

Book-shop Automation Software

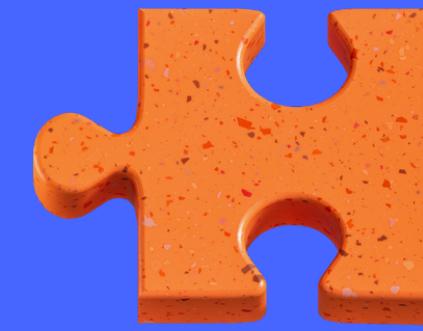
TEAM 12



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Introduction



Software
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Life Cycle
(SDLC)



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User Interface

What is the need for BAS?

Almost every activity in the world today is controlled by computer-driven software programs. Every area of human interactions is invaded by various software systems such as real-time, business, simulation, embedded, web-based, personal, and more recently, artificial intelligence software, etc.

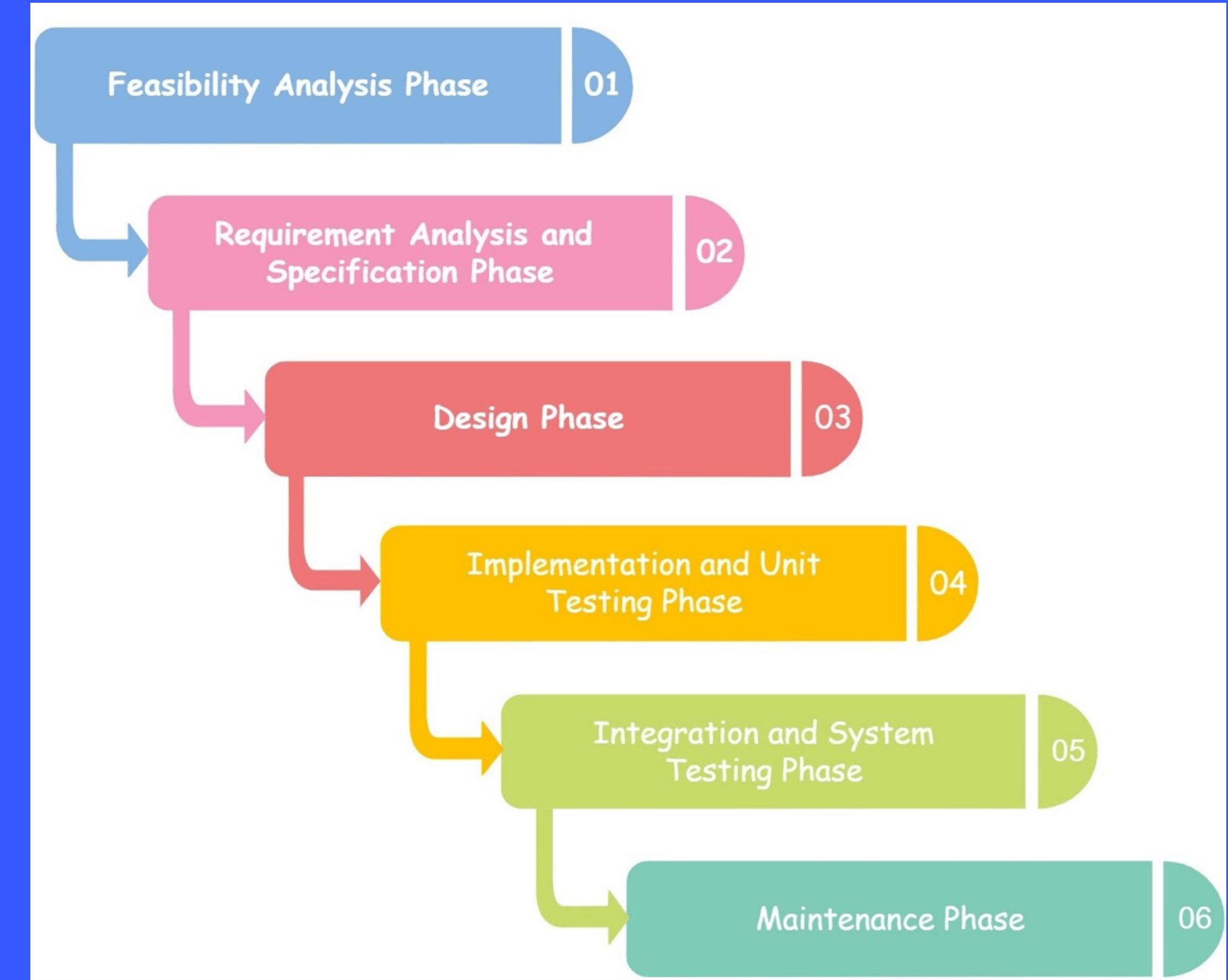
According to the above facts, managing and maintaining a bookshop could also be controlled by efficient software. This project focuses attention on designing efficient and reliable software which controls the transactions of a bookshop.

Development of BAS

There are several SDLC (Software Development Life Cycle) models available, and the choice of model depends on various factors such as the project size, complexity, budget, and timeline. Considering the requirements mentioned for the Book-shop Automation Software (BAS), the Waterfall model is a suitable choice.

The Waterfall model is a linear and sequential approach where each phase of the SDLC is completed before moving on to the next phase. It is a suitable choice when the project requirements are well-defined and stable, and the timeline is short. In the case of BAS, the requirements seem to be well-defined, and the project size is not too large. Therefore, the Waterfall model is used to develop BAS.

Waterfall Model



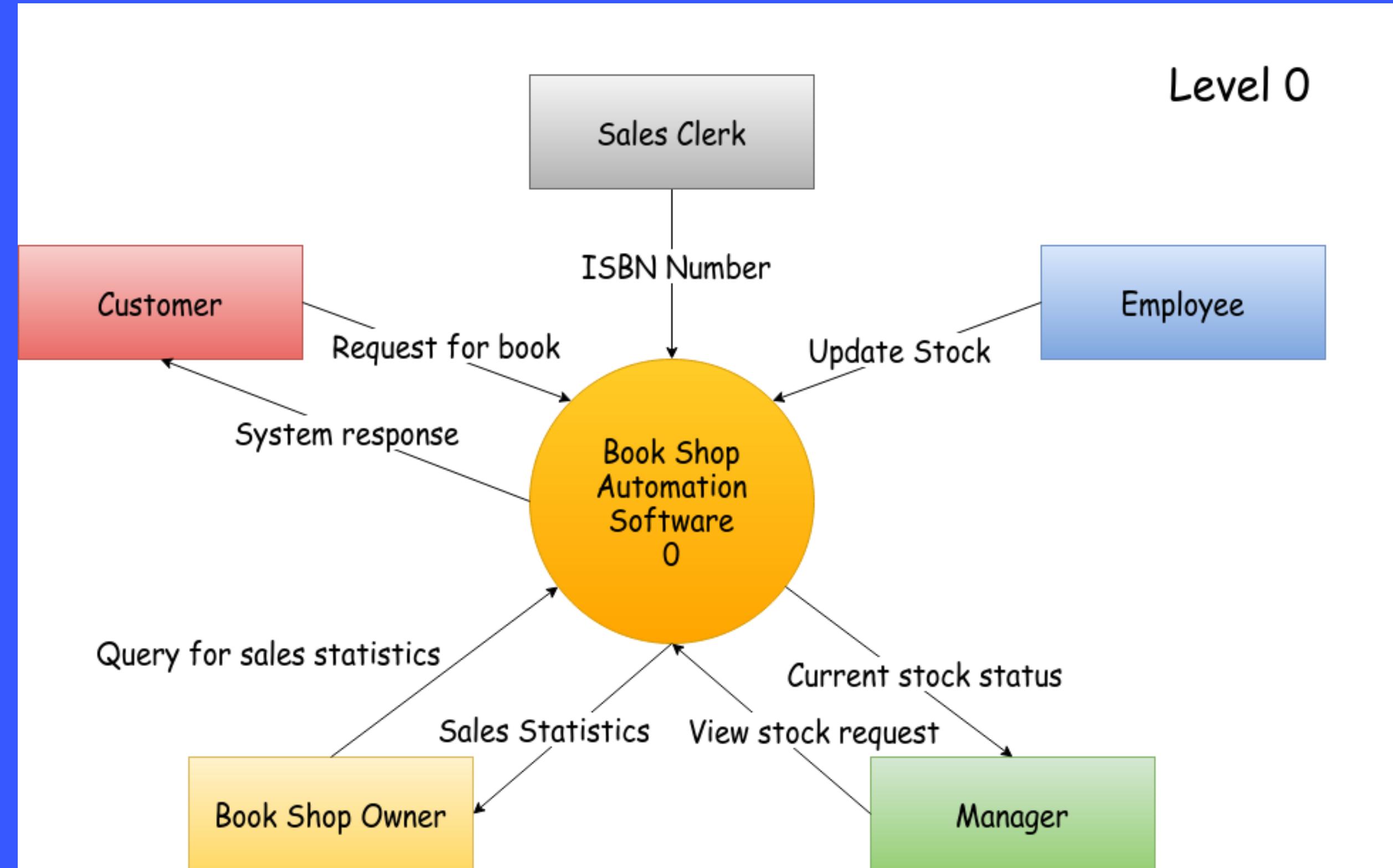
KEY REQUIREMENTS

- > **Check for availability of book:** The system would search the books in the books register based on the keywords.
- > **View request:** Once the manager selects this option, the system displays the current demand for different books
- > **Purchase Book:** Once the customer selects this option the system will ask to enter the ISBN no. of books sold.
- > **Update stock:** Once the employee selects this option, he would be asked to enter the list of new book name
- > **Generate Sales Statistics:** Once the manager selects this option, he will be informed about exact business done over any period of time. It also calculates inventory level required for various books.
- > **Check threshold books:** 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

