
Software Requirements Specification

for

KnowYourCibo

Version 1.0

Prepared by

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Revisions

Version	Primary Author(s)	Description of Version	Date Completed
v1.0	Group- Code Crafters	SRS 1.0	25/01/24

1. Introduction

1.1 Product Scope

1. Goals:

- a. **Streamline Food Reviews:** Simplify the process of reviewing and accessing food-related information for IIT Kanpur's hall canteens and food stalls through an intuitive and user-friendly platform.
- b. **Foster Community Engagement:** Create a community-driven platform where users actively contribute to a comprehensive repository of food reviews.

2. Objectives:

- a. **Comprehensive Database:** Develop and maintain a detailed menu database to enable efficient search and retrieval of specific food items.
- b. **Credible Reviews:** Implement an authentication system to ensure the credibility of user reviews, fostering trust within the community.
- c. **Enhanced User Experience:** Provide additional details such as opening hours, location, promotions, and visual content (food photos) for a more enriched user experience.
- d. **User Reporting Mechanism:** Enable users to report false or inappropriate reviews, contributing to the maintenance of a trustworthy review platform.

3. Purpose:

The purpose of this software is to enhance the overall dining experience within IIT Kanpur's campus. By providing a centralized platform for authentic and community-driven food reviews, the software aims to assist individuals in making informed decisions when exploring diverse culinary options. Additionally, the purpose extends to fostering a sense of community engagement and collaboration, where users actively contribute to building a valuable resource for others.

4. Benefits:

- a. **Informed Decision-Making:** Users gain access to a wealth of authentic reviews, enabling them to make informed decisions when selecting food items or restaurants.
- b. **Community Building:** The platform fosters a sense of community engagement, allowing users to share their experiences and contribute to a collective repository of knowledge.
- c. **Enhanced User Experience:** Additional details such as opening hours, and location, coupled with visual content like food photos, contribute to a more enriched and enjoyable user experience.
- d. **Trustworthy Platform:** The authentication system, moderation features, and user reporting mechanisms ensure a trustworthy environment for dining recommendations, enhancing the reliability of the platform.

1.2 Intended Audience and Document Overview

Intended Audience:

1. Developers:

- **Document Sections of Interest:**
 - Hardware Interfaces
 - Technical Requirements
 - Development Constraints
- **Content Overview:**
 - Developers will find detailed technical requirements, hardware interface specifications, and development constraints to guide the implementation of the food reviewing system..

2. Project Management:

- **Document Sections of Interest:**
 - System Overview
 - Goals and Objectives
 - Assumptions and Dependencies
- **Content Overview:**
 - Project Managers can gain insight into the system's overall goals, objectives, and critical assumptions and dependencies, assisting in project planning and coordination.

3. Marketing Staff:

- **Document Sections of Interest:**
 - System Overview
 - Benefits
- **Content Overview:**
 - Marketing staff can utilize the system overview and benefits sections to understand the product's features, advantages, and target audience.

4. Users:

- **Document Sections of Interest:**
 - System Overview
 - Benefits
 - User Interface Specifications
- **Content Overview:**
 - Users will find information on the system's purpose, benefits, and user interface specifications to understand how to interact with the food reviewing platform.

5. Testers:

- **Document Sections of Interest:**
 - System Overview
 - Assumptions and Dependencies
- **Content Overview:**
 - Testers can refer to the system overview, requirements traceability matrix, and assumptions and dependencies to ensure comprehensive test coverage.

6. Documentation Writers:

- **Document Sections of Interest:**
 - System Overview
 - Interface Specifications
 - Hardware Interfaces
- **Content Overview:**

- Documentation writers will focus on system overview, interface specifications, and hardware interfaces for creating user manuals and technical documentation.

Document Overview:

1. Section 2 :

- This section comprises four points , origin of the product and the description of the platform using a flow chart, it delineates the major functions that the platform or product provides, outlines hardware limitations, addresses security considerations, and establishes programming standards.
- The final segment concludes by outlining the assumptions made that could affect the requirements and dependencies on external factors.

2. Section 3 :

- This section encompasses three key points. Firstly, it furnishes a basic description of how users will interact with the system and includes pictorial views illustrating the user interface, it provides a concise description of the various hardware interfaces and outlines the connections between the product and other specific software components.
- Secondly, it outlines the functional requirements, capturing the intended behavior of the system. Lastly, the section incorporates use case models that encapsulate the entire system and involve all relevant actors.

3. Section 4 :

- This section focuses on non-functional requirements. Firstly, it presents performance requirements for the product along with an explanation of the rationale behind them. Secondly, it outlines safety and security requirements, defining safeguards or actions that must be taken, as well as actions that must be prevented. Lastly, the section provides requirements related to various software quality attributes.

4. Section 5 :

- This section addresses other requirements essential for the platform, such as database requirements.

5. The sequence of reading the document:

- **Developers, Documentation writers and end-users:** They need to read the whole document. To get a better idea, after reading section **2.2**, they should read section **3.1, 3.2 and 3.3**.
- **Testers:** For a better understanding of working of the system, they should mainly read section **3.3** (use cases).

1.3 Definitions, Acronyms and Abbreviations

Term	Definition
API	Application Programming Interface
CSS	Cascading Style Sheets
DB	Database
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IBM	International Business Machines
IDE	Integrated Development Environment
IEEE	Institute of Electrical and Electronics Engineers
IITK	Indian Institute of Technology, Kanpur
JS	JavaScript
NIC	National Informatics Centre
Restaurant	List of all canteens and stalls available in IIT Kanpur
SRS	Software Requirement Specification
UML	Unified Modeling Language
WCAG	Web Content Accessibility Guidelines

1.4 Document Conventions

- This document adheres to the IEEE formatting requirements, utilizing Arial font with a size of 11 for the entire text.
- Section titles use font size 21, subsection titles use font size 17 and Subsections of subsection titles use font size 15.
- Sub headings use font size 13.
- The text is formatted with single spacing throughout the document.
- Consistent 1-inch margins are in accordance with the IEEE template.
- Important words in the document are made bold to distinguish them from the rest of the text.

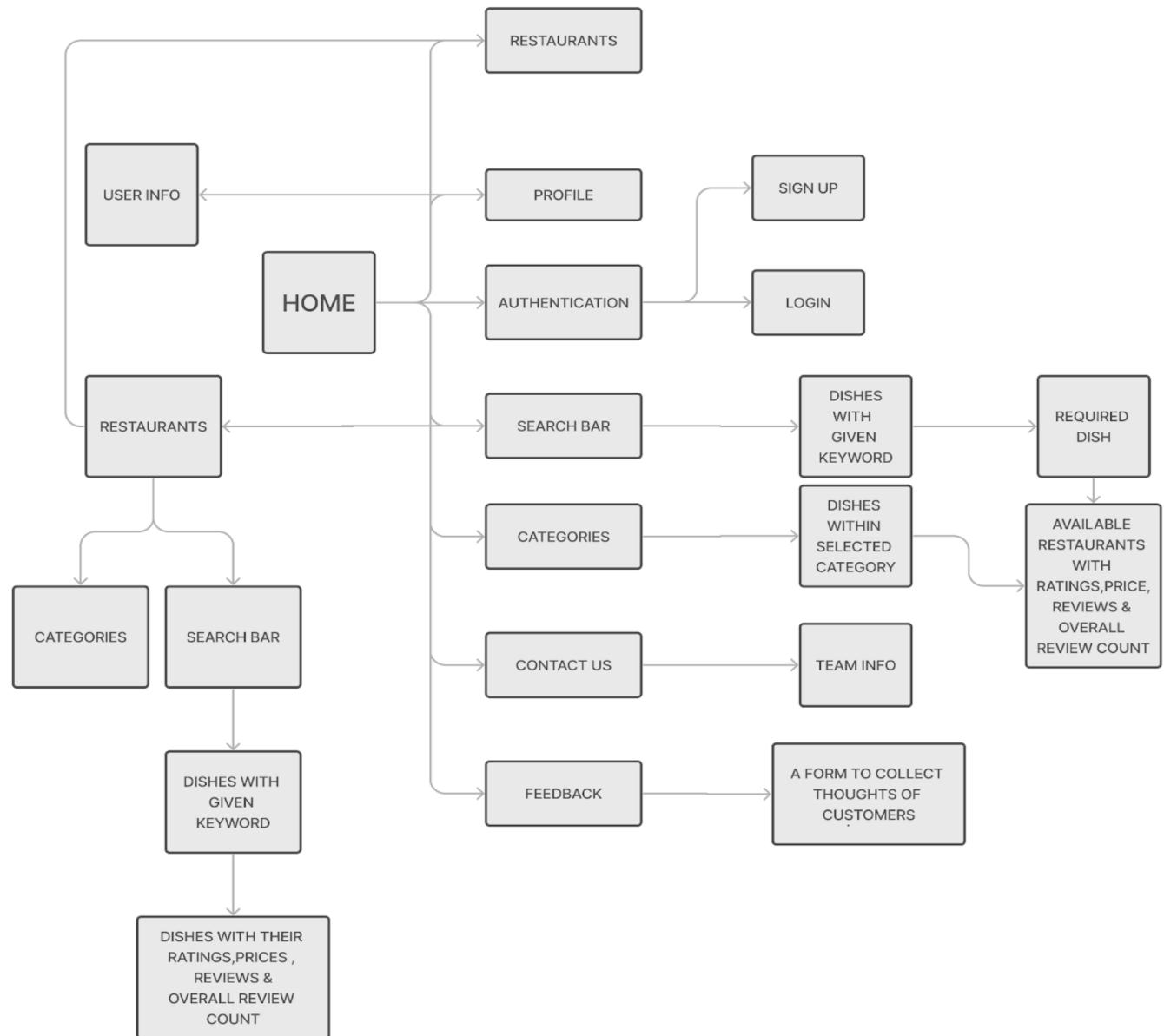
1.5 References and Acknowledgments

- 1.** IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.
- 2.** Explore the UML sequence diagram - IBM.

