

Bookstore Inventory System

Vision Document

Version 1.0

Revision History

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Vision Document

1. Introduction

1.1. Purpose

The purpose of this document is to define the high level requirement of the Bookstore Inventory Software System.

1.2. Scope

This program will be used as an all-around back-end bookstore inventory system. Some of the key features of the system are the following. The software will enable the client (business) to have real time statistics of sales and book inventory, automatically produce End of Day sales reports and End of Day low-inventory notices (purchase order suggestions).

It will also enable the users (customers) to view the real time inventory and extract book information, enable users to place orders online and pick up books in-store and access to a personalized account profile, order history, etc.

Lastly, the program will enable vendors to have access to part of the system – it will allow any vendor to update book information, add/remove new books to/from the inventory and updated prices.

1.3. Definitions, Acronyms and Abbreviations

This is a comprehensive list of all terms used in this vision document.

POS (Point of Sale) – an electronic terminal that handles all credit/cash transactions.

Vendor – A company/person who is in the business of selling products and goods to businesses.

Inventory – a detailed list of goods and materials that are in stock.

User – a person who can interact with the software – can be an employee or end user (customer).

Client – the UNLV bookstore.

Book Inventory – the detailed list of books in stock.

Database (DB) – an organized (structured) body of related information.

End of Day Report – a report that is done after business hours are over. Typically, it includes sales and inventory.

Sales – the overall money transaction during a specified time interval.

Transaction – the exchange of goods or services for legal tender.

1.4. References

None.

1.5. Overview

In the following sections we outline the software product in higher detail. We will start with defining the key features that will be implemented. Next, we will discuss the constraints that will be imposed upon the software and the quality ranges, in other words, the robustness,

fault tolerance and usability of the software product amongst other things. In the precedence and priority section we will comment on the most important functionalities that the software product must have and the integrity of the sales system.

In the following sections will discuss all other product requirements, such as, performance requirements, platform requirements and environmental requirements. Lastly, we will comment on the documentation requirements, such as, user manuals, online help & support, installation and packaging.

2. Product Features

2.1. Manage Books

The product must be able to adequately manage the books that the bookstore receives. Therefore the database will sort books via ISBN, author name, class subject (i.e.- CS472, CPE100, etc), title, department name, etc.

2.2. View Books

The system must be able to provide an interface to view all books that are available. This feature will allow the user to check whether a book is available for purchase. An employee may also request a list of books that can be categorized by author, title, class subject, ISBN, etc.

2.3. Manage/View Books Prices

The product must allow the bookstore to update the pricing of their books. Access to this feature must be limited only to essential personnel. The access must be protected by means of login and password. Every individual with access to this feature must have a separate login and password. The product must be able log and record the price changes made, the time and date of the price change, and the person that made the change.

It must also have an interface for vendors to update their corresponding book prices. This feature will simplify and improve the communication between the bookstore and all vendors.

2.4. Transactions

The product must be able to interface the sales registers (POS system) with the database in order to update the total count of each book available in the bookstore at a given time. When a book is sold the system must reduce the number of that book available by one. When a book is returned the system must increase the number of that book by one.

2.5. Databases

The product will need to manage three databases in order to do its intended operation. The first is a database to manage all the books available in the bookstore. This database will be organized in a number of different categories. For example, we can lookup books by author's, subject, ISBN, how many in stock, how many new and used, how many in order, if its for rental, the price of the book, etc....

The second database will manage and keep track of all transactions. There will be different ways in which information can be retrieved. For example, we can query information based

on date of transaction, receipt number, etc.

The third database will manage all customer information. This database will keep track of the customer's name (first, middle, or last), home address, email address, phone number, and history of rented books.

2.6. Manage Rented Books

The system must implement a function to allow a bookstore to keep track of rented book and when they are due.

2.7. Reports

The system must be able to generate reports based on give parameters, such as, dates, specific book, publisher, etc. The report will provide information on sales and inventory.

2.8. Alerts and Purchase Order Suggestions

The system will be able to automatically generate low stock inventory alerts. A purchase order suggestion will also be generated based on the inventory of a particular book.

3. Constraints

- The number of books is dependent on employees inputting information correctly and the system functioning in the desired manner.
- The system must be connected with external hardware, such as, registers and servers.
- A back up system must be incorporated.
- A website is incorporated into the system.

4. Quality Ranges

4.1. Reliability

- The system shall be designed to be robust and be able to handle a large amount of traffic.
- The system must be able to handle improper user input.
- The system shall be designed in a manner that is free of security flaws.

4.2. Availability

The system shall be available to users during the specified time that the client chooses (24 hours, business hours only, etc.)

4.3. Usability

The system shall enable the users to navigate and perform operations in an intuitive and easy manner. The user interface must allow the user to search for the books in a timely manner. Also, vendors must access the system in a secure manner and the book information. However, they should have this capability during the business day but not affect the business operations of the bookstore.

4.4. Fault Tolerance

The system must be designed to be robust, especially during the start of the fall, spring, and summer terms. If a crash happens, a simple switch to a backup or reboot fixes the problem temporarily so that the software remains operational. The software must be able to handle improper user input. The system shall also be designed in a manner which is free of

exploits.

4.5. Supportability

The system shall be designed for easy maintenance and upgradability. The system will be designed to handle a large and diverse load at peak times at the start of each semester. The system must continue operating at a constant pace with a maximum load.

4.6. Functionality

The system shall be designed such that a user can query information stored in the databases. For example, query a book by author, title, ISBN, publisher, etc.

The system shall be designed for easy navigation. Also each separate database can be modified to tailor a client's needs. The system shall be able to provide all the system features as outline in previous sections.

4.7. Performance

The system shall be designed to handle a large amount of traffic.

5. Precedence and Priority

5.1. High Priority

- Input from registers.
- Price updates from vendors/staff.

5.2. Medium Priority

- none.

5.3. Low Priority

- End of day sales and inventory reports
- Purchase order suggestions
- User interfaces.

6. Other Product Requirement

6.1. Applicable Standards

TCP/IP, UL and ISBN standard.

6.2. Environmental Requirements

The environment of the system is in the student book store at room temperature and is to be self-contained.

6.3. Platform Requirements

In order to maintain easy upgradability and robustness, the software product will be developed for the UNIX platform.

6.4. System Requirements

The product must have an interface with the printer/printers of the store in order to print the necessary report.

It should be designed so that possible updates and maintenance can be done as effortlessly as possible. If a system crash should occur there should be back up files so that the system may be restarted.

6.5. Performance Requirements

The product must minimize the amount of time spent updating and organizing the databases.

The access time to the databases must not exceed 1s seconds.

The system is expected to be highly dependable and highly unsusceptible to crashes. Searches and updates to the database must be done in real time and therefore as quickly and efficiently as possible. It should be specifically designed to operate smoothly under the busiest conditions.

7. Documentation Requirements

7.1. User Manual

A user manual will provided as a pdf document to staff. It will outline, in detail, the system's functions.

7.2. Online Help

System documentation will also be available online, it will include the user manual, FAQ section and an email support system.

7.3. Installation, Guides, Configuration and Read Me File

The installation guide and configuration guidelines will be provided as part of the Read Me file which is included as a .txt file.

7.4. Labeling and Packaging

The software will be packaged for the unix environment running Apache, SQL and PHP. Labeling will include all icons, copyright information and any applicable trademarks.