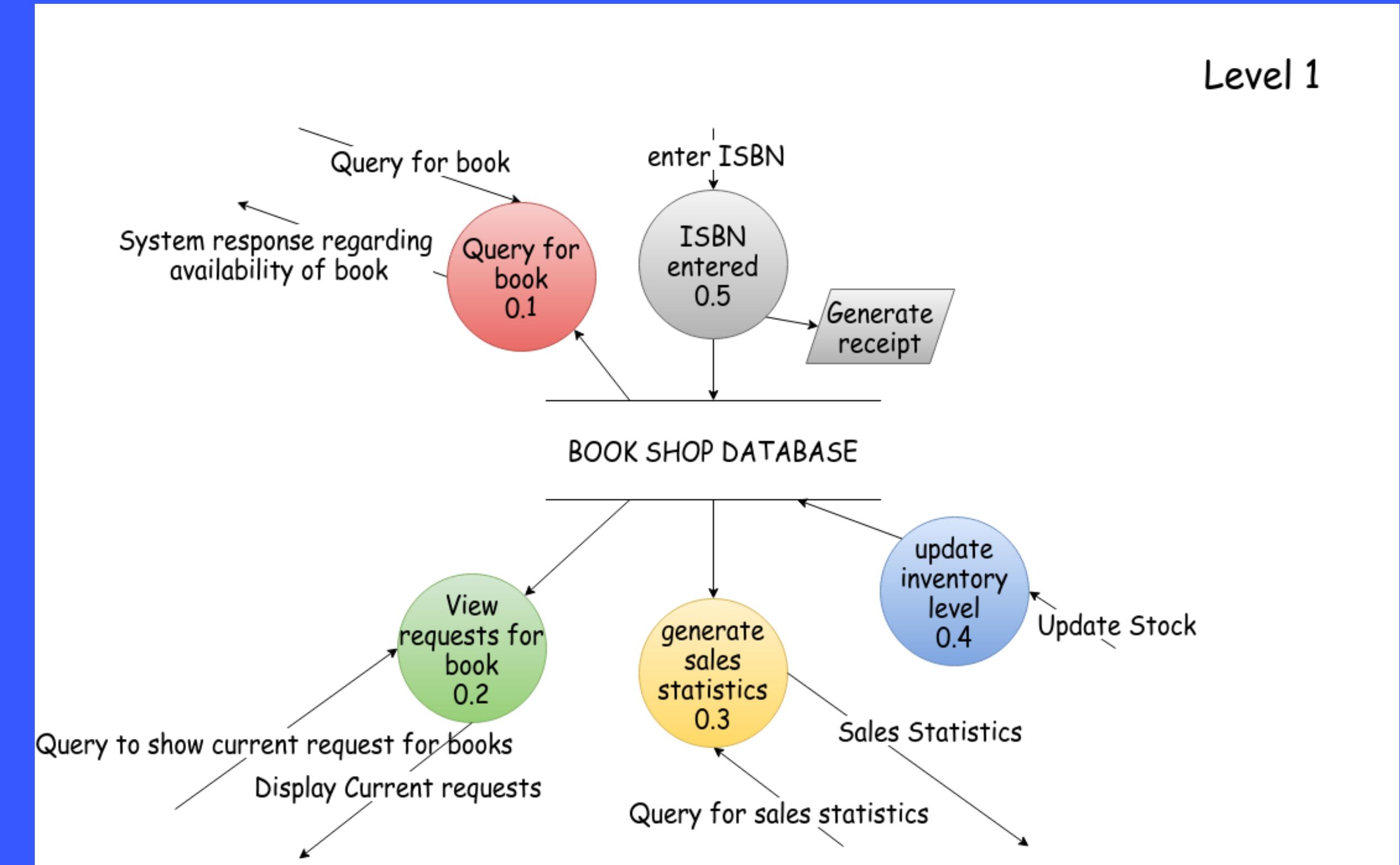
USE CASE DIAGRAM



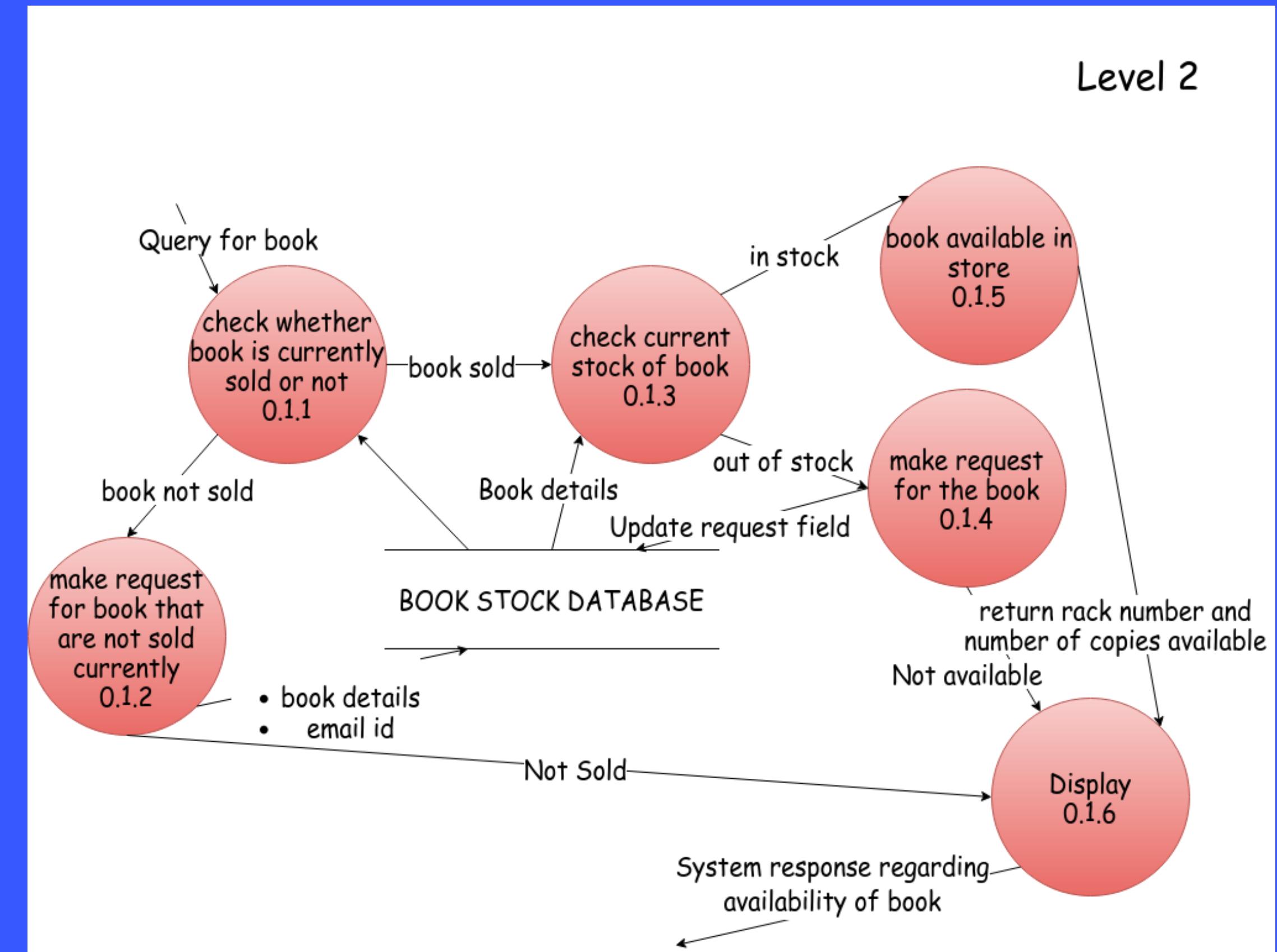
DFD Level-0



DFD Level-1

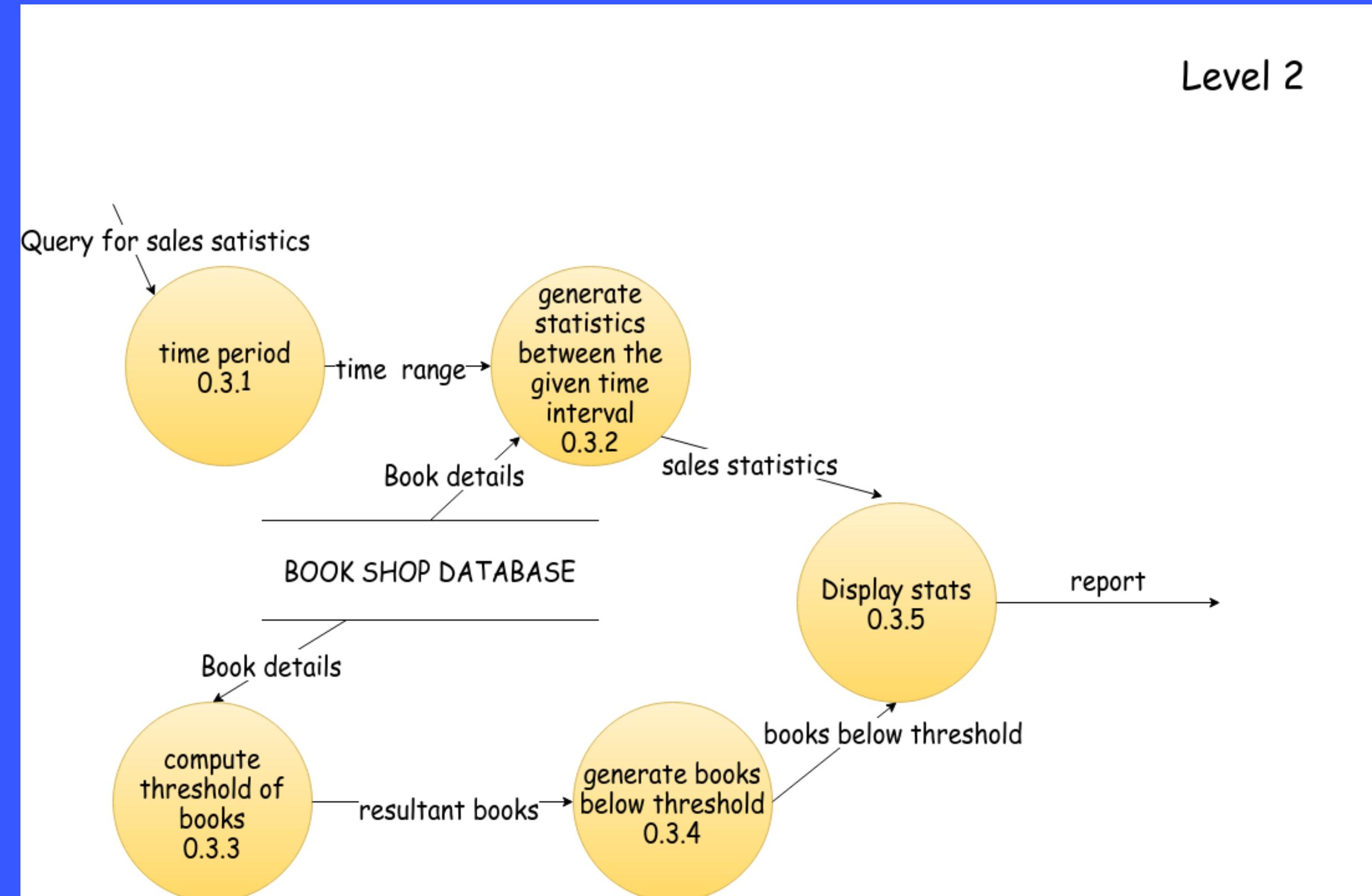


DFD Level-2



DFD Level-2

Level 2

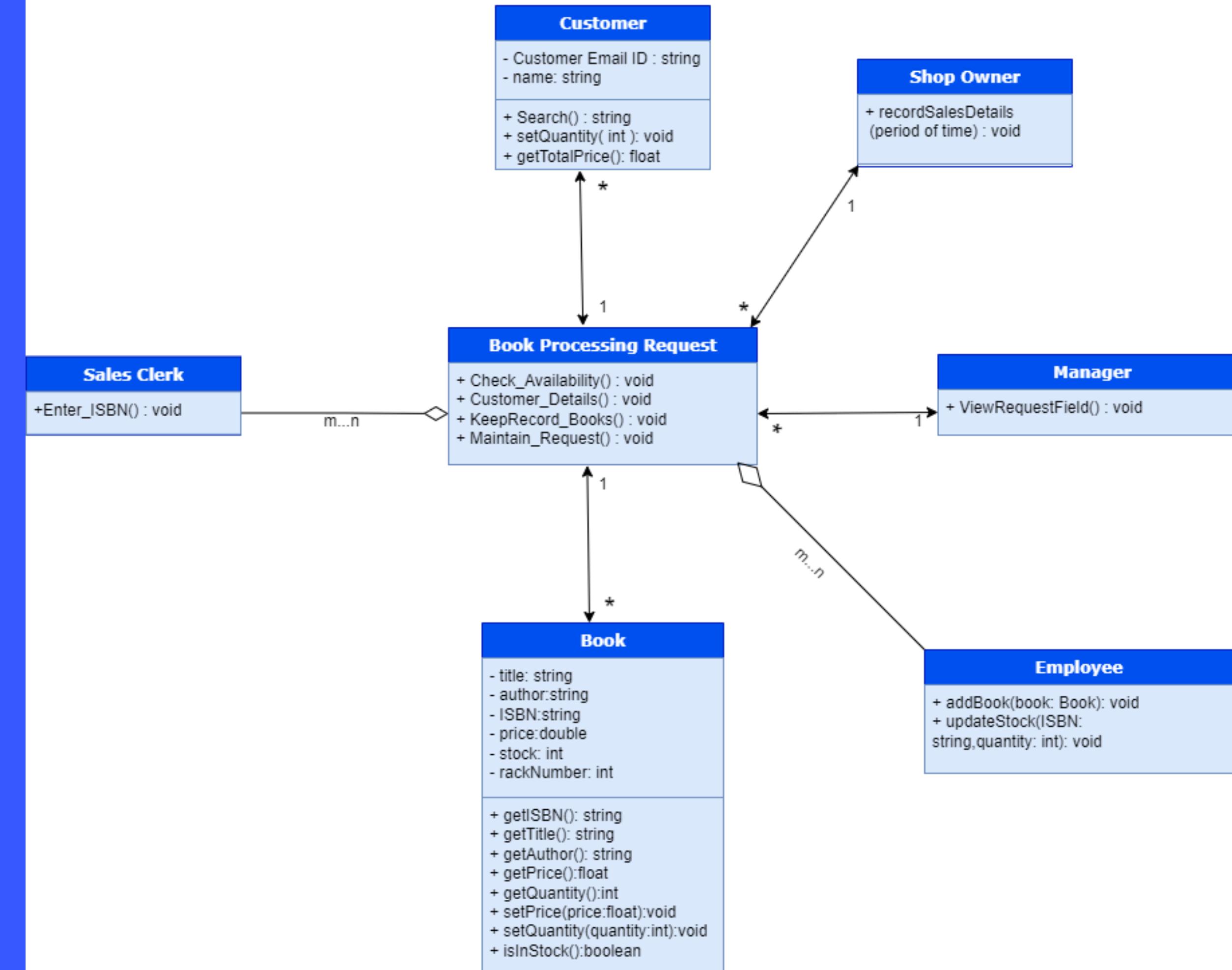


Data Dictionary

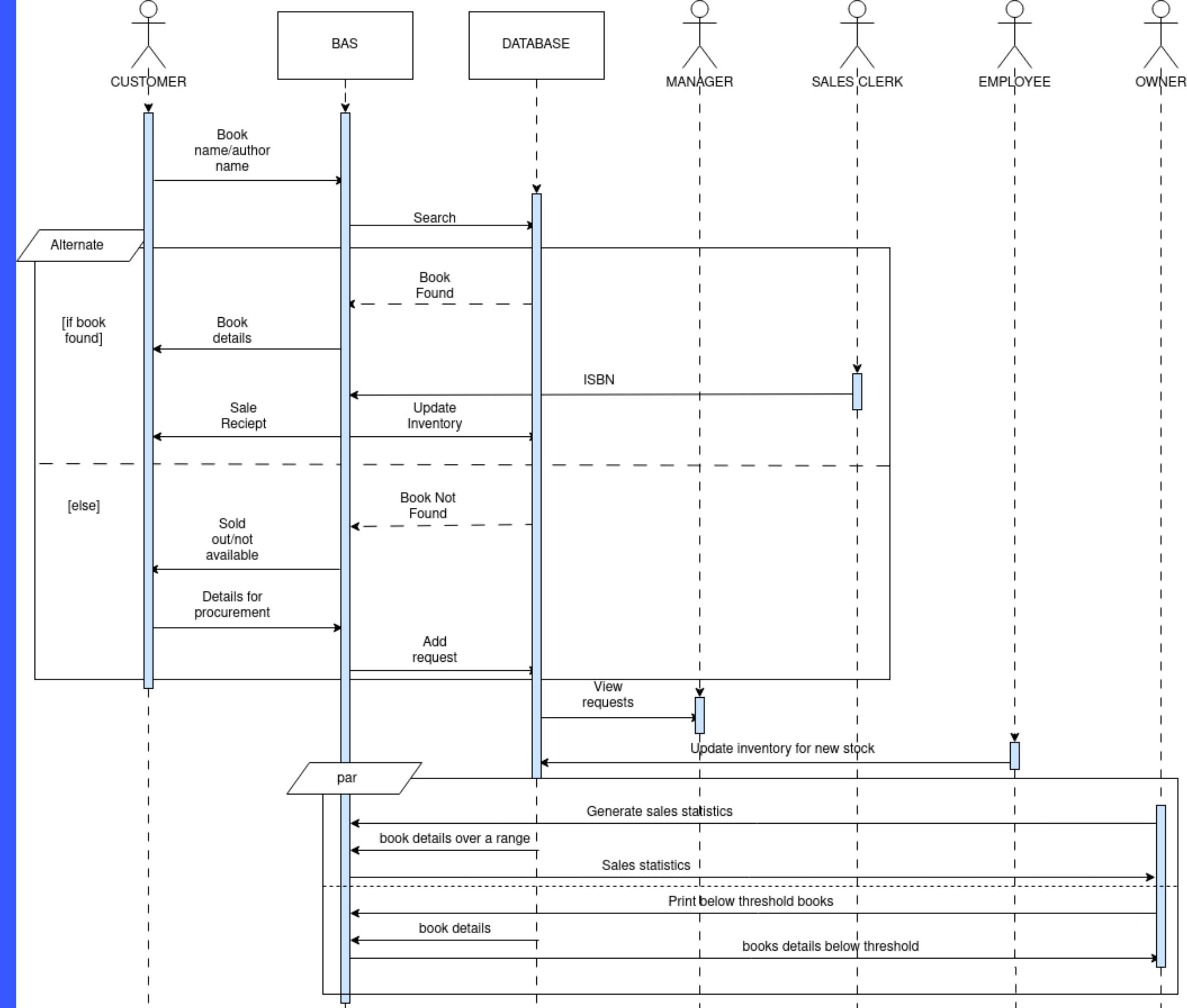
- author: string *input string*
- title: string *input string*
- Query-for-book: [author, title]
- system-response: [location, not-available, not-sold]
- location: string *Rack No. and No. of copies*
- not-available: string *Book Not Available message*
- not-sold: string *Book Not Sold message*
- query: period /* query from manager regarding sales statistics*/
- period: [date+date,month,year,day]
- date = year + month + day
- year: int
- month: int
- day: int
- ISBN-No.: int *input*
- Stock: int *available copies of book*
- book-detail: {title + author + ISBN-No. + Stock + location +
(date)}* *records of book sold info*
- threshold:int *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*
- statistics: {author + title + quantity + price }*
- sales-statistics: {statistics}*- quantity: integer
- books-below-threshold: {book-details}*- report = sales-statistics + books-below-threshold

