BookLoop

FATHIMATH SANA CV

(MES24MCA-2016)

Department of Computer Applications

MES College of Engineering, Kuttippuram

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PRODUCT OWNER

DR.GEEVAR C ZACHARIAS

(ASSISTANT PROFESSOR)

DEPARTMENT OF COMPUTER APPLICATIONS

MES COLLEGE OF ENGINEERING, KUTTIPPURAM

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BookLoop

•BookLoop is a peer-to-peer digital platform for renting and reselling academic books on campus.

•It helps students save money, reduces book waste, and promotes a sustainable sharing ecosystem.

•Students can list books for sale or rent, manage rentals with return reminders, and search books by title, subject, or semester.

•Features include user dashboards, admin panel, in-app messaging, and optional book image uploads.

•Built with HTML,Bootstrap,CSS,JavaScript , MongoDB, and Tailwind CSS; uses JWT authentication and supports deployment on Vercel/Render.

OBJECTIVES

- To reduce the financial burden of academic books on students by enabling affordable rentals and resales.
- To minimize resource wastage by keeping books in circulation instead of sitting unused after semesters.
- To promote a sustainable and collaborative campus culture through peer-to-peer book sharing.
- To provide an easy-to-use, secure, and reliable platform for listing, renting, and selling academic books.
- To improve accessibility of study materials for all students, regardless of financial background.

EXISTING SYSTEM

- Students mostly buy new textbooks → very costly.
- Resale/second-hand options are limited and give low returns.
- Library copies are limited and not always available.
- Some informal sharing/exchange among friends → no structure or security
- Leads to high cost, waste of books, and inconvenience.

PROPOSED SYSTEM

- Centralized digital platform for renting and selling books.
- Students can list, rent, or sell books easily.
- Search and filter option for quick access.
- Return reminders for rentals.
- User dashboard and admin panel for management.
- In-app messaging for secure communication.
- Secure authentication (JWT).

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MOTIVATIONS

•High cost of academic books creates financial pressure on students.

•Many books remain unused after the semester, leading to waste.

•Lack of a structured, secure, and convenient system for peer-to-peer book exchange.

•Need to make study materials more accessible for all students.

•Promote sustainability through resource sharing and reducing unnecessary purchases.

•Encourage a collaborative campus culture of helping peers.

FUNCTIONALITIES

- List books for sale or rent.
- Search & filter books easily.
- Custom rental periods with return reminders.
- User dashboard for managing listings.
- Admin panel for monitoring.
- In-app messaging for secure communication.

MODULE DESCRIPTION

1. Admin Module

- Login
- Manage categories
- View users
- View complaints & send reply
- View books
- View transactions
- View user ratings
- Block users

MODULE DESCRIPTION

2. <u>User Module</u>

- Registration and login
- Manage books
- Search books
- Send requests
- View requests status & update
- Payment processing
- View rental details & return notifications

- Send/view feedback and ratings
- Chat with other users
- Update profile
- Send complaints and & view replies
- Change password

DEVELOPING ENVIRONMENT

Operating System: Windows / Linux

Front-End: HTML, CSS, JavaScript

Back-End: PHP (Laravel) / Python (Django)

Database: MySQL / Firebase

Framework: Bootstrap / Laravel / Django

IDE / Code Editor: Visual Studio Code, Sublime Text

Web Server: XAMPP / Apache / Firebase Hosting

Version Control**:** Git / GitHub for collaboration

SPRINT BACKLOG

Backlog tem	Status And Completion Date	Original Estimation in Hours	Day 1 hrs	Day 2 hrs	Day 3 hrs	Day 4 hrs	Day 5 hrs	Day 6 hrs	Day 7 hrs	Day 8 hrs	Day 9 hrs	Day 10 hrs
SPRINT 1												
User Registration & Login	Completed	10/07/2025	6	2	2	2	0	0	0	0	0	0
Admin Dashboard	Completed	16/07/2025	8	2	2	2	2	0	0	0	0	0
SPRINT 2												
Book Listing Module	Completed	24/07/2025	10	2	2	2	2	2	0	0	0	0
Search & Filter Function	Completed	30/07/2025	7	2	2	1	2	0	0	0	0	0

