BOOKSWAP: Online book exchange system

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Abstract: BookSwap is an online book exchange system which is used to exchange books and one can buy new books at a particular discount. In some cases, books are expensive and parents can't afford new books. So, considering the problems, from the new emerging technologies we have chosen a web development domain to create a website which will be useful for the underprivileged as well as for the ordinary masses. The 'BookSwap' website would be an online platform where one can buy new books at reasonable prices with the exchange of pre-owned books if any. This platform would also provide the facility to acquire second-hand books at decent prices to the book lovers who cannot afford new books. The website has certain requirements for exchanging pre owned books.User's pre-owned books should not be older than two years and can be directly purchased if the user is purchasing any fresh book from BookSwap. The adequate value in money for the pre-owned books will be given according to the condition of the book at the time of purchase. If the book is in **good condition** we will offer **half** of the original price of the book. If the book is in average condition then 40% of the original price of the book.If the book is in **poor condition** then **one third** of the original price of the book is offered.

Keywords: Book swapping, Book recommendation, Ecommerce, Online book system

1.   INTRODUCTION

Book swapping is the practice of swapping books from one person to another. Book swapping can be done at any level of education. It is done among friends and fellow workers at work. Education is every student's right and book swapping is an affordable way for the people to exchange and read. It can be an efficient way to provide education.

When education is provided to everyone it will bring evolution in the country. Book swapping can be beneficial as it will promote the goal of literacy. When people get books to read, they develop an ability to go back hundreds of years and feel the thoughts shared by the author. When somebody is reading and not enjoying it, book swapping can be a beneficial option. Maybe other people find the book interesting . One can pass it, swap it, share it.

Firstly, whenever a user visits the website, he/she has to make an account if the user is not the pre-existing user or the user can login the website with the credentials, if the user has already registered and the details of the new user would be recorded in the database. In our website there would be two categories from which the user can select to either buy a new book or a 'pre-owned' book i.e., a second-hand version book. This process would be very intuitive with the presence of a user-friendly interface on the platform. There would be a database at the backend in which we will store the user 's details, his credentials and all the details regarding the new as well as used books which are available to buy for the users so that we can replenish the store at required intervals.

There would be a navigation bar where the users can search for the particular book by including the title/author/keywords in the search query. While purchasing a new book, if someone wants to sell old books, the delivery person would check the condition of the used book according to the standards regulated by the BookSwap community and if all the conditions are satisfied, the user would be offered a decent discount on his new purchase. The books sold by the user would be received at the BookSwap store and would reside there till any user desires to buy them.

The paper is differentiated into the following sections. Section II will contain a survey of 8 research papers and a comprehensive summary of the paper. Section III will contain proposed methods which will have two subsections: first is, features of the project and second subsection will contain software and hardware requirements. Section IV will contain results which will provide the demonstration of the websites in the form of the images. Section V will contain conclusions and it will leave a strong final impression of the project. Section VI will contain the references for

the literature review in IEEE format.

2.   LITERATURE REVIEW

Pooja Bhat et al. [1]developed an OBES (Online Book Exchange system) that aims to provide various functionalities like registration of the customer, customer profile, new book module etc. They Presented this web portal In which any user can create an account and further can search the owner of the particular book the user is looking for. They designed a protocol that users can lend/buy that same book from the owner of that particular book by putting a request for the particular book. It has an edge that Exchange of books is free of cost from one person to another but there is a drawback that is of Privacy issues due to divulgenceof seller's sensitive information.

Maria Soledad Pera et al.[2] developed a BESWAL(Recommendation Based Book exchange system without using wish list)based on two algorithms and that are lenskit.org which is basically a recommendation based tool in which a favorable suggestions will be recommended to the user to save time and the other algorithm OptaPlanner.org which Is a optimal user recommendation tool basically used to recommend the favorable user to the person searching for selling the book which saves time and cost as well because it doesn't charge anything else postal charges which will be from both the sides. It is effective becauseit has a Recommendation Based system which can Recommend books to the users but on the other hand it has a clause that without the wish lists user cannot exchange their books.

Prasad NK et al. [3] built an Online Book Store based on selling the books by allowing the user to search the book of different categories. It facilitates the procedure of purchasing any book liked by the user by adding that into the shopping cart and further completes the processby making payments either by credit/Debit card or cash On Delivery. It is efficient there by providing various payment methods including Credit/Debit card or Cash on delivery but it needs more functionalities like second hand version of books for the underprivileged.