Class Diagram

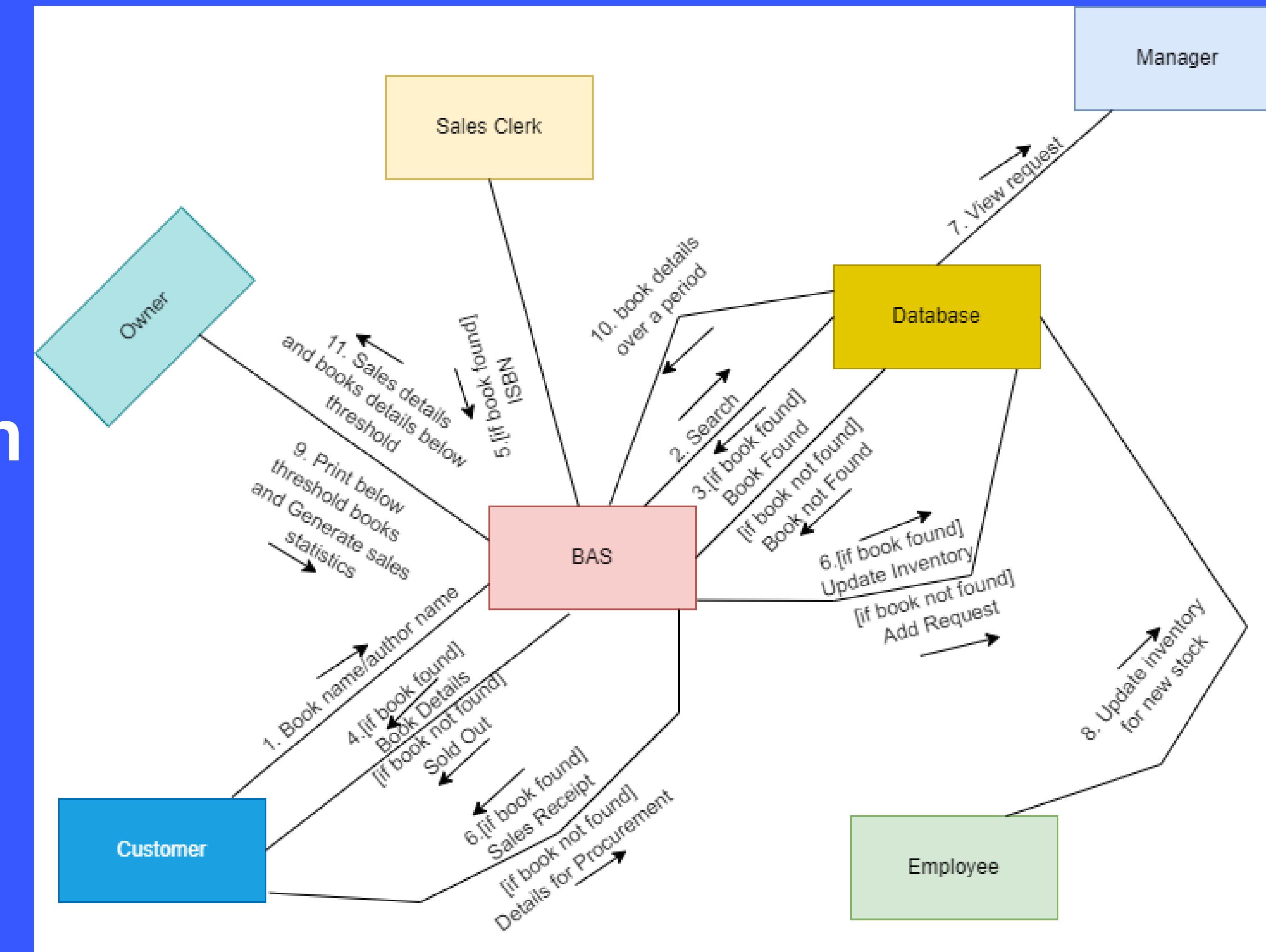
Class Diagram



Sequence Diagram

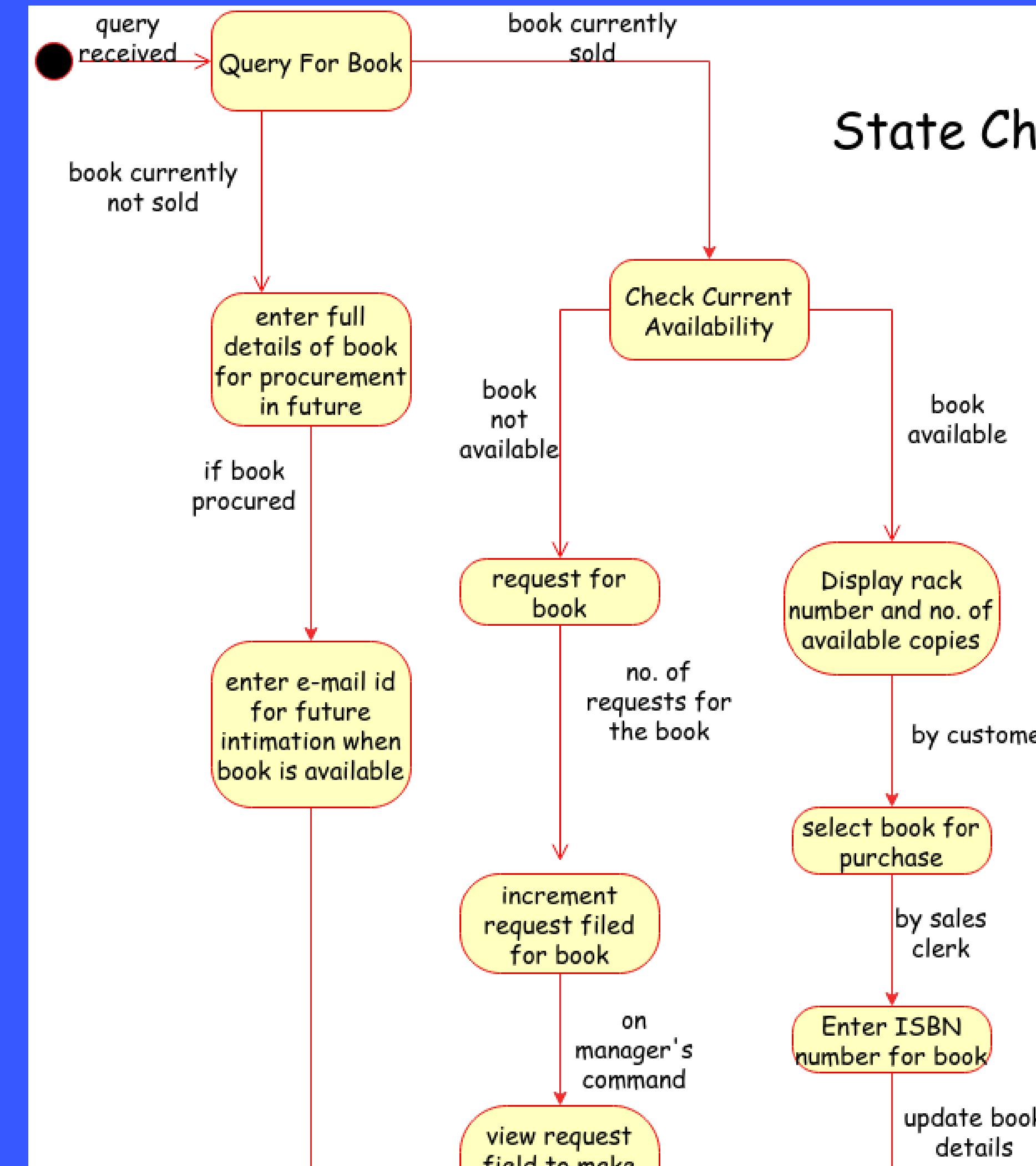


Collaboration Diagram

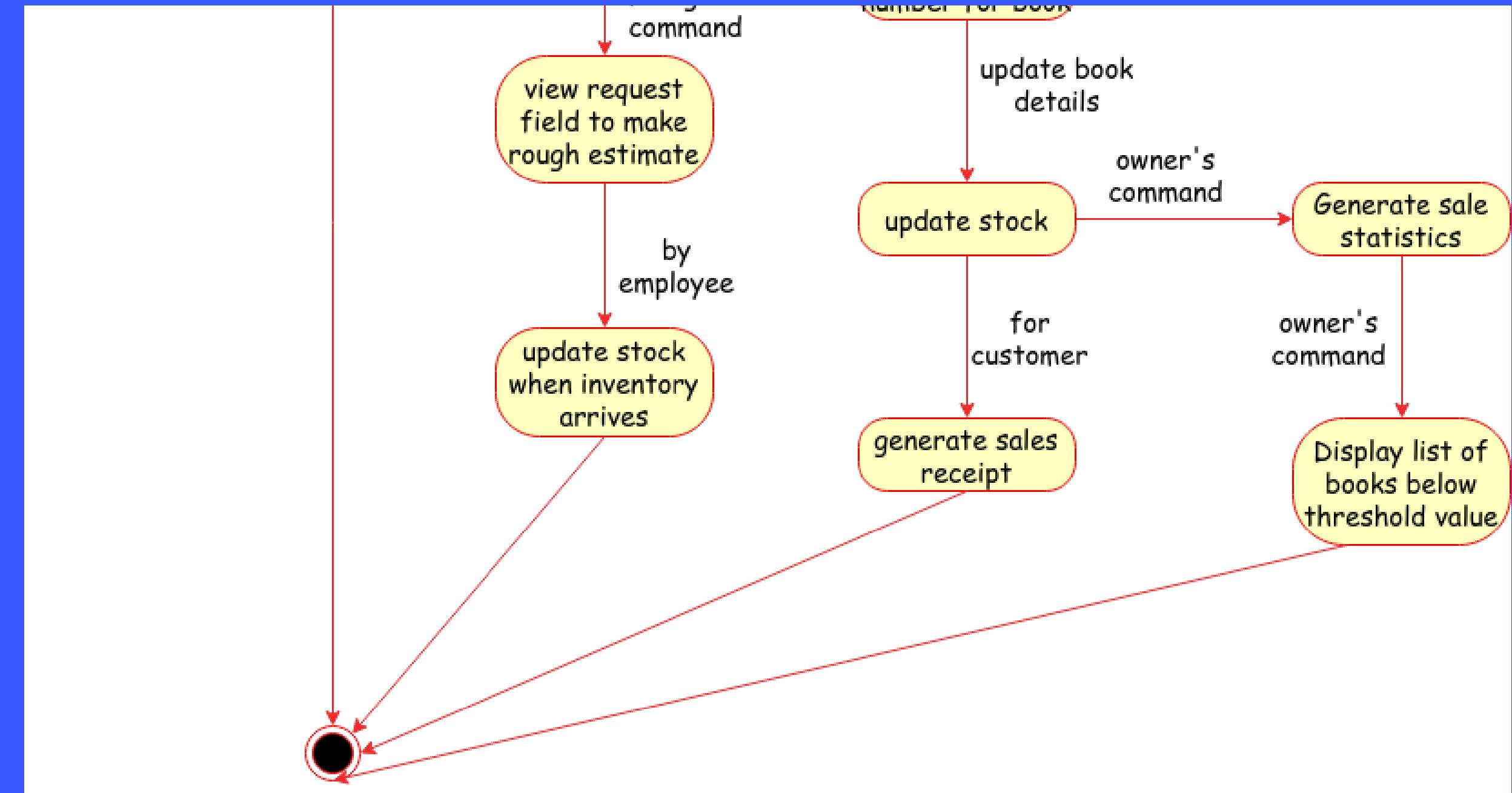


State Chart Diagram

