Software Requirements Specification

for

INVENTORY MANAGEMENT SYSTEM

Prepared by

Group No: 24

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1 Introduction

The aim of the project is to make a Database for Chain of Stores to manage their Inventory by tracking the Items present and maintaining the transactions for all the items between warehouses to branch and warehouse to warehouse.

1.1 Document Purpose

The main purpose of the project is to maintain details of employees working in inventory, transactions happening in the inventory. The DBMS software we have developed allows us to maintain records of every transaction between customers and sellers and to maintain the details of the user.

1.2 Product Scope

Inventory management system is a platform which enables to store the data in a secured way, which can be easily accessed by manager of the inventory to keep a track of products sold etc. And this software also improves the efficiency of data stored.

1.3 Intended Audience and Document Overview

This document is intended for developers, project managers, marketing staff, users, professors and documentation writers. Reading this document from the beginning without skipping of any of the section is recommended. This SRS contains the analysis of requirements necessary to help easy design. This is a working document so subject might change. Initially as per what mentioned it might not be complete and require continuing refinement. Requirements may be modified and new requirements can be added as the project progresses.

1.4 Definitions, Acronyms and Abbreviations

SRS- Software Requirement Specification
DBMS- Database Management Systems

1.5 Document Conventions

Font used- Arial
Font size- 12

1.6 References and Acknowledgments

IEEE Software Engineering Standards Committee, “IEEE Std 830-1998, IEEE Recommended Practice for Software Requirement Specifications”, October 20,1998

R Elmasri and S.B Navathe, Fundamentals of Database Systems, Pearson Publications

2 Overall Description

2.1 Product Overview

The items are distributed to various Branches by various Warehouses, Main Inventory of Each branch is managed by a manager, the items are ordered by customers, they are imported and if any product is expired, they are returned back to the company, if an order is valid the transaction is carried out by either cash or Card.

2.2 Product Functionality

Main Inventory
- Manager ID shows us the details of the manager

Warehouse
- Warehouse No shows us the details of the warehouse

Customers
- Username shows us the details of the customer

Items
- Product ID shows us the details of the products available

Orders
- Order ID shows us the details of the order placed by the customer

Transaction
- Transaction ID shows us the details of the transaction

Products
- Product ID shows us the details of the particular product

Expired Items
- EProduct ID shows us the details of the expired products

Employee
- Employee ID shows us the details of the employee

Supplier
- Supplier ID shows us the details of the supplier

2.2.1 Operating Environment

This software is platform independent. It is also hardware platform independent.

Software Requirement:
- Database: MYSQL
- PHP (Hypertext preprocessor)- back end
- HTML (Hypertext markup language)- front end
- CSS (Cascading style sheets)- front end
- SQL- Query language

- BOOTSTRAP- front end
- WEB SERVER: XAMPP (for testing)

Hardware Requirement:

This software can be run on any operating like Windows, Linux, MacOS etc.

2.3 Design and Implementation Constraints

The information of all the users must be stored in a database that is accessible by INVENTORY MANAGEMENT SYSTEM. The warehouse information security system must be compatible with the internet applications.

The users can access the Inventory Management System from any computer that has internet browsing capabilities and an internet connection.

2.4 Assumptions and Dependencies

The users are expected to have basic technical and computer knowledge to operate this software. The server on which it is hosted is expected to work properly and as per the software requirements and run 24/7.

3 Specific Requirements

3.1 External Interface Requirements

This section contains the details about the specific requirements needed for building our system and has two sections namely interfaces and functional requirements.

The types of interfaces we have requirements for are:

- User
- Hardware
- Software
- Communication

3.1.1 User Interfaces

Welcome Interface:

The first interface which the user gets to see when he opens the portal. In this interface, the user gets to select an option whether he is an employee or customer and will be redirected to corresponding login page.

User sign-up Interface:

In this interface, the user needs to fill his credentials namely user-id and password in the corresponding fields and login.

User login Interface:

In this interface, the user needs to fill in the credentials namely user-id and password in the corresponding field and login, where he will be directed to the products page where he can buy the items.

Logout:

This option redirects the user to welcome interface.

