* **Functional Requirements for Bookshop System:**

1. **User Registration and Authentication:**

- The system should allow users to register for an account.

- Users should be able to log in using their credentials.

- User authentication and authorization should be implemented to ensure secure access to the system.

1. **Book Catalog Management:**

- The system should provide functionality to add, update, and delete books from the catalog.

- Each book entry should include information such as title, author, genre, price, copies and availability.

- The system should support searching and filtering options to help users find specific books.

1. **Inventory Management:**

- The system should keep track of the available stock of books.

- When a book is sold, the system should automatically update the inventory count.

- The system should provide alerts or notifications when the stock of a particular book is running low.

1. **Online Ordering:**

- Users should be able to browse the book catalog and add books to their shopping cart.

- The system should calculate the total cost of the order, including any applicable taxes or discounts.

- Users should be able to review and modify their cart before proceeding to the checkout process.

- The system should facilitate secure payment options, such as credit card or online payment gateways.

1. **Order Management:**

- The system should generate a unique order ID for each placed order.

- Order details, including customer information, purchased books, quantities, and total amount, should be stored.

- The system should provide order status tracking, allowing users to monitor the progress of their orders.

- Notifications or email confirmations should be sent to users for order confirmation, shipment, and delivery updates.

1. **User Reviews and Ratings:**

- Users should be able to rate and provide reviews for books they have purchased or read.

- The system should display average ratings and user reviews for each book.

- Users should have the option to sort and filter books based on ratings and reviews.

1. **Reporting and Analytics:**

- The system should generate reports on sales, popular books, revenue, and other relevant metrics.

- Analytics features, such as visualizations and trends, should be available to help monitor business performance.

- The system should provide the ability to export reports in various formats, such as PDF or CSV.

1. **Admin Panel:**

- An administrative interface should be available to authorized staff.

- The admin panel should allow managing book catalog, user accounts, orders, and inventory.

- Admins should have the ability to add or remove users, update book information, and track order fulfillment.

1. **Integration with External Systems:**

- The system should support integration with external services, such as payment gateways or shipping providers, to facilitate smooth transactions and order fulfillment.

1. **Accessibility and Usability:**

- The system should be designed with a user-friendly interface and intuitive navigation.

- It should be accessible and responsive across different devices and screen sizes.

* 1. **Overview:**

A library system is a comprehensive framework of processes, technologies, and resources designed to manage and facilitate the operations of a library. It encompasses various components that work together to provide efficient library services and enhance user experience. The primary objective of a library system is to organize, access, and circulate library materials while supporting the information needs of its users.

* 1. **Background:**
* **Atriuum ILS:**

Book Systems was founded by Bill Jones, who worked as a librarian for more than 35 years. While attending a national library seminar in Nashville, TN, he mentioned to several people that he and his son were creating an automated library system.

Several of the attending librarians met with Bill offsite that evening where he showed them the program. As soon as he completed his demonstration, fellow librarian Eva Nell Hunter said, "I want it!", becoming the company's first customer. And the rest, as they say, is history.

Through the years, the company has steadily grown from that small family business that began in a basement. In 1996, they took their first big step by moving into an actual office building when they rented Suite 7 at the old Heart of Huntsville Mall.

As the company grew, so did the need for more space. They expanded into Suite 11 just 2 years later, and quickly filled it as well. In February 2006, Book Systems moved to its current location. Today, we serve thousands of customers across the country.

* 1. **Problem statement:**

The library system in Yemen faces several challenges, including limited access to resources, infrastructure and technology gaps, a lack of trained library professionals, low awareness and promotion, preservation and conservation issues, and limited interlibrary cooperation. These challenges hinder the effectiveness of the library system in providing quality services and meeting the information needs of the population. Addressing these issues requires increased investment in infrastructure, funding for resources, professional development for librarians, awareness campaigns, preservation efforts, and fostering partnerships and collaboration among libraries.

