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Book Cave: A Bookstore for Everyone

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ABSTRACT

In this day and age, mobile phones and applications play a role in every person's life every day. Book shopping App allows users to check for various books and purchase them. The project consists of a list of books displayed in various models and designs. The online books shopping project brings an entire Books Store online and makes it easy for both buyer and seller to make deals on books.

1.Introduction

The traditional book ordering system is a manual and time - consuming process where the customer must visit a bookstore to search and purchase the books. In this tight schedule, problems arise in finding specific books due to the inadequate distribution of books through the bookshop. The buyer may or may not find the book they were looking for.

With the rapid development of internet technologies, the number of online books selling websites has increased which enhanced the competition among them. This is not a website but a mobile application which helps to buy the books online or rent them from nearby areas on a per - day basis. It will be one of the strongest tools to increase profit and retain buyers. Moreover, the mobile application also lets users know if the book is in stock or not. It also guides users to book review so that the user can read the reviews before buying or renting the book.

Buying books over the web at an online book shop is an interesting and informative buying experience. It allows you to buy books suited to your interests and that too while relaxing at home at any time of the day or night. Online book browsing and buying are indeed transforming the way readers and an author come together and are already creating a huge effect on the publishing and book retail industries.

Physical brick-and-mortar stores are restricted

by space limitations and budgets, but an online bookstore does not have these restrictions and offer a huge variety of authors and titles, not only the popular ones but also the lesser- known ones. You can find books in any genre at an online bookstore, be it fantasy, science fiction, cookery books, or novellas. At a physical book store, finding an uncommon book may be difficult, or ordering for a rare tome could take weeks for it to arrive, while the same book can easily be ordered online and delivered to your doorstep within a couple of days.

Objective

The aim of this project is to develop a mobile application with features of a bookstore and being able to rent out books to people in need. Connect the people who have books lying around their house that they do not need any more with the people who need these books. The Book Store application has been developed to override the problems prevailing in the practicing manual systems. This application is supported to eliminate and, in some cases, reduce the hardships faced by this existing system.

Feasibility

The mobile application is highly user friendly and it is much easier to interact with the user. Users do not need special training to operate the application. Therefore, the system will provide maximum easiness. The application is technically feasible as it can be developed easily with the help of available technology. The application requires Java as front-end and MySQL as back-end. Economic analysis is the most frequently used technique for evaluating the effectiveness of the system or application. The tangible benefits proposed that the manual work and burden is reduced maximum as possible, resulting in the reduction in manpower requirement and cost incurred on manpower as well. The application provides many benefits that can't be measured in terms of money for e.g., user friendliness, more efficient response, maintenance of database, etc. Fig 1 shows the conceptual framework of the application, here users can be sellers or customers selling, lending, renting and buying books.
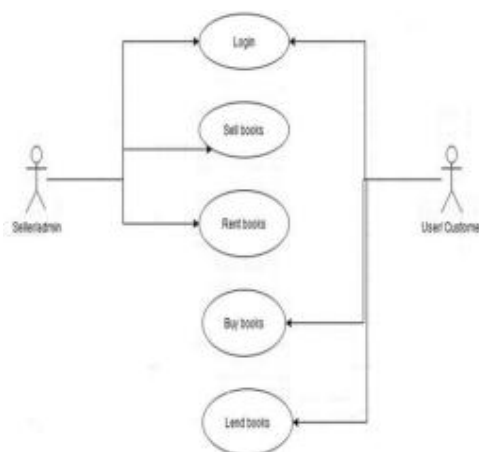
Fig. 1. Use Case Diagram for BookCave

Literature review

The development of the library has become an intelligent service organization that provides knowledge services. Whether it is a university library or a public library, it is committed to building a sound resource construction and sharing system. Most existing book management systems are central server models, including the establishment and maintenance of back-end databases and the development of front-end applications. Organizations such as libraries generally set up common working mod- ules, such as interviews, cataloging, circulation, journals, reference, and public consultation, according to the book management process.[4]

The rapid development of the Internet provides a good environment for the application of electronic commerce. B2C e-commerce is developing rapidly which greatly facilitates people's shopping. At the same time, people's consumption behavior and concept have also changed greatly, more and more consumers pursue personalized consumption.[5]
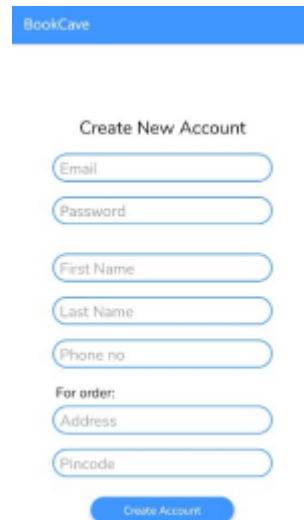
The traditional library process is developing to a mod- ern and intelligent library, which is the revolution of library management systems. In this process, we need advanced technology to develop and optimize the management of many traditional libraries through the multi- angle and multi-angle of multi equipment and multi- object Internet. Many of these solutions can provide better services for library managers and users. Readers improve the credibility of the library, change the way of collection, burrowing, and reading, improve the security, accuracy, confidence, and expansion of the library, and the necessity of replacing the library.[9]

Design analysis

This whole project has a concept to provide a wide range of book products to their customers. You can select any type of book you want to buy or borrow/rent. The proponents have developed a mobile application that will provide end users with 4 modules: User registration, Books uploading, Buying Renting, and Payment.

