sustainable Development Goal
2. ER – Entity – Relationship
3. DBMS – Database Management System
4. GUI – Graphical User Interface
5. DOC – Document
6. ACM – Association for Computing Machinery

Chapter 1

Introduction

1.1 Introduction

Forklore is your ultimate recipe database management system, merging culinary artistry with modern convenience. Whether you are a seasoned chef or an aspiring home cook, Forklore streamlines your culinary adventures.

With secure user authentication, personalize your journey by creating your profile and selecting food preferences. Explore a diverse recipe collection catering to every palate and dietary preference, from vegan to meaty delights.

Engage with the community, leave comments, and share your culinary experiences. Enjoy interactive features and detailed recipe pages with step-by-step instructions and nutritional insights.

Powered by HTML, CSS, JavaScript, and PHP, Forklore seamlessly integrates with Google Maps API for ingredient ordering from nearby restaurants.

1.2 Purpose

Forklore is crafted to revolutionize your culinary journey by providing a comprehensive platform where food enthusiasts of all levels can explore, create, and savor delicious dishes. With a commitment to convenience, community, and creativity, Forklore aims to:

1. Simplify Cooking: By offering a user-friendly interface and detailed recipes, Forklore makes cooking accessible to everyone, from beginners to seasoned chefs.
2. Foster Community: Through interactive features like commenting and sharing, Forklore encourages users to connect, exchange ideas, and inspire one another in their culinary endeavors.
3. Promote Healthy Eating: With a diverse range of recipes catering to various dietary preferences and nutritional insights provided, Forklore empowers users to make informed choices and adopt healthier eating habits.
4. Support Sustainability: By highlighting sustainable ingredients and practices, Forklore promotes environmentally conscious cooking and contributes to the global effort towards sustainability.
5. Enhance Dining Experiences: Integration with real-world dining experiences allows users to seamlessly transition from recipe exploration to enjoying delicious meals prepared with ease.

1.3 Product Scope

The product scope of Forklore encompasses a user-friendly recipe database management system designed to streamline culinary experiences. It includes features such as secure user authentication, personalized profile customization, and exploration of diverse recipes categorized by dietary preferences. Users can engage with the community through interactive features, access detailed recipe pages with nutritional insights, and seamlessly order ingredients from nearby restaurants via integration with the Google Maps API. The platform aims to simplify cooking, foster community engagement, promote healthy eating habits, support sustainability, and enhance dining experiences, providing users with a comprehensive tool for culinary exploration and enjoyment.

Chapter 2

Literature Survey / Background

2.1 Literature Survey

The development of a sustainable recipe platform catering to diverse dietary preferences and promoting healthy eating habits requires a foundation in existing research and technological advancements. This literature survey delves into relevant studies and resources to inform the design and functionalities of the platform. We explore user-centered design principles for recipe recommendation systems that cater to needs.

User-Friendly Interface and Dietary Preferences:

- Personalization in Food Recommendation Systems: https://www.sciencedirect.com/science/article/pii/S0924224420304829 This research paper explores personalization techniques for recipe recommendation systems, considering dietary restrictions and preferences.
- A Survey of Recipe Recommendation Systems: https://arxiv.org/abs/1006.5278 This survey provides a broader overview of recipe recommendation systems, including approaches to cater to diverse dietary needs.

Sustainable Practices:

- The ultimate guide to developing environmentally sustainable recipes: https://alprofoundation.org/ This guide from the Alpro Foundation offers valuable insights on creating recipes with a lower environmental footprint.
- Eight innovation platforms for sustainable food systems: https://www.vinnova.se/en/m/vinnova-develops-system-innovation-for-a-sustainable-future/ This article by Vinnova highlights.

2.2 Background

Forklore emerged from a collective passion for both culinary exploration and technological innovation. Recognizing the evolving landscape of cooking practices and the increasing reliance on digital solutions, our team sought to bridge the gap between traditional cooking methods and modern convenience. Inspired by the diverse culinary traditions around the world and the desire to promote healthy eating habits and sustainability, Forklore was conceived as a holistic recipe platform.

Drawing from personal experiences in the kitchen, we identified the need for a comprehensive tool that not only provided access to a wide range of recipes but also facilitated meaningful engagement within a community of food enthusiasts. With a commitment to simplicity, inclusivity, and user-centric design, Forklore was envisioned as more than just a recipe database but as a culinary companion that empowers individuals to explore, create, and savor delicious dishes with confidence and ease.

Grounded in our core values of accessibility, authenticity, and innovation, Forklore aims to revolutionize the way people approach cooking by offering a seamless and enriching culinary experience that celebrates the joys of food, fosters community connections, and embraces sustainable practices for health

Chapter 3

Objectives / Problem Statement

3.1 Problem Statement

In a world where culinary exploration is hindered by fragmented recipe resources and lack of personalized guidance, there exists a need for a comprehensive recipe platform that seamlessly integrates diverse culinary traditions, promotes healthy eating habits, and fosters community engagement. Current recipe databases often lack the depth of user customization and fail to provide meaningful interaction opportunities within a community of food enthusiasts. Additionally, there is a growing demand for platforms that support sustainability by promoting eco-friendly cooking practices and facilitating access to locally sourced ingredients. Considering these challenges, the problem at hand is to develop a user-friendly recipe book database management system that addresses these shortcomings, empowering users to embark on culinary adventures with confidence, creativity, and camaraderie while contributing to a healthier and more sustainable food ecosystem.

3.2 Objectives

1. Develop a user-friendly interface for Forklore that prioritizes ease of use and intuitive navigation. Implementing a visually appealing design and intuitive layout will ensure that users can seamlessly explore the platform's diverse collection of recipes, which cater to various dietary preferences, culinary traditions, and skill levels.
2. Enhance user engagement through robust authentication and profile customization features. By allowing users to create personalized profiles and tailor their food preferences and dietary restrictions, Forklore aims to provide a curated culinary experience that resonates with each user's unique tastes and needs.
3. Curate a comprehensive database of recipes that goes beyond mere listings. Each recipe will be accompanied by detailed ingredient lists, step-by-step instructions, and nutritional insights, empowering users with the knowledge and confidence to embark on their culinary adventures. Additionally, Forklore will prioritize diversity in its recipe selection, featuring dishes from various cuisines and cultures.
4. Foster a sense of community among users by providing interactive features that facilitate communication and collaboration. From liking and commenting on recipes to sharing cooking tips and experiences, Forklore aims to create a vibrant and supportive community of food enthusiasts who can learn from and inspire one another.
5. Integrate external APIs, such as Google Maps, to offer seamless access to ingredients. Users will have the option to order ingredients from nearby restaurants or grocery stores directly through the platform, bridging the gap between recipe exploration and real-world cooking experiences.
6. Promote sustainability and environmental consciousness by highlighting eco-friendly cooking practices, such as using locally sourced ingredients and minimizing food waste. Forklore will also provide resources and tips on sustainable cooking techniques, empowering users to make environmentally conscious choices in their culinary endeavors.
7. Continuously iterate and improve Forklore based on user feedback and emerging trends in culinary technology and sustainable food practices. By staying attuned to the needs and preferences of its users, Forklore aims to evolve into a trusted and indispensable resource for culinary enthusiasts worldwide.