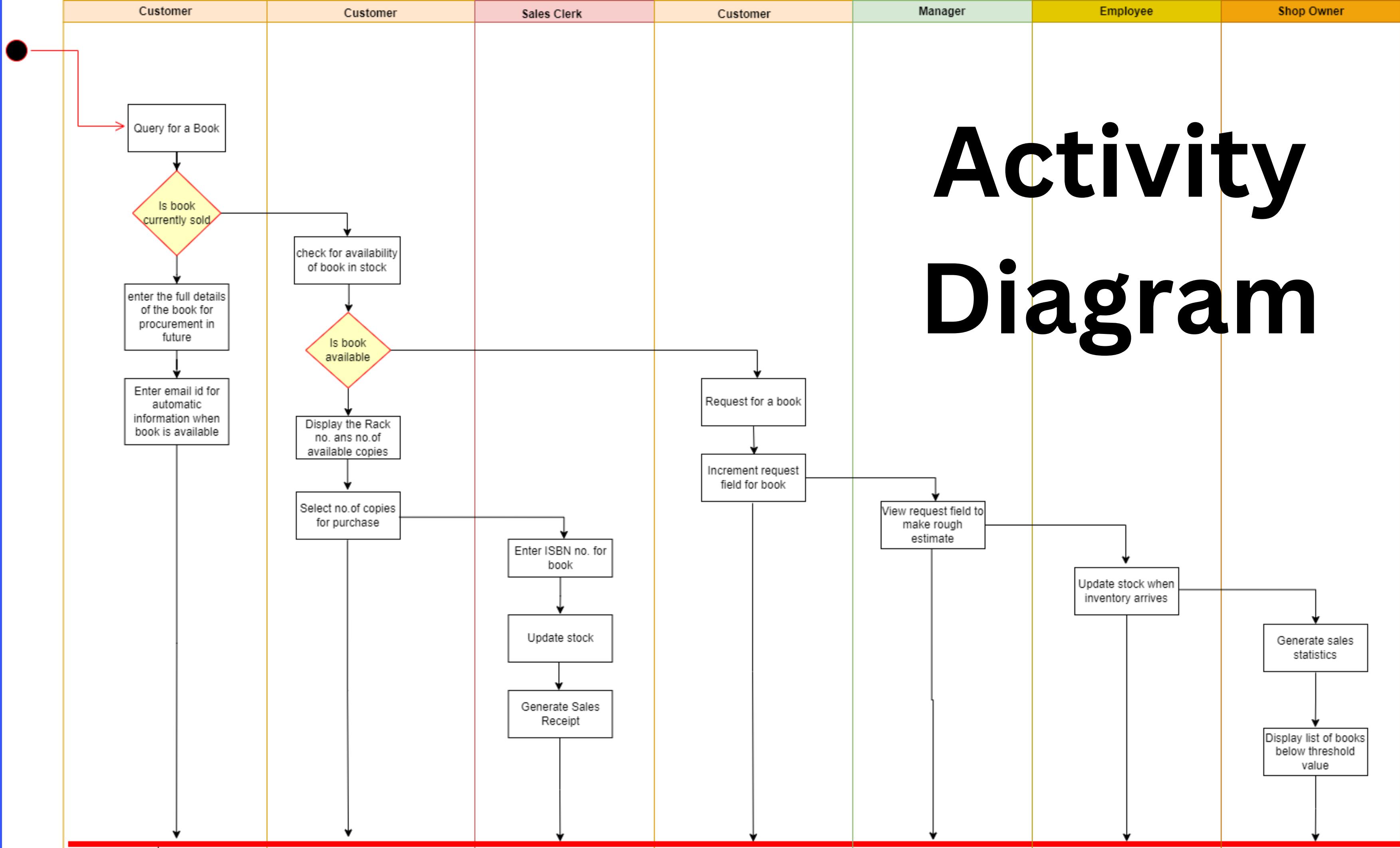
State Chart Diagram

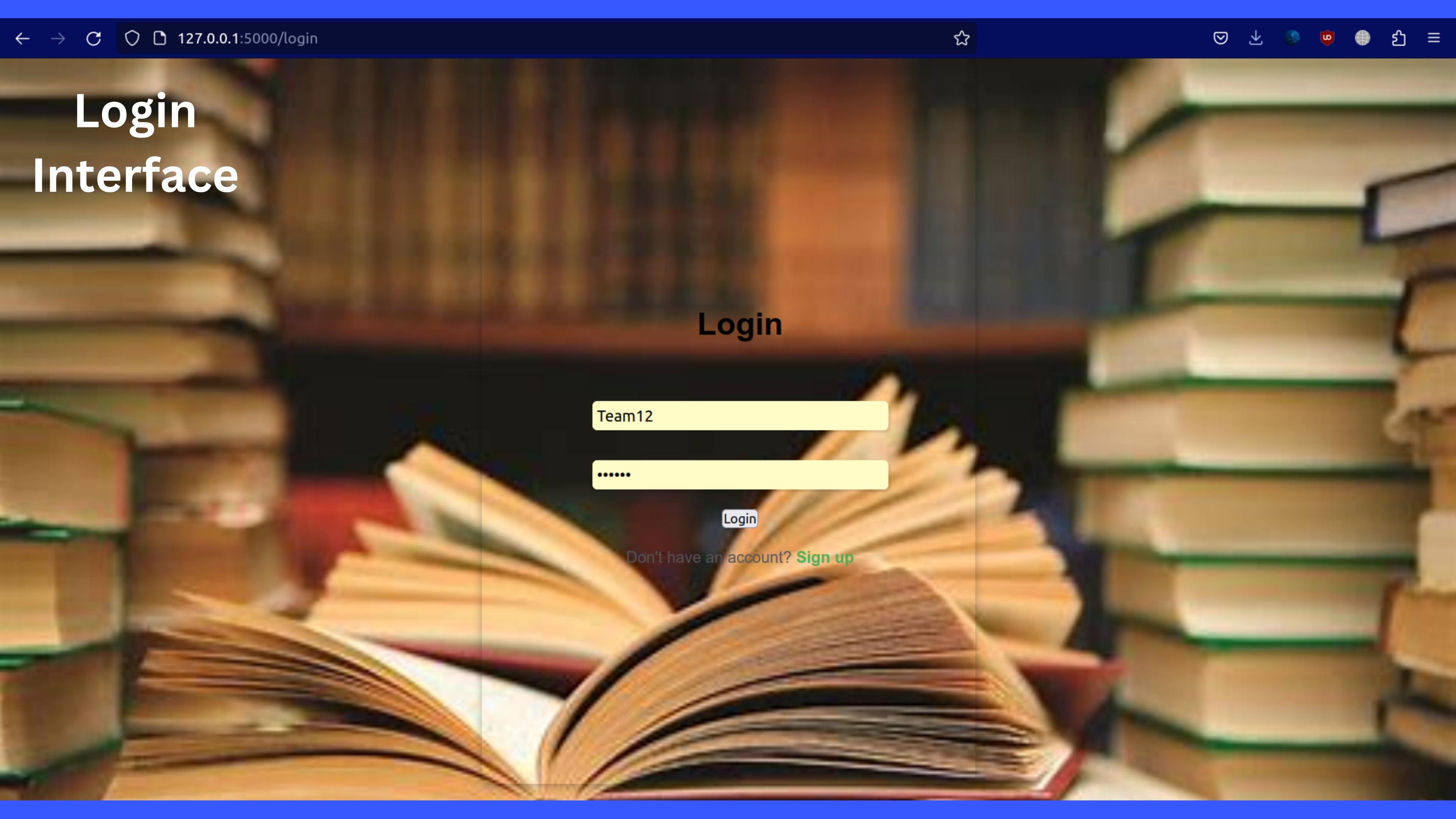


State Chart Diagram



Activity Diagram





Book Store

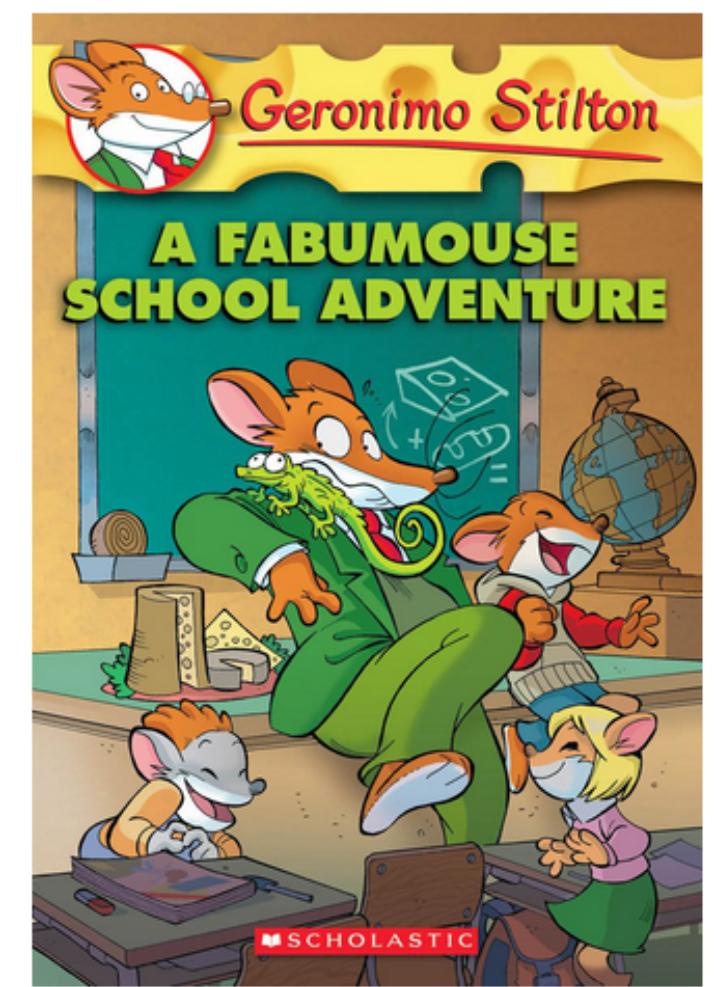