2. Overall Description

2.1 Product Overview

The food reviewing system for IIT Kanpur is an innovative and self-contained product designed to elevate the dining experience within the campus community. This system is not part of an existing product family, nor does it replace any current systems. It emerges as a fresh, standalone solution tailored to the unique culinary landscape of IIT Kanpur. The product is born out of the necessity to address the diverse food options available on campus and create a community-driven platform for users to share authentic reviews.



The product is a web-based application designed to serve as an interactive dining guide, allowing users to discover and evaluate restaurants and their offerings. Its core components include a personalized user information section, a home page for navigation, and a restaurant module that sorts dining options into categories and presents them according to user queries and preferences.

A robust authentication system ensures secure user login and sign-up. The search functionality is a key feature, enabling users to find dishes using keywords or by browsing categories. Detailed information on dishes, including ratings, prices, and reviews, is readily available. Additionally, the platform offers insight into the team behind the service and collects user feedback, underscoring its commitment to user satisfaction and continuous improvement. As a new and unique offering, the food reviewing system is envisioned to foster a sense of culinary exploration and community engagement among students, faculty, staff, and external visitors. Overall, the platform aims to provide a seamless and informative experience for users seeking dining options that align with their tastes and expectations.

2.2 Product Functionality

The major functions that the system must perform or enable the user to perform are:

1. Login/Signup:

Allow users to create accounts and log in to access personalized features like giving ratings and reviews, enhancing user engagement and data personalization.

2. Search:

Implement a robust search functionality enabling users to find restaurants or items efficiently within the system.

3. Restaurants :

Display a comprehensive list of available restaurants, providing users with an overview of their options.

4. Profile Page:

Offer a personalized profile page for users to manage and customize their information, preferences and favorite dishes.

5. Favorite Choices of Food Items:

Enable users to mark food items as favorites, facilitating quick access.

6. Rating and Reviewing of Food Items:

Allow users to rate and review food items, fostering a sense of community and aiding others in decision-making.

7. Contact Page:

A dedicated page with contact information of service providers, promoting communication and customer support.

8. Feedback Page:

Include a user-friendly feedback page where users can share their thoughts on the system, user experience, or any other comments, contributing to continuous improvement and customer satisfaction.

2.3 Design and Implementation Constraints

1. Memory Requirements:

All the data of restaurants ,food items(menu) and personal user's information has to be stored in our database.

2. Technology and Tools:

Mandatory use of specific technologies and tools, such as MongoDB for the database, Visual Studio Code as the integrated development environment (IDE), and Node.js for backend integration.

Development must conform to specific language requirements, such as HTML, CSS, and JS for frontend development, and adhere to coding standards for maintainability.

3. Communications Protocols:

The system must follow established communication protocols, including HTTP and HTTPS, for secure and standardized data exchange between the frontend and backend components.

4. Design Conventions and Programming Standards:

Since the software would be maintained by people other than the developers, the Object Oriented Programming Paradigm is to be used to enhance the software's maintainability.

2.4 Assumptions and Dependencies

Assumptions:

1. User Base:

It is assumed that the primary users of the system will be students, faculty, and staff of IIT Kanpur, who have a basic understanding of using web applications.

2. Data Accuracy:

The restaurant and dish information provided to the system for initial setup is accurate and up-to-date.

3. Campus Participation:

Restaurants on campus are willing to participate and provide necessary data for the platform.

4. Scalability:

Initial infrastructure will support the anticipated user load without significant performance degradation.

5. Review integrity:

Users will provide honest and respectful reviews without the need for heavy moderation.

6. Security Compliance:

The authentication system will be compliant with the institute's and google's security policies and data privacy regulations.

Dependencies:

1. Software Dependencies:

- a. We will be using CSS styling and some additional JavaScript libraries for adding animation to the website.
- b. We will be using some REST APIs for sign-in.
- c. The project relies on the stability and compatibility of the chosen database system (e.g., MongoDB) for storing user data, reviews, and system information.

2. Authentication System:

- a. Dependency on a third-party authentication service(Google mail) or IIT Kanpur's authentication system for secure user login and sign-up.

3. Specific Requirements

3.1 External Interface Requirements

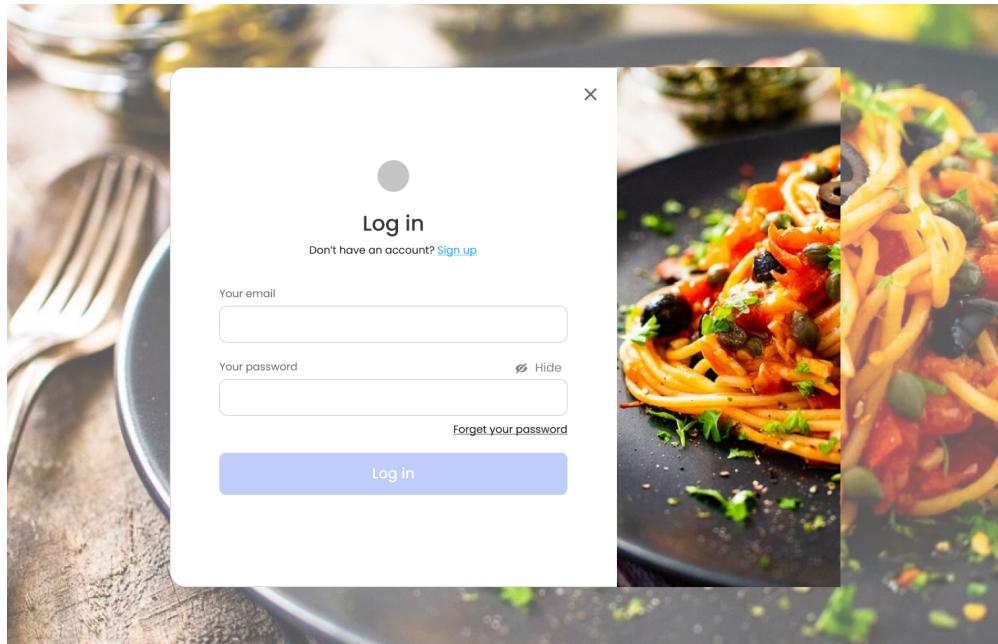
3.1.1 User Interfaces

The software is accessible through a singular website, allowing users the flexibility to either log in, sign up as a new user, or directly explore features such as searching for dishes or restaurants, and viewing associated ratings and reviews without the need for authentication. It is important to note that while users can freely access information about dishes or restaurants without the requirement of logging in or signing up, the process of providing a rating or review mandates user authentication through login or sign-up. This deliberate measure is in place to ensure that the act of contributing feedback is facilitated by authenticated users, thereby maintaining the integrity and reliability of the rating and review system.

Each part of the user interface intends to be as user-friendly as possible. The fonts and buttons used will be intended to be very fast and easy to load on web pages. The pages will be kept light in space so that it won't take a long time for the page to load.

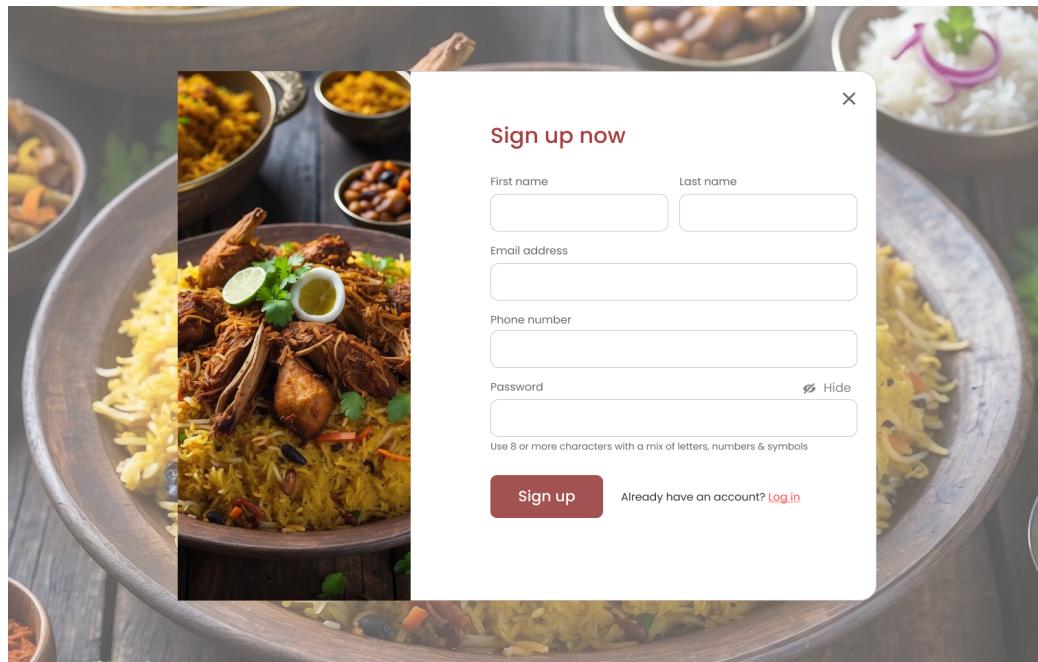
- **Front-end software** - HTML, CSS, JS
- **Back-end software** - Node.js, MongoDB