3.1.2 Hardware Interfaces

- **Operating System: Windows**
- **Hard disk: 40 GB**
- **RAM: 256 MB**
- **Processor: Intel i3**

3.1.3 Software Interfaces

The web application is developed using HTML as the front end and PHP as the back end, SQL server to store the database.

3.1.4 Communication Interfaces

The communication between database and portal consists of operations concerning reading and modifying the data.

3.2 Functional Requirements

Register
- The user will have to register.
- The user has to provide his/her name, mobile, address, E-mail, password.

Login
- Input: username and password.
- Output: Users will be able to use the features of software.

Main Inventory
- From Here one can access the data from all the warehouses and have the count of all the items present.

Warehouse
- Each warehouse contains some specific products in some specific Quantity which can be ordered by customer.

Customers
- They visit any of the warehouse and orders the items for desired quantity if they are present in the warehouse then the transaction is complete.

Items
- This contains all the list of item and cost of item we can import the products if required some products might get expired which will have to be sent back to the imported company.

Orders
- Orders are placed to company for receiving the items, which are further processed.

Transaction
- This contains all the details regarding the transactions which took place either through Cash, Card.

Products
- This contains all the items along with the quantity which are imported, Expiry date and the date of order are also mentioned.

Expired Items
- These are the items which are expired and returned back to the company.

Employee
- This contains the details of employees working in warehouses along with the manager details.

Supplier

- This contains the details of the supplier who is supplying the items to the warehouse.

4 Other Non-functional Requirements

4.1 Performance Requirements

The DBMS software developed should be able to work effectively to give out information when needed and also to store the data without any latency to avoid any issue. Several factors which affect the performance is that the system resources should be adequate and meet the baseline requirements for the software to run without any issues.

● The performance should be accurate and response time should be minimum to avoid issues when a request comes in.
● The data should be backed up as log files on a regular basis to avoid data loss when a server crashes or a corrupted file causes a total data loss.
● The DBMS should be able to handle a large amount of data and perform actions in less time to be more effective.
● For login to the software, password and username will be matched to the password and name saved in the database and thus only authenticated users are allowed to login.

4.2 Safety and Security Requirements

The user information will be kept private for safety and security issues and will not be disclosed to any other third-party organizations so that user privacy is intact and information is safe. The data is backed up on a regular basis so the data will not be lost if database crashes or any other harm which leads to loss of data. Also as a safety measure, the data is stored on a private storage so it can't be accessed from outside.
● The database is secured and the system users have different constraints on accessing the database.
● The user cannot edit the database, only the admins are allowed to edit the database for security concerns.
● There should be separate accounts for admins and users so that only admins can make changes in the database.

4.3 Software Quality Attributes

- Adaptability- This developed DBMS software is adaptable by any organization.
- Availability- The availability of the software is easy and for everyone.
- Correctness- The results of the function are pure and accurate.
- Flexibility- The operation may be flexible and reports can be presented in many
- Ways.

- Maintainability- After the deployment of the project if any error occurs then it can
- be easily maintained by the software developer.
- Portability- The software can be deployed at any machine.
- Reliability- The performance of the software is better which will increase the
- reliability of the software.
- Reusability- The data and record that are saved in the database can be reused if
- needed.
- Robustness- If there is any error in any window or module then it does not affect
- the remaining part of the software.
- Usability- To perform any operations and to understand the functioning of software
- is very easy.
- Productivity- This software will produce every desired result with accuracy.
- Timelines- The time limit is very important. It will save much time and provide fast
- accessing.
- Cost effective- This software is less in cost and bearable by any organization

Appendix A – Data Dictionary

- **HTML: HYPER TEXT MARKUP LANGUAGE.**
- **CSS: CASCADING STYLE SHEETS.**
- **PHP: HYPERTEXT PREPROCESSOR.**
- **XAMPP: OPEN-SOURCE CROSS-PLATFORM WEB SERVER SOLUTION STACK PACKAGE.**
- **MYSQL: OPEN-SOURCE RELATIONAL DATABASE MANAGEMENT SYSTEM**
- **SQL: STRUCTURED QUERY LANGUAGE FOR RDBMS.**
- **BOOTSTRAP: OPEN-SOURCE CSS FRAMEWORK.**