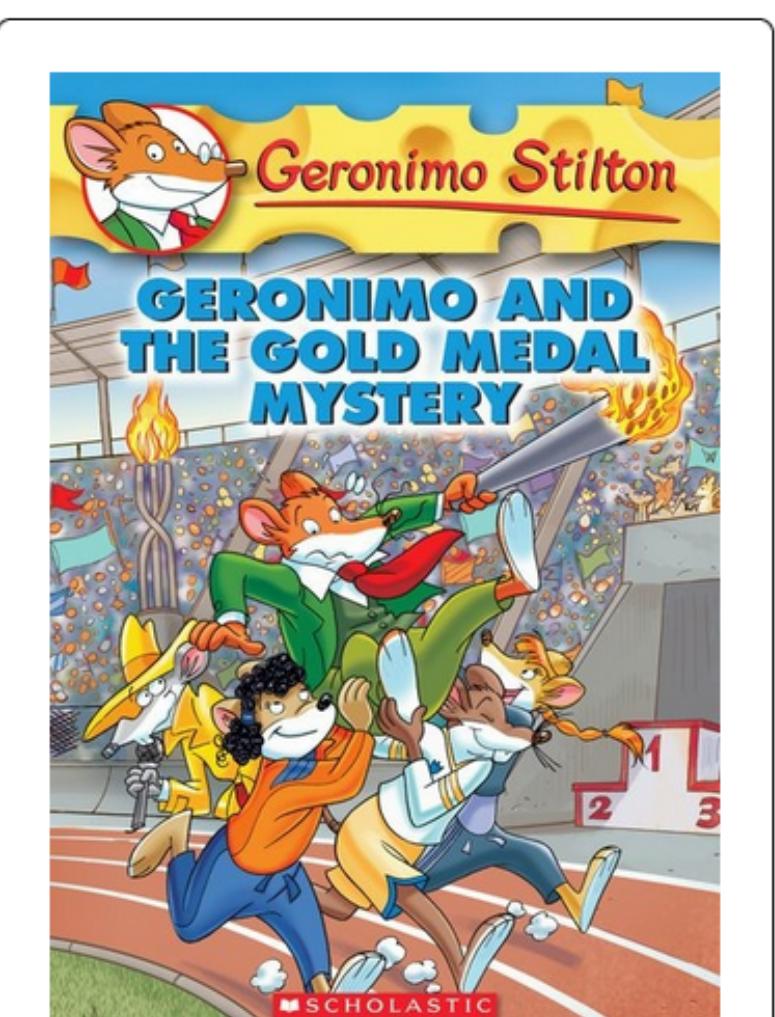
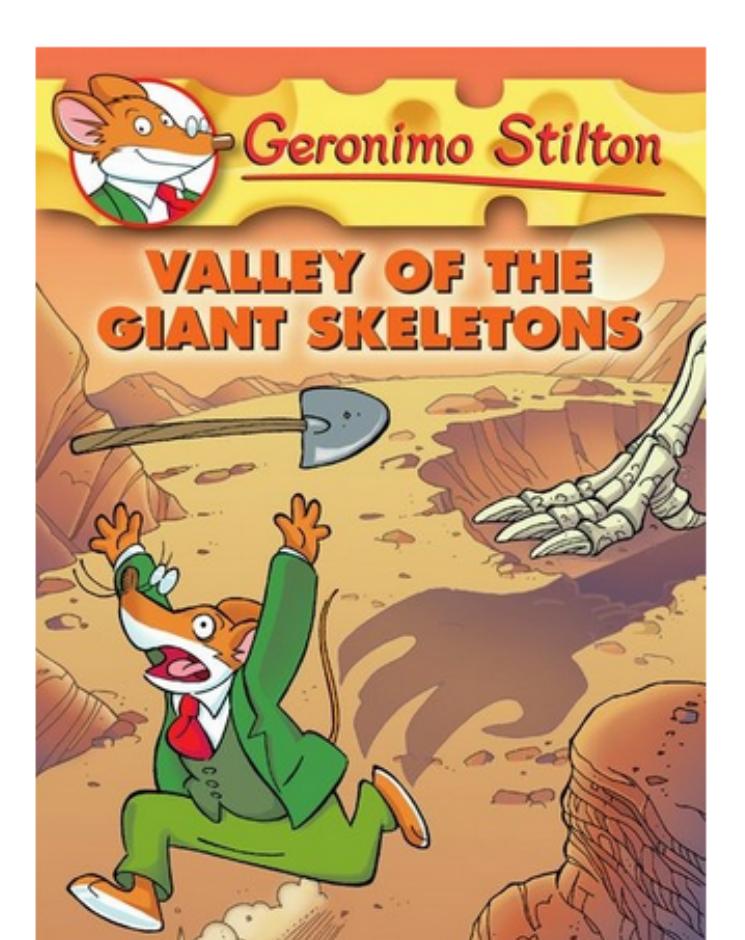
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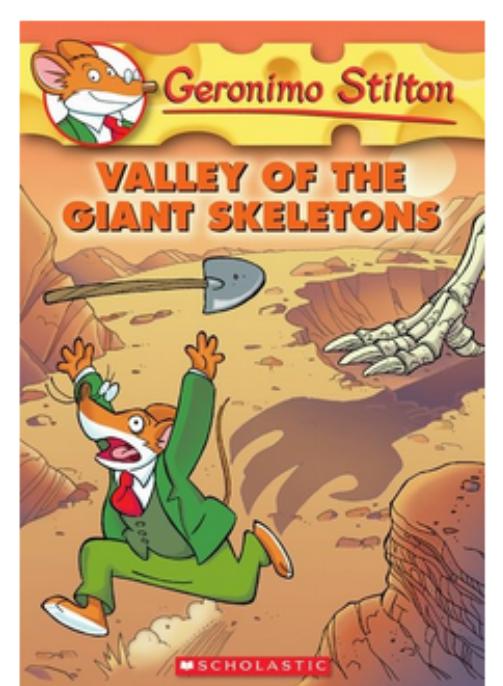
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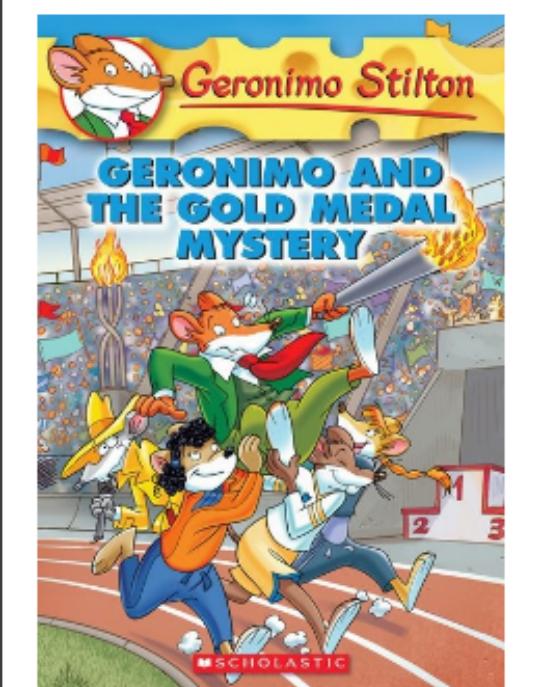
