

# Project Documentation

## Book Management System

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## 1 Project Overview

The **Book Management System** is a full-stack CRUD (Create, Read, Update, Delete) web application designed to help users manage a list of books. The UI is developed using **HTML**, **CSS (Bootstrap)**, **JavaScript**, and **Thymeleaf**, with **Spring Boot** as the backend framework.

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## 2 Objective

To create a responsive, user-friendly system where users can:

- Add new books
  - View and manage books in a searchable/sortable table
  - Edit or delete entries
  - Perform real-time filtering and sorting
  - Paginate long lists for better performance
  - Display a clear message when no results are found
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## 3 Technologies Used

Layer	Technology
Frontend	: HTML5, CSS3, Bootstrap 5
Logic	: Vanilla JavaScript
Backend	: Spring Boot (Java)
Templating	: Thymeleaf
Database	: MySQL
Build Tool	: Maven

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## 4 Core Features

### ✓ Add Book

- Input fields: Name, Price, Category, Description, Status
- Server-side form validation
- Stored in the database

### ✓ View Book List

- Table showing all books from DB
- Clean Bootstrap design
- Pagination controls

### ✓ Edit Book

- Click `Edit` to open a pre-filled form
- Update changes and save

### ✓ Delete Book

- Button triggers a confirmation prompt
- Deletes book from DB

### ✓ Search / Filter

- Real-time filtering via JavaScript
- Search by Name, Category, or Status

### ✓ Sort Columns

- Click column headers (Name, Price, etc.)
- Toggle between ascending (↑) and descending (↓)

### ✓ Pagination

- Only a few rows shown per page (e.g., 5)
- Pages displayed as: « 1 2 3 »

### ✓ No Result Message

- When search yields no matches
  - Shows message: "No matching records found"
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## 5 Screenshots

📷 Add these images inside a `screenshots/` folder or embed in your PDF:

1\_add\_book.png

### Description

Book form to add a new record

### Book Details

Name	<input type="text"/>
Price	<input type="text"/>
Category	<input type="text"/>
Description	<input type="text"/>
Status	<input type="text"/>
<div><button>Reset</button><button>Save</button></div>	

[View Records](#)

2\_book\_list.png

### Book List

[+ Add New Book](#)

<input type="text" value="Search by Name, Category, or Status..."/>					
Name #	Price #	Category #	Description	Status #	Actions
The Alchemist	299.0	Fiction	A philosophical story about a boy's journey to find treasure.	ACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
Atomic Habits	449.0	Self-help	An easy & proven way to build good habits and break bad ones.	ACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
Rich Dad Poor Dad	350.0	Finance	Personal finance and investing advice from two perspectives.	ACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
Wings of Fire	299.0	Biography	Autobiography of Dr. A.P.J. Abdul Kalam.	ACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
The Power of Now	399.0	Spiritual	Guide to spiritual enlightenment through mindfulness	INACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
<div><a href="#">«</a> <a href="#">1</a> <a href="#">2</a> <a href="#">»</a></div>					

### Description

3\_search\_result.png

## Book List

[+ Add New Book](#)

Think and Grow Rich					
Name †	Price †	Category †	Description	Status †	Actions
The Alchemist	299.0	Fiction	A philosophical story about a boy's journey to find treasure.	ACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
Atomic Habits	449.0	Self-help	An easy & proven way to build good habits and break bad ones.	ACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
Rich Dad Poor Dad	350.0	Finance	Personal finance and investing advice from two perspectives.	ACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
Wings of Fire	299.0	Biography	Autobiography of Dr. A.P.J. Abdul Kalam.	ACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
The Power of Now	399.0	Spiritual	Guide to spiritual enlightenment through mindfulness	INACTIVE	<a href="#">Edit</a> <a href="#">Delete</a>
No matching records found					

4\_no\_result.png

## Book List

[+ Add New Book](#)

Search by Name, Category, or Status...					
Name ↑	Price ↑	Category ↑	Description	Status ↑	Actions
No Records Found					

5\_edit\_book.png

Description

Book Details

Name	Wings of Fire
Price	299.0
Category	Biography
Description	Autobiography of Dr. A.P.J. Abdul Kalam.
Status	ACTIVE

Reset

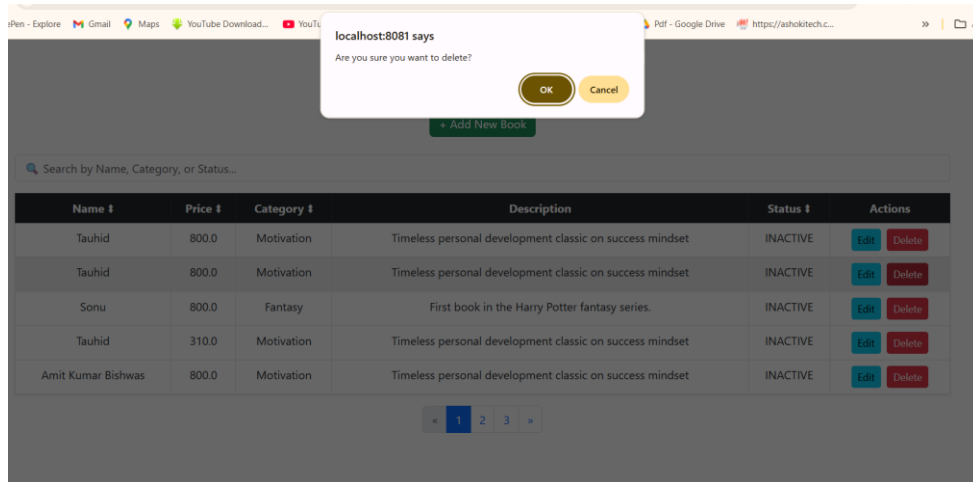
Save

[View Records](#)

## Description

6\_delete\_popup.png

Delete Confirmation



## 6 Project Structure

```
BookManagementSystem/  
├── src/  
│   ├── main/  
│   │   ├── java/com/project/book/  
│   │   │   ├── controller/  
│   │   │   ├── model/  
│   │   │   ├── repository/  
│   │   │   └── service/  
│   │   └── resources/  
│   │       ├── templates/  
│   │       │   ├── add_book.html  
│   │       │   └── view_books.html  
│   │       └── application.properties  
├── screenshots/  
├── pom.xml  
├── README.md  
└── Project_Documentation.pdf
```

## ✓ Conclusion

The Book Management System demonstrates a complete CRUD application with real-time interactivity, clean design, and professional documentation. It is built with best practices in Spring Boot and modern frontend logic using JavaScript and Bootstrap.

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