Chapter 4

Data Design

4.1 ER Diagram

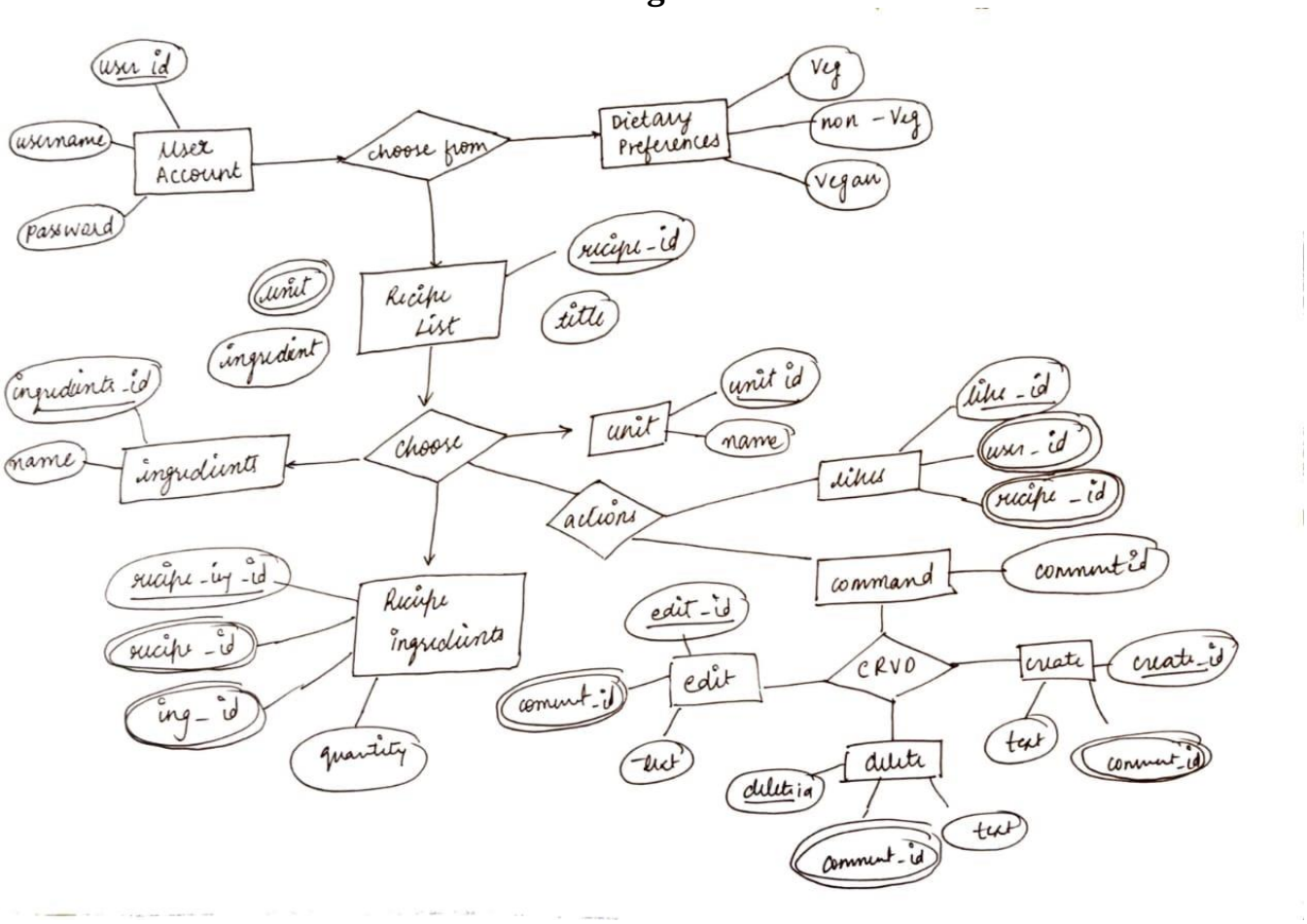

Figure 1

4.2 Reduction

The refinement phase in the database design process involves simplifying the intricate Entity-Relationship (ER) diagram into a streamlined and focused representation. This refinement seeks to accentuate vital components and connections, improving the comprehension and transparency of the 'Forklore Recipe Platform' database structure. By condensing the ER diagram, we establish a more concise and manageable overview that underscores the fundamental entities and their relationships within the system. The subsequent sections offer a refined and distilled portrayal of the principal database tables, providing a clearer understanding of the architecture of Folklore.

1.User
User_id int PRIMARY KEY
Username varchar(10)
Email varchar(20)
Password varchar(15)

2.Recipe
Recipe_ID int PRIMARY KEY
Title varchar(20)
Description varchar(10)
Instructions varchar(200)
Unit int

3.Likes
Like_id Int PRIMARY KEY
User_id int
Recipe_id int

4.Unit
Unit_id int PRIMARY KEY
Name varchar(20)

5.Ingredients
Ingredients_id int PRIMARY KEY
Name varchar(20)

6.Recipe_Ingredients
Recipe_Ingredients_ID int PRIMARY KEY
Recipe_id int
Ingredients_id int
Quantity int

7.Recipe_categories
Recipe_categories_ID int PRIMARY KEY
Recipe_id int
Category_name varchar(20)

8.Comment_create
Comment_id int PRIMARY KEY
User_id int
Recipe_id int

Create_Text varchar(255)

9.Comment_delete
Comment_id int PRIMARY KEY
User_id int
Recipe_id int
Delete_Text varchar(255)

10.Comment_edit
Comment_id int PRIMARY KEY
User_id int
Recipe_id int
Edit_Text varchar(255)

4.3 SCHEMA Diagram

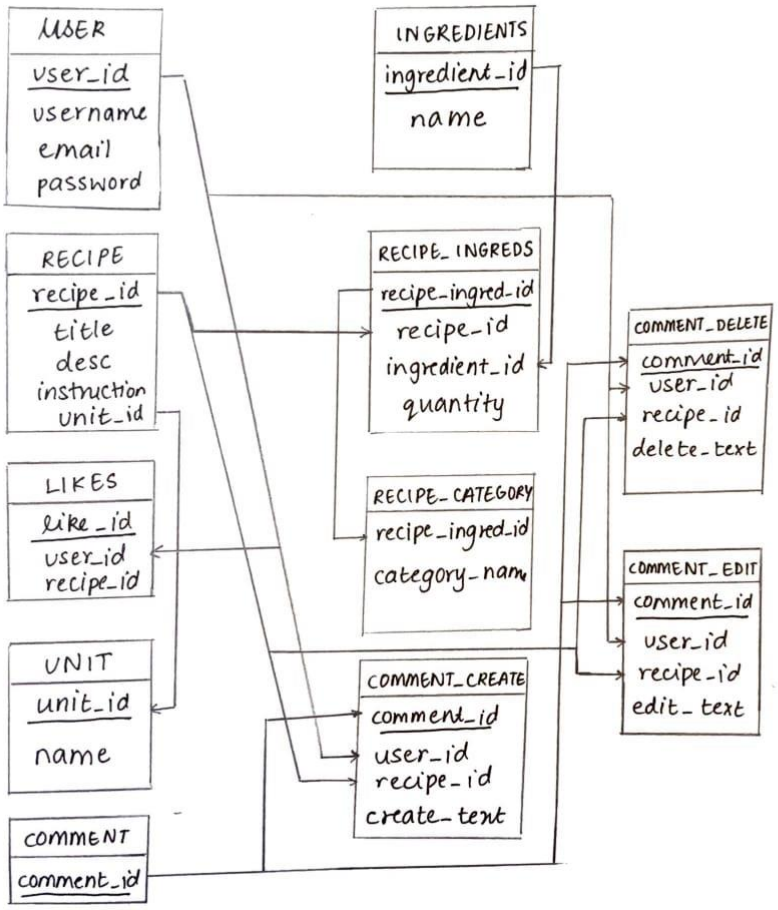

Figure 2:Schema

4.4 Normalization Tables

- User Table

1NF (First Normal Form): Each attribute (User_id, Username, Email, Password) contains atomic values, meaning they cannot be further divided.
2NF (Second Normal Form): The table is in 2NF because all non-prime attributes (Username, Email, Password) are fully functionally dependent on the primary key (User_id). There are no partial dependencies.
3NF (Third Normal Form): No attributes transitively depend on the primary key. There are no transitive dependencies.
BCNF (Boyce-Codd Normal Form): The table is in BCNF because there is only one candidate key {User_id}, and all attributes are dependent on it.

- Recipe Table

1NF: Each attribute contains atomic values.
2NF: The table is in 2NF as all non-prime attributes (Title, Description, Instructions) are fully functionally dependent on the primary key (Recipe_ID). There are no partial dependencies.
3NF: There are no transitive dependencies.
BCNF: The table is in BCNF because there is only one candidate key {Recipe_ID}, and all attributes are dependent on it.

- Likes Table

1NF: Each attribute contains atomic values.
2NF: The table is in 2NF as all non-prime attributes (User_id, Recipe_id) are fully functionally dependent on the primary key (Like_id). There are no partial dependencies.
3NF: There are no transitive dependencies.
BCNF: The table is in BCNF because there is only one candidate key {Like_id}, and all attributes are dependent on it.

- Unit Table

1NF: Each attribute contains atomic values.
2NF: The table is in 2NF as all non-prime attributes (Name) are fully functionally dependent on the primary key (Unit_id). There are no partial dependencies.
3NF: There are no transitive dependencies.
BCNF: The table is in BCNF because there is only one candidate key {Unit_id}, and all attributes are dependent on it.

- Ingredients Table

1NF: Each attribute contains atomic values.
2NF: The table is in 2NF as all non-prime attributes (Name) are fully functionally dependent on the primary key (Ingredients_id). There are no partial dependencies.
3NF: There are no transitive dependencies.
BCNF: The table is in BCNF because there is only one candidate key {Ingredients_id}, and all attributes are dependent on it.

- Recipe_Ingredients Table

1NF: Each attribute contains atomic values.
2NF: The table is in 2NF as all non-prime attributes (Recipe_id, Ingredients_id, Quantity) are fully functionally dependent on the primary key (Recipe_Ingredients_ID). There are no partial dependencies.
3NF: There are no transitive dependencies.

BCNF: The table is in BCNF because there is only one candidate key {Recipe_Ingredients_ID}, and all attributes are dependent on it.

- Recipe_Categories Table

1NF: Each attribute contains atomic values.
2NF: The table is in 2NF as all non-prime attributes (Recipe_id, Category_name) are fully functionally dependent on the primary key (Recipe_categories_ID). There are no partial dependencies.
3NF: There are no transitive dependencies.
BCNF: The table is in BCNF because there is only one candidate key {Recipe_categories_ID}, and all attributes are dependent on it.