John Buckman [4] developed the website bookmooch which is used to basically exchange books. It is basically based on a point system where every time when you sell a book you willreceive a point. When you sell your book out of the country you will receive 3 points and we can use these points for charity purposes and if you have read the book then you can put it back into bookmooch for someone else.

Ranjit Kumar et al. [5] build a website named MyPustak which is based on selling new books at lowest rate as much as possible and the main and interesting part is that you will get second hand books free of cost the only delivery charges will be there and there you can sell your old books for charity. Here people can get the books FREE OF COST.It delivers your book at your doorstep by charging minimum handling charges.

Arif Hidari et al. [6] built a mechanism named Online Book Store. Used various technologies like HTML, PHP,MySQL and more. In this mechanism users can buy a new book by searching with the help of its author title. In this same user can add the book in a shopping cart with which they can finally purchase it either by credit/Debit card transactions. It has various extra functionalities like the administrator can add, delete, update the book details.

Richard Pickering et al. [7] foundedPaperBackSwap.com (PBS)   is   a book swapping website. The purpose of PaperBackSwap is to use the Internet to facilitate the parity trading of books among members in the United States using a credit-based system for swapping. The club also operates sister websites SwapaDVD and SwapaCD to facilitate parity trading of DVDs and CDs, respectively. It is efficient because it works on pointssystem where one gets two points for signing up and an additional point for every book you send to another person and further you can redeem it and discount will be given for the same but they have pitfall that in their membership they deduct an extra fee 'transaction fee' which they neither disclose nor consented to.

Jeff Bezos [8], The current e-commerce leader Amazon offers customers a vast selection of products and services to choose from, with delivery options that meet their needs. It offers new as well as used books for the purchase but the user cannot sell his old books while purchasing a new one from the store.

3.   PROPOSED METHODOLOGY

In this section we will be describing our methodologies and functionalities of the system.

A.   Features of the system

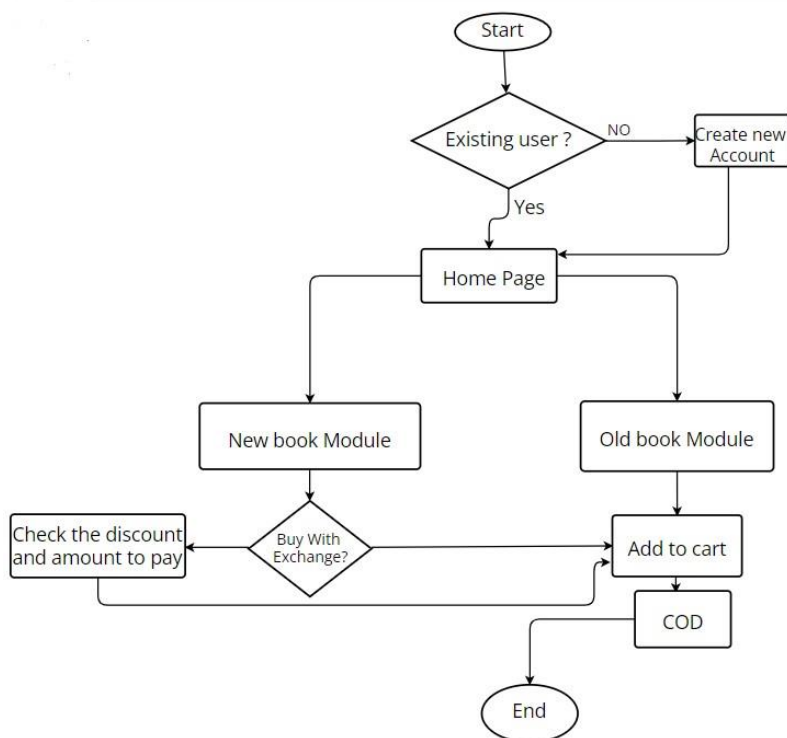In this system we will have different modules and they are as follows:-

1.   **New User Module -**A new user has to create an account and will have to register. This module has a login page where users can register them by creating a Username and Password. After registering they can explore different modules and buy books of their interest.

