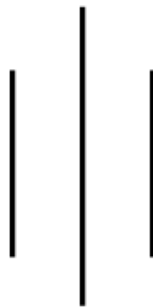




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**A Minor Project Proposal
On
Rent a Book**

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Table of content:

1. Introduction
2. Problem statement
3. Objectives
4. Scopes
5. Literature Review
6. Requirements
7. Proposed methodology
8. Schedule
9. Expected outcome

Introduction

This project aims to present a solution to tackle the rising cost of books and educational materials by providing an online portal that allows students and the general public to rent textbooks for a particular duration. The portal will have a range of features to help users rent, manage time spans and return books, the portal will also have an inbuilt recommendation system to create a better user experience.

Problem statement

Many people live in areas where access to books is limited, either due to a lack of bookstores or prohibitively high prices. With so many books available, it can be difficult for users to find the specific books they are looking for. Buying any books for students can be financially difficult.

Renting books from traditional libraries or rental stores can be time-consuming and inconvenient. Students have to visit multiple shops or contact multiple seniors in hopes of getting physical copies of books. This causes a loss of time and resources. The existing online portals do not provide options to rent books and charge premium amounts for these books.

So there is a need for an online portal that provides a user-friendly and cost-effective platform for users to rent books and make it easy for them to find and access the books they need. A book rental app would make it possible for students to access a wider variety of books at an affordable cost. The app will have a robust search and filtering system to help users quickly find the books they want.

Objectives:

The main objectives of the rental app are as follows:

- To provide a user-friendly platform for users to search, find, and rent books at an affordable cost
- To make it easy for users to find specific books by providing a robust search and filtering system
- To save money for users by allowing them to rent books instead of buying them.
- To increase access to books for people in areas with limited access.
- To promote reading and literacy through easy access to books.
- To create a platform for book owners to earn money.

Scope

The scope for the book rental app is as follows:

- Design and development of the rental app website and its associated features.
- Implement a user-friendly UI that allows users to easily find, and rent books.
- Payment integration for secure and easy transactions.
- Features to remind users to extend or return books.
- Allowing the user to view their rental history and transactions.

Literature Review

The initial review of the existing system found that there are no particular apps or website that provides options to rent books. However, many pages on various social media sites provide us with these options. These social media pages were found to be less reliable and lacking in various features. We also conducted research about various other apps that provide rental services. According to our research, rental services have become increasingly popular in recent years, due in part to the convenience and cost-effectiveness they offer. The study suggests that the increasing availability and popularity of mobile devices have also contributed to the growth of rental services. Another study found that users of rental services are primarily motivated by the desire to save money and by the convenience of being able to access books from home. However, it also identified some challenges such as the limited availability of certain books, and shipping and delivery issues.

Requirements

Functional Requirements:

1. Recommend books based on the previous search history of the user.
2. Show Trending Books.
3. Include login and registration system.
4. Implement email verification while registering and password verification while login in and display errors if any during registration and login.
5. Show Book Description and category to both registered and unregistered users.
6. Renting option for Registered users with pricing details on per month basis
7. List view of the selected books(in case of multiple books selected by the user)
8. Provide payment options which can be either by cash or by using a payment gateway
9. Integration with external payment gateway service provider
10. Give permission to the Administrator for Adding and Removing books from available books.
11. The administrator must be able to manage existing customers and update the database

Non-functional requirements:

1. Better response to the user.
2. Handel all the customers.

3. Easy to use and navigate.
4. Protection of user data and secure payment process.
5. Support across all types of devices.
6. Easy to upgrade and maintain.
7. Email verification link should be sent within 5 seconds of the registration.

Proposed Methodology

The methodology begins with research and analysis to identify the needs of users and the gaps in existing book rental services. This is followed by the design and development of the app using the Django framework for the backend and React for the front end. Django is used to handle the database, user authentication, management, and API endpoints, while React is used to create a responsive and interactive user interface. Once the app is developed, it is thoroughly tested to ensure that it is free of bugs and that all features are functioning as intended. After that, the app is deployed on a web server and made available to users. The app is continuously improved based on user feedback.

The software development approach we have decided to implement is the Agile method. Agile development is an iterative and incremental process that emphasizes flexibility and adaptability. It is suitable for a book rental app as it allows for rapid prototyping and frequent testing, which can be useful for validating the app's features and usability with users.

Tools:

1. Django REST framework will be used for the backend development for handling the database, user authentication, and management of API endpoints.
2. React will be used for the frontend development, for providing a smooth and responsive user interface.
3. Python will be used for the implementation of a Recommendation system for recommending books for the user.

Schedule

Phase 1: Planning and preparation (1 week)

1. Define project scope and objectives.
2. Identify and prioritize features.
3. Choose development tools and technologies.
4. Define the development process and timeline.

Phase 2: Design and development (4 weeks)

1. Design the overall architecture of the website.
2. Design the user interface and user experience.
3. Develop the login and registration module.
4. Develop the book search and application module.
5. Develop the book recommendation module.
6. Test and debug the website.

Phase 3: Testing (2 weeks)

1. Perform end-to-end testing to ensure the website is functioning as expected.
2. Address any bugs or issues that are discovered during testing.

This is just a sample implementation plan and the actual timeline may vary depending on the specific requirements and complexity of the project. It is important to regularly review the progress of the project and make adjustments to the plan as needed.

Expected outcome

The expected outcomes for a book rental app are multifaceted and aim to provide a comprehensive service to its users. The app would increase access to books by providing a user-friendly platform for users to search, find, and rent books at an affordable cost. This would be especially beneficial for people in areas with limited access to physical bookstores.

Additionally, by renting books instead of buying them, users can save money, making reading more affordable for everyone. The app would also make the rental process convenient for users by allowing them to rent books from their mobile devices.

The app would also have a positive impact on reading and literacy by making books more accessible and affordable, which could lead to increased literacy and a love for reading.

The app could also generate revenue from rental fees and late fees, and also allow book owners to earn money by renting out their books. Lastly, the app could create a community of book enthusiasts who can share their reading experiences and discuss books, fostering a sense of connection and shared interest among its users.