- Comment_Create Table

1NF (First Normal Form): Each attribute (Comment_id, User_id, Recipe_id, Create_Text) contains atomic values.
2NF (Second Normal Form): The table is in 2NF as all non-prime attributes (User_id, Recipe_id, Create_Text) are fully functionally dependent on the primary key (Comment_id). There are no partial dependencies.
3NF (Third Normal Form): There are no transitive dependencies.
BCNF (Boyce-Codd Normal Form): The table is in BCNF because there is only one candidate key {Comment_id}, and all attributes are dependent on it.

- Comment_Delete Table

1NF: Each attribute contains atomic values.
2NF: The table is in 2NF as all non-prime attributes (User_id, Recipe_id, Delete_Text) are fully functionally dependent on the primary key (Comment_id). There are no partial dependencies.
3NF: There are no transitive dependencies.
BCNF: The table is in BCNF because there is only one candidate key {Comment_id}, and all attributes are dependent on it.

- Comment_Edit Table

1NF: Each attribute contains atomic values.
2NF: The table is in 2NF as all non-prime attributes (User_id, Recipe_id, Edit_Text) are fully functionally dependent on the primary key (Comment_id). There are no partial dependencies.
3NF: There are no transitive dependencies.
BCNF: The table is in BCNF because there is only one candidate key {Comment_id}, and all attributes are dependent on it.

4.5 Table Creation

- User table

```
CREATE TABLE User (
   User_id INT PRIMARY KEY,
   Username VARCHAR(10),
   Email VARCHAR(20),
   Password VARCHAR(15)
);
```

- Recipe table

```
CREATE TABLE Recipe (
   Recipe_ID INT PRIMARY KEY,
   Title VARCHAR(20),
   Description VARCHAR(10),
   Instructions VARCHAR(200),
   Unit INT,
   FOREIGN KEY (Unit) REFERENCES Unit(Unit_id)
);
```

- Likes table

```
CREATE TABLE Likes (
   Like_id INT PRIMARY KEY,
   User_id INT,
   Recipe_id INT,
   FOREIGN KEY (User_id) REFERENCES User(User_id),
   FOREIGN KEY (Recipe_id) REFERENCES Recipe(Recipe_ID)
);
```

- Unit table

```
CREATE TABLE Unit (
   Unit_id INT PRIMARY KEY,
   Name VARCHAR(20)
);
```

- Ingredients table

```
CREATE TABLE Ingredients (
   Ingredients_id INT PRIMARY KEY,
   Name VARCHAR(20)
);
```

- Recipe_Ingredients table

```
CREATE TABLE Recipe_Ingredients (
   Recipe_Ingredients_ID INT PRIMARY KEY,
   Recipe_id INT,
   Ingredients_id INT,
   Quantity INT,
```

```
FOREIGN KEY (Recipe_id) REFERENCES Recipe(Recipe_ID),
   FOREIGN KEY (Ingredients_id) REFERENCES Ingredients(Ingredients_id)
);
```

- Recipe_categories table

```
CREATE TABLE Recipe_categories (
   Recipe_categories_ID INT PRIMARY KEY,
   Recipe_id INT,
   Category_name VARCHAR(20),
   FOREIGN KEY (Recipe_id) REFERENCES Recipe(Recipe_ID)
);
```

- Comment_create table

```
CREATE TABLE Comment_create (
   Comment_id INT PRIMARY KEY,
   User_id INT,
   Recipe_id INT,
   Create_Text VARCHAR(255),
   FOREIGN KEY (User_id) REFERENCES User(User_id),
   FOREIGN KEY (Recipe_id) REFERENCES Recipe(Recipe_ID)
);
```

- Comment_delete table

```
CREATE TABLE Comment_delete (
   Comment_id INT PRIMARY KEY,
   User_id INT,
   Recipe_id INT,
   Delete_Text VARCHAR(255),
   FOREIGN KEY (User_id) REFERENCES User(User_id),
   FOREIGN KEY (Recipe_id) REFERENCES Recipe(Recipe_ID)
);
```

- Comment_edit table

```
CREATE TABLE Comment_edit (
   Comment_id INT PRIMARY KEY,
   User_id INT,
   Recipe_id INT,
   Edit_Text VARCHAR(255),
   FOREIGN KEY (User_id) REFERENCES User(User_id),
   FOREIGN KEY (Recipe_id) REFERENCES Recipe(Recipe_ID)
);
```

Chapter 5

Methodology

5.1 Implementation Details

5.1.1 System Architecture

Client-Side Interface: This is the user-facing part of Forklore, where users interact with the platform through web browsers or mobile applications.
Frontend Technologies: HTML, CSS, and JavaScript are used to build the client-side interface, defining the structure, style, and behavior of the Forklore website or app.
Application Logic: This component represents the business logic and functionality of Forklore, including user authentication, recipe processing, and data manipulation.
Backend Technologies: PHP is used to implement the server-side application logic, handling incoming requests from the client-side interface and communicating with the database.
Database Management System (DBMS): The DBMS stores and manages all data related to Forklore, including user profiles, recipes, comments, and likes. Common examples of DBMS include MySQL.
Overall, this system architecture enables Forklore to provide users with a seamless and feature-rich recipe platform, with efficient data management, robust functionality, and a responsive user interface.

5.1.2 Customer-Focused Features

In aligning Forklore's architecture with a user-centric focus, here's how the system caters to the needs and preferences of users:

1. User Authentication and Registration: Forklore prioritizes user privacy and security by providing a seamless authentication and registration process. Users can create accounts with ease, allowing them to access personalized features and save their preferences across sessions.

2. Customized Dietary Preferences: Upon registration, users have the option to specify their dietary preferences, including vegan, vegetarian, or non-vegetarian. This customization ensures that users are presented with recipe recommendations that align with their dietary choices, enhancing their overall experience.

3. Recipe Selection and Interaction: The user interface of Forklore is designed to facilitate effortless recipe exploration and selection. Users can browse through a diverse collection of recipes categorized based on their preferences. They can view recipe details, including ingredients, instructions, and nutritional information, enabling them to make informed decisions about their culinary endeavors.

4. Engagement and Interaction Features: Forklore encourages user engagement and interaction through various features such as liking recipes, leaving comments, and sharing culinary experiences. These interactive elements foster a sense of community and enable users to connect with like-minded individuals who share their passion for cooking.

5. Integration with External Services: Forklore leverages Google Map JavaScript API to enhance the user

experience further. Users can utilize location-based services to find nearby restaurants that offer the ingredients or dishes they desire.

6. Ingredient Management and Notes: To streamline the cooking process, Forklore provides users with a personalized shopping list of ingredients needed for selected recipes. Users can also add personal notes and comments to recipes, allowing them to customize and adapt recipes to their preferences and cooking styles.

7. Continuous Feedback and Improvement: Forklore actively solicits user feedback and incorporates it into ongoing development cycles. By listening to user suggestions, addressing pain points, and continuously iterating on the platform, Forklore ensures that it remains responsive to the evolving needs and preferences of its user base.

5.1.3 Administrator Features

In addition to user-focused features, Forklore also provides administrator features to manage and maintain the platform effectively. Here is how the system architecture caters to administrator needs:

1. User Management: Administrators have access to user management functionalities, allowing them to view user profiles, monitor activity, and manage user accounts. They can handle tasks such as user registration approvals, account suspensions, and password resets, ensuring a secure and orderly user environment.

2. Recipe Management: Administrators can oversee the recipe database, including adding new recipes, updating existing ones, and removing outdated or inappropriate content. They have the authority to review recipe submissions from users, verify their accuracy and compliance with platform guidelines, and approve them for publication.

3. Content Moderation: Administrators have the ability to moderate user-generated content, such as comments and reviews, to maintain a positive and respectful community atmosphere. They can monitor user interactions, flag inappropriate content, and take necessary actions, such as removing offensive comments or banning users who violate community guidelines.

4. Analytics and Reporting: Administrators can access analytics and reporting tools to gain insights into platform usage, user engagement, and content performance. They can track key metrics, such as recipe popularity, user activity trends, and feedback sentiment, to inform decision-making and strategic planning.

5. System Configuration: Administrators are responsible for configuring and maintaining the system settings and preferences. They can customize platform features, adjust user permissions, and configure security settings to ensure compliance with regulatory requirements and best practices.

6. Integration with External Services: Administrators manage integrations with external services, such as restaurant APIs and grocery delivery platforms, to ensure seamless functionality and data accuracy. They oversee API integrations, monitor service performance, and troubleshoot any issues that may arise.