SPRINT BACKLOG

Backlog item	Status And Completion Date	Original Estimation in Hours	Day 1 hrs	Day 2 hrs	Day 3 hrs	Day 4 hrs	Day 5 hrs	Day 6 hrs	Day 7 hrs	Day 8 hrs	Day 9 hrs	Day 10 hrs
SPRINT 3												
Rent & Sale Management	Completed	07/08/2025	9	2	2	2	2	1	0	0	0	0
Return Reminder Notification	Completed	13/08/2025	5	1	1	2	1	0	0	0	0	0
SPRINT 4												
In-App Messaging	Completed	27/08/2025	6	1	2	2	1	0	0	0	0	0
Feedback & Complaint Module	Completed	01/09/2025	4	2	2	0	0	0	0	0	0	0

PRODUCT BACKLOG

ID	Name	Priority	Estimate (Hours)	Status
1	User Registration and Login	High	6	Completed
2	Admin Login and Dashboard	High	8	Completed
3	Book Listing (Add, Edit, Delete)	High	10	Completed
4	Book Search and Filter Function	Medium	7	Completed
5	Rent and Sale Management	High	9	Completed
6	Return Reminder Notification	Medium	5	Completed

PRODUCT BACKLOG

ID	NAME	PRIORITY	ESTIMATE (Hours)	STATUS
7	In-App Messaging	Medium	6	Completed
8	Feedback and Complaint Module	Medium Low	4	Completed
9	Admin Book and User Management	High	8	Completed
10	JWT Authentication Setup	High	6	Completed
11	Profile Management (User Side)	Low	4	Completed
12	UI Design using HTML and CSS	High	10	Completed
13	UI Design using HTML and CSS	High	6	Completed

USER STORY

User Story ID	As a type of User	I want to	So that I can
1	Student	Register and log in to the system	Access the platform securely
2	Student	Add books for rent or sale	Share my books with other students
1	Student	Register and log in to the system	Access the platform securely
2	Student	Add books for rent or sale	Share my books with other students

USER STORY

User Story ID	As a type of User	I want to	So that I can
5	Student	Receive return reminders	Return rented books on time
6	Student	Chat with other users	Discuss book details securely
7	Student	Manage my profile, listings, and requests	Keep track of my activities
8	Student	Send feedback or complaints to admin	Report issues or give suggestions

USER STORY

User Story ID	As a type of User	I want to	So that I can
9	Admin	Log in securely	Manage the system safely
10	Admin	View and manage users and books	Monitor and control all activities
11	Admin	Approve or remove book listings	Maintain the quality of listings
12	Admin	View and reply to user complaints	Resolve issues efficiently
13	Admin	Monitor transactions and activities	Ensure the platform runs smoothly

PROJECT PLAN

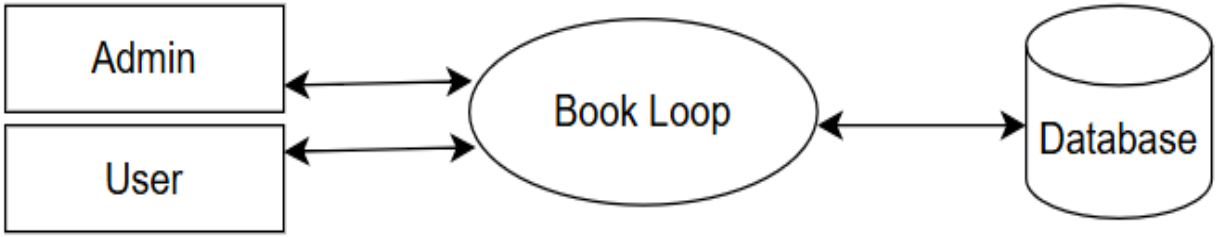
User Story ID	Task Name	Start Date	End Date	Days	status
1	Sprint 1 – Database Design & User Authentication	10/07/2025	23/07/2025	14	Completed
2	Sprint 2 – Profile Management & Book Creation	24/07/2025	06/08/2025	14	Completed
3	Sprint 3 – Book Listing, Search & Filter	07/08/2025	20/08/2025	14	Completed
4	Sprint 4 – Rent, PurchasePayment Module	21/08/2025	03/09/2025	14	Completed