2.   **Existing User Module-** If a user already has an existing account then they have to login using the login credentials that they have created while registering themselves.

3.   **Buy New Book Module -** If a user wants to purchase a new book then they can buy under this section. This module does not contain any Pre Owned books.

4.   **Buy Used Book Module -** If a user wants to purchase pre-owned books then he/she can buy using this module. Buying pre-owned books may benefit a user as they can get a huge discount on them.

5.   **Sell and Buy Module -** if a user wants to sell their pre-owned books and wants to purchase a new book then they can do it with the assistance of this module.

B.   Software Summary of the system

1.   **Front-End** - It is a user-Interface where the user interacts with different modules. This part has been designed using **HTML, CSS, JAVASCRIPT** and **BOOTSTRAP**. Bootstrap helps us to build quick responsive and intuitive designs. An architecture has been set up using HTML and styling has been done through Cascading style sheets and for adding behaviors and events to web pages **Javascript** has been implemented.

2.   **Back-End -** It is used for displaying the data on the front end. The details of the customers have been stored using database **SQLite,** MySQL as per requirement. Storing the data and the credentials of the user is an important part because it helps to differentiate between the new and the existing users. The Django framework has been used for developing Scalable , flexible servers which can handle any amount of data. Using **CRUD** operations , it allows modifying ,managing and retrieving the data in the database.
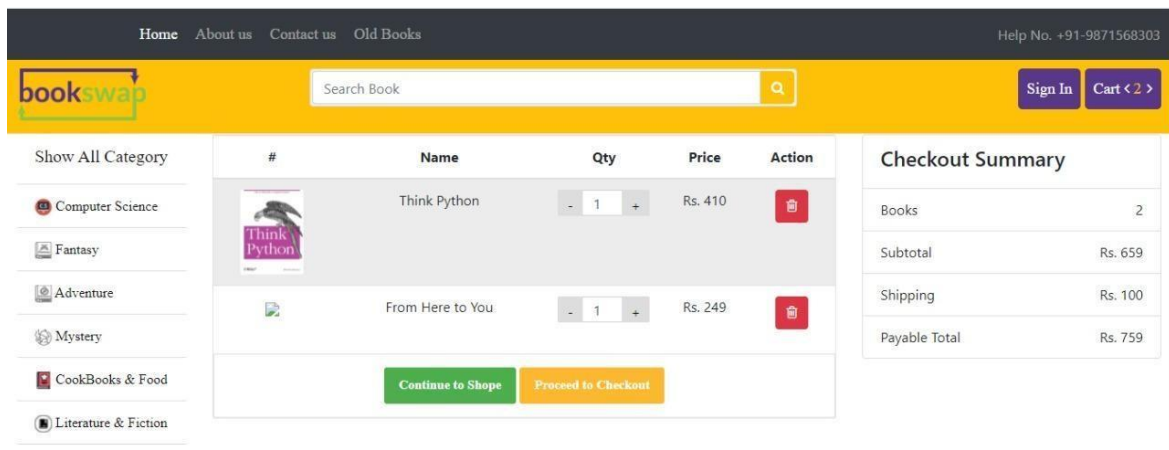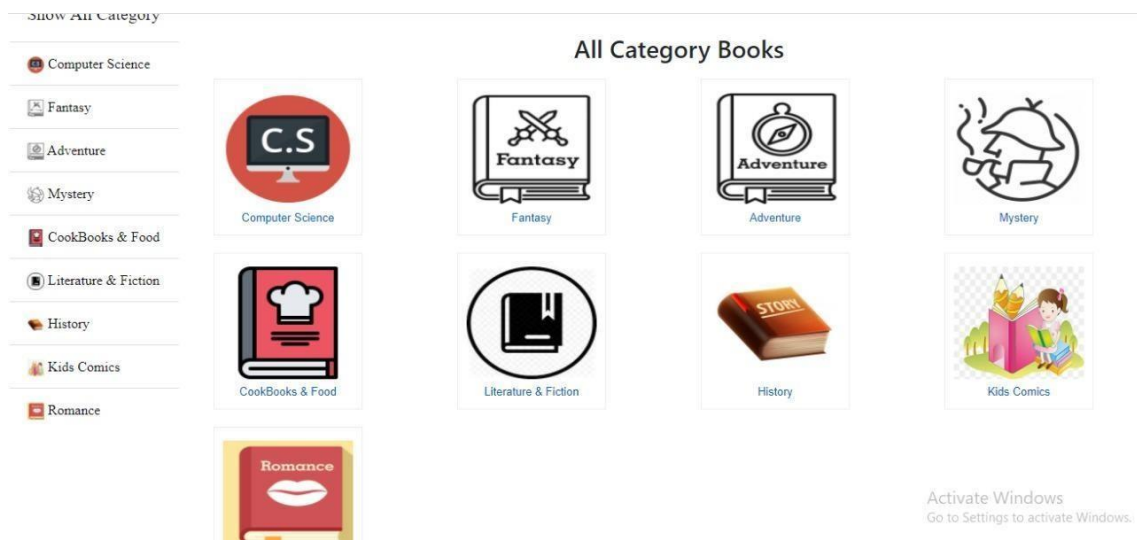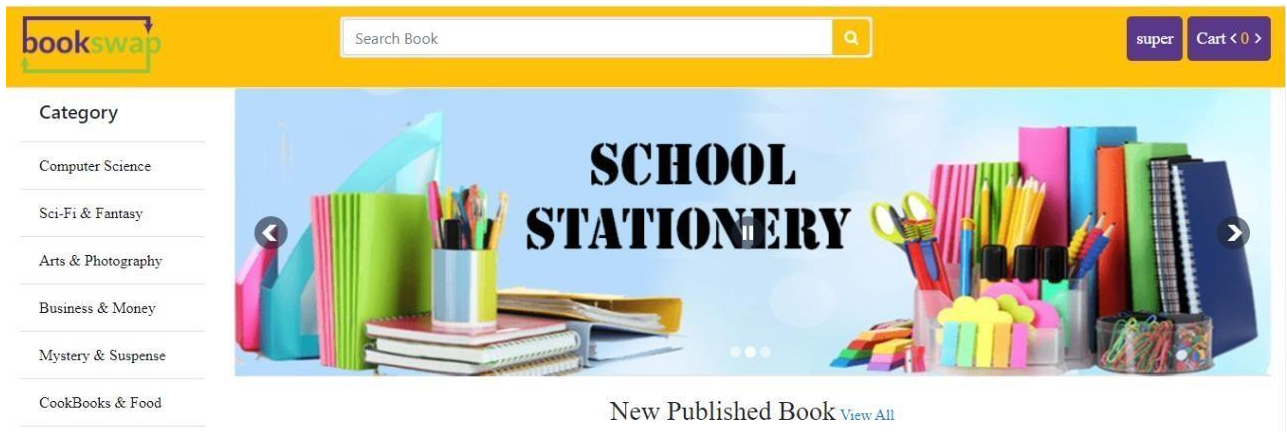
3.1. FLOW CHART