Block Diagram

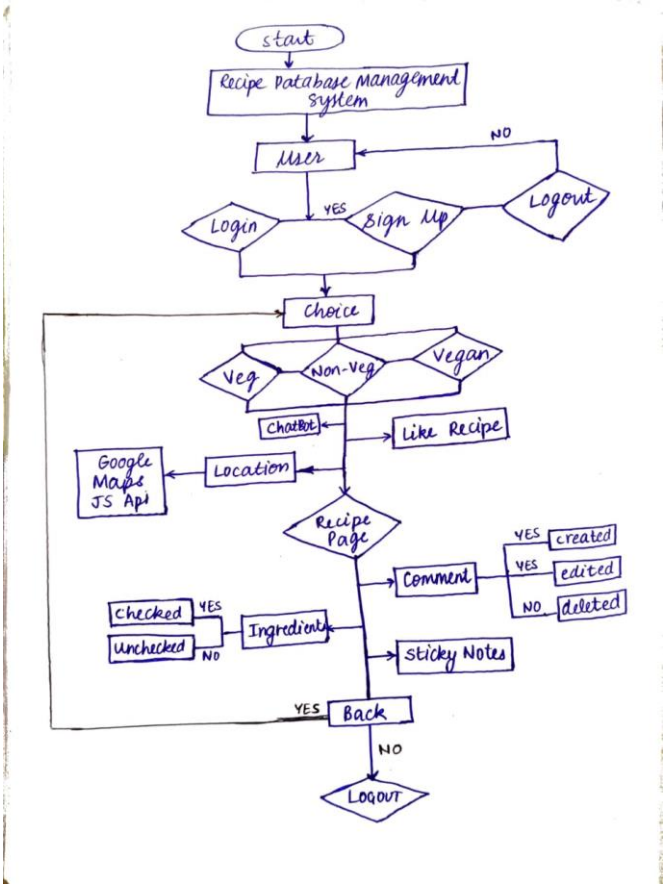

Figure 3: Block Diagram of the project

1.User Interface: The user interacts with the system through a user-friendly interface where they can access various features and functionalities.
2. Authentication: Users can log in or register to access personalized features and preferences, including choosing between vegetarian, vegan, or non-vegetarian options.
3. Recipe Selection: Users can browse through a selection of recipes based on their dietary preferences and interests.
4. Restaurant Locator: Users have the option to find nearby restaurants using an API integration, enabling them to explore dining options related to their chosen recipes.
5. Recipe Details: Upon selecting a recipe, users can view detailed information including ingredients, instructions, and nutritional facts.
6. Like Recipe: Users can like their favorite recipes to save them for later or show appreciation for the recipe.
7. Add Notes/Comments: Users can add personal notes or comments to recipes, sharing their cooking experiences or tips with the community.
8. Ingredient List: Users can generate an ingredient list for selected recipes, facilitating meal preparation by creating a to-do list of necessary ingredients.

Chapter 6

Results and Snapshots

The triumphant launch of Forklore, a cutting-edge Recipe Platform, marks a significant milestone in our journey as budding developers. Through meticulous testing and invaluable user feedback, Forklore has emerged as a beacon of innovation, seamlessly blending culinary exploration with community interaction.

Driven by our passion for coding and gastronomy, Folklore offers a user-friendly interface that simplifies recipe discovery and caters to diverse dietary preferences. With features like personalized recipe recommendations and interactive user engagement, Folklore empowers culinary enthusiasts to embark on exciting culinary adventures from the comfort of their kitchens.

Behind the scenes, our team has worked tirelessly to implement robust administrative functionalities, including inventory management and real-time data processing. These features not only enhance the user experience but also showcase our dedication to delivering a comprehensive and technologically advanced solution.

As students, Forklore represents our commitment to harnessing technology to address real-world challenges, transforming traditional cooking processes into an immersive and dynamic experience. With Forklore, we aspire to inspire and delight users, one recipe at a time.

