

1. We need to develop a software for automating various activities of a small book shop. From a discussion with the owner of the book shop, the following user requirements have been arrived at:

Book-shop Automation Software (BAS)

BAS should help the customers query whether a book is in stock. The users can query the availability of a book either by using the book title or by using the name of the author. If the book is not currently being sold by the book-shop, then the customer is asked to enter full details of the book for procurement of the book in future. If a book is in stock, the exact number of copies available and the rack number in which the book is located should be displayed. If a book is not in stock, the query for the book is used to increment a request field for the book. The manager can periodically view the request field of the books to arrive at a rough estimate regarding the current demand for different books. BAS should maintain the price of various books. As soon as a customer selects a book for purchase, the sales clerk would enter the ISBN number of the book. BAS should update the stock, and generate the sales receipt for the book. BAS should allow employees to update the inventory whenever new supply arrives. Also upon request, BAS should generate sales statistics (viz., book name, publisher, ISBN number, number of copies sold, and the sales revenue) for any period. The sales statistics will help the owner to know the exact business done over any period of time and also to determine inventory level required for various books. The inventory level required for a book is equal to the number of copies of the book sold over a period of two weeks multiplied by the average number of days it takes to procure the book from its publisher. Every day the book shop owner would give a command for the BAS to print the books which have fallen below the threshold and the number of copies to be procured along with the full address of the publisher