1. Login Page:



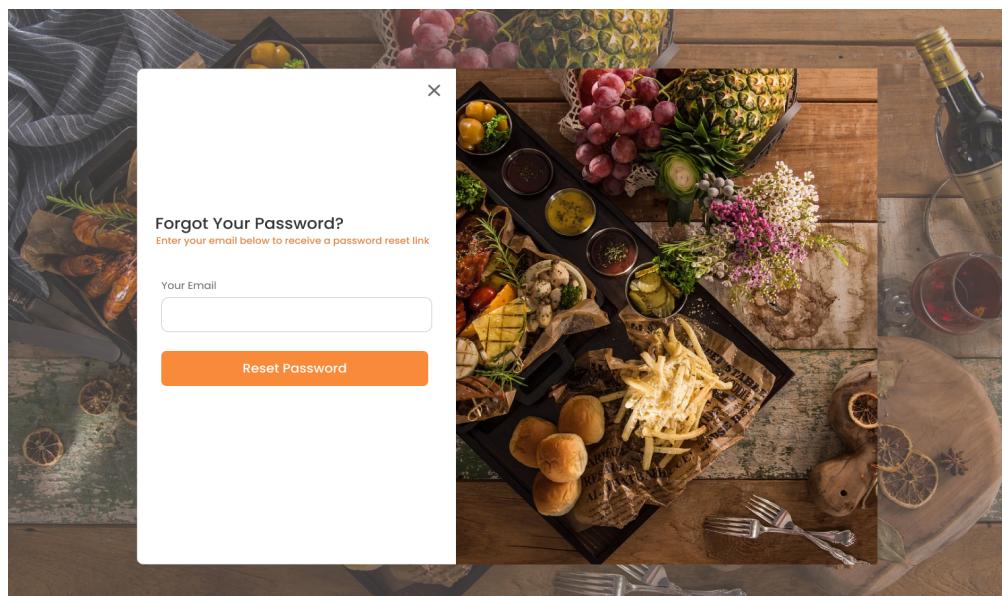
The "Log in" page is a critical component of "Know Your Cibo," providing a secure entry point for returning users. It prompts for email and password credentials, includes a password visibility toggle for user convenience, and offers a link for users who need to recover forgotten passwords. Additionally, it provides an option for new users to navigate to the "Sign Up" page, ensuring seamless navigation between user authentication states.

2. SignUp Page:



The "Sign Up" page of "Know Your Cibo" serves as the entry point for new users to create an account, essential for a personalized experience on the platform. It prompts the user to enter personal information, such as first and last name, email address, phone number, and a secure password. The form enforces strong password creation for security and provides a direct link to the login page for existing users, streamlining the process of joining and navigating the food reviewing community.

3. Forgot Password:



The "Forgot Your Password?" page on "Know Your Cibo" provides users with a secure method to reset their password. Upon entering their registered email address, users will receive a password reset link. This feature ensures that users can regain access to their accounts with minimal disruption, maintaining the security and integrity of user access within the system.

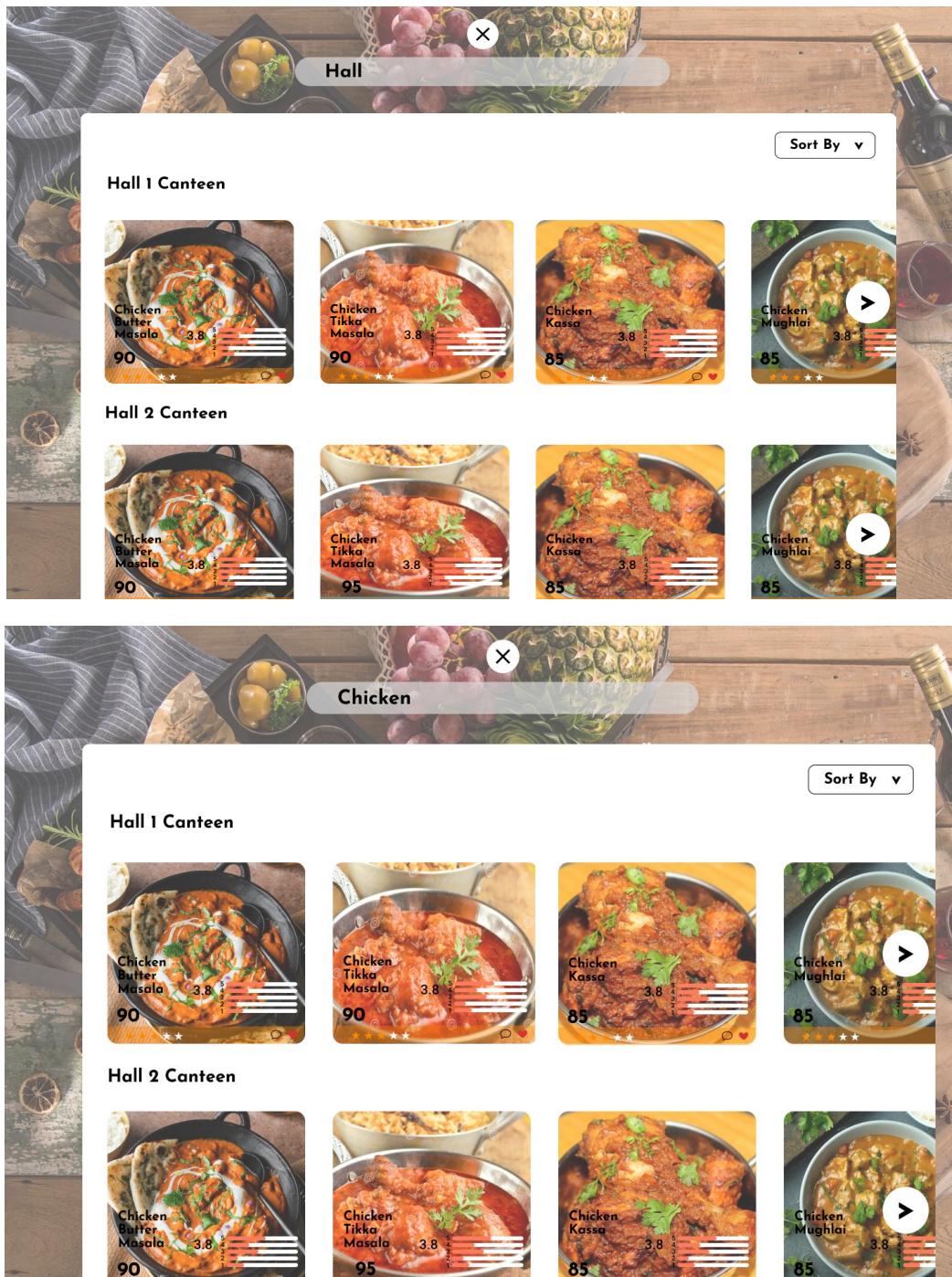
4. View and Edit Profile:

The image consists of two screenshots of the KnowYourCibo website. The top screenshot shows the User Profile page for a user named Mahathi. It features a circular profile picture, the name 'Mahathi' in red, and the email 'gnagal22@iitk.ac.in'. Below this are statistics: 22 Favorites, 67 Ratings, and 5 Reviews. An 'Edit profile' button is at the bottom. To the right, there's a section titled 'FAVORITE PICKS' with three pizza options: Farmhouse (459), Peppy Paneer (459), and Veggie Paradise (539). The bottom screenshot shows the 'Edit Profile' page, which has fields for First name, Last name, Email address, Phone number, and Password. A note says 'Use 8 or more characters with a mix of letters, numbers & symbols'. An 'Update' button is at the bottom right. The background of this page is orange.

The 'Edit Profile' and 'User Profile' pages are interconnected facets of the "Know Your Cibo" user interface. The 'Edit Profile' page allows users to update their personal details such as name, email, phone number, and password to maintain their account's accuracy and security. The 'User Profile' page displays the user's chosen favorites, ratings, and

reviews, enhancing the personalized experience by allowing quick access to preferred items and a summary of past interactions on the platform.

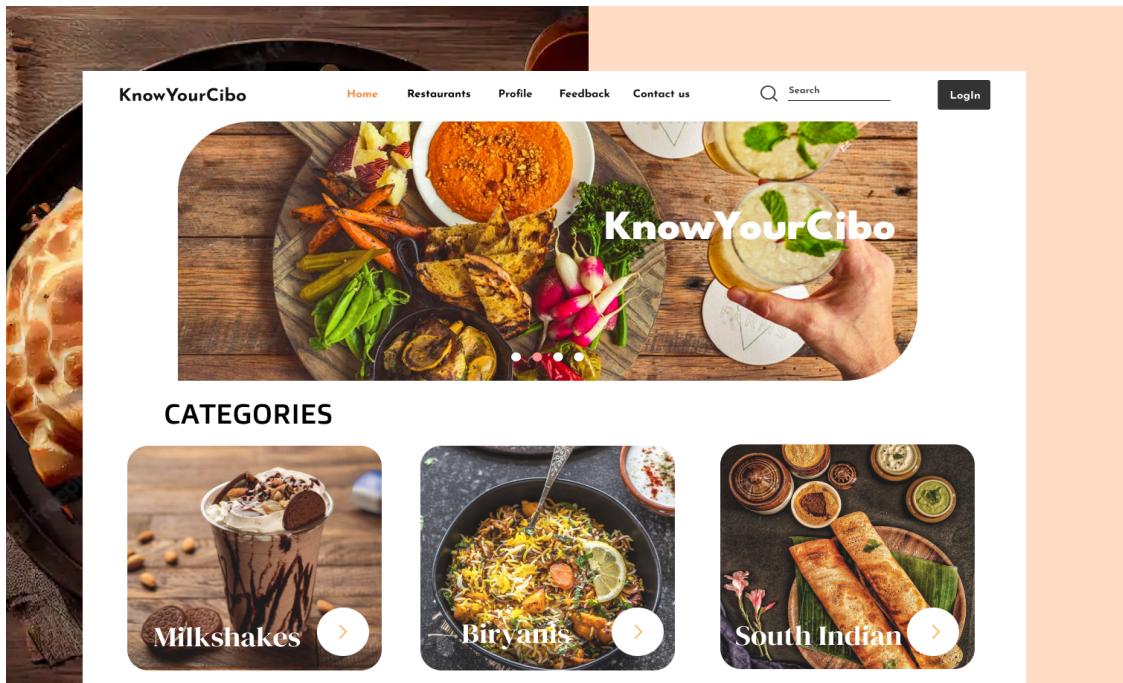
5. Functionality of search:



The pages feature a categorized display of dishes from different restaurants, providing users with a visual menu to browse. Each dish is accompanied by an image, name, price, and a

rating system, allowing for an intuitive and engaging user experience. The pages are designed to facilitate easy comparison and selection of dishes based on user preference, with functionality to sort the items and navigate for more details or to place orders directly from the platform.

