

## Problem Statement : Library Book Borrowing API

### Models

#### RoleModel

Field Name	Datatype	Primary Key	Comments
id	Integer	Yes	Autoincrement
rolename	String	No	Values: "MEMBER", "LIBRARIAN"

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#### UserModel

Field Name	Datatype	Primary Key	Foreign Key	Comments
id	Integer	Yes	No	Autoincrement
username	String	No	No	-
email	String	No	No	Unique
password	String	No	No	-
role	Integer	No	Yes	FK to RoleModel

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#### BookModel

Field Name	Datatype	Primary Key	Comments
id	Integer	Yes	Autoincrement
title	String	No	-
author	String	No	-
category	String	No	Example: "Fiction", "Science"
price	Double	No	-
available	Boolean	No	Default: True

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#### BorrowModel


Field Name	Datatype	Primary Key	Foreign Key	Comments
id	Integer	Yes		Autoincrement
bookId	Integer	No		FK to BookModel
memberId	Integer	No		FK to UserModel
borrowDate	String	No		Default: Current date
returnDate	String	No		-
fine	Double	No		Calculated: (daysLate * 10)
status	String	No		Default: "borrowed"

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## Endpoints

1. POST /borrow/create (MEMBER only)
  - Manipulation: Fine auto-calculated if returnDate exceeds 14 days.
2. GET /borrow/list?category=Science&maxFine=100 (Both roles)
  - Filters by category and fine amount.
3. PATCH /borrow/update/{id} (LIBRARIAN only)
  - Updates status to "returned".
4. DELETE /borrow/delete/{id} (Conditional)
  - Librarian or member who borrowed can delete.

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 Manipulations: Fine calculation based on late days, query params with category + maxFine.