User Interfaces

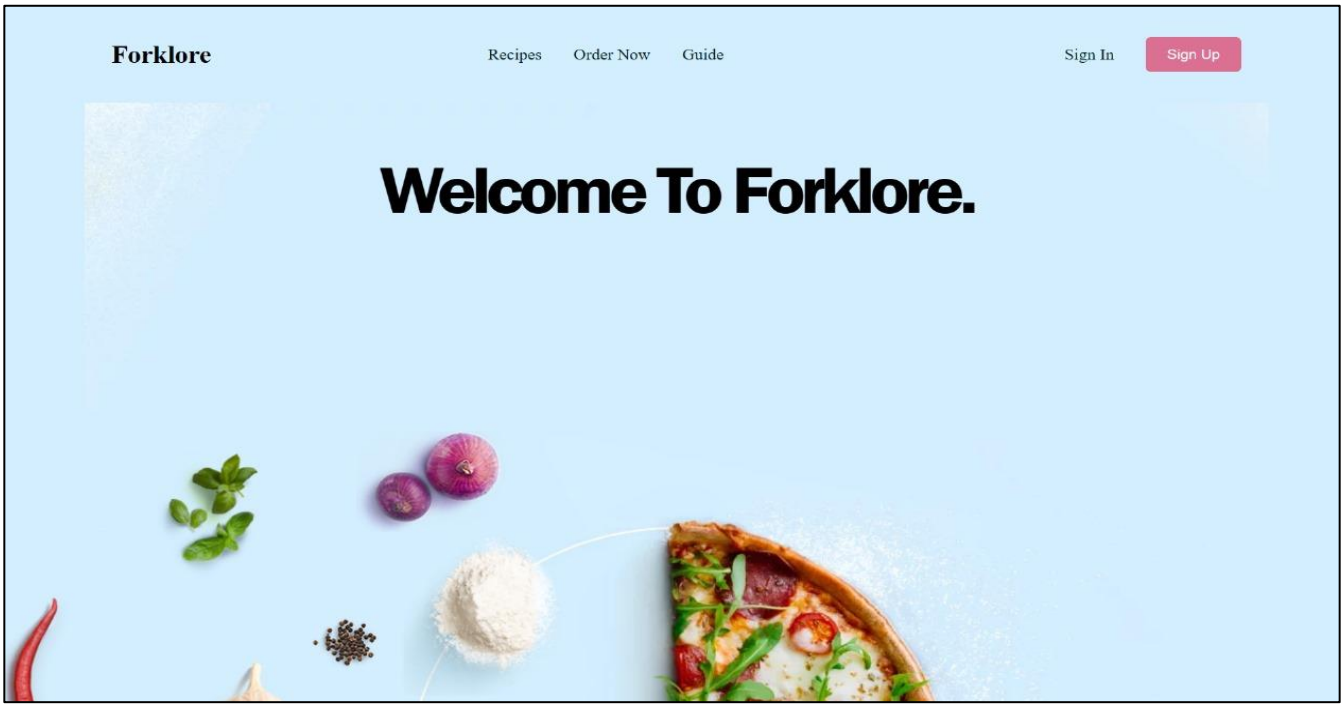

Figure 4: Landing Page

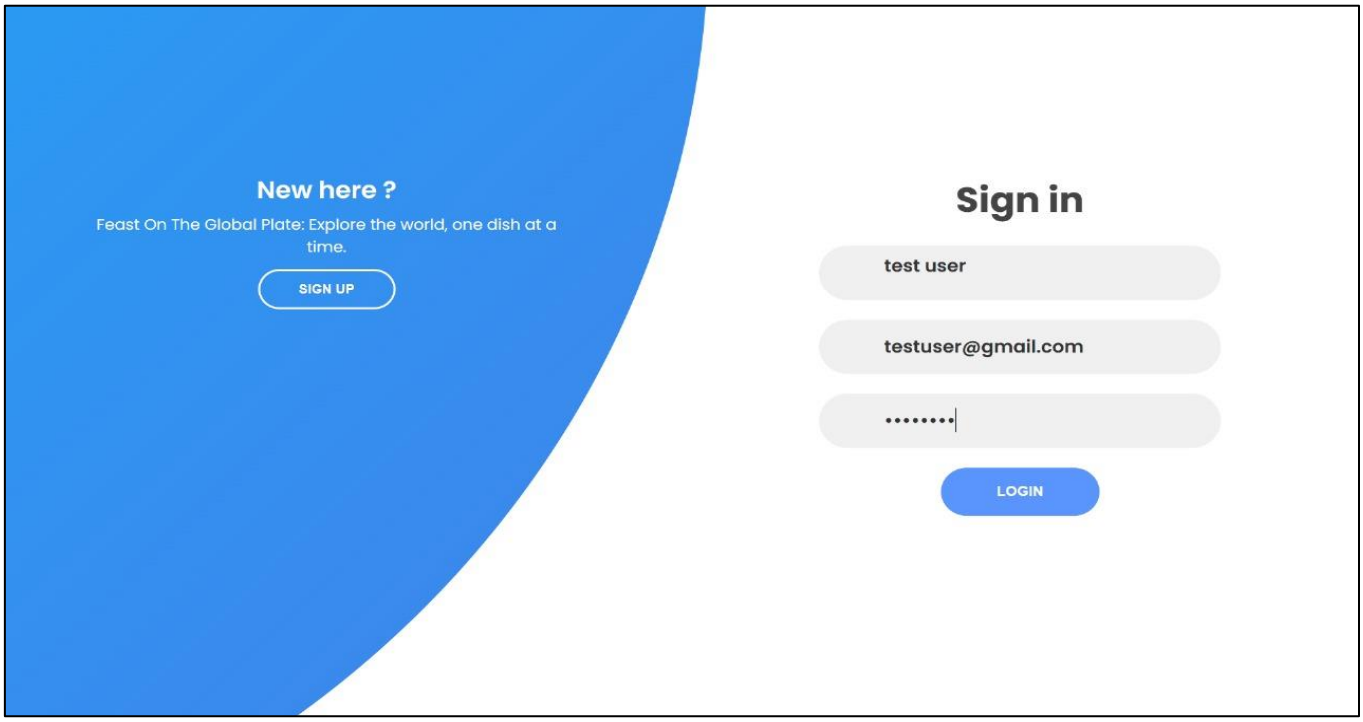

Figure 5: Login Page

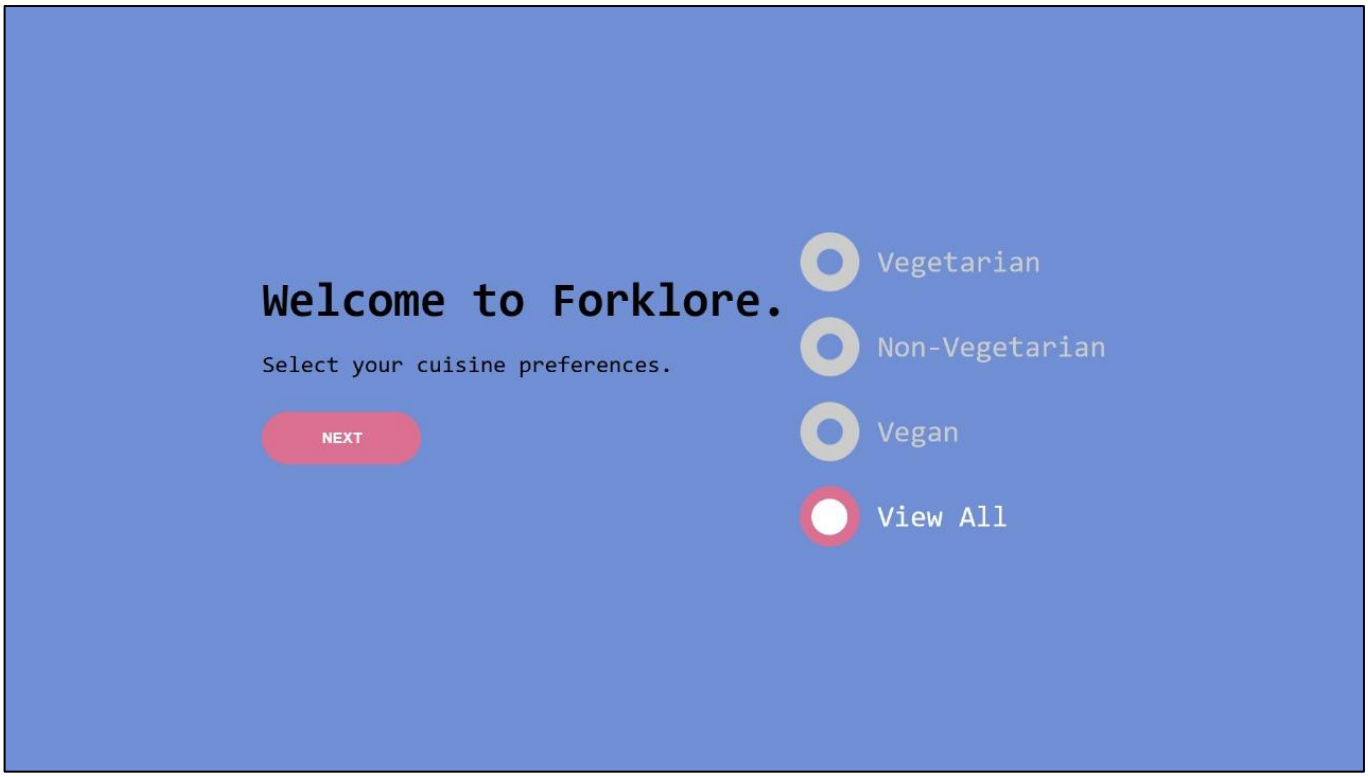

Figure 6: Choice Page

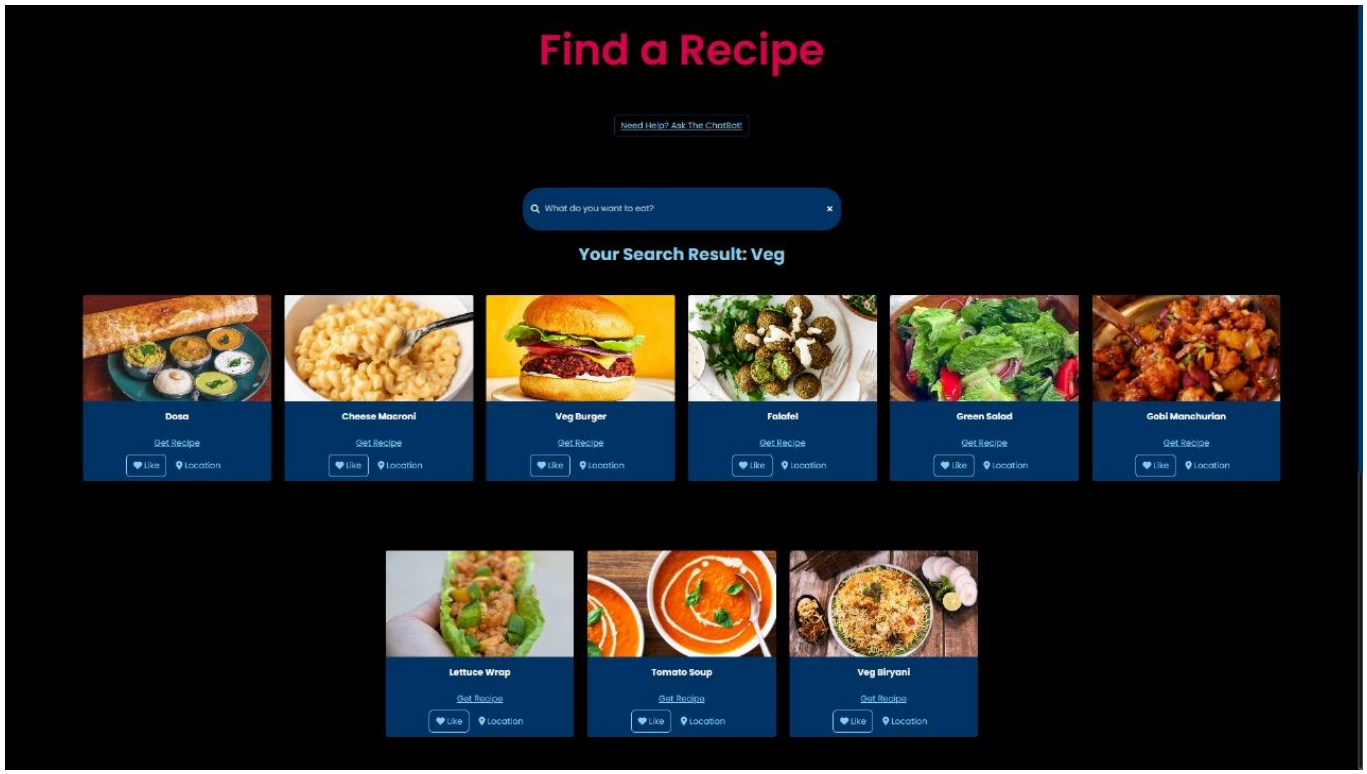

Figure7: Veg Page

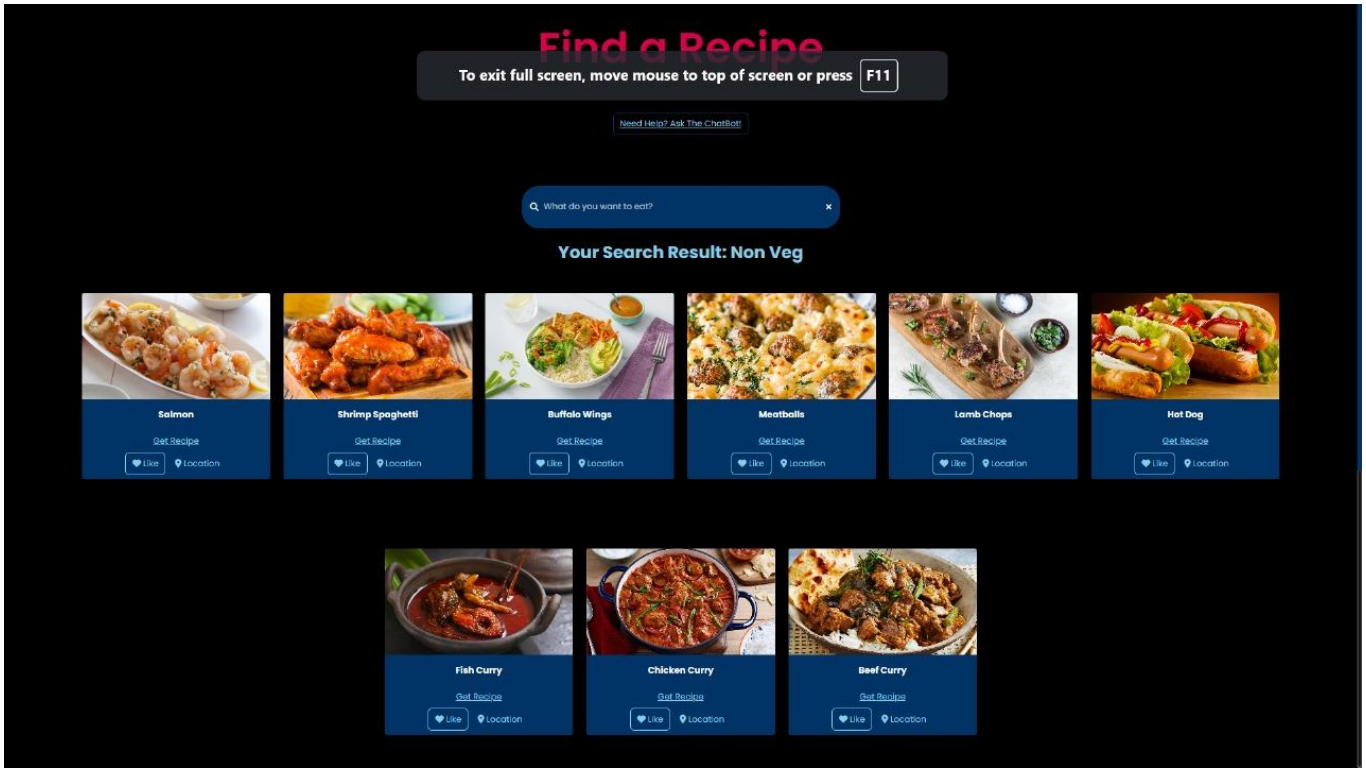

Figure8: Non-Veg Page

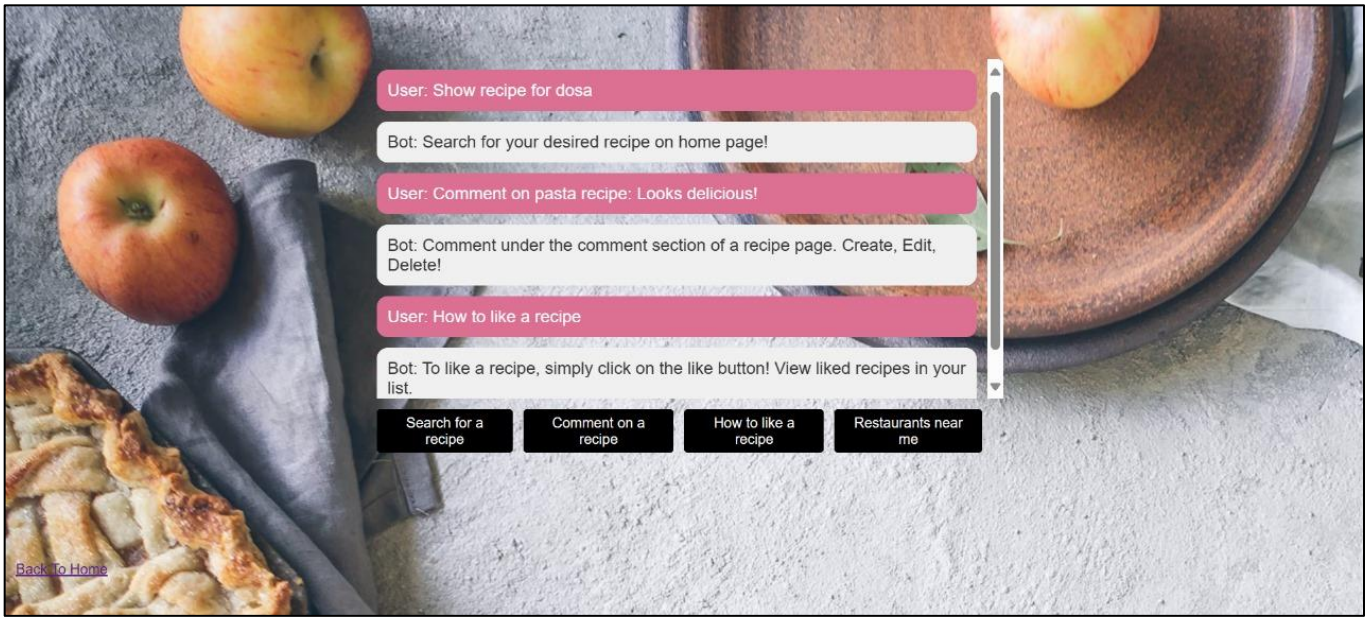

Figure 9: Chat Bot

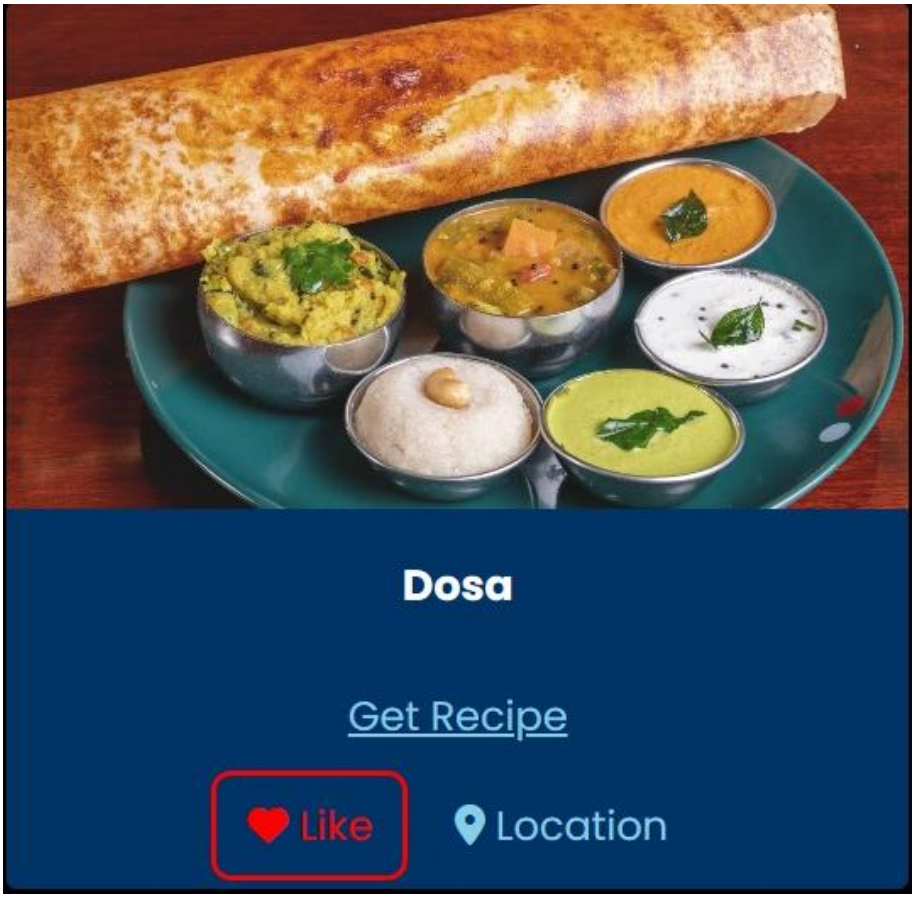

Figure 10: Recipe Card

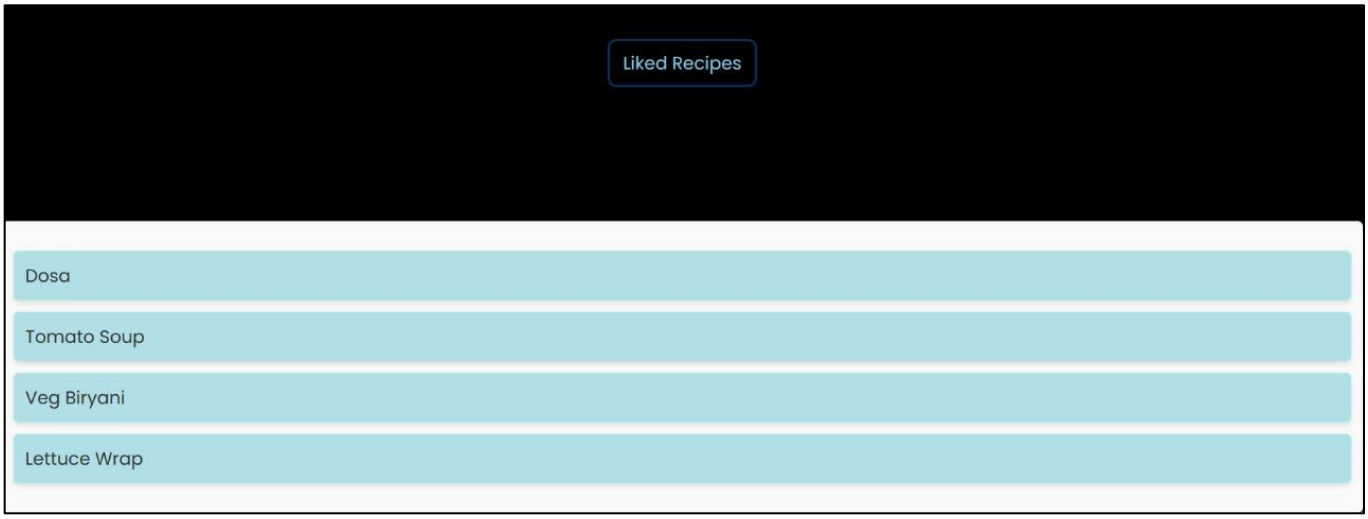

Figure 11: Liked Recipe

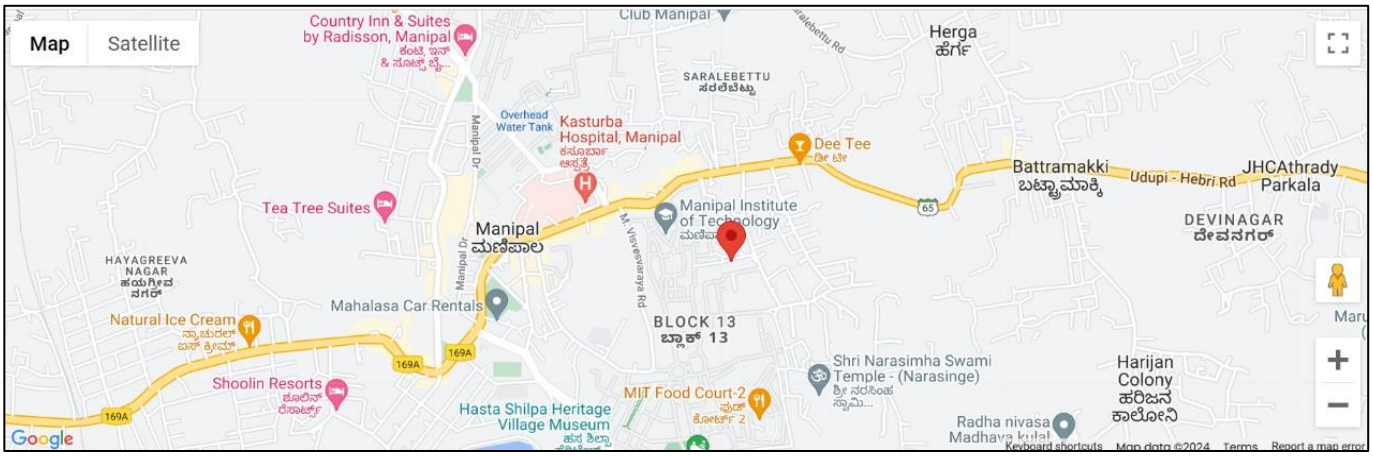

Figure 12: Google Map JavaScript API

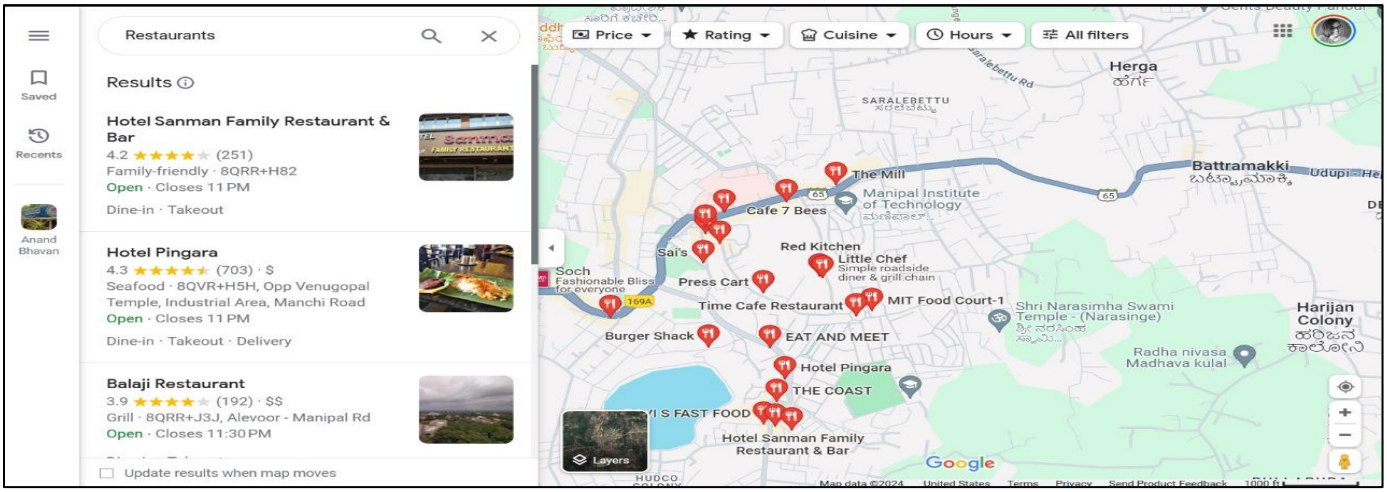

Figure 13: Restaurants Near Me

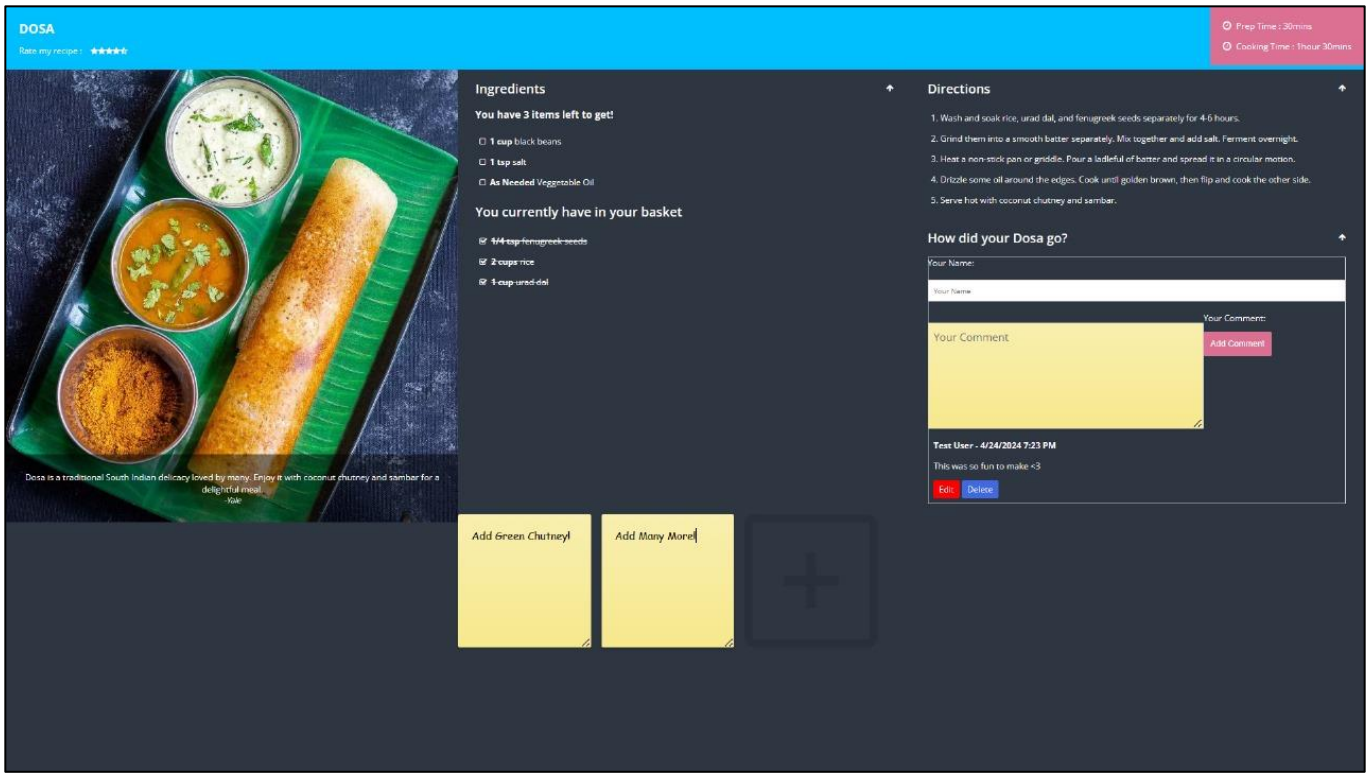

Figure 14: Recipe Page

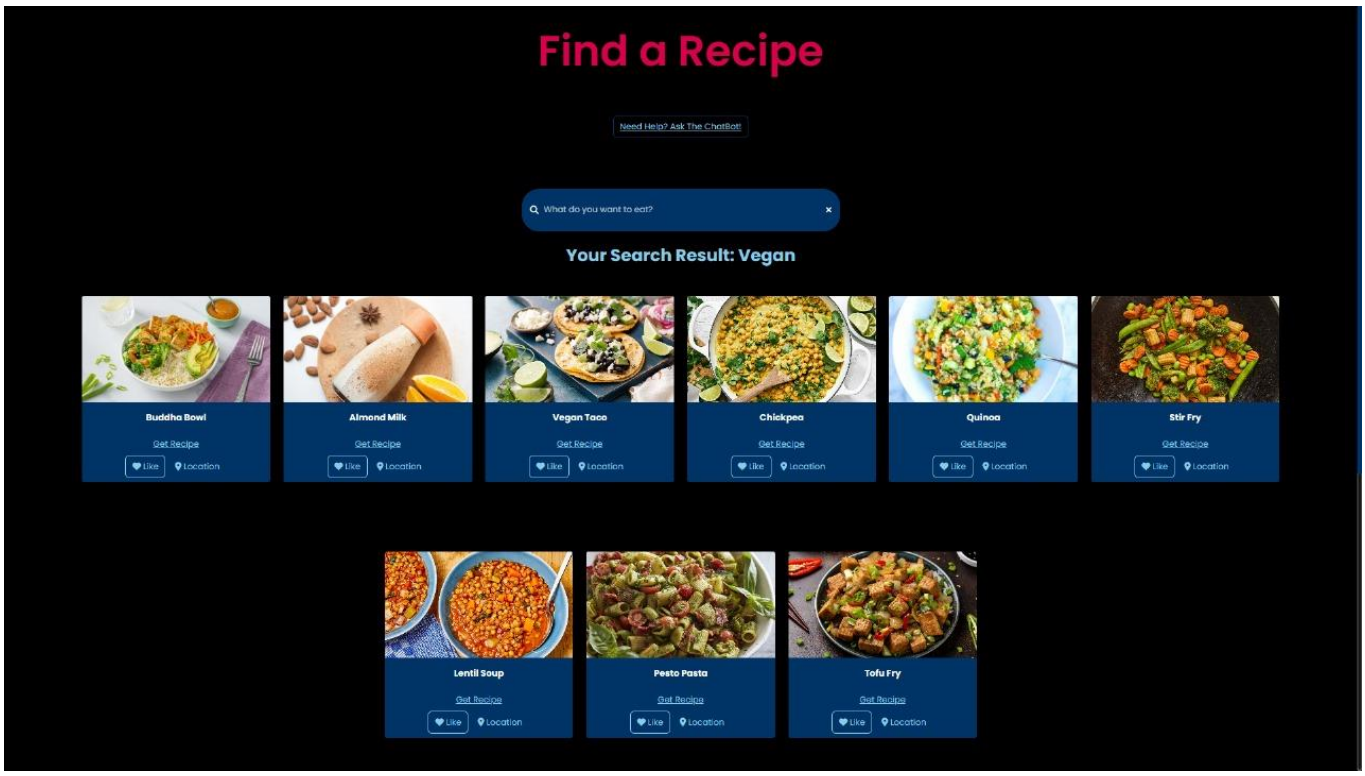

Figure 15: Vegan Page

Database and Tables

Filters

Containing the word:

	Table	Action	Rows	Type	Collation	Size	Overhead
☐	comment_create	Browse Structure Search Insert Empty Drop	14	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	comment_delete	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	comment_edit	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	identity	Browse Structure Search Insert Empty Drop	32	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	likes	Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	recipe_categories	Browse Structure Search Insert Empty Drop	9	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	recipe_details	Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	recipe_ingredients	Browse Structure Search Insert Empty Drop	9	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	unit	Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	user	Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
	10 tables	Sum	75	InnoDB	utf8mb4_general_ci	192.0 KiB	0 B

Check all With selected:

Figure 16: Number of Tables

Figure 17: Login-Register Database

			name	content
Edit	Copy	Delete		
Edit	Copy	Delete	djdj	jik
Edit	Copy	Delete	fhychc,u	,dgxt,,cgcf
Edit	Copy	Delete	hy-9nrx10m[	hjwr 9`bw
Edit	Copy	Delete	,,.	3e23e
Edit	Copy	Delete	Anusha	del

Figure 18: User Database

			recipe_category_id	recipe_name
Edit	Copy	Delete		
Edit	Copy	Delete	112_VEG	biryani
Edit	Copy	Delete	113_VEG	cheese
Edit	Copy	Delete	117_NONVEG	curry
Edit	Copy	Delete	131_NONVEG	salmon
Edit	Copy	Delete	132_NONVEG	shrimp
Edit	Copy	Delete	133_VEG	taco
Edit	Copy	Delete	134_VEG	tomato soup
Edit	Copy	Delete	135_NONVEG	wings

Figure 19: Dietary Preference Table

← T →	ingredient_name	recipe_name	ingerdient_id
Edit Copy Delete	Dosa	Dosa Cheese Macroni	10002
Edit Copy Delete	Cheese	Dosa Cheese Macroni	10009
Edit Copy Delete	Veg Burger	Veg Burger	1123
Edit Copy Delete	Gobi Manchurian	Gobi Manchurian	2134
Edit Copy Delete	Lettuce	Lettuce Wrap	3036
Edit Copy Delete	Green Salad	Falafel Green Salad	345
Edit Copy Delete	Tomato	Tomato Soup	67821
Edit Copy Delete	Macroni	Dosa Cheese Macroni	6789
Edit Copy Delete	Falafel	Falafel Green Salad	78900

Figure 20: Recipe Table

Show all | Number of rows: 25 Filter rows: Se

Extra options

like_id	user_id	recipe_category_id
	1	0
	1	0
	1	0

Figure 21: Likes Table

unit_id	name
1111	Rice
4560	Salt
6700	Beans

Figure 22: Ingredients Table

Chapter 7

Conclusion and Future Work

The development and rollout of Forklore, our innovative Recipe Platform, have been met with resounding success, providing a seamless and enriching culinary experience for users. With its intuitive interface and comprehensive recipe database, Forklore has revolutionized the way users explore and interact with recipes, fostering a vibrant community of culinary enthusiasts.