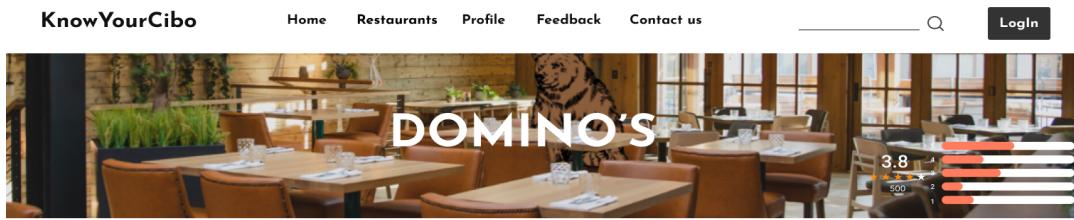
6. Home Page:



This page serves as the homepage for "Know Your Cibo," a food discovery platform. It features a navigation bar for easy access to various sections like Home, Restaurants, Profile, Feedback, and Contact Us. A search bar is prominently displayed for quick searches. The main focus of the page is the "Categories" section, showcasing different food categories like Milkshakes, Biryanis, and South Indian cuisine, each with a visually appealing image and a call-to-action button, inviting users to explore the offerings within each category. The design aims to engage users with an attractive and intuitive layout, encouraging exploration and interaction with the site's content.

7. Restaurant Page, Ratings and Reviews:

The pages from the "KnowYourCibo" website offer a user-centric interface for engaging with the food community at IIT Kanpur. The restaurant page provides a visual and interactive menu of dishes available at specific restaurants, complete with images, prices, and user ratings, allowing for informed dining decisions.

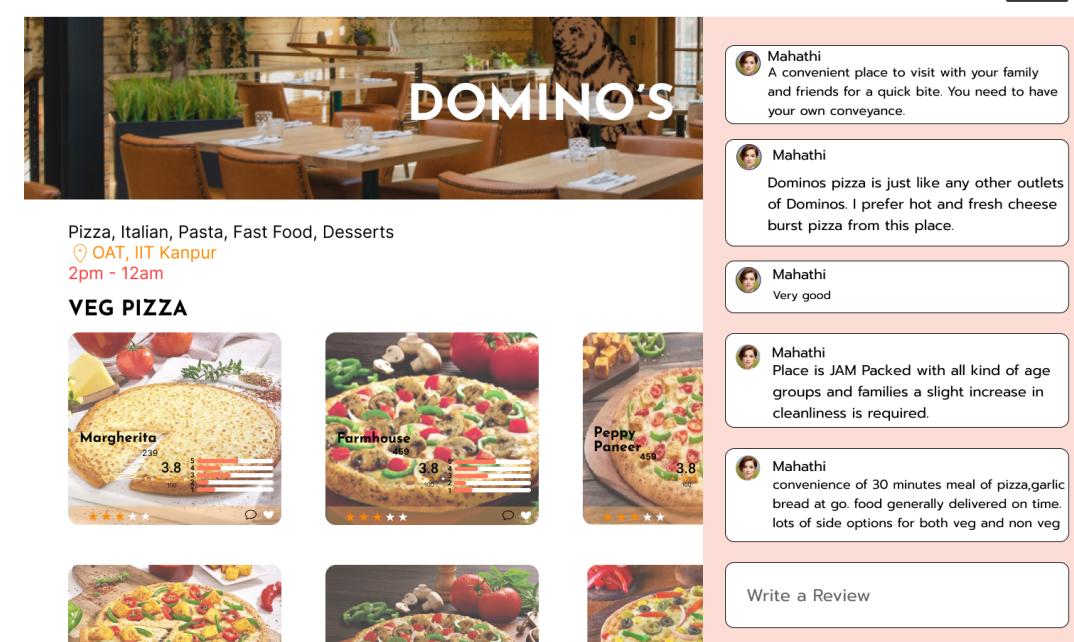


Pizza, Italian, Pasta, Fast Food, Desserts
 OAT, IIT Kanpur
 2pm - 12am

VEG PIZZA

Pizza Type	Rating	Reviews
Margherita	3.8	238
Farmhouse	3.8	469
Peppy Paneer	3.8	459
Veggie Paradise	3.8	539

KnowYourCibo



Pizza, Italian, Pasta, Fast Food, Desserts
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Pizza Type	Rating	Reviews
Margherita	3.8	238
Farmhouse	3.8	469
Peppy Paneer	3.8	459

Mahathi
 A convenient place to visit with your family and friends for a quick bite. You need to have your own conveyance.

Mahathi
 Dominos pizza is just like any other outlets of Dominos. I prefer hot and fresh cheese burst pizza from this place.

Mahathi
 Very good

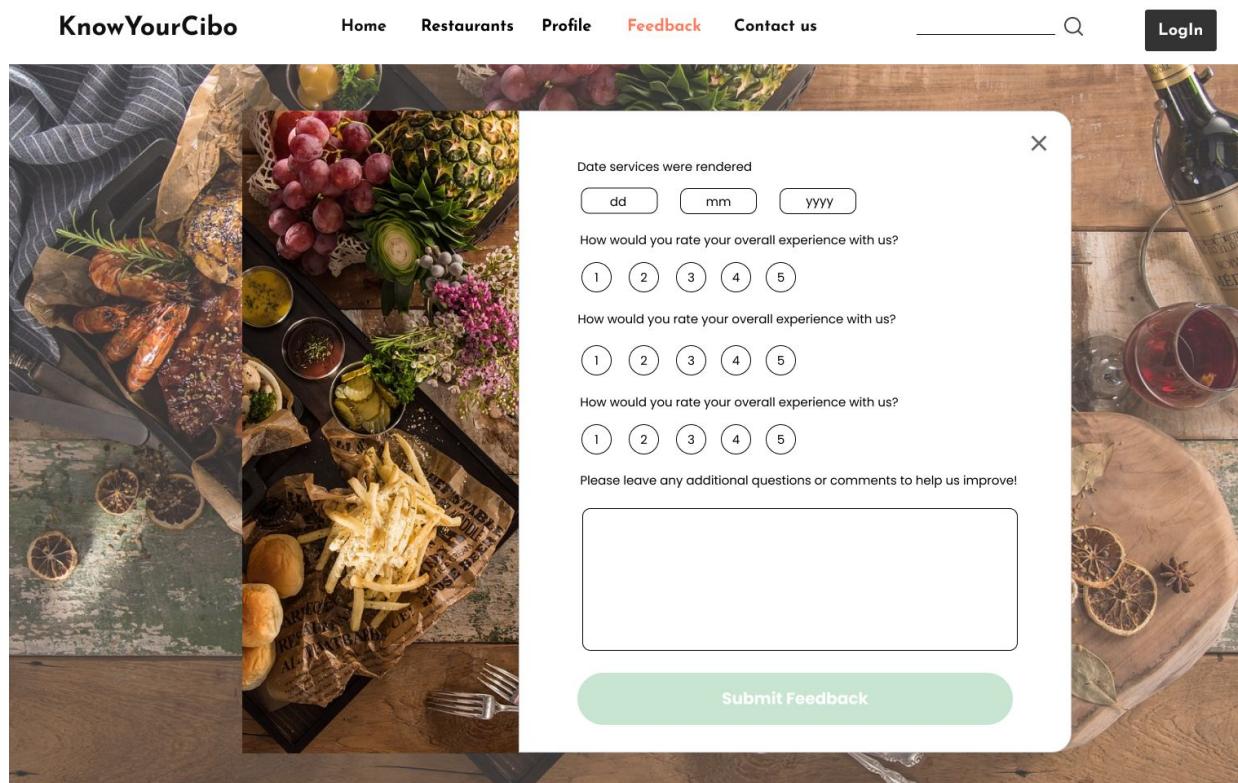
Mahathi
 Place is JAM Packed with all kind of age groups and families a slight increase in cleanliness is required.

Mahathi
 convenience of 30 minutes meal of pizza,garlic bread at go. food generally delivered on time. lots of side options for both veg and non veg

Write a Review

8. Feedback form:

The "Feedback" page on "Know Your Cibo" is designed for users to rate their dining experiences and provide detailed feedback. It features a date selection for service rendered, a rating scale for multiple aspects of the service, and a text box for additional comments or suggestions. This functionality allows the platform to gather actionable insights to enhance service quality and user satisfaction.



3.1.2 Hardware Interfaces

- **Internet Access Hardware:**

To enable internet access, the system requires a modem, a network interface card (NIC), and a network connection.

- **User Devices:**

The software interacts with various user devices, including smartphones, tablets, desktops, and laptops. Users access the system through web browsers installed on these devices.

- **Web Server:**

A web server is required to host and serve the food reviewing system. This server-side component ensures the delivery of web pages and handles user requests.