PROJECT PLAN

User Story ID	Task Name	Start Date	End Date	Days	status
5	Sprint 5 – Admin Dashboard & Review Management	04/09/2025	17/09/2025	14	Completed
6	Sprint 6 – Notification, Chat & Complaint Module	18/09/2025	01/10/2025	14	Completed
7	Sprint 7 – UI/UX Enhancement, Deployment & Testing	02/10/2025	18/10/2025	17	Completed

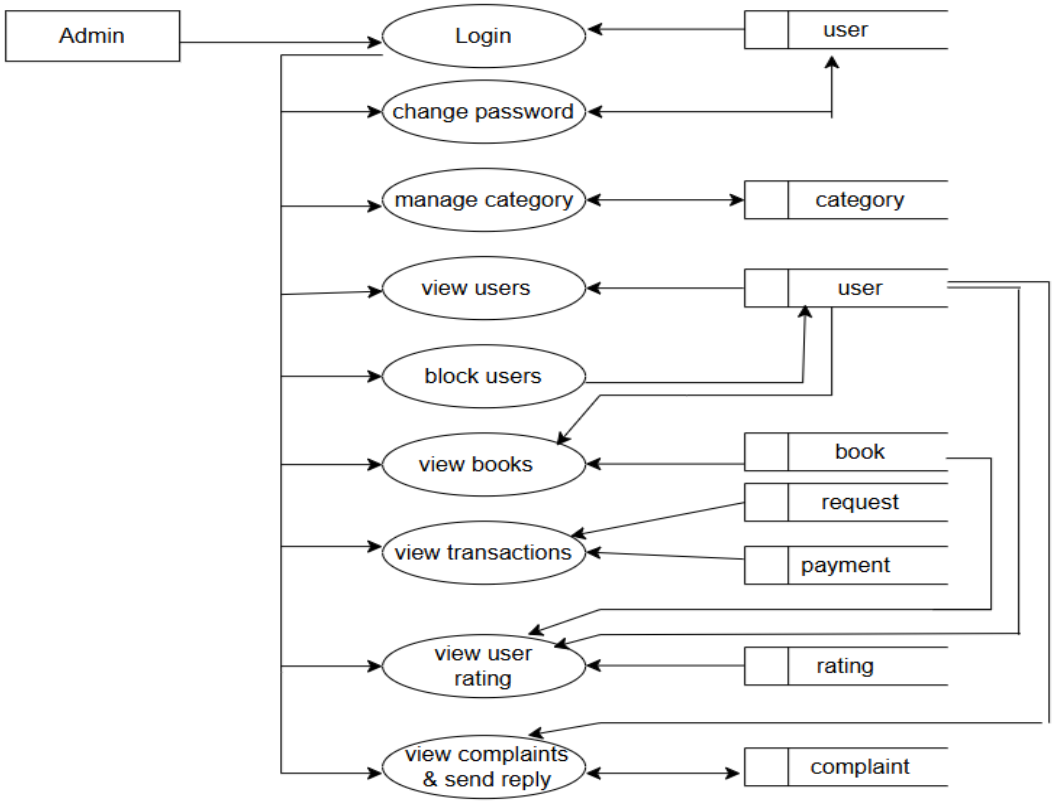
DATA FLOW DIAGRAM