As we reflect on our achievements, we recognize the potential for further enhancements and expansions to elevate Forklore to new heights. Here are some areas for future development and improvement:

1. **Integration of Advanced Features**: Explore the integration of advanced features such as machine learning algorithms for personalized recipe recommendations, predictive ingredient suggestions, and dynamic recipe adjustments based on user preferences and dietary restrictions.
2. **Enhanced User Engagement**: Implement features to enhance user engagement, such as interactive cooking challenges, virtual cooking classes with renowned chefs, and community-driven recipe contests to encourage user participation and interaction.
3. **Geographical Expansion**: Consider expanding Forklore's reach to cover a broader geographical area, partnering with local chefs and food bloggers to curate region-specific recipes and catering to a more diverse user base.
4. **Mobile Application Development**: Develop a dedicated mobile application for Forklore to provide users with on-the-go access to recipes, cooking tutorials, and community forums, enhancing convenience and accessibility.
5. **Integration with Emerging Technologies**: Explore integration with emerging technologies like augmented reality (AR) or virtual reality (VR) to offer immersive cooking experiences, allowing users to visualize recipes in their own kitchens and interact with virtual cooking assistants.
6. **Enhanced Analytics and Reporting:** Strengthen analytics capabilities to provide users with insights into their cooking habits, ingredient usage patterns, and nutritional intake, empowering them to make informed decisions about their culinary choices.
7. **Accessibility and Inclusivity**: Focus on improving accessibility features to ensure that Forklore is usable by individuals with diverse needs and abilities, including support for screen readers, keyboard navigation, and customizable user interfaces.