These hardware interfaces facilitate the essential interactions between the software product and the underlying hardware components. Users can access the system through a variety of devices with internet connectivity, while the web server hosts and manages the system on the server side.

3.1.3 Software Interfaces

To facilitate the system development process, the following software requirements are essential:

1. Web Browser (with internet access):

Utilized during development for debugging and testing purposes.

2. HTML, CSS, JS:

Essential building blocks for developing the responsive web components, serving as the front end of the web application.

3. Node.js:

Required to integrate the backend of the web application, facilitating server-side functionality.

This layer contains the server logic and is responsible for processing API requests, executing business logic, handling authentication, and interfacing with the MongoDB database.

4. MongoDB:

Utilized for communication with the server database, handling data storage and retrieval.

5. Application programming interface(API Layer):

The web application's backend will expose a RESTful API created using Node.js. This API will accept HTTP requests from the front end and communicate with the database to fetch or store data.

6. External Interfaces:

Third-Party Services: The application uses external services (such as email services, or social media integration), so the backend will interface with these through their APIs.

Web Browsers: The front end will be designed to be compatible across different web browsers and will interface with them through standard web technologies.

3.2 Functional Requirements

3.2.1 User Account Management:

- **Registration and Login:** Users will be able to register and log in to the platform using their credentials.
- **Profile Management:** Allowing users to manage their profiles, including adding favorites and updating personal information like username, password etc.

3.2.2 Search functionality:

- Enables users to search for specific food items and restaurants within the comprehensive database.
- Allows filtering and sorting of food items and restaurants based on different criteria like veg, non-veg, ratings, price etc...

3.2.3 Review and rating system:

- **Submitting Reviews:** Users will be able to write reviews for different food items and restaurants once they access a particular food item in a particular restaurant.
- **Rating Mechanism:** A system where users can rate food items on a predefined scale (e.g., 1 to 5 stars) to rate both food items and restaurants.

3.2.5 Restaurant info:

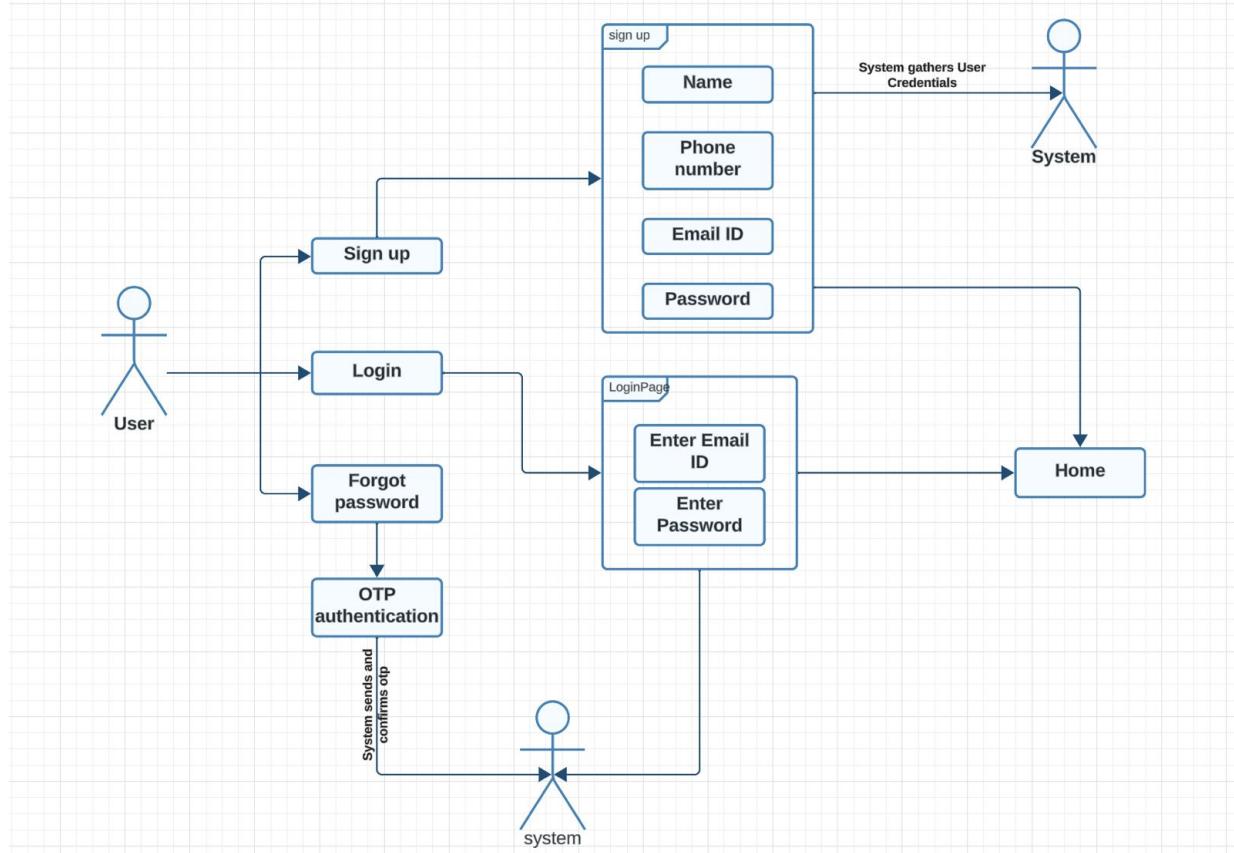
- Displays detailed information about each food stall, including menus, opening hours, and location.
- Displays the rating, price, reviews and total review count of the required dish.

3.2.6 User interaction and feedback:

- **Contact Us:** Facilitate a section where contact information of service providers is provided.
- **Feedback System:** Implement a mechanism for users to provide feedback about the platform.

3.3 Use Case Model

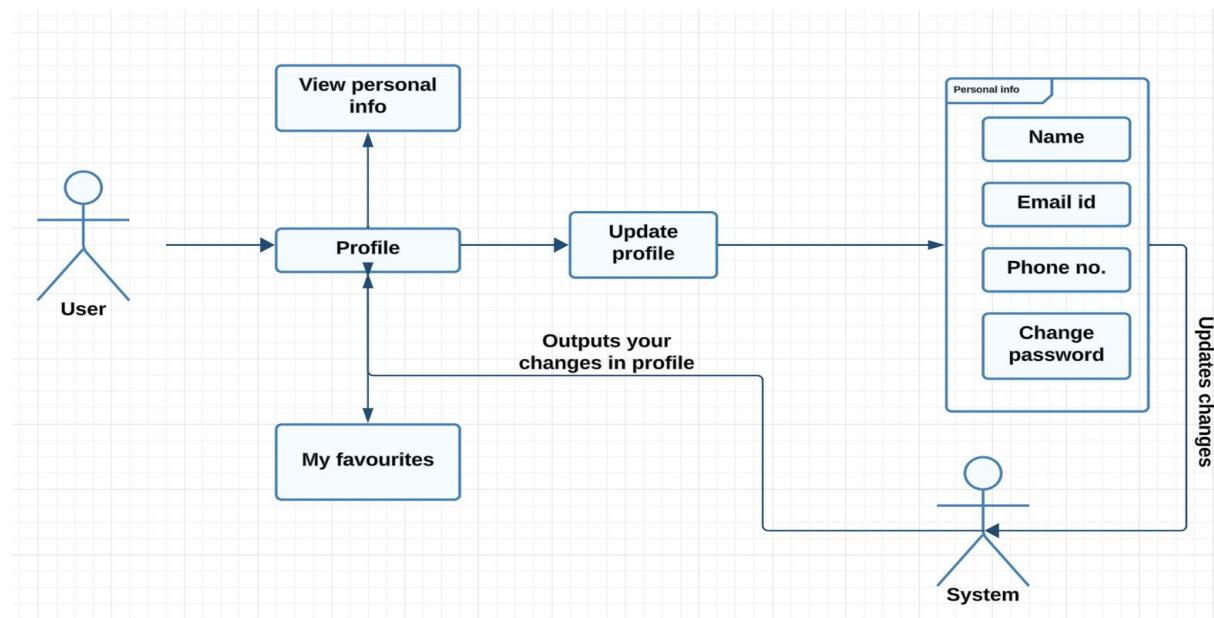
3.3.1 Use Case #1: Authentication



Author	K S U Rithwin
Purpose	To facilitate users in securely accessing their personal accounts on the system by registering a new account, logging into an existing account, or recovering access to an account via a password reset process.
Requirements Traceability	User registration, User login, Password recovery.

Priority	Medium - As these are essential functions for users to give reviews
Preconditions	<ul style="list-style-type: none"> • The user is at the landing page of the application. • For login, the user must already be registered. • For password recovery, the user must have a registered email ID.
Postconditions	<ul style="list-style-type: none"> • Upon successful signup, the user is registered and redirected to the homepage. • Upon successful login, the user is authenticated and given access to their account. • Upon successful password recovery, the user is able to reset their password and regain access to their account.
Actors	<ul style="list-style-type: none"> • Primary Actor: User • Secondary Actor: System (Authentication Server)
Exceptions	<ul style="list-style-type: none"> • Signup with an already existing email or phone number. • Login with incorrect credentials. • Password recovery attempt fails due to invalid email ID or incorrect OTP.
Includes	None
Notes/Issues	<ul style="list-style-type: none"> • The process for ensuring the uniqueness of email IDs and phone numbers during signup needs to be defined. • The security of data transmission during the signup and login process needs to be ensured. • The password recovery process should have a secure OTP generation and validation system.

