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**System Requirements Specification (SRS) for Café Bliss Full-Stack Website**

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## 1. Introduction

### 1.1 Purpose

The purpose of this System Requirements Specification (SRS) document is to outline the functional and non-functional requirements for developing a fully functional full-stack website for   Café Bliss  . The website aims to enhance the café's operations by providing an online platform for customers, employees, and administrators to interact seamlessly.

### 1.2 Scope

This SRS document covers the requirements for developing the Café Bliss website, which includes:

- A user-friendly interface for customers to browse the menu, place orders, and manage their accounts.

- An employee interface for managing orders, updating menu items, and handling customer interactions.

- An admin interface for overseeing the entire system, managing users, and accessing comprehensive reports.

- Integration of backend functionalities using PHP and MySQL (via XAMPP).

- Implementation of security measures to protect user data and system integrity.

## 1.3 Definitions, Acronyms, and Abbreviations

- **SRS : System Requirements Specification**

- UI : User Interface

- UX : User Experience

- PHP : Hypertext Preprocessor

- MySQL : Relational Database Management System

- CRUD : Create, Read, Update, Delete

- ETA : Estimated Time of Arrival

- SSL/TLS : Secure Sockets Layer / Transport Layer Security

- XAMPP : Cross-Platform Apache, MySQL, PHP, and Perl

## 1.4 References

- [HTML5 Specification] (https://html.spec.whatwg.org/)

- [CSS3 Specification] (https://www.w3.org/TR/CSS/)

- [PHP Documentation] (https://www.php.net/docs.php)

- [MySQL Documentation] (https://dev.mysql.com/doc/)

- [*W3C Web Content Accessibility Guidelines*] (https://www.w3.org/WAI/standards-guidelines/wcag/)

### 1.5 Overview

This document provides a detailed description of the Café Bliss website's functionalities, user interfaces, system features, and constraints. It serves as a guide for developers and stakeholders to understand the project's requirements and expectations.

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## 2. Overall Description

### 2.1 Product Perspective

The Café Bliss website is a self-contained application designed to improve the café's customer service and operational efficiency. It extends the café's services online, allowing for better customer engagement and streamlined order management.

### 2.2 Product Functions

-   Customer Functions :

  - Browse menu items with images, descriptions, and prices.

  - Select item quantities and add items to the cart.

  - Place orders with options for Dine-in, Pickup, or Delivery.

  - Manage personal account details, including profile information and payment methods.

  - View order history and reorder past orders.

  - Cancel orders if necessary.

- Save items for later.


- Employee Functions :

  - View and manage orders categorized by Dine-in, Pickup, and Delivery.

  - Update order statuses and assign delivery personnel.

  - Update menu items, including adding, editing, or removing items.

  - Manage customer inquiries and communication.


- Admin Functions :

  - Access comprehensive lists and histories of all customer orders.

  - Manage users, including customers and employees.

  - Clear order lists and perform administrative tasks.

  - Generate reports and oversee system operations.


## 2.3 User Classes and Characteristics


- Customers :

  - Individuals who can browse the menu, place orders, and manage personal accounts.

  - May be registered users or visitors.


- Employees :

  - Café staff responsible for managing orders, updating menu items, and interacting with customers.

  - Have access to employee-specific interfaces and functionalities.


- Administrators :

  - Users with the highest level of access, responsible for system oversight and user management.

- Can perform all actions available to employees and have additional administrative privileges.

- Visitors :

- Unregistered users who can browse the menu but must register or log in to place orders.

2.4 Operating Environment

- Client-Side Requirements :
  - Modern web browsers (Chrome, Firefox, Safari, Edge).
  - Support for HTML5, CSS3, and JavaScript.

- Server-Side Requirements :
  - Web server running Apache via XAMPP.
  - PHP 7.x or higher.
  - MySQL database for data storage.

**2.5 Design and Implementation Constraints**

- Technologies :
  - Frontend: HTML, CSS, JavaScript.
  - Backend: PHP.
  - Database: MySQL via XAMPP.

- Frameworks :
  - Optional use of Bootstrap for UI design.
  - Plain PHP without frameworks for backend development.

- File Organization :

  - Project structured with separate folders for HTML, CSS, JS, and images.


- Security :

  - Passwords must be hashed.

  - Basic protection against SQL injection, XSS, and CSRF attacks.


### 2.6 User Documentation


- User manuals or guides for customers, employees, and administrators will be provided if required in the future.


### 2.7 Assumptions and Dependencies


- Users have access to stable internet connections.

- The website will be hosted locally during development, with plans to host online in the future.

- The system will not handle real payment processing initially.


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## 3. Specific Requirements


### 3.1 Functional Requirements


### 3.1.1 User Authentication and Registration

- FR-1 : Users must be able to register as customers or employees using a unified registration form.