- LEVEL 0



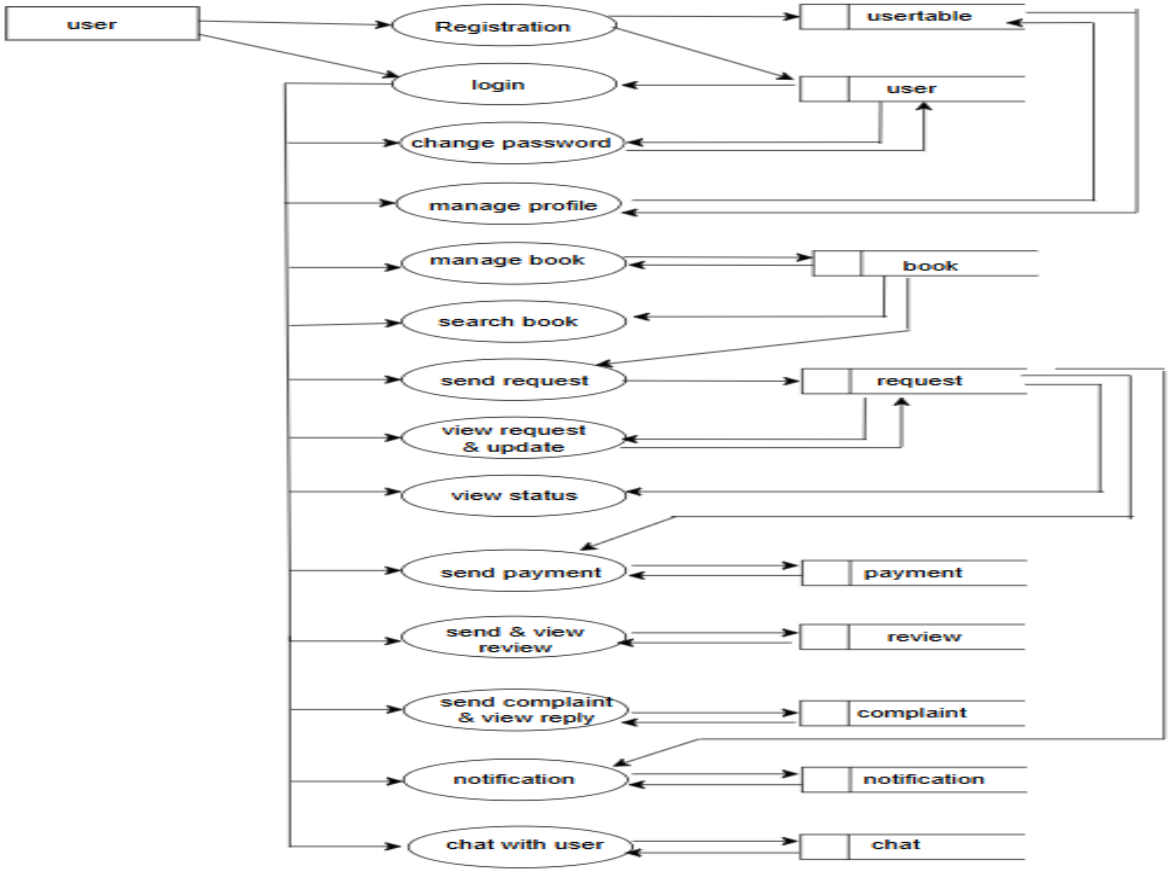
DATA FLOW DIAGRAM

- Level 1

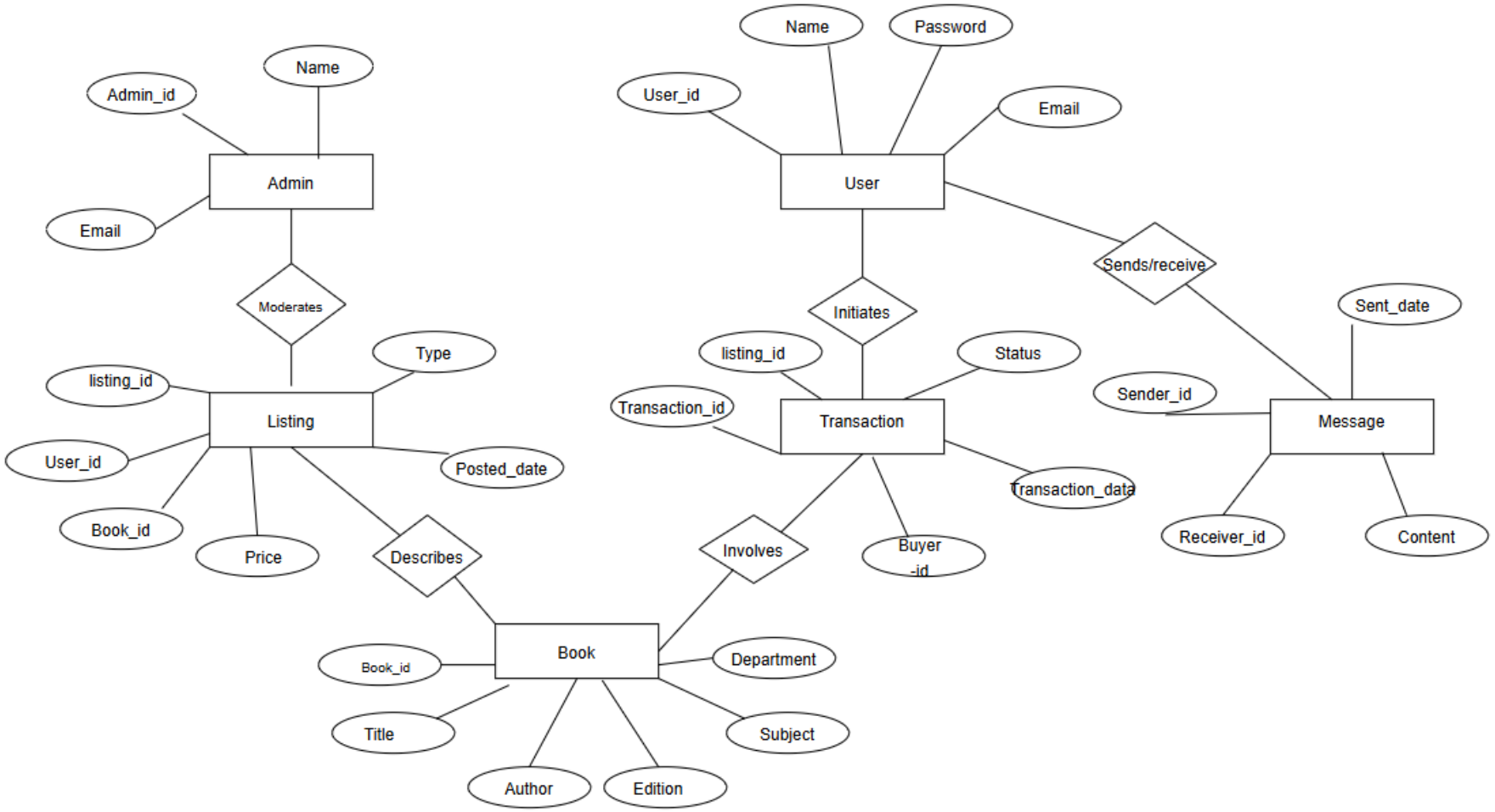


DATA FLOW DIAGRAM

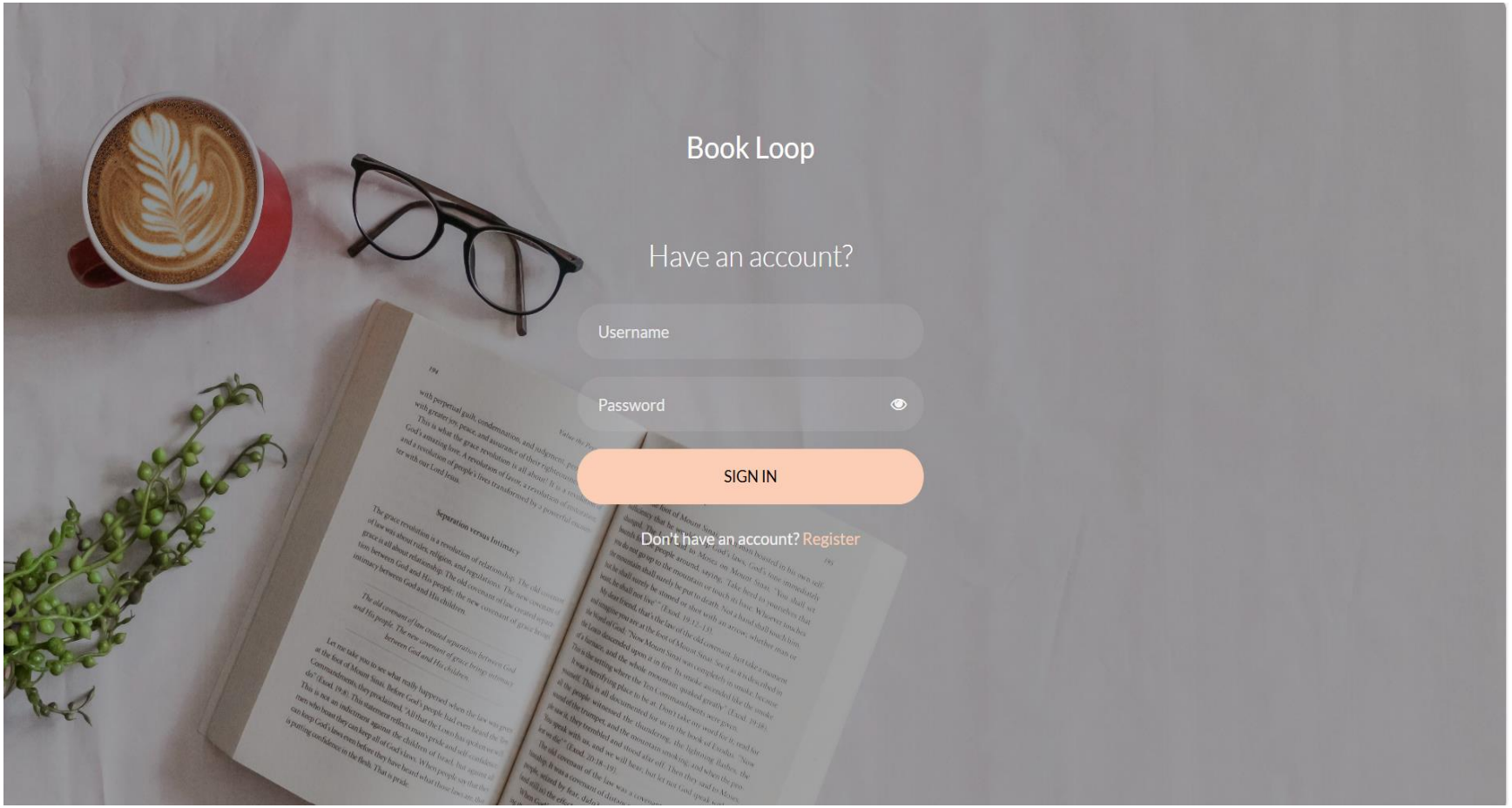
- Level 2