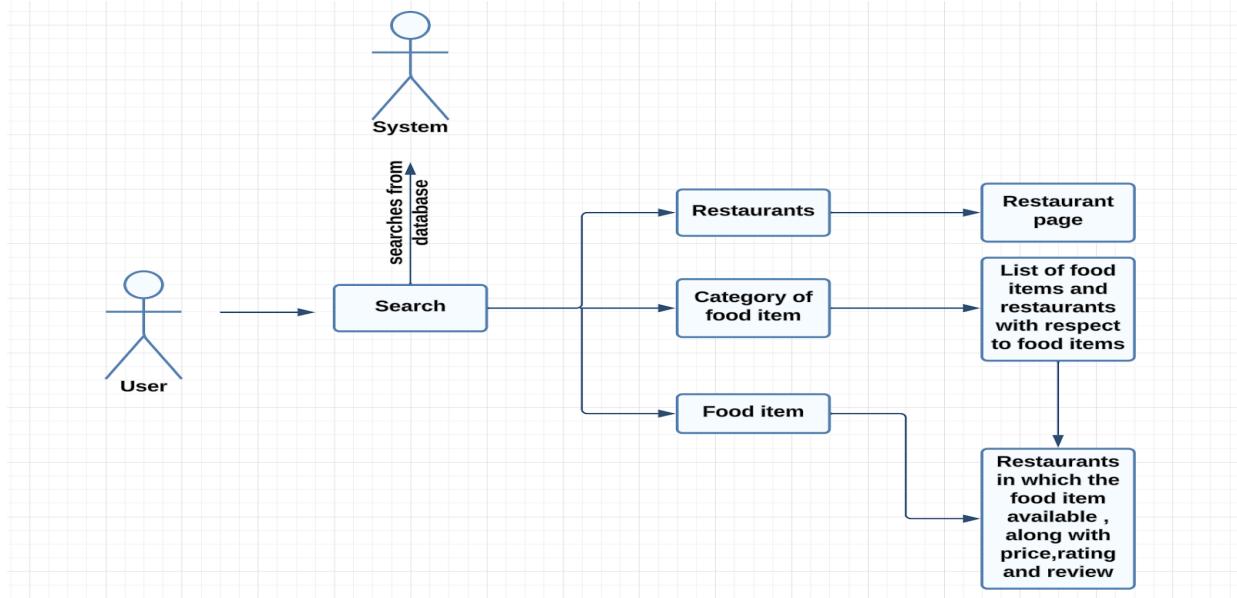
3.3.2 Use Case #2: Updating User Profile Page



Author	R V S Havish
Purpose	To allow users to view and update their personal information, and manage their favorite items on the system for a personalized experience.
Requirements Traceability	View Personal Information, Update Personal Profile, Manage Favorites
Priority	Medium - While not critical to system function, these features greatly enhance user experience and personalization.
Preconditions	<ul style="list-style-type: none"> • Users must be logged into their account. • User's profile information must exist in the system.

Postconditions	<ul style="list-style-type: none"> User's personal information is displayed or updated correctly. Changes to the profile are saved and reflected in the system. User's list of favourite items is accessible and modifiable.
Actors	<ul style="list-style-type: none"> Primary Actor: User Secondary Actor: System (Profile Management Service)
Exceptions	<ul style="list-style-type: none"> Attempt to update profile with invalid or incomplete data. Failure to save updates due to system errors or connectivity issues. Attempt to access or modify the favourites list when not logged in.
Includes	Use Case #1
Notes/Issues	<ul style="list-style-type: none"> Ensure data privacy and security during the retrieval and update of personal information. Will implement field-level validation to ensure

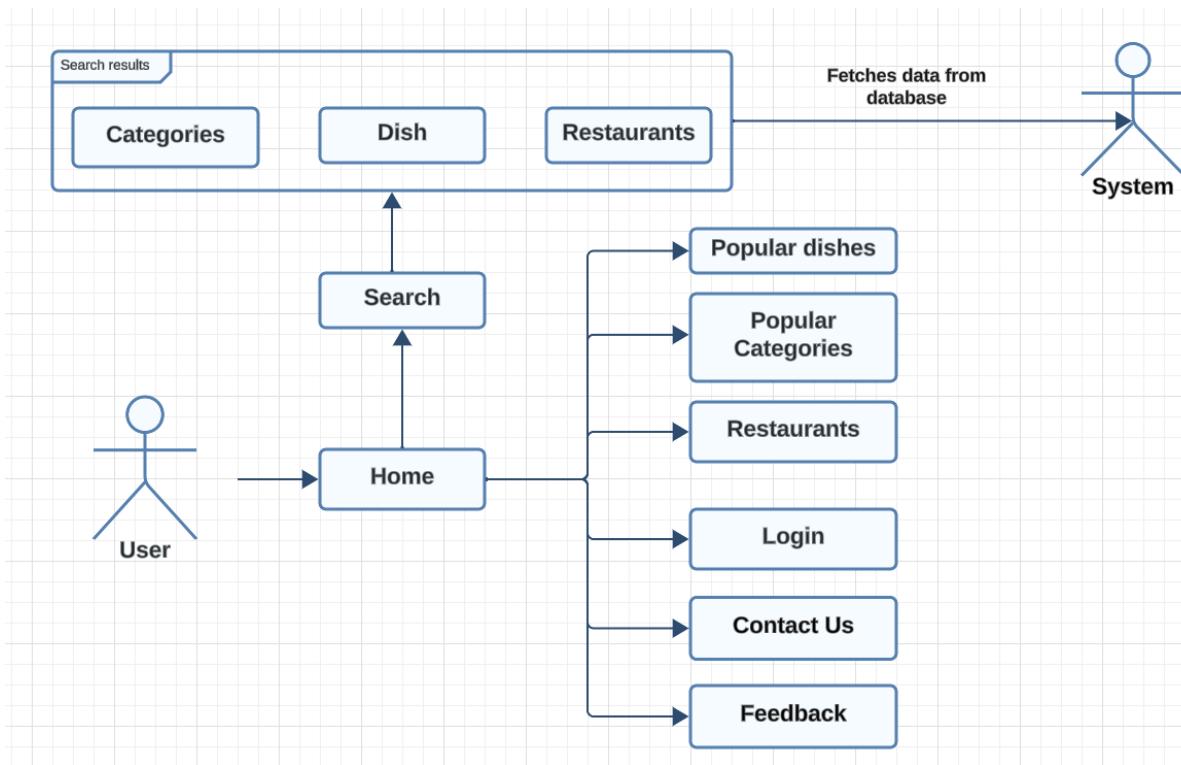
3.3.3 Use Case #3: Functionality of Search



Author	Mahanthi Vijay Kumar
Purpose	To enable users to search the system for restaurants or specific food items, view categories of food items, access detailed restaurant pages, and obtain lists of food items along with relevant information such as availability, price, ratings, and reviews.
Requirements Traceability	Search Functionality Implementation, Category and Item Listing, Restaurant Information Retrieval, Detailed Item Information Display
Priority	High - The search functionality is integral to the user experience, allowing users to find and evaluate food options based on their preferences.
Preconditions	None.
Postconditions	<ul style="list-style-type: none"> ● The user has successfully found and viewed information on restaurants, categories, or specific food items. ● The user has access to detailed information about food items, including price, ratings, and reviews.
Actors	<ul style="list-style-type: none"> ● Primary Actor: User ● Secondary Actor: System (Database and Search Engine)
Exceptions	<ul style="list-style-type: none"> ● User attempts to access a restaurant page or food item details that are not available.
Includes	None

Notes/Issues	<ul style="list-style-type: none"> • Ensure search functionality includes relevant filters and sorting to enhance user experience. • Ensure responsiveness and accuracy of the search results to maintain user engagement. • Will implement user feedback mechanisms to improve search algorithms.
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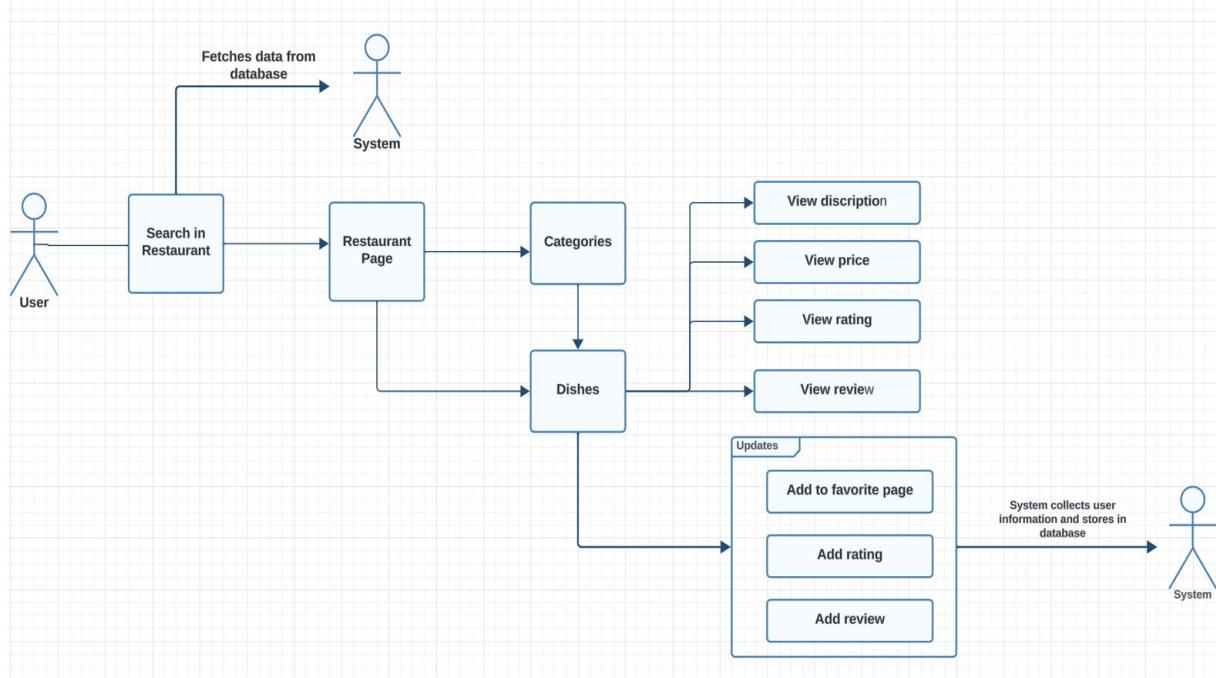
3.3.4 Use Case #4: Home Page Navigation



Author	Rohan Aditya, Harshith Sai
Purpose	To provide users with a comprehensive starting point to interact with the system, allowing them to search for categories, dishes, restaurants, view popular dishes and categories, access their account through login, contact support, and provide feedback.

