**Software Requirements specification for**

**NITT FoodHub**

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*1.* ***Introduction***

The NITT FoodHub Website aims to offer a comprehensive solution for the National Institute of Technology, Tiruchirappalli (NITT) community to conveniently order food from various campus eateries. This document serves as a guide for the development team and stakeholders, outlining the functional and non-functional requirements of the NITT FoodHub system.

***2. Scope***

The NITT FoodHub project includes the following functionalities:

* User registration and authentication.
* Browsing menus of campus eateries.
* Placing orders with customization options for food items.
* Managing user profiles and payment information.
* Providing feedback and ratings for eateries.
* Accessing real-time order status updates.

The project will focus on developing a Website for both iOS and Android platforms, along with backend server infrastructure to support user interactions and order processing. However, the project will not include the implementation of a delivery tracking feature.

***3. Overall Description***

**3.1 Product Perspective**

The NITT FoodHub system will operate as a standalone website, interfacing with backend servers hosted on campus. It will provide a seamless user experience for browsing menus, placing orders, and customizing food items. The website will be available on both iOS and Android platforms.

**3.2 Product Functions**

1. **User Registration and Authentication**:

Users will be able to register for an account using their university email address and password. Authentication mechanisms will ensure the security of user accounts.

1. **Browse Menus and Place Orders**:

Users can browse menus of available eateries on campus, view item details, and add items to their cart. They can specify delivery location, preferred time, and any special instructions.

1. **Customize Food Items**:

Users will have the option to customize their food orders by adding or removing ingredients according to their preferences. This feature enhances user experience and caters to individual tastes.

1. **Manage User Profile and Payment Information**:

Users can manage their profiles, update personal information, and securely store payment methods for quick checkout. Multiple delivery addresses can be saved for convenience.

1. **Provide Feedback and Ratings**:

Users will have the ability to rate their food and overall experience and provide feedback to eateries. This helps maintain quality standards and improves service.

**3.3 User Characteristics**

The primary users of NITT FoodHub will include students, faculty, and staff of NITT who possess basic knowledge of smartphone usage and have access to compatible mobile devices.

**3.4 Constraints**

* **Campus Policies**: The system must adhere to campus network and security policies to ensure data privacy and integrity.
* **Compatibility**: The website should be compatible with a wide range of mobile devices and screen sizes to cater to diverse user preferences.
* **Development Timeline**: The development timeline is limited to six months to ensure timely delivery of the product.

**3.5 Assumptions and Dependencies**

* Users will have access to a stable internet connection to use the website.
* Eateries on campus will cooperate with the system to provide accurate menu information and fulfill orders promptly.
* The system will rely on a secure payment gateway for processing transactions

***4. Specific Requirements***

**4.1 External Interface Requirements**

**4.1.1 User Interfaces**

* The website shall feature intuitive and aesthetically pleasing user interfaces (UI) designed for ease of use and accessibility.
* UI elements shall be responsive and adaptable to different screen sizes and orientations.

**4.1.2 Hardware Interfaces**

* The website shall utilize hardware components of the mobile device, such as the camera for scanning QR codes for order pickup.

**4.1.3 Software Interfaces**

* The website shall communicate with backend servers using HTTPS protocols to ensure secure data transmission.
* APIs shall be used for user authentication, menu retrieval, order processing, and notification delivery.

**4.1.4 Communication Interfaces**

* The website shall support push notifications to update users on order status changes and important announcements.

**4.2 Functional Requirements**

**4.2.1 User Registration and Authentication**

* Users shall be able to register for an account by providing necessary information such as name, email, and password.
* Account verification shall be performed via email confirmation to ensure authenticity.

**4.2.2 Browse Menus and Place Orders**

* Users shall be able to browse through a categorized list of available eateries and view their menus.
* Each menu item shall include details such as name, description, price, and available customization options.
* Users shall be able to add items to their cart, adjust quantities, and remove items before checkout.
* Order placement shall require users to select a delivery location, preferred time slot, and payment method.

4.2.3 Customize Food Items

* Users shall have the option to customize food items by adding or removing ingredients according to their preferences.
* Available customization options shall be presented clearly, and changes shall reflect in the final order summary.

4.2.4 Manage User Profile and Payment Information

* Users shall have the option to edit their profile information, including name, contact details, and delivery addresses.
* Payment information, including credit/debit card details or mobile wallet accounts, shall be securely stored and encrypted.
* Users shall be able to add, remove, or update payment methods as needed.

4.2.5 Provide Feedback and Ratings

* Users shall be able to rate their overall experience, food quality, delivery time, and delivery personnel on a scale of 1 to 5 stars.
* Feedback comments shall be optional but encouraged to provide valuable insights for eateries and the platform administrators.

**4.3 Performance Requirements**

* The website shall load menus and process user interactions within 3 seconds under normal server load conditions.
* Order placement and confirmation shall be completed within 10 seconds of user submission.
* The system shall support a minimum of 100 concurrent users during peak hours without performance degradation.

**4.4 Design Constraints**

* The website 's user interface shall adhere to the university's branding guidelines, incorporating official colors, logos, and typography.
* UI design shall prioritize simplicity, clarity, and consistency across all screens and interactions.
* Accessibility features, such as text size adjustment and screen reader compatibility, shall be implemented to cater to users with disabilities.

**4.5 Quality Attributes**

* **Reliability**: The system shall have an uptime of at least 99%, ensuring uninterrupted service availability.
* **Maintainability**: Codebase shall be well-documented and modular to facilitate future updates, bug fixes, and feature enhancements.
* **Scalability**: The system architecture shall be scalable to accommodate an increase in user base and transaction volume over time.

**4.6 Other Requirements**

* **Security**: The website shall implement industry-standard encryption protocols (e.g., SSL/TLS) to protect user data during transmission.
* **Privacy**: User data, including personal information and transaction history, shall be stored securely and handled in compliance with relevant privacy regulations (e.g., GDPR).
* **Error Handling**: The website shall provide informative error messages and graceful error recovery mechanisms to guide users through unexpected scenarios.

***5. Appendices***

**Appendix A: Glossary of Terms**

**NITT**: National Institute Of Technology Tiruchirappalli

**FOODHUB**: A environment for people who like to enjoy different varieties of food

**Appendix B: References**

Campus Haat(IIT KANPUR)

Technology used: **HTML,CSS AND JAVASCRIPT.**

Tools used: **Visual Studio code**.

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