**LIBRARY MANAGEMENT SYSTEM** ***(LMS)*** **DOCUMENTATION**

**Installation**

* Starting a project:

django-admin startproject LMS

* Creating virtual environment :

Cd LMS

v

v

virtualenv env

* Activating virtual env:

env\scripts\avtivate

* Installing Django and djangorestframework:

pip install djangorestframework

* Creating different apps :

Python manage.py startapp Books

* Create and run migrations :

Python manage.py makemigrations

Python manage.py migrate

**DATABASE SCHEMA**

**In models.py**

1. BookInfo

* title (CharField)
* author (CharField)
* category (CharField with choices)
* price (DecimalField)
* stock (PositiveIntegerField)
* status (CharField with choices)

1. ReturnedBookInfo

* returner\_name (CharField)
* book (ForeignKey to BookInfo)
* borrowed\_date (DateField)
* due\_date (DateField)
* returned\_date (DateField)
* due\_status (TextField)

1. BorrowedBookInfo

* borrower\_name (CharField)
* book (ForeignKey to BookInfo)
* borrowed\_date (DateTimeField)
* due\_date (DateField)

1. Transaction

* transaction\_type (CharField with choices)
* transaction\_date (DateField)
* due\_date (DateField)
* user (CharField)
* book (ForeignKey to BookInfo)

**API Endpoints:**

1. **Retrieve List of Books**

* Method: GET
* Endpoint: /books/books-info
* Description: Retrieve a list of all books.

1. **Retrieve List of Returned Books**

* Method**: GET**
* Endpoint**: /books/returnedbooksbyuser**
* Description: **Retrieve a list of books that have been returned.**

**3) Retrieve List of Borrowed Books**

* Method: **GET**
* Endpoint**: /books/borrowedbooksbyuser/**
* Description**: Retrieve a list of books that are currently borrowed.**

**4)Borrow a Book**

* Method: **POST**
* Endpoint: **/books/BorrowAPI/**
* Description: **Borrow a book.**
* Request Body: J**SON with book\_id and user.**

**5)Return a Book**

* Method: **POST**
* Endpoint: **/books/ReturnAPI/**
* Description**: Return a borrowed book.**
* Request Body**: JSON with book\_id and user.**

**User Roles**

**1)User**

* Can retrieve the list of books.
* Can borrow a book.
* Can return a borrowed book.
* Can search for books.

**2)Liberian**

* Can add books
* Can manage users

**3)admin**

* Can have full control