User Registration

The users can register themselves as sellers or buyers. The users will provide their basic information such as email, first name, last name, phone no., address etc., along with their password for logging in.
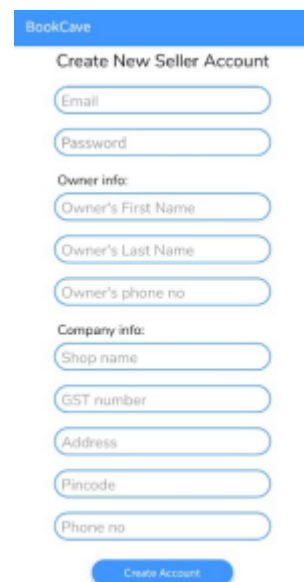
Fig 2. Buyer Registration Page

Fig 2. Shows the page where the buyers or renters can register themselves to use the application.

Fig 3. Seller Registration Page

Fig 3. Shows the registration page for sellers. The sellers must register themselves in order to use the application.

Books Uploading

The sellers are allowed to upload the books for purchase or rent. Only the accounts logged in as sellers can upload the books. They have to provide basic information such as quantity, price, shipping charges etc.
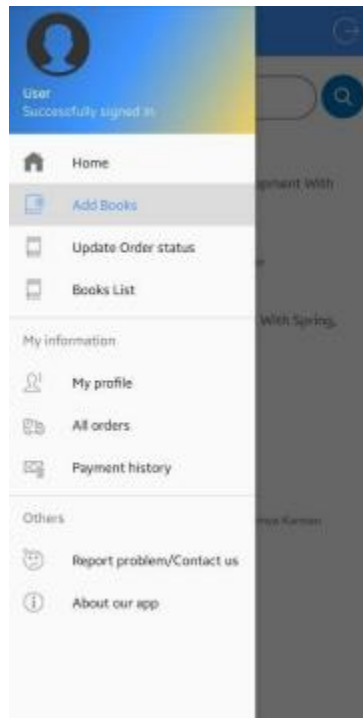
Fig. 4 Options for sellers

There are various options available for the sellers to keep track of their account as shown in fig 4.

Fig 5. Search option

Search option is available to search and upload books as shown in fig 5.

Fig 6. Book Information Page

Book Information can be seen on the page seen in fig 6.

Fig 7. Uploaded Books Page
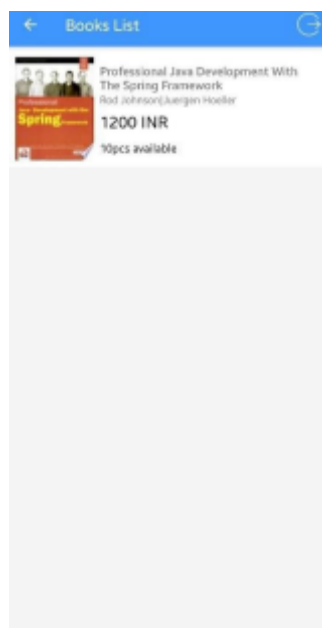
Uploaded books list can be seen in the uploaded books page shown in fig 7.

Buying & Renting Books

The user or buyer after registration can search through a list of books and select to buy from them.

Fig 8. Browsing Page

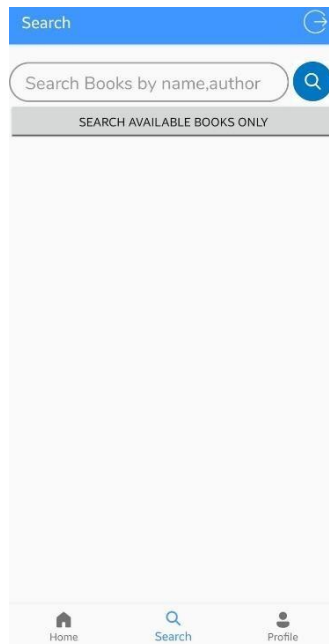Browsing page lets you see all the options available to you as seen in fig 8.

Fig 9. Search Page

Books can be searched on the search page seen in fig 9.