8. **Cybersecurity Measures**: Implement robust cybersecurity measures to safeguard user data and protect against potential security threats, including encryption protocols, data anonymization techniques, and regular security audits.

By embracing continued innovation and adaptation to emerging technologies, we aim to keep Forklore at the forefront of culinary exploration, delivering a delightful and enriching experience for users while staying aligned with their evolving needs and expectations.

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Appendix A:

ACM Taxonomy Keywords

[Information Systems] : Database Management , Information Retrieval , Inventory Management , MySQL Database , User Data Storge

[Computing Methodology] : Local Application Design , Offline Accessibility , Reduced Latency, Mobile Application Development

[Security and Privacy] : Access Control , Database Security , Incident Response , Risk Assessment, Security Architecture , Secure communication

Appendix B:

Glossary

BCNF (Boyce-Codd Normal Form) : A specific level of normalization in the database design process , ensuring certain dependencies are satisfied .

ER Diagram (Entity – Relationship Diagram) : A visual representation of the entities and their relationships with the recipe database .

MySQL : A relational database management system used as the backend database for storing and retrieving data in the webpage.

Normalization: The process of organizing data in database to reduce redundancy and improvedata integrity .

User Authentication : The process of verifying the identity of users to ensure secure access within the system .

GUI(Graphical User Interface) : The visual interface that allows the users to interact with the recipe management system usi4ng graphical elements .