* 1. **Project scope:**
  2. **The system include:**

1. **Cataloging and Classification:** The system provides tools for cataloging books, assigning unique identifiers (such as ISBN or barcode), and organizing them based on standardized classification systems (such as Dewey Decimal Classification or Library of Congress Classification).
2. **Book Acquisition and Ordering:** The system facilitates the acquisition of books by managing the ordering process, tracking purchase requests, managing budgets, and generating purchase orders for vendors or publishers.
3. **Circulation Management:** This feature supports the circulation of books, including functions like check-in and check-out, managing due dates, handling renewals, placing holds or reservations, and managing fines and fees for overdue materials.
4. **User Management:** The system allows for the creation and management of user profiles, including registration, tracking borrower information, managing borrowing privileges, and generating reports on user activities.
5. **Online Public Access Catalog (OPAC):** The OPAC provides a web-based interface for users to search and access the library's collection. It allows users to search for books by title, author, subject, or keywords, view availability status, place holds, and access additional information about books and related resources.
6. **Inventory Management:** The system tracks the physical location of books within the library, managing shelf locations, handling book transfers between branches or departments, and conducting periodic stock-taking or inventory audits.
7. **Reporting and Analytics:** The system generates reports andstatistics related to book circulation, usage patterns, popular titles, and other relevant metrics. This information helps librarians make data-driven decisions about collection development, resource allocation, and user needs.
8. **Interlibrary Loan (ILL):** In some cases, the system may include functionality for interlibrary loan services, facilitating the borrowing and lending of books between different libraries to expand access to materials.
9. **Book Reservation and Holds:** The system allows users to reserve books that are currently checked out, ensuring they will be notified when the book becomes available for borrowing.
10. **Book Maintenance and Preservation:** The system may include features for managing book repairs, tracking book condition, and implementing preservation measures to ensure the longevity of the library's physical collection.
    1. **Project Objectives:**
11. **Automate Book Management**
12. **Enhance Accessibility**
13. **Streamline Circulation Processes**
14. **Facilitate Resource Sharing**
15. **Improve Collection Management**
16. **Generate Comprehensive Reports and Analytics**
17. **Integrate with Other Systems**
18. **Ensure Data Security and Privacy**
19. **Provide Training and Support**
20. **Foster User Engagement and Satisfaction**
    1. **Project benefits:**

**1.7.1 Benefits for the users and the owner of the system:**

* A book management system automates manual tasks such as cataloging, circulation, and inventory management. This automation reduces the time and effort required to perform these tasks, leading to increased operational efficiency and productivity for library staff.
* Enhanced Data accuracy By digitizing and centralizing book information, the system helps maintain accurate and up-to-date data. This reduces errors in cataloging, circulation records, and inventory management, ensuring the library has reliable information about its collection.
* The system streamlines various workflows, such as book acquisitions, cataloging, and circulation processes. This leads to smoother operations, faster transactions, and improved service delivery.
* The system provides tools for managing the library's resources effectively. This includes features for budgeting, acquisitions, weeding, and preservation. By optimizing resource allocation and decision-making, the system helps the library maintain a relevant and high-quality collection.
* A well-implemented book management system improves the user experience for library patrons. Users can easily search for books, place holds, and access resources through an intuitive online catalog or self-service kiosks. Streamlined circulation processes reduce wait times and enhance user satisfaction.
* The system generates comprehensive reports and analytics on circulation statistics, resource usage, and user behavior. These insights enable the library owner to make data-driven decisions regarding collection development, resource allocation, and service improvements.
* The system helps ensure the security and privacy of user data by implementing appropriate security measures and data protection protocols. This instills confidence in library patrons that their personal information and borrowing history are safeguarded.
* Integration with other library systems, such as discovery platforms, digital libraries, or learning management systems, enhances interoperability and user experience. It allows seamless access to resources and services across various library platforms.
* While the initial investment in implementing a book management system may be significant, it can lead to long-term cost savings. Automation reduces labor costs, eliminates manual record-keeping errors, and optimizes resource utilization, resulting in operational efficiencies and potential cost reductions over time.
  1. **Project requirements:**
     1. **Hardware requirements:**
* Server such as web server.
* Network devices such as routers and switches.
* client devices such as desktop computers, laptops, or tablets.
* Barcode Scanners.
* Printer.
* Backup system.
  + 1. **software requirements:**

• Windows operating system.

• Integrated Development Environment: PHP storm and Visual Studio Code.

• Apache server and MySQL server.

• UI design: html, CSS and bootstrap.

• Windows operating system. • Integrated Development Environment: Php storm and Visual Studio Code. • Apache server and MySQL server. • UI design: html, CSS and bootstrap. • Language used: PHP. • Language used: PHP.