  - Customer Registration : Collect full name, email, phone number, and home address.

  - Employee Registration : Collect full name, email, phone number, home address, and employee ID.

- FR-2 : Users must be able to log in by providing email, password, and selecting their user type (Customer or Employee).

- FR-3 : Passwords must be securely hashed before storing in the database.

- FR-4 : Visitors attempting to confirm orders must be prompted to log in or register.

### 3.1.2 Menu Browsing and Ordering

- FR-5 : Customers and visitors can browse the menu categorized into Breakfast, Lunch, Beverages, and Desserts.

- FR-6 : Each menu item must display an image, name, price, description, and availability status.

- FR-7 : Menu items should have a quantity selector (maximum of 10) and an "Add to Cart" button.

- FR-8 : Out-of-stock items must be clearly marked and prevent adding to the cart.

### 3.1.3 Cart Management

- FR-9 : Users can add items to the cart with selected quantities.

- FR-10 : A temporary popup message ("Items added to the cart successfully") must appear for 10-15 seconds after adding items.

- FR-11 : Users can view and edit items in their cart, including changing quantities or removing items.

- FR-12 : Cart contents must persist across sessions for logged-in users.

- FR-13 : Users can save items for later purchase.

### 3.1.4 Order Processing

- FR-14 : Users must select one of the three options before confirming orders:
  - Dine-in
  - Pickup
  - Delivery

- FR-15 : After order confirmation:
  - Dine-in :
    - Display a unique two-digit number for order pickup.
    - Provide options to return to the home page or continue browsing.
  - Pickup :
    - Display an estimated preparation time (30 minutes to 1 hour).
    - Show a countdown timer.
    - Provide options to return to the home page or continue browsing.
  - Delivery :
    - Initially display "The Café is preparing your order" with an ETA countdown.

- Update to "Your delivery is on its way" when a delivery person is assigned.

- Provide options to return to the home page or continue browsing.

- FR-16 : Implement order status tracking for customers.

- FR-17 : Allow customers to cancel orders before they are processed.

### 3.1.5 User Profiles

- FR-18 : Customers can view and edit their profile information, including personal details, address, and payment methods.

- FR-19 : Customers can view their order history and reorder past orders.

- FR-20 : Payment methods:
  - Cash on Delivery
  - Bank Transfer : Customers can provide bank details in their profile.
  - Mobile Banking (Bkash) : Customers can provide their Bkash number in their profile.

### 3.1.6 Employee Interface

- FR-21 : Employees can log in to access the employee dashboard.

- FR-22 : Employees can view orders categorized into:
  - Dine-in List
  - Pickup List
  - Delivery List

- FR-23 : For each order, employees can:

  - View order details and customer information (name, contact number, address for delivery).

  - Update order status by checking a box to indicate the order has been processed.


- FR-24 : Orders in the lists should display a red or green light indicator based on their status.


- FR-25 : Employees can update menu items (add, edit, remove) and manage stock availability.


### 3.1.7 Admin Interface


- FR-26 : Admins have access to all functionalities available to employees.


- FR-27 : Admins can clear order lists once all orders are marked as completed.


- FR-28 : Admins can view comprehensive reports and order histories for all customers.


- FR-29 : Admins can manage users, including customers and employees (e.g., add, remove, update user details).


### 3.1.8 Notifications and Communication


- FR-30 : Implement pop-up notifications for actions such as adding items to the cart or order updates.


- FR-31 : Implement a chat option for communication between customers and employees (future enhancement).

- FR-32 : Optionally send email or SMS notifications for order confirmations and updates.

### 3.1.9 Additional Features

- FR-33 : Implement search functionality and filtering of menu items.

- FR-34 : Allow customers to leave reviews or ratings for menu items (future enhancement).

- FR-35 : Implement a loyalty program or discounts for customers.

## 3.2 Non-Functional Requirements

### 3.2.1 Performance Requirements

- NFR-1 : The system should handle multiple concurrent users without significant performance degradation.

- NFR-2 : Page load times should not exceed 3 seconds on a standard broadband connection.

- NFR-3 : Real-time updates for order lists and status tracking.

### 3.2.2 Security Requirements

- NFR-4 : Implement password hashing (e.g., bcrypt) for user passwords.

- NFR-5 : Protect against common web vulnerabilities such as SQL injection, XSS, and CSRF attacks.

- NFR-6 : Secure data transmission using SSL/TLS where feasible.

### 3.2.3 Software Quality Attributes

- NFR-7 : The website must be user-friendly and intuitive.

- NFR-8 : Maintain consistent UI/UX across all pages.

- NFR-9 : The website should be mobile-responsive.

