



SURYAVANSHI LIBRARY MANAGEMENT SYSTEM

Business requirement document

Contents

Business Requirements Document (BRD).....	2
Requirements.....	2
Manage Authors.....	2
Manage Publishers.....	2
Manage Books.....	3
Manage Customers	4
Manage Transactions	5

Business Requirements Document (BRD)

Suryavanshi Books is a large book publisher who wants to start a library as part of its CSR program. They want to make the biggest library in India. To support their day-to-day operations, they have approached your company to build them a Library Management System.

Requirements

Manage Authors

1. Author Entity

Properties/Fields	Field Type	Field Size
Id [PK]	string	25
Name	string	250
Notes	string	2050

2. Author Management (CRUD)

- a. List
- b. Create
- c. Update
- d. Delete
 - i. Only allowed if no books exist

Manage Publishers

1. Author Entity

Properties/Fields	Field Type	Field Size
Id [PK]	String	25
Name	String	250
Phone	String	250
Email	String	250
Notes	String	2050

2. Publisher Management (CRUD)

- a. Create
- b. Read
- c. Update
- d. Delete
 - i. Only allowed if no Books exist

Manage Books

1. Book Entity

Properties/Fields	Field Type	Field Size
ISBN [PK]	string	25
Title	String	250
PublisherId	int	
AuthorId	int	
IssuedStatus	bool	
IsDeleted	bool	

2. Book Management

a. Display Books List

- i. All Books
- ii. Available Books
- iii. Issued Books

b. Search Book

- i. Search By ISN
- ii. Search By Name (Partial word search)
- iii. Search By Publisher
- iv. Search By Author

c. Add new books

d. Edit an existing book

- i. ISBN cannot be edited

e. Delete an existing book

- i. Book can be hard deleted
 - 1. If Book has never been issued to a customer.
- ii. Book can be soft deleted
 - 1. Add a IsDeleted property to Books entity
 - 2. If Book has been issued in the past.
- iii. Book cannot be deleted
 - 1. If Book is currently issued.

Manage Customers

1. Customer Entity

Properties/Fields	Field Type	Field Size
Id [PK]	string	25
Name	string	250
Email	string	250
Phone	string	250
Address	string	500
IsDeleted	bool	

2. Customer Management

a. Display Customer List

- i. All Customer
- ii. Customers holding books

b. Search Customer

- i. Search By Name (Partial word search)
- ii. Search by email
- iii. Search By phone

In all 3 cases if results found then display Id, Name, Email, Phone, Address in tabular format. Also display the list of books, for each Customer.

Example: Search by Name: su

Result:

Id	Name	Email	Phone	Address	Total Books
12	Suman Tiwari	1
ISBN		Name		Author	
111-222-333-444		The Road to Trepidation		Sudhanshu Roy	
33	Rasuja Moi	3
ISBN		Name		Author	
999-999-999-999		The rise and fall of Rome		Rossell Donald	
878-787-878-787		Running towards Health		Arnold Diesel	

c. Add new customer

d. Edit an existing customer

- i. Id cannot be edited

e. Delete an existing customer

- i. Customer can be hard deleted
 1. If Customer has never been issued to a Book.
- ii. Customer can be soft deleted
 1. Add a IsDeleted property to Customer entity
 2. If Customer has been issued a book in the past.
- iii. Customer cannot be deleted
 1. If Customer is currently holding a book.

Manage Transactions

1. Transaction Entity

Properties/Fields	Field Type	Field Size
Id	string	25
BookId	string	25
CustomerId	string	25
DateOfIssue	string	25
DateOfReturn	string	25

2. Transaction Management

a. Issue Book

- i. Enter BookId & CustomerId
- ii. DateOfIssue is populate automatically to today & return date should be empty/null.
- iii. If the requested book is already issued, show message "Book is already issued" if not, then Create entry in Transaction file and show message – Book has been issued to customer <Customer Full name>, return date - <7 days from date of issue>
- iv. when a book is issued to a customer
 1. Make an entry in transaction
 2. Set IssuedStatus = true for the book entity

b. Return Book

- i. Enter BookId & CustomerId
- ii. Search for the transaction and
 1. set DateOfReturn as today
 2. Update the IssuedStatus = false for the book entity
- iii. If the return is delayed, display the due fine.
 1. Currently fine is Rs. 100 per late day.
 2. Make it configurable so it can be changed later.

c. Search Customer

- i. Search By Name (Partial word search)
- ii. Search by email
- iii. Search By phone

In all 3 cases if results found then display ISBN, Book, Author Name, Publisher Name, in tabular format.

d. Show Late Books

- i. List all transactions who have missed the default return date.
 1. TransactionId, ISBN, Book, Customer Id, Customer Name, Due Date, Late by Days, Fine Due