Software Requirement Specifications

For

Medicine Inventory Management System

Prepared By:

Mahendra Nain

SVS Pavan

Kush Sankhavara

Mahendra Singh

National Institute of Technology, Rourkela
Department of Computer Science and Engineering

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1. Introduction

1.1 Purpose:

Medicine Inventory Management System facilitates the user(owner) of the software to manage the medicines in his/her inventory. It allows user to track where does the medicine is stored in the whole inventory. It also allows user to add new medicines and it's details and the vendor details.

1.2 Scope:

The scope of the project we are designing is mentioned in this section. Here we list the significant inclinations of our project and what area it gives importance to, and what area of inventory management it is not associated with.

Focuses on Inventory stock:

There are lots of medicines stored in the inventory with variable expiry date for each of the medicine, Our system follow up all the expiry date with the present date and display an error or alert message when a medicine is about to expire.

Focuses on Newly arrived stock:

Sometimes a new stock of medicines with different names and with new expiry date gets imported into the inventory and our system will enter the details into the database.

1.3 Definitions, Acronyms and Abbreviations

1.3.1 SRS : Software Requirement Specifications

1.3.2 www : World Wide Web

1.3.3 GUI : Graphical User Interface

1.3.4 MIMS : Medicine Inventory Management System

1.3.5 Threshold Stock: Threshold stock value means quantity of medicine purchased over a week.

1.4 References:

1.4.1 IEEE standard 830-1998 recommend practice for software requirements specifications – Description.

1.4.2 IEEE software requirements specifications template.

1.5 Overview:

The overview description provides interface requirements for a Medicine Inventory Management System, Product Perspective, Hardware Interfaces, Software Interfaces, Communication Interfaces, Memory Constrains, Product Functions, User Characteristics, and other constraints involved in the software and which are responsible for the working of the Medicine Inventory Management System.

2.Overall Description

2.1 Product Perspective

2.1.1 Hardware Interfaces

a) Hard Disk : The database connectivity requires a hardware configuration that is online. This makes it necessary to have a fast database system(such as RDBMS) running on high rpm hard disk permitting complete data redundancy and backup system to support the primary goal of reliability.

b) The system must interface with the standard output device, keyboard and mouse to interact with the software.

2.1.2 Software Interfaces

Any database management software : MongoDB

For GUI and user interaction : Chrome Browser

2.2 Product Functions: -

(i) Calculating average number of medicines sales over one week.

(ii) Generating medical items to be ordered.

(iii) Entering new supply details.

(iv) Issuing and printing cheque for vendors.

(v) Updating database of medicines with new medicine introduces.

(vi) Generating a code number for new medicines.

(vii) Getting inventory information about a particular medicine.

(viii) Generating a list of expired medicines and their vendors.

(ix) Case Receipt would be printed after every sale.

(x) Generating revenue and profit.

(xi) Showing vendor-wise payments for given period.

2.3 User Characteristics

2.3.1 :-The intended user of this software need not have specific knowledge as to what is the internal operation of the system. Thus the end user is at a high level of abstraction that allows easier, faster operation and reduces the knowledge requirement of end user.

2.3.2 :- The product is absolutely user friendly, so the intended users can be the naïve users.

2.3.3 :- The product does not expect the user to posses nay technical background. Any person who know to use the mouse and keyboard can successfully use this product.

2.4 Constraints

2.4.1 :- At the time of creating the new account of searching for a specific medicine the user(owner) will enter the details of the medicine like medicine name or serial no.

2.4.2 :- At the time when the new stock arrives the user enters the details of the medicine like medicine name expiry date and vendor details.

3.Specific Requirements

3.1 External Interfaces

3.1.1 User Interface

The immediate user interface would be a page with an alert message when a certain medicine is out of stock or else it is going to be expired soon.

In the right corner, there is a search bar in which the user(owner) can enter the details of the medicine like medicine name or serial no. and it will display the row and stack number in which the medicine is stored.

3.2 Functions: -

3.2.1 Calculating Threshold Value: -

i) Shop owner want to follow Just in Time Philosophy.

ii) Items in stock should be above in number than threshold value. iii) Threshold value is average number of medicines sales for one week for each part. iv) Information about Number of medicines sales can be get through database.

3.2.2 Generating list of Items to buy: -

i) Generating the list which contains items which stock is below threshold value.

ii) That list contains

(1) Medical Description

(2) Quantity Required (Threshold Value of that medicine – Present stock)

(3) Address of the vendor who supply that medicine iii) We get medical description and address of vendor from Medicine Database. iv) We get quantity from Inventory.