4. RESULT AND ANALYSIS

The following section provides the illustration of our system in figures.

4.1. Performance comparison of book exchange system

Bibliography	Technology	Pros	Cons
Pooja Bhatt et al	Html, Java serverpages, XML , MySql	Exchange of booksis free.	Privacy issues due to divulgence of seller's sensitiveinfo.
Prasad NK et al	Html, PHP, MySql,XAMPP	The system has various paymentmethods.	It doesn't offer a second-hand editionof the books.
Yunkai Zhai et al	JSP, MySql, Dreamweaver CS6,JQuery	Simple and User-friendly.	It only provides new editions of the books.
Vamsi krishna et al	C#, ASP.NET	Feedback system for books & Credit-card as payment method.	Lacks any suggestion or recommendationsystem.
Bookswap[Presentwork]	Python, Django, HTML, CSS, JS, SQLite	The user can swapits used book and can get the discounton the new purchase.	Offers only Cash on Delivery as a payment method.

5.   CONCLUSION

In this paper, the concept of book swap has been introduced. Online book exchange systems similar to those which are present on the internet have been discussed in detail. Description and feature functionality of the proposed system is outlined. Our work also gives a brief overview of the technologies used during the development of our proposed system. Book Swap will provide a convenient way to buy books online. There are many students in India who give up their dreams just because they can't afford new books or they don't have enoughresources to follow their passion. This website will be helpful for those people. Book sharing is great for our environment, because a lot of wood (trees), water and other valuable resources can be saved . Little efforts can bring drastic change in the environment.

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