Requirements Traceability	Search Functionality, Display Popular Dishes, Display Popular Categories, Display Restaurant Listing, User Login, Contact Us, Feedback Submission
Priority	High - The home page is critical as it is often the first interaction point for users and enables them to navigate to various parts of the system.
Preconditions	<ul style="list-style-type: none"> The user must have network access to reach the home page. The system must be operational and have the latest data available from the database.
Postconditions	<ul style="list-style-type: none"> The user has navigated to their desired section, whether it be search results, login, or other areas from the home page. Any input received through 'Contact Us' or 'Feedback' is logged and processed accordingly.
Actors	<ul style="list-style-type: none"> Primary Actor: User Secondary Actor: System (Database and Backend Services)
Exceptions	None
Includes	None
Notes/Issues	<ul style="list-style-type: none"> Ensure search functionality includes relevant filters and sorting to enhance user experience. Determine the criteria for what makes dishes and categories "popular" and how often this data should be updated. Define the workflow for handling inquiries and feedback submitted through the 'Contact Us' feature

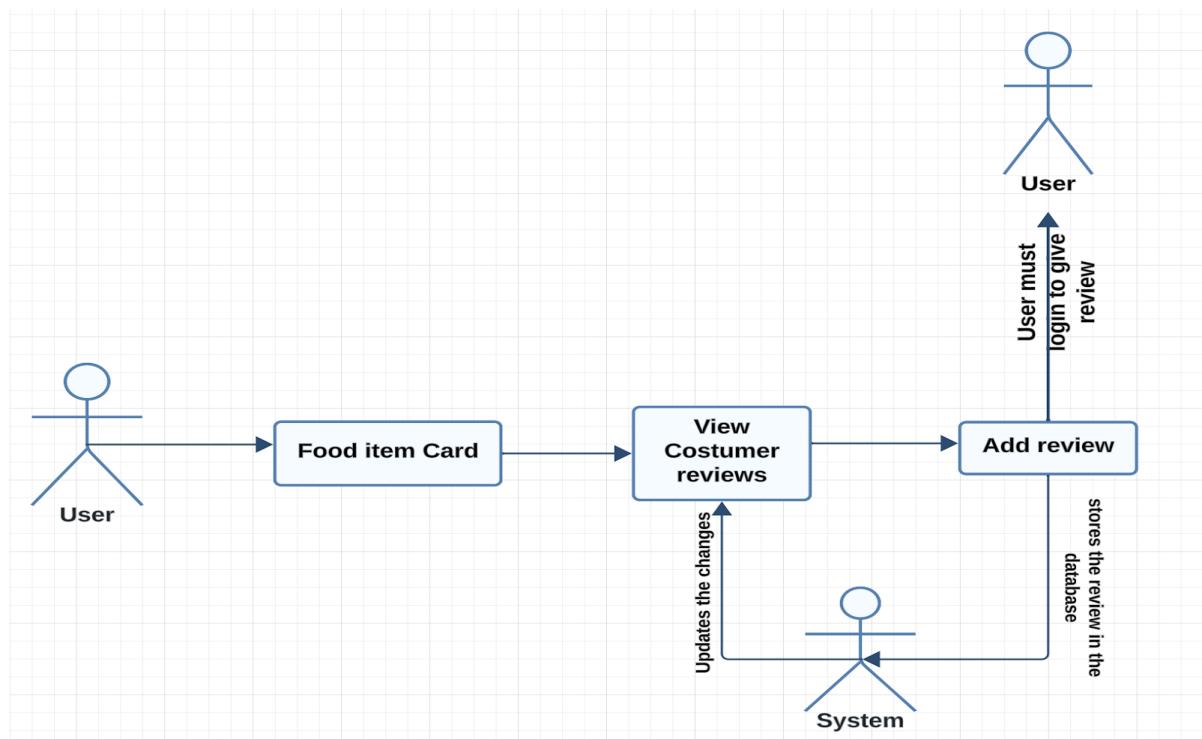
3.3.5 Use Case #5: Restaurant Page Navigation



Author	Raj Vinayak Meena, Rushikesh Chary
Purpose	To enable users to search for restaurants, view various food categories, see detailed information about dishes, and interact by adding to favourites, rating, and reviewing, enhancing the user experience.
Requirements Traceability	Restaurant Search Functionality, Category Browsing, Dish Details Display, User Interaction with Dishes
Priority	High - This function is a core part of the user experience, allowing for detailed exploration and interaction with the restaurant's offerings.
Preconditions	<ul style="list-style-type: none"> The restaurant's data must be present in the system's database.

Postconditions	<ul style="list-style-type: none"> User has found and viewed the desired restaurant's categories and dishes.
Actors	<ul style="list-style-type: none"> Primary Actor: User Secondary Actor: System (Database and Backend Services)
Exceptions	<ul style="list-style-type: none"> The search does not yield any results for food item details that are not available. Users can't add a rating or review without being logged in.
Includes	None
Notes/Issues	<ul style="list-style-type: none"> Review the search algorithm to ensure it returns the most relevant results. Consider user interface design to make navigation between categories and dishes intuitive. Ensure the system effectively captures and stores user interactions to maintain the integrity of reviews and ratings.

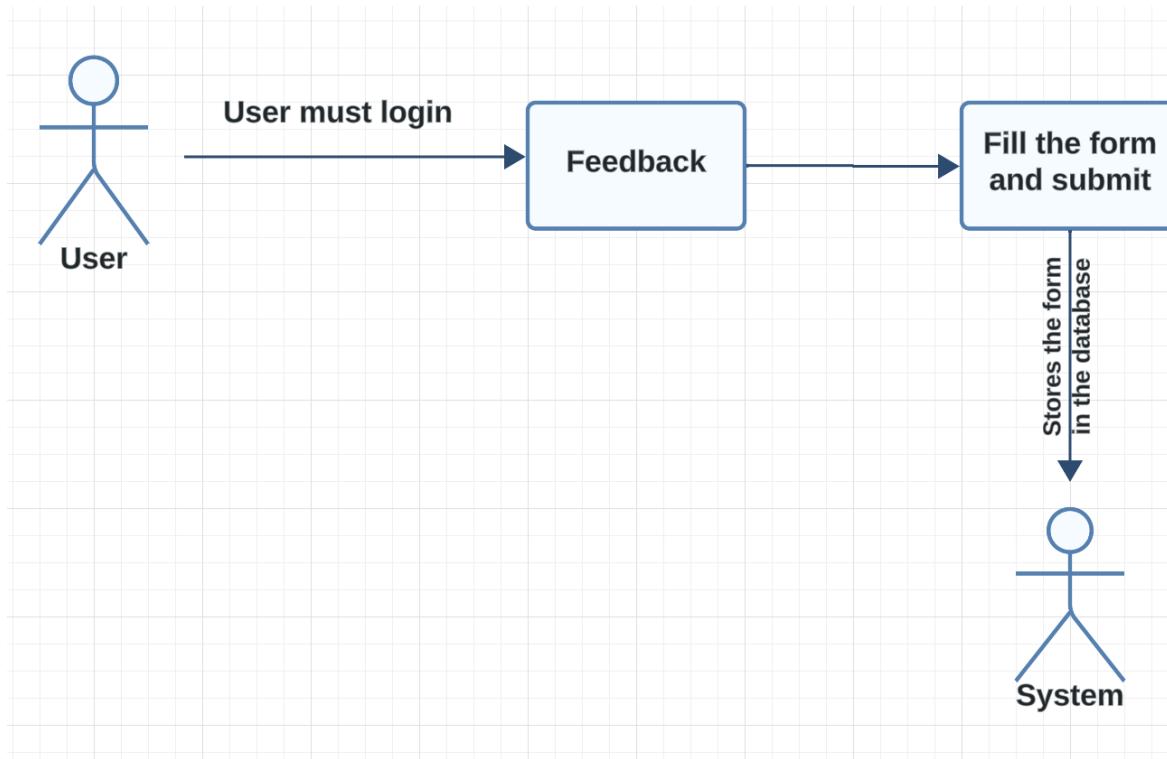
3.3.6 Use Case #6: Giving Reviews



Author	Laveti Bhanu Prakash, Gowtham Chand
Purpose	To provide a mechanism for users to view existing customer reviews for food items and contribute their own reviews, fostering an informed community and aiding in decision-making for other users.
Requirements Traceability	Viewing Customer Reviews, Adding New Reviews
Priority	Medium - While not critical for basic system operations, this feature is important for user engagement and providing valuable feedback.
Preconditions	<ul style="list-style-type: none"> ● Users must have access to the food item card to view reviews. ● To add a review, the user must be logged into their account.
Postconditions	<ul style="list-style-type: none"> ● After viewing, the user is informed about others' experiences with the food item. ● After adding a review, the user's feedback is stored in the system and made visible to others.
Actors	<ul style="list-style-type: none"> ● Primary Actor: User ● Secondary Actor: System (Database and Backend Services)
Exceptions	<ul style="list-style-type: none"> ● Users can't add a review without being logged in. ● User submits a review, but it fails to save due to a system error.
Includes	Use Case #1, Use Case #6

