# Documentation for Library Management System API

**Overview**

This is the API for managing library resources, including books, patrons, and borrowing records. The API supports basic CRUD operations, user authentication, and borrowing/returning books.

**Base URL**

<http://localhost:8080/api>

**Endpoints**

## Books Management

### Get All Books

* **URL:** /books
* **Method:** GET
* **Auth:** Bearer Token
* **Description:** Fetches a list of all books in the library.
* **Response Example:**

[

{

"id": 1,

"title": "1984",

"author": "George Orwell",

"publicationYear": 1949,

"isbn": "9780451524935"

}

]

### Add a Book

* **URL:** /books
* **Method:** POST
* **Auth:** Bearer Token
* **Body:**

{

"title": "1950",

"author": "George Orwell",

"publicationYear": 1950,

"isbn": "9780451524935"

}

* **Description:** Adds a new book to the library.

### Get Book by ID

* **URL:** /books/{id}
* **Method:** GET
* **Auth:** Bearer Token
* **Description:** Fetches the details of a specific book by its ID.

### Update a Book

* **URL:** /books/{id}
* **Method:** PUT
* **Auth:** Bearer Token
* **Body:**

{

"title": "1955",

"author": "George Orwell",

"publicationYear": 1955,

"isbn": "9780451524950"

}

* **Description:** Updates the details of a specific book.

### Delete a Book

* **URL:** /books/{id}
* **Method:** DELETE
* **Auth:** Bearer Token
* **Description:** Deletes a specific book by its ID.

## 2. Patrons Management

### Get All Patrons

* **URL:** /patrons
* **Method:** GET
* **Auth:** Bearer Token
* **Description:** Fetches a list of all patrons in the library.

### Add a Patron

* **URL:** /patrons
* **Method:** POST
* **Auth:** Bearer Token
* **Body:**

{

"name": "Alice Brown",

"email": "alice.brown@example.com",

"phoneNumber": "+112233445544"

}

* **Description:** Adds a new patron to the library.

### Get Patron by ID

* **URL:** /patrons/{id}
* **Method:** GET
* **Auth:** Bearer Token
* **Description:** Fetches the details of a specific patron by ID.

### Update a Patron

* **URL:** /patrons/{id}
* **Method:** PUT
* **Auth:** Bearer Token
* **Body:**

{

"name": "Alice Brownies",

"email": "alice.brown@example.com",

"phoneNumber": "+112233445544"

}

* **Description:** Updates the details of a specific patron.

### Delete a Patron

* **URL:** /patrons/{id}
* **Method:** DELETE
* **Auth:** Bearer Token
* **Description:** Deletes a specific patron by ID.

## 3. Borrowing Records

### Borrow a Book

* **URL:** /borrow/{bookId}/patron/{patronId}
* **Method:** POST
* **Auth:** Bearer Token
* **Description:** Creates a borrowing record for a patron.

### Return a Book

* **URL:** /borrow/{bookId}/patron/{patronId}
* **Method:** PUT
* **Auth:** Bearer Token
* **Description:** Updates the borrowing record to indicate that the book has been returned.

## 4. Authentication

### Login

* **URL:** /auth/login
* **Method:** POST
* **Body:**

{

"username": "ZAINA",

"password": "123456"

}

* **Description:** Authenticates a user and provides a JWT token for accessing secured endpoints.

**Notes**

* All secured endpoints require a **Bearer Token** for authentication.
* Replace {id}, {bookId}, and {patronId} with the appropriate IDs.