

Service-oriented Bookstore Management System

1. Description: A service-oriented bookstore management system helps the customers, bookstore sales, and bookstore managers more quickly and efficiently adapting to the process of front desk selling and warehouse management. The customers are expecting to select the desired books for purchasing, return a purchase books and setup a new membership in bookstore. The bookstore sales are expecting to implement the requests made by the customers such as checkout, return, membership setup. The bookstore managers are expecting to review the statistics of sales amount, recent sales trend depends on the type of books. And a list of the most “popular” book types depends on the purchasing behavior of customers in last year to explore the potential market opportunity. The following shows a list of key services should be developed toward a complete bookstore management system:
 - a. For the front desk sales, an efficient checkout system should be available for checking out the books that is intended purchased by the customer. For each checkout operation, service should be able to update the book information of inventory stored in database.
 - b. A membership service should be available for adding the new customer as a member of the store or remove the 6 months inactive member. All the members information such as customer ID, email address, and phone number should be stored in a database.
 - c. A return purchase service should be available for the customers to return the purchased books within 15 days. For each return operation, the information of returned books should be updated in inventory database.
 - d. For the bookstore manager, an accounting service should be available for handling the request from bookstore manager to view the sales statistics, the trend of recent sales.
 - e. An analysis service can help the bookstore manager to analyze the behavior of the customers who purchased the books in store for last one year. An unsupervised machine learning technique should be implemented to perform on top of database. It returns several popular books types to inform the bookstore manager for stocking the new books.
2. Service-oriented Bookstore Management System Design Diagram (Done via draw.io):