3.2.3 Updating Inventory: -

i) Updating the stocks of medicine when new medicine or new supply arrives.

ii) With stocks, there would also be entries of

(1) Item Code Number

(2) Batch Number

(3) Expiry Date

(4) Vendor Number

3.2.3 Managing Payments to Vendors: -

i) System should print out cheque to the vendors for the items supplied. ii) Made every time whenever there is a new supply.

3.2.4 Updating Database with new medicine: -

i) Software should be able to update the database, whenever shop owner met with new medicines.

ii) Software would allow attributes of medicines such as

(1) Medicine Trade Number

(2) Generic Number

(3) Vendors

(4) Unit Selling

(5) Purchasing Price iii) Code number should also be generated for new medicine so that shop owner would paste the code number in the rack where this medicine would be stored.

3.2.5 Getting stock of medicine: -

i) Shop owner would query about medicine using generic name or trade name.

ii) Software should able to fulfill the query of by displaying medicine's code number and the present quantity.

3.2.6 Generating list of expired medicines: -

i) Software should present list of expired medicines over shop owner command. ii) Software should prepare vendor-wise list of the expired items.

3.2.7 Printing cash receipt: -

i) After every sale, shop owner enter code number of each medicine and the corresponding quantity sold.

ii) And, software will print out the cash receipt for customer. iii) Inventory will also be updated.

3.2.8 Calculating revenue and profit: -

i) The shop owner would define a period.

ii) For that every period, software will generate revenue and profit. iii) And also show vendor-wise payments for the period.

3.3 Performance Requirements

Inventory management systems are designed to help individuals or organizations effectively manage inventory and business. Performance requirements for such systems will vary de pending on the specific needs of the software user.

However, some common performance requirements that are essential for this system to be effective are:

Speed: The system would work in real time environment, so it should be fast enough to display the row and stack number where the medicine is stored or else it will lead to major decrease in the sales of the dealer.

Accuracy: The system should accurately track expired medicines. Inaccurate data about expired medicines would be hazardous to life of patients.

Usability: The system should be user-friendly and easy to use. The shop owner or user should not find any difficulty in using this software.

3.4 logical Database Requirements

The system should contain databases that include all the necessary information for the product to function according to the requirements. These include relations such as medicine details, expiry date and amount of medicine available.

We have use Non-Relational Database MongoDB for this Software to achieve accuracy, security and faster access to database.

1. **Medicine** :- The database should include document for medical supplies which contain medicine name, its rack number, expiry date, cost and sell price and vendor details.

2. **Transaction** :- The software should record transaction and store them in transaction document. We will use this data for generating revenue and profit.

3. **Vendor** :- The software should store the details of suppliers in vendor document.

4. **Reports** :- The database should support the generation of inventory reports, such as inventory levels, stock outs, and expiration dates. Reports should be customizable and easy to read.

3.5 Design Constraints

The design and implementation constraints for the medical inventory system software project must be carefully considered to ensure that the software meets the needs of healthcare providers, complies with regulatory requirements, and is cost-effective to develop and maintain.

- **Platform and technology constraints**:- The software is designed to run on specific platforms and technologies, such as web-based or client-server architecture.
- **User interface constraints**:- The software must have a user-friendly interface that is easy to use for healthcare professionals with varying levels of technical expertise.
- **Data management constraints**:-The software must be able to handle large amounts of data, ensure data integrity, and provide data security to protect sensitive information.
- **Performance constraints**:- The software must be able to handle high volumes of transactions, provide real-time updates, and generate reports quickly and accurately.
- **Budget constraints**:- The project must be completed within a specific budget, which may require making trade-offs between features, functionality, and development resources.

4 Non-Functional Requirements :-

1. **Usability**:- The software should have a user-friendly interface that is easy to navigate and understand, with clear instructions and help resources.
2. **Reliability**:- The software should be reliable, with a low failure rate and minimal downtime, to ensure that shop owner can access inventory data when needed.
3. **Security:**-The software should be secure, with appropriate user authentication, access control, and encryption measures to protect sensitive data from unauthorized access.
4. **Scalability**:- The software should be designed to handle large volumes of data and support multiple users, with the ability to scale up or down as needed.
5. **Performance**:- The software should have high performance, with fast response times, efficient data retrieval and processing, and minimal delays.
6. **Flexibility**:- The software should be flexible, with the ability to adapt to changing business requirements, such as new inventory items or regulatory changes.
7. **Maintainability**:- The software should be maintainable, with the ability to quickly diagnose and fix bugs, upgrade features, and apply security patches..