OXFORD COLLEGE OF ENGINEERING AND MANAGEMENT

PROJECT

On

CANTEEN MANAGEMENT SYSTEM

(Bachelor of Computer Application)

4th SEM

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Software Requirements Specification (SRS)

Canteen Management System (CMS)

1. Introduction

This document outlines the requirements for a Canteen Management System (CMS) developed using VB.NET and Microsoft SQL Server. The CMS will be used to manage various aspects of a canteen operation, including:

- Items offered (food and beverages)
- Customers (students, staff, etc.)
- Orders
- Inventory
- Billing

2. Overall Description

The CMS will be a desktop application designed for use by canteen staff. It will provide a user-friendly interface for managing all aspects of canteen operations, improving efficiency and accuracy.

3. Specific Requirements

3.1 Functional Requirements

- **User Management:**
  - Create, edit, and delete user accounts for canteen staff.
  - Assign different access levels to user accounts (e.g., cashier, inventory manager).
- **Item Management:**
  - Add, edit, and delete items offered in the canteen (including name, description, price, category).
  - Maintain stock levels for each item.
  - Set up low-stock alerts for items.
- **Customer Management:**
  - Create and manage customer profiles (optional, depending on canteen setup).
  - Allow customers to pre-register (optional).
- **Order Management:**
  - Allow customers to place orders (either in person or through a pre-ordering system, if applicable).
  - Provide options for customizing orders (e.g., adding special instructions).
  - Display order details including item names, quantities, and total price.
  - Enable order modification before confirmation.

- **Billing:**
    - Calculate order totals automatically.
    - Provide various payment options (e.g., cash, card).
    - Generate receipts for orders.
- **Reporting:**
    - Generate reports on sales, inventory levels, and other relevant data.
    - Allow filtering and exporting reports in different formats (e.g., PDF, CSV).

3.2 Non-Functional Requirements

- **Security:**
    - Implement user authentication and authorization mechanisms.
    - Securely store sensitive data (e.g., customer information, financial data).
- **Performance:**
    - The system should be responsive and handle user requests efficiently.
- **Usability:**
    - The user interface should be intuitive and easy to navigate for users with varying technical skills.
- **Reliability:**
    - The system should be reliable and minimize downtime.
- **Maintainability:**
    - The code should be well-documented and easy to maintain.

4. User Interfaces

The CMS will have separate user interfaces for different user types:

- **Cashier:** Used for taking orders, processing payments, and generating receipts.
- **Inventory Manager:** Used for adding, editing, and managing items, including stock levels and low-stock alerts.
- **Administrator:** Used for managing user accounts, system settings, and generating reports.

5. Database Design

The system will utilize a Microsoft SQL Server database to store all application data. The database schema will be designed to efficiently store and retrieve information related to items, customers, orders, inventory, and user accounts. Data integrity and normalization principles will be followed.

6. Development Tools and Technologies

- Programming Language: VB.NET
- Database: Microsoft SQL Server
- Development Environment: Microsoft Visual Studio

7. Conclusion

This Software Requirements Specification (SRS) outlines the functional and non-functional requirements for a Canteen Management System (CMS) to be developed using VB.NET and Microsoft SQL Server. The implementation of this system will enhance the efficiency and accuracy of canteen operations by automating various tasks and providing a centralized platform for managing inventory, orders, billing, and customer data (if applicable).

The success of this project will hinge on adherence to the outlined user needs, security considerations, performance benchmarks, and user-friendly design principles. Following these guidelines will ensure the development of a robust and user-friendly CMS that caters to the specific needs of the canteen operation.