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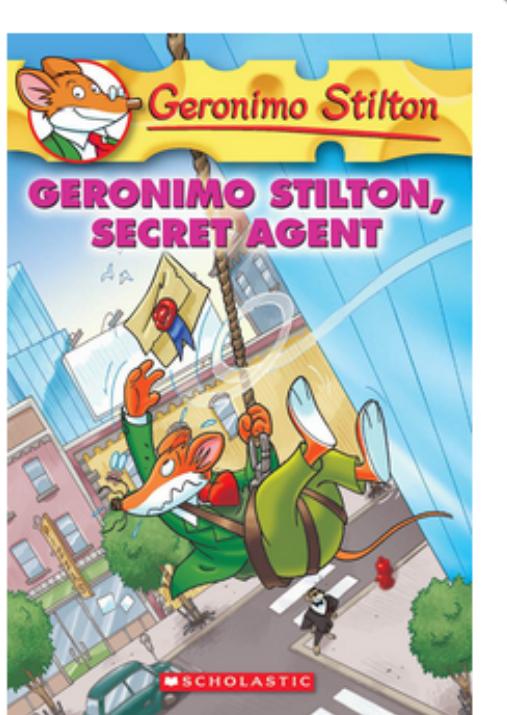


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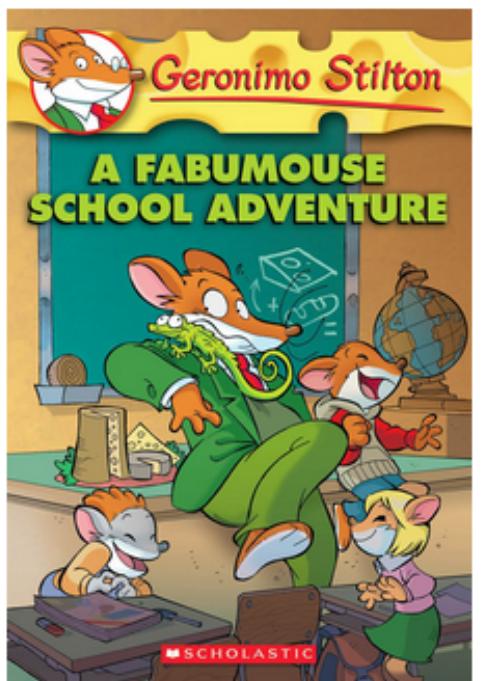