Fig 10. Buying & Renting Page

You can choose to buy or rent the book according to your needs from the page shown in fig 10.

Payment

Shows the payment details to the user according to whether they are buying or renting the book as shown in fig 11.
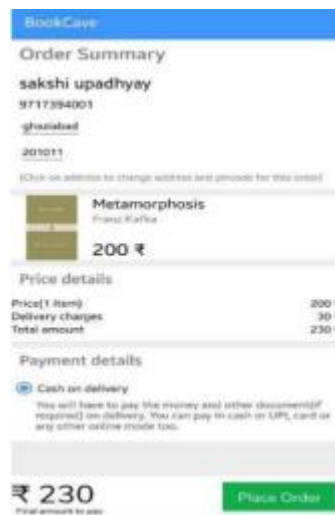
Fig 11. Payment Page

Implementation and testing Testing was done for the assessment and evaluation of the mobile application project at each module. The application was tested to ensure that the application is functioning correctly and efficiently after all the required modules were developed and integrated and to make sure it meets all the requirements. The test plan included formulation of test cases which includes different test scenarios, pre-conditions, expected result etc. that helped determine whether there is still a need to improve the codes or the design of the project. The test cases helped in identifying which modules encountered errors and identified the problem as early as possible to avoid future problems.

Table 1 Test Case for seller registration

Test Case	Input	Expected Result	Test result
Successful Seller Registration	Id = sakshiupadhyay @gmail.com Password = "sakshi0123"	Successful Registration of seller	Seller successfully Registered
Seller Registration Fail	Id = sakshiupadhyay @gmail.com Password = "sakshi0123"	A message "Sorry the ID is already in use"	A message "Sorry the ID is already in use"

Table 1 shows the test cases done on the seller registration page.

Table 2 Test Case for Seller Login and Logout

Test Case	Input	Expected Result	Test result
Successful Seller Login	Id = sakshiupadhyay @gmail.com Password = "sakshi0123"	Successful Login of seller	Seller successfully Logged in
Successful Seller Logout	Click on Logout Button	Successful Logout of seller	Seller successfully Logged out

Table 2 shows the test cases done on seller login and logout.

Table 3 Test Case for User/ Customer Registration

Test Case	Input	Expected Result	Test result
Successful Customer Registration	Id = vaibhavsharma@gmail.com Password = "vaibhav007"	Successful Registration of user	Customer successfully Registered
Customer Registration Fail	Id = vaibhavsharma@gmail.com Password = "vaibhav007"	A message "Sorry the ID is already in use"	A message "Sorry the ID is already in use"

Table 3 shows the test cases performed on the customer or buyer registration page.

Table 4 Test Case for User/Customer Login and Logout

Test Case	Input	Expected Result	Test result
Successful Customer Login	Id = vaibhavsharma @gmail.com Password = "vaibhav007"	Successful Login of Customer	Customer successfully Logged in
Successful Customer Logout	Click on Logout Button	Successful Logout of Customer	Customer successfully Logged out

Table 4 shows the test cases performed on the buyer login and logout.

Table 5 Test Case for Successful Order Submission

Test Case	Input	Expected Result	Test result
Successful order	Placing order	Successful addition of book in order history	Successful addition of book in order history
Unsuccessful order	Ordering books unavailable	Book not added in order history	Book not added in order history

Table 5 shows the test cases performed to test if the order is successfully submitted.

Test Case	Input	Expected Result	Test result
Successful Buying of book	Click on buy book	Payment method page shown	Payment method page shown
Unsuccessful buying of book	Click on buy book (of unavailable book)	A message shown "Sorry the book is unavailable"	A message shown "Sorry the book is unavailable"

Table 6 Test Case for Buying Books

Table 6 shows the test cases performed on the buying page.

Table 7 Test Case for Renting Books

Test Case	Input	Expected Result	Test result
Successful Renting of book	Click on buy book	Payment method page shown	Payment method page shown
Unsuccessful Renting of book	Click on buy book (of unavailable book)	A message shown "Sorry the book is unavailable"	A message shown "Sorry the book is unavailable"

Table 7 shows the test cases performed on the renting page of the application.

Table 8 Test Case for Book Review

Test Case	Input	Expected Result	Test result
Reading Book Review	Click on Book Review Button	Successful Opening of book review web pages	Successful Opening of book review web pages

Table 8 shows the test cases on the book review button available on the application.

Conclusion and Future Scope

The project has been developed successfully and the performance of the application has been found good. The application provides platform to view the books online on an app and purchase or rent them. The application is efficient in maintaining customer details, reduces the workload of the shopkeeper to know the quantity of books available. The application will be a great way for people to rent the books lying around their houses and earn money from renting it.

New features could be added to this project for making this project more productive, reusable and flexible which include online payment service and hybrid recommendation.

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