Software Requirements Specification

Medicine Shop Automation

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- # **Introduction**

- ## **Purpose**

Medicine Shop Automation (MSA) is required to ease the workload of medical shop professionals. The main features include stock management, accounting, client management. Integration with doctors allows getting prescriptions instantly, ordering medicines from suppliers.

It can solve a few important problems for the medical shop professionals such as
  - The shop owner is to be able to order items as soon as the number of items in the inventory reduces below a threshold value.
  - To calculate the threshold value for each item, the software must be able to calculate the average number of medicines sales for one week for each part.
  - Whenever new supply arrives, the shop owner would enter the item code number, quantity, batch number, expiry date, and the vendor number.
  - The software should print out a cheque favoring the vendor for the items supplied.
  - Whenever any sales occur, the shop owner would enter the code number of each medicine and the corresponding quantity sold. The MSA would print out the cash receipt for him.
  - The computer should also generate revenue and profit for any given period. It should also show vendor-wise payments for the period.

- ## **1.2 Product Scope**

As this is generic software it can be used by a wide variety of outlets (Shopkeepers and Suppliers) to automate the process of manually maintaining the records related to the subject of maintaining the stock and cash flows.

- ## **1.3 References**

  - www.php.net
  - www.mysql.org
  - www.w3schools.com
  - www.tutorialspoint.com
  - www.wikipedia.com

- **1.4 Features**

  - Inventory/stock management
  - Accounting
  - Direct supply of medicine with sync with doctor's prescription
  - Notification of prescriptions by doctors to the respective shop owners
  - Order placement
  - Globally accessible cloud features
  - Viewing previous purchases and prescriptions by the patients.

- # Overall Description

- ## User Classes and Characteristics

  - Medicine Shop owner(Retailer)
  - Supplier
  - Doctor
  - Customer

Medicine shop owners have full authorization of stock management, billing and accounting, credit management for each customer. This software requires a moderate level of technical expertise for all the users.

Doctors can get information (names) of the medicines available. They can prescribe a list of medicines to the patients, which will be forwarded to the shop owner, and customers can purchase the medicines they want.

Suppliers can set the price of each medicine according to a different/new batch. They can supply medicine to the shop owners based on their requirements/order.

Customers will buy medicines from the shop. They can see their credits as well as their history of purchases (bills) as well as prescriptions after logging into the application.

- **Operating Environment**

Requirements:

- Internet connection
- Web browser
- Desktop/laptop (recommended).
- Platform independent.
- Printer (for shop owners)

Design and Implementation Constraints

2.3.1 Programming Languages:

- HTML
- CSS
- BOOTSTRAP
- JAVASCRIPT
- PHP

2.3.2 Database

MySQL

2.3.3 Tools

Sublime Text Editor

Xampp

- **User Documentation**

This application will include a user manual. The user manual includes a complete overview of the product's, configuration of the tools used (ex: MySQL or other), technical details and contact information which will include email address and phone number.

- **Assumptions and Dependencies**

  - Users of the application should have an internet connection.
  - The suppliers while entering the details of medicines should enter the names correctly. In other words, the naming convention is universal across doctors, suppliers as well as customers.

- # Functional Requirements

User Authentication

Use Case 1: Registration

Main Scenario:
- System asks for details (Name, Email, Phone No, Password, Address)
- Verify if the password entered both times is correct.
- User enters the details along with user type (User/Shop owner/Doctor/Supplier).
- Open the corresponding homepage.

Alternate Scenario:
- Passwords do not match.
- Prompt users to enter correct passwords.
- User enters the correct passwords.
- Account is created.
- Open corresponding homepage

Use Case 2: User Login

Main Scenario:
1. System prompts the user for Email and password.
2. User enters Email.
3. User enters password.
4. System does authentication and finds user type
5. Based on user type, the main screen is displayed.

Alternate Scenario:
- Authorization fails
- Prompt user to enter correct username and password.
- User enters the correct details.
- System does authentication and finds user type
- Based on user type, the main screen is displayed.

Use case for Shop owner

Use Case 1: Sell / Create Bill

- Admin Fills the Customer Details and date
- Fill the medicines in the bills
- Checks for credits or payment
- Automatic Stock Adjustment
- print the daily sales revenue

Use Case 2: Order Medicines

- Checks for shortage of medicines
- Places Order from the suppliers
- After order received, stock adjustment

Use Case 3: Customers Account Handling

- Manages Customers
- Adjust Credits
- Manage bills

Use Case 4: Managing Prescriptions

- Checks for any prescription
- Forwards/Converts those prescriptions into bills.

Use case for Customer

- Can view list of shop owners he has purchased earlier as well as credits for each shop owner.
- Can view old bills
- Can view old prescriptions.

Use case for Doctor

Use Case: Prescribe
- Fill Patient Details
- Fill medicines
- Send the prescription to the shop owner
- View previous prescriptions

Use case for Supplier
1. Add new medicines
2. Supply medicines according to orders from different shop owners.

• External Interface Requirements

• User Interfaces

Various interfaces for the system could be as follows:
- Registration form where new customer (patient)/doctor/shop owner/supplier can register.
- Login Page where all the registered users can login to their respective profile.

Shop Owners
- On the landing page a blank bill will open
- Notification icon for prescriptions

- Button for stock adjustment, customer account management and viewing list of suppliers and prescriptions.

Doctors
- Doctors will get a blank prescription form where they can fill patient details, prescribed medicines, and send it to the respective shop owners.

Customers
- They can view their previous purchases (bills).
- They can view their prescription history also.

- **Hardware Interfaces**

Minimum hardware specification required:

- Processor: Intel Core i7
- RAM: 4 GB RAM
- Monitor: 1 5" Color Monitor
- Processor Speed: 3.40 GHZ

- **Software Interfaces**

- As all the data is stored in the database present in the server, the client machine gets the data from the server by making REST API calls.
- The communication between the database and the web application consists of operations concerning both reading and modifying the data.

- **Communications Interfaces**

- Users can access the application via web browser.
- The communication standard used will be HTTP.
- There should be real time updates across all the users/systems.

- ## Other Nonfunctional Requirements

- ### Performance Requirements

  - The application should be able to support at least three simultaneous users.
  - There should be minimal delay in updating the database as well as synchronizing and updating all the relevant information across all the users who are currently logged into the application.
  - System should be operable 24 hours a day and accessible in real-time.

- ### Safety Requirements

  - The Database may get crashed or damaged due to some viruses or operating system requirements.
  - Therefore, it is mandatory to have backup for your data.
  - Inverter facility should be there in case of power failure.

- ### Security Requirements

  - System will use a secure database.
  - There should be separate accounts for all the types of users. Based on the type/class of user, appropriate privileges will be provided.
  - Proper user authentication will be provided.

- ### Software Quality Attributes

  - The shop owner can remove any customer or doctor or supplier if required.
  - Every user of this application has the privilege to edit his/her personal details

- ## Other Requirements

Database Requirements:

MySQL

Legal Requirements:

Copyright laws and license agreements must be respected for any third party software used in the creation of the project.
There are no other requirements for this project as of now.

Conclusion:

It is a complete medical shop management software designed to ease the workload of medical shop professionals.
The main feature includes invoicing inventory and stock control client and vendor management