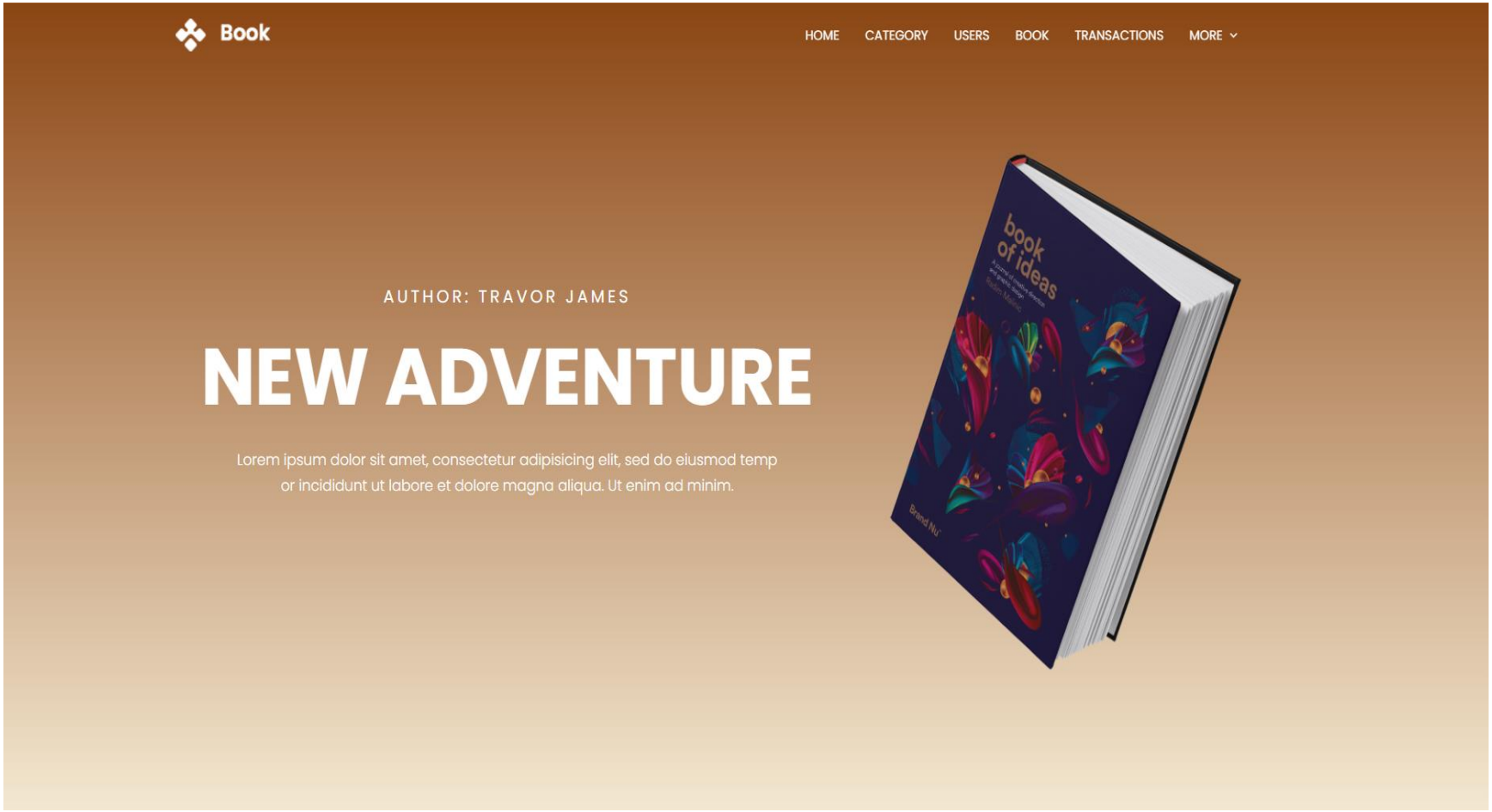
ER DIAGRAM


Name
Admin_id
Admin
Email
Moderates
Type
listing_id
Listing
User_id
Posted_date
Book_id
Price
Describes
Book
Book_id
Department
Title
Subject
Author
Edition
Name
Password
User_id
Email
User
Sends/receive
Initiates
Sent_date
listing_id
Status
Sender_id
Transaction_id
Transaction
Message
Transaction_data
Involves
Buyer
-id
Receiver_id
Content