## 3.3 External Interface Requirements

### 3.3.1 User Interfaces

- Customer Interface : Accessible via web browsers, intuitive navigation, and clear presentation of information.

- Employee Interface : Dashboard with access to order management and menu updates.

- Admin Interface : Advanced dashboard with system oversight functionalities.

### 3.3.2 Hardware Interfaces

- Not applicable; the system is web-based.

### 3.3.3 Software Interfaces

- Database : MySQL database accessed via PHP scripts.

- Web Server : Apache server provided by XAMPP.

### 3.3.4 Communications Interfaces

- The system should support standard HTTP/HTTPS protocols.

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## 4. System Features

### 4.1 User Authentication System

- Unified login and registration forms for customers and employees.
- User type selection during login.
- Password recovery options (future enhancement).

### 4.2 Menu Management

- Dynamic menu displaying items from the database.
- Employee functionality to manage menu items and stock levels.
- Categories and subcategories for efficient browsing.

### 4.3 Cart and Order Processing

- Persistent cart functionality for logged-in users.

- Quantity selection and validation for menu items.

- Real-time order processing and status tracking.

### 4.4 Order Status Tracking

- Customers can track the status of their orders.

- Employees can update order statuses.

- Visual indicators for order progress.

### 4.5 Employee and Admin Dashboards

- Employees can manage orders and update menu items.

- Admins have additional controls over user management and system settings.

### 4.6 Payment Processing

- Option for customers to select payment methods:

  - Cash on Delivery

  - Bank Transfer

  - Mobile Banking (Bkash)

- Integration of payment details into user profiles.

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## 5. Other Requirements

### 5.1 Database Requirements

- Design a relational database schema to store users, menu items, orders, and other relevant data.

- Ensure data integrity through proper use of primary and foreign keys.

- Implement data normalization where appropriate.

### 5.2 Security Requirements

- Use prepared statements or ORM to prevent SQL injection.

- Implement input validation on both client and server sides.

- Use HTTPS protocol for secure data transmission (if deployed online).
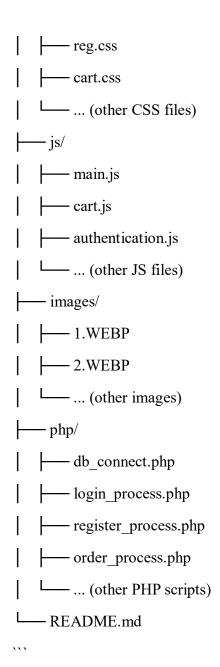
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## 6. Appendices

### 6.1 Tools and Technologies

- Frontend :
  - HTML5
  - CSS3
  - JavaScript (Vanilla JS)
  - Bootstrap (optional)

- Backend :

- PHP (Plain PHP without frameworks)

- Database :

  - MySQL via XAMPP

- Development Environment :

  - XAMPP for local server and database management

  - Text Editor or IDE (e.g., Visual Studio Code)

- Version Control :

  - Git (for future collaboration and version tracking)

**6.2 Project File Structure**

```
/project-directory
├── html/
│   ├── index.html (formerly mid.html)
│   ├── login.html
│   ├── reg.html
│   ├── cart.html
│   ├── employee_dashboard.html
│   ├── admin_dashboard.html
│   └── ... (other HTML files)
├── css/
│   ├── styles.css (consolidated CSS)
│   ├── login.css
```

```
|   ├── reg.css
|   ├── cart.css
|   └── ... (other CSS files)
├── js/
|   ├── main.js
|   ├── cart.js
|   ├── authentication.js
|   └── ... (other JS files)
├── images/
|   ├── 1.WEBP
|   ├── 2.WEBP
|   └── ... (other images)
├── php/
|   ├── db_connect.php
|   ├── login_process.php
|   ├── register_process.php
|   ├── order_process.php
|   └── ... (other PHP scripts)
└── README.md
```

### 6.3 Project Timeline

- Week 1-2 :
  - Set up development environment.
  - Design database schema.
  - Implement user authentication and registration.

- Week 3-4 :

  - Develop customer interface: menu browsing, cart functionality, order processing.

  - Implement employee and admin interfaces.

- Week 5 :

  - Test all functionalities.

  - Perform security audits.

- Week 6 :

  - Finalize UI/UX enhancements.

  - Prepare documentation.

  - Deploy locally and prepare for potential online hosting.

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## 7. Conclusion

This SRS document outlines the comprehensive requirements for developing the Café Bliss full-stack website. By adhering to these specifications, the project aims to deliver a robust, user-friendly platform that enhances the café's operations and customer satisfaction. The system will facilitate seamless interactions between customers, employees, and administrators, providing a foundation for future growth and enhancements.

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