Notes/Issues	<ul style="list-style-type: none"> Determine the structure and limitations for review content, such as length or prohibited content. Implement measures to prevent spam or malicious reviews. Consider the need for a moderation system to review user-submitted content before it goes live.
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3.3.7 Use Case #7: Giving Feedback



Author	Mahathi, Dishanth
Purpose	To collect user feedback through a form submission process to understand user satisfaction, gather suggestions for improvements, and address any issues.
Requirements Traceability	Feedback Form Submission

Priority	Low
Preconditions	<ul style="list-style-type: none">The user must login.
Postconditions	<ul style="list-style-type: none">User feedback is submitted and stored in the system's database for review and action.
Actors	<ul style="list-style-type: none">Primary Actor: UserSecondary Actor: System (Feedback Management System)
Exceptions	<ul style="list-style-type: none">Feedback form submission fails due to technical issues or validation errors.
Includes	Use Case #1
Notes/Issues	<ul style="list-style-type: none">Establish a mechanism to notify system administrators or customer service representatives of new feedback submissions.Consider implementing an automated response to acknowledge the receipt of user feedback.

4. Other Non-functional Requirements

4.1 Performance Requirements

Performance requirements are crucial to ensure that the food reviewing system meets user expectations and operates efficiently under various circumstances.

4.1.1 Response Time

- The system shall respond to user interactions within 4 seconds for common tasks, such as searching for reviews, submitting reviews, and loading menu details.

4.1.2 Throughput

- The system shall support a minimum of 100 concurrent users without a significant degradation in response time. Ensuring the system can handle concurrent user interactions is essential for providing a seamless experience during peak usage periods.

4.1.3 Scalability

- The database infrastructure shall be scalable to accommodate a 20% increase in data volume and user activity within one year.

4.2 Safety and Security Requirements

4.2.1 User Authentication

- The system will implement a secure user authentication mechanism, requiring a unique username and password for each user.
- Regularly update authentication protocols to safeguard against unauthorized access.

4.2.2 Data Privacy

- User data, including names, email addresses, and review content, must be treated with strict confidentiality.
- The platform will comply with relevant data protection regulations (like GDPR or local privacy laws) to ensure user data privacy.

4.2.3 Compliance with Campus Policies

- Adhere to IIT Kanpur's IT policies and standards, including regulations related to internet and data usage within the campus network.

4.3 Software Quality Attributes

4.3.1 Usability:

The system places a significant emphasis on usability to ensure a positive and efficient user experience.

1. Ease of Use:

- **Requirement:** The system shall provide an intuitive and user-friendly interface, allowing users to navigate and interact with features without extensive training.
- **Verification:** Conduct user testing sessions to assess the ease of use and gather feedback on the user interface design.

2. Efficiency:

- **Requirement:** The system shall optimize response times for key functionalities, ensuring quick access to reviews, menus, and other relevant information.
- **Verification:** Measure the average response time for critical user actions, aiming for a maximum response time of 2 seconds.

4.3.2 Portability:

Portability is vital for ensuring that the food reviewing system can be seamlessly deployed and accessed across various Windows-based environments.

1. Cross-Platform Compatibility:

- **Requirement:** The system shall be compatible with various Windows-based operating systems, ensuring consistent performance on Windows 7, 8, 10 and 11, Linux and macOS.
- **Verification:** Conduct thorough testing on different Windows versions to confirm compatibility and identify and address any platform-specific issues.

2. Browser Compatibility:

- **Requirement:** The front end shall be compatible with major web browsers on Windows and Mac OS and not limited to Chrome, Firefox, and Edge.
- **Verification:** Conduct extensive testing on various browsers to ensure a consistent and error-free user experience.

3. Responsive Design:

- **Requirement:** The website frontend shall exhibit responsive design principles, adapting to different screen sizes and resolutions on Windows-based devices.
- **Verification:** Utilize responsive design testing tools and conduct manual testing on various devices to ensure optimal display.

4.3.3 Reliability:

Reliability is crucial for the food reviewing system to maintain consistent and dependable service for users.

1. Error Handling:

- **Requirement:** The system shall implement robust error handling mechanisms to gracefully manage unexpected errors and provide informative error messages to users.
- **Verification:** Conduct thorough testing to simulate various error scenarios, ensuring the system responds appropriately.

4.3.4 Maintainability:

Ensuring ease of maintenance is crucial for the long-term sustainability and evolution of the food reviewing system.

1. Code Modularity:

- **Requirement:** The system shall adhere to modular coding practices, facilitating easy maintenance and updates to specific components without affecting the entire system.
- **Verification:** Conduct code reviews to ensure the modularity of the codebase and adherence to coding standards.

2. Documentation:

- **Requirement:** Comprehensive documentation, including code comments, system architecture, and user manuals, shall be maintained and regularly updated.
- **Verification:** Regularly audit and update documentation, ensuring alignment with the latest system changes.

5. Other Requirements

The current implementation of our concept is confined to the cafeterias at IITK and other on-campus restaurants. Nevertheless, there is potential for expansion to a broader community through the development of analogous applications and implementations.

1. Database Requirements:

- **Scalability:** It must be scalable to accommodate increasing amounts of data as the user base and number of reviews grow.
- **Backup and Recovery:** Implement regular backup procedures and a robust recovery plan in case of data loss.

2. Internationalization Requirements:

- **Multi-language Support:** The platform should support multiple languages, considering the diverse linguistic backgrounds of IIT Kanpur's community.

3. Legal Requirements:

- **Compliance with Laws:** The software must comply with all relevant local and national data protection and privacy laws.
- **User Consent:** Implement mechanisms to obtain user consent for data collection and usage, in line with privacy laws.

4. Reuse Objectives:

- **Modular Design:** Develop the software in a modular fashion to allow for components to be reused in other projects or future expansions.
- **Documentation:** Maintain thorough documentation to facilitate understanding and reuse of code and design elements.

5. Environmental Sustainability:

- **Resource Efficiency:** The software should be optimized for energy efficiency, particularly in its data centres and servers.

6. Accessibility Requirements:

- **Inclusivity:** Design the interface to be accessible to users with disabilities, following accessibility guidelines such as **WCAG**.
- **Adaptive Features:** Include features like text-to-speech, screen readers, and adjustable text sizes.

7. Extension and Integration:

- **API Development:** Develop APIs for integration with other systems or platforms within IIT Kanpur.
- **Future Expansion:** Design the software architecture to allow easy incorporation of additional features or integration with future technologies.

Appendix A – Data Dictionary

1. User Class:

Element	Description	Operations	Requirements
User	Individuals interacting with the food reviewing system	login, submit, review, research, report	Secure authentication , data privacy compliance
Authentication	The process of confirming the identity of user	login/logout	Secure user authentication
User profile data	Maintain the data of each user	Store user info	string, integer
Restaurants	Campus dining establishments where food is served	View menu, view reviews	Accurate menu database, real time updates
Moderation	Review content evaluation to ensure evaluation	Review approval, flagging	Inappropriate content handling, reporting mechanism
Internet connection	connectivity enabling access to the online system	Establish connection, transmit data	Reliable internet access
Browser	software enabling users to access the system online	Render pages, submit forms and view content	Cross-Browser compatibility
Modem	Hardware facilitating, internet connection	Establish connection and transmit data	Reliable internet access
Network Interface Card (NIC)	hardware allowing communication	Enable network connectivity	Reliable internet connection

2. User Interface Class:

Element	Description	Operations	Requirements
Registration	Takes the first name and last name, password, and email arguments and then registers the user for a seamless experience	First-time registration and data input	Name, email address and password
Login/Logout	It takes the email address and password as arguments then checks the condition of login and returns the status of login.	Enables login/logout functionality for user	email, password
Review	User-generated evaluation of a specific food item	enables the user to review on food items	content moderation, data integrity
Rating	User-generated evaluation of a specific food item	enables the user to rate on food items	content moderation, data integrity
Feedback	User given report to help admins for the betterment of website	allows user to give feedback to the admin	email address

3. Server Class:

Element	Description	Operations	Requirements
Web server	hosts and serves the food reviewing system	Handle user requests and delivers web pages	High availability and responsive design
Database	Stores user data, reviews and system information	Read, write, update and delete	Data integrity, scalability and compatibility

Appendix B - Group Log

SL. no.	Date	Timings	Venue	Description
1.	09/01/2024	3 pm - 6 pm	RM Building	Discussed various potential ideas for the project & their feasibility.
2.	12/01/2024	4 pm - 6 pm	RM Building	Finalized the idea for the project and discussed various aspects.
3.	16/01/2024	4:30 pm - 6 pm	RM Building	Studied the SRS template given and distributed the work amongst the team members.
4.	17/01/2024	6:30 pm - 8 pm	RM Building	First meet with the Teaching Assistant Mr. Sarthak Neema. Discussed some doubts regarding the SRS documentation.
5.	20/01/2024	3 pm - 5 pm	RM Building	Redistributed the pending work after having clarified the doubts with the TA.
6.	24/01/2024	6 pm - 9 pm	RM building	Explored some more functionalities for the product and progressed with the SRS document.
7.	25/01/2024	4 pm - 6:30 pm	RM building	Explored various implementation tools and software for the project.
8.	26/01/2024	11 am - 12:30 pm	Meet (Google Meet)	Reviewed the final draft and made changes accordingly.