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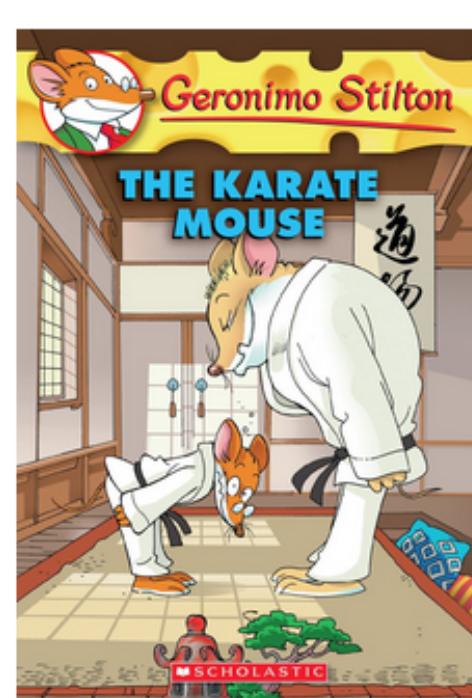


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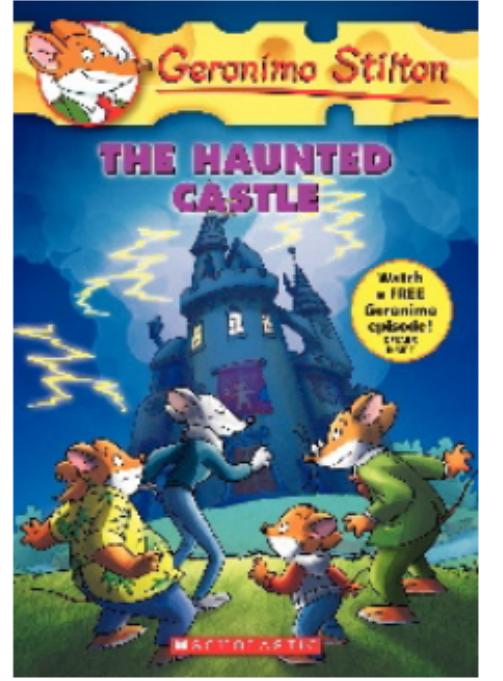


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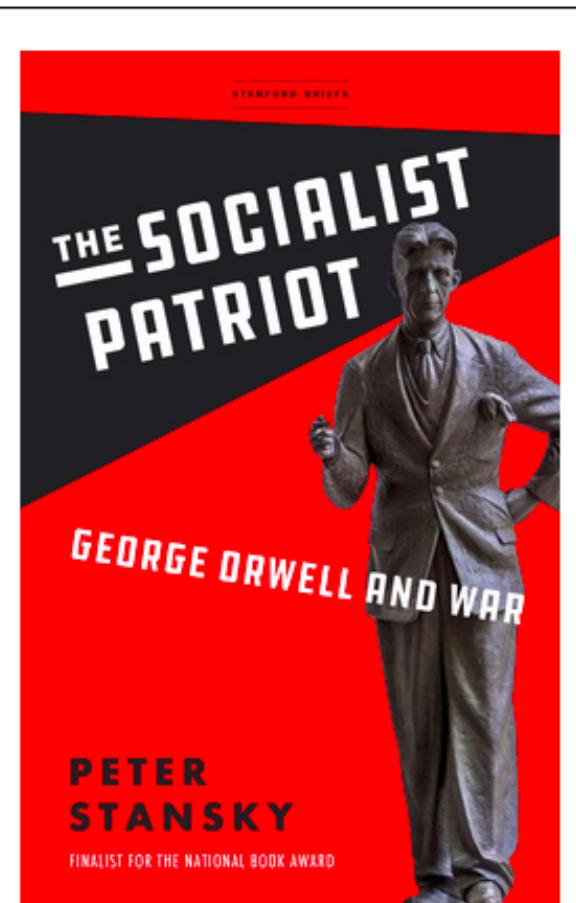
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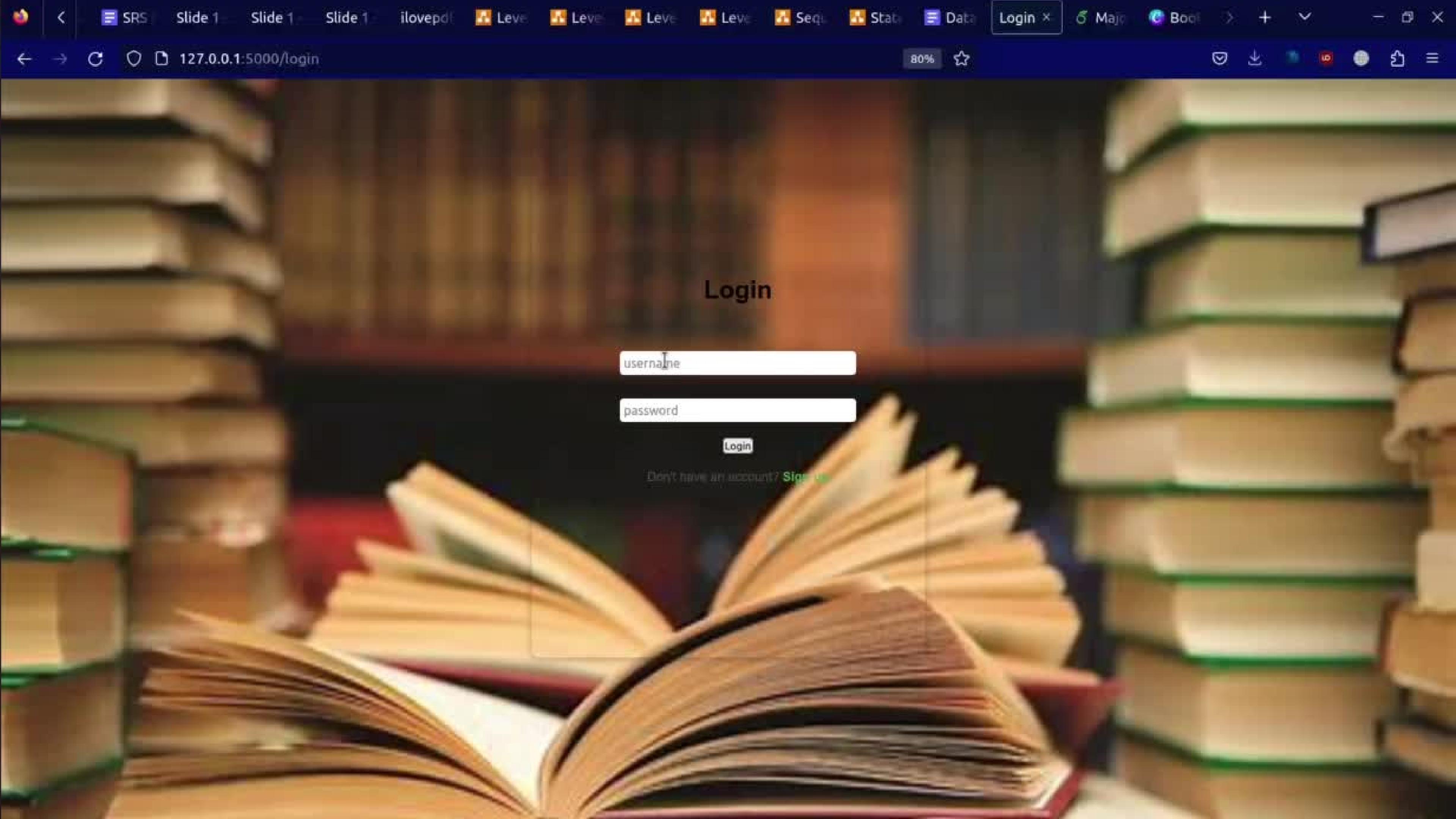
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Conclusion

To sum up, Book-shop Automation Software (BAS) makes it easier for customers to check if a book is available and helps employees manage inventory and sales data efficiently. The BAS helps the manager keep track of stock and estimate book demand. The owner can also track the business's performance and plan for the future using the sales statistics and inventory reports generated by the software. By implementing the BAS, the bookshop can become more efficient and profitable. However, careful planning, testing, and staff training are necessary to ensure successful adoption. Overall, the BAS is a valuable investment that can give the bookshop a competitive advantage in the long term.

END

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