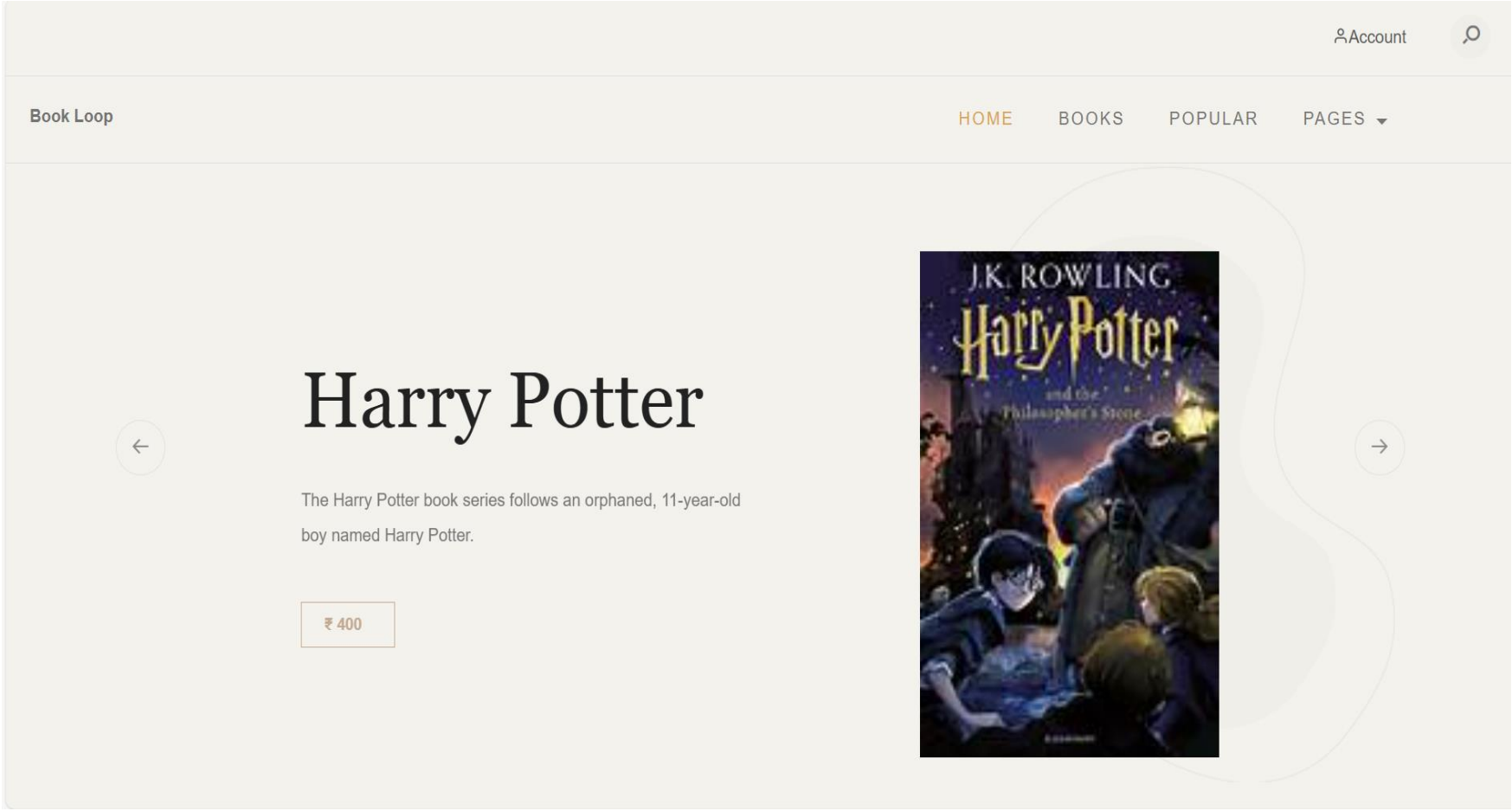
INTERFACE


Book Loop
Have an account?
Username
Password
SIGN IN
Don't have an account? Register

INTERFACE


Book
HOME
CATEGORY
USERS
BOOK
TRANSACTIONS
MORE
AUTHOR: TRAVOR JAMES
NEW ADVENTURE
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod temp
or incididunt ut labore et dolore magna aliqua. Ut enim ad minim.
book of ideas
Brand Nu

INTERFACE


Account
Book Loop
HOME
BOOKS
POPULAR
PAGES
Harry Potter
The Harry Potter book series follows an orphaned, 11-year-old boy named Harry Potter.
₹ 400
J.K. ROWLING
Harry Potter
and the Philosopher's Stone

SAMPLE CODE

```
def login_get(request):
    return render(request,'index.html')

def login_post(request):
    username=request.POST['username']
    password=request.POST['password']
    user=authenticate(username=username,password=password)
    if user is not None:
        if user.groups.filter(name='admin').exists():
            login(request,user)
            return redirect('/Myapp/AdminHome/')
        elif user.groups.filter(name='user').exists():
            login(request, user)
            return redirect('/Myapp/UserHome/')
        else:
            messages.warning(request,'Invalid username or password')
            return redirect('/Myapp/login_get')
    messages.warning(request,'Invalid Username or password exists')
    return redirect('/Myapp/login_get')
```

CONCLUSION

The **BookLoop** project successfully provides a practical and sustainable solution for managing academic books within a campus environment. It offers an online platform where students can rent and sell books easily, reducing costs and minimizing waste. The system's key features— such as user registration and login, book listing, search and filter options, rental reminders, feedback system, and admin control—work together to create a secure and user-friendly experience. Developed using Python (Django), HTML, CSS, and MySQL, the project achieves its main goal of promoting affordable access to learning resources and encouraging book reuse.

- However, certain limitations were encountered during development, such as the lack of advanced payment integration and mobile app compatibility due to time constraints. These can be addressed in future work by adding online payment gateways, mobile responsiveness, and advanced recommendation features. Overall, BookLoop demonstrates the potential of technology in supporting sustainable learning practices and improving accessibility for students.

THANK YOU