

CLIENT REQUIREMENTS: PHARMACY MANAGEMENT SYSTEM

Requirements Specification:

This document outlines the client's requirements for a pharmacy management database. The system will be used to streamline inventory management, customer insurance processing, order fulfillment, and billing operations.

System Overview:

The pharmacy management database system will provide a centralized platform for managing all aspects of the pharmacy's operations. The system will be accessible by authorized staff and will ensure data integrity through proper access controls and data validation techniques.

Data Entities:

The system will manage data pertaining to the following core entities:

1. Provide Company: Information about companies that supply medication to the pharmacy.

Attributes:

- Company Name (Unique Identifier)
- Phone Number
- Address

2. Category: Classification of medication types.

Attributes:

- Category Name (Unique Identifier)
- Number of Items (Optional, can be derived from Item table)

3. Item: Individual medication items within the pharmacy's inventory.

Attributes:

- Item Name
- Unique Product Code (Primary Key)
- Quantity in Stock
- Description
- Selling Price
- Original Price
- Supplier Company (Foreign Key referencing Provide Company)
- Category (Foreign Key referencing Category)

4. Employee: Information about pharmacy staff members.

Attributes:

Employee ID (Auto-generated Primary Key)
Employee Name
Date of Birth
Date of Employment
Password (Secure one-way hashed storage recommended)

5. Employee Types: Two subcategories of employees with specific attributes:

Hourly Employee:

Employee ID (Foreign Key referencing Employee table)
Total Work Hours
Hourly Wage

Contract Employee:

Employee ID (Foreign Key referencing Employee table)
Total Contract Amount

6. Order: Represents a customer's medication order.

Attributes:

Order ID (Auto-generated Primary Key)
Employee Processed By (Foreign Key referencing Employee table)

7. Cash Order: Represents a cash payment for an order.

Attributes:

Order ID (Foreign Key referencing Order table - Primary Key)
Order Date

8. Insurance Company: Information about insurance companies that cover medication costs for customers.

Attributes:

Insurance Company Name (Unique Identifier)
Discount Percentage Offered
Number of Customers Covered

9. Insurance: Tracks customer insurance information.

Attributes:

Customer ID (Unique Identifier - Primary Key)
Customer Name
Insurance Company (Foreign Key referencing Insurance Company table)

10. Insurance Order: Connects customer insurance information with specific orders.

Attributes:

Customer Insurance ID (Foreign Key referencing Insurance table)
Order Date
Order ID (Foreign Key referencing Order table)

11. Bill: Represents the final bill for a customer's order.

Attributes:

Order ID (Foreign Key referencing Order table - Primary Key)
Order Date
Full Price
Profit
Bill Type (Cash/Insurance)
Employee Generated By (Foreign Key referencing Employee table -

Optional)

System Functionality:

The pharmacy management database system will provide the following functionalities:

Inventory Management:

- i. Add, update, and delete information about medication items.
- ii. Track stock levels and generate low-stock alerts.
- iii. Manage supplier information and product ordering.

Customer Management:

- i. Process customer orders, including medication selection and quantity.
- ii. Capture customer insurance information and verify coverage.
- iii. Generate bills based on order details and insurance applicability.

Employee Management:

- i. Maintain employee information, including contact details and employment history.
- ii. Differentiate between hourly and contract employee types and manage their respective payment structures.
- iii. Assign access control levels to different employee roles.

Reporting:

- i. Generate reports on sales, inventory levels, and employee performance.
- ii. Track trends and analyze profitability.

Data Integrity and Security:

The system will enforce data integrity through:

- Data validation rules to ensure accuracy of entered information.
- Primary and foreign key constraints to maintain data consistency.
- Regular data backups to ensure disaster recovery.

The system will prioritize data security through:

- Secure password hashing techniques for employee logins.
- Access control mechanisms to restrict unauthorized data manipulation.
- Encryption of sensitive data (consider encrypting customer information if applicable based on regional regulations).

Future Enhancements:

The system can be further enhanced to include functionalities such as:

- **Integration with Electronic Prescriptions (e-Prescribing):** Allow electronic prescription receipt and processing directly from healthcare providers.
- **Customer Relationship Management (CRM):** Implement features for managing customer interactions, purchase history, and loyalty programs.
- **Inventory Management Optimization:** Integrate functionalities for forecasting demand, optimizing stock levels, and minimizing stockouts.
- **Advanced Reporting and Analytics:** Generate comprehensive reports on sales trends, product performance, and employee efficiency for informed decision-making.
- **Mobile App Integration:** Develop a mobile application for customers to manage prescriptions, refill medications, and access order history.

Acceptance Criteria:

The successful implementation of the pharmacy management database system will be measured by the following criteria:

- The system meets all the functional requirements outlined in this document.
- The system is user-friendly and easy to navigate for authorized personnel.
- Data integrity and security are maintained through proper validation, access controls, and encryption mechanisms.
- The system generates accurate and timely reports to support informed decision-making.
- The system is scalable and adaptable to accommodate future growth and integration with additional functionalities.

Conclusion:

This document provides a comprehensive overview of the requirements for the pharmacy management database system. The system will streamline core pharmacy operations, enhance data management, and improve customer service. By implementing this system, it will be well-positioned to increase operational efficiency, profitability, and customer satisfaction.