

BookPass

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BookPass is a platform designed to facilitate the selling and donating of old books. The inspiration behind BookPass stems from recognising the vast number of books that are either disposed of or left to collect dust on shelves. By creating a dedicated platform for selling and donating old books, BookPass aims to extend the lifecycle of these valuable resources and promote more sustainable consumption practices. The platform is designed with ease of use in mind, allowing users to quickly list their unwanted books and connect with potential buyers or recipients. This facilitates the exchange of books and fosters a community of readers who can share their love for literature and discover new reads. Moreover, BookPass addresses critical environmental concerns. Encouraging the reuse of books helps reduce waste and the demand for new book production, often involving deforestation and significant energy consumption. BookPass also has a social significance. It provides an affordable and accessible source of reading materials, which can help promote literacy and a culture of reading. In BookPass, user can also interact with other Book lovers through the community feature, giving them a suitable environment. The development of BookPass involved extensive research, including surveys and user interviews, to gather requirements and ensure that the platform meets the needs of its users. An evaluation plan has also been established to assess the effectiveness and user satisfaction of the platform.

CCS Concepts: • **Do Not Use This Code → Generate the Correct Terms for Your Paper**; *Generate the Correct Terms for Your Paper*; Generate the Correct Terms for Your Paper; Generate the Correct Terms for Your Paper.

Additional Key Words and Phrases: Do, Not, Us, This, Code, Put, the, Correct, Terms, for, Your, Paper

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1 MOTIVATION, PROBLEM/ VISION STATEMENT, AND PROOF OF ITS SIGNIFICANCE

The motivation behind BookPass is to promote sustainable consumption and foster a culture of reading by providing a platform for users to sell or donate their old books. Recognising the vast number of books that are often discarded or left unused, BookPass aims to extend the lifecycle of these resources, reduce waste, and encourage the reuse of books. The platform also provides an affordable and accessible source of reading materials, promoting literacy and making a diverse range of books available to a broader audience. The significance of BookPass is multi-faceted and impacts both environmental and societal dimensions. From an ecological perspective, BookPass directly contributes to

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waste reduction by promoting the reuse of books. Each year, millions of books are discarded and end up in landfills. By providing a platform to exchange used books, BookPass helps to minimise this waste, contributing to a more sustainable consumption model. Additionally, by extending the lifecycle of books, BookPass reduces the demand for new book production, a process that involves deforestation and significant energy consumption. On a societal level, BookPass fosters literacy and encourages a reading culture. By making used books more accessible and affordable, the platform democratises access to a wide range of reading materials. This can particularly benefit communities where new books may be prohibitively expensive or where access to libraries or bookstores may be limited. Moreover, BookPass brings together a community of book lovers, enabling them to share their passion for literature and discover new titles they might not have encountered otherwise. This sense of community can have additional societal benefits, fostering connections between individuals with common interests. Finally, the convenience and user-friendly nature of the BookPass platform itself is significant. By making the process of selling and donating books straightforward and efficient, BookPass encourages more people to participate in the exchange of used books, further amplifying its environmental and societal impact. In conclusion, BookPass is significant in promoting sustainability, fostering literacy and creating a community around the love for books. Its success could be a model for how digital platforms can contribute to sustainable consumption and societal well-being.

2 RESEARCH

We delved into extensive secondary research to comprehensively understand the issue at hand. This initial phase examined various research documents, scholarly articles, and relevant online resources. By immersing ourselves in this wealth of information, we were not only able to gather insightful data but also develop a broader perspective of the problem by taking interviews, surveys and observations. This comprehensive view allowed me to identify patterns, trends, and underlying factors that might take time to become apparent. This in-depth understanding is crucial in formulating effective and sustainable solutions for this issue.

2.1 Observations

The observation deals with how people are performing the tasks related to the problem statement you have chosen to solve. So here are the few tasks we have observed regarding the problem we are trying to tackle using the BookPass and how people are dwelling with them: documentclass command:

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\documentclass[STYLE]{acmart}
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Selling of Old Books:

- Selling old books can be a challenging process, especially when trying to get a fair price.
- There could be a market for used books, especially among students and those on a tight budget.
- People often form emotional connections with their books, making it difficult for them to simply discard these books.
- There are many ways for students to sell old books, they can sell them to their friends, campus store, online, etc. But most users find it hard to get buyers who can buy their old books.

Donating Books

- The process of selling or donating books could be made more efficient and user-friendly, making it easier for people to part with their old books.

- Donating books serves as an act for a good cause, which eventually makes user feel like they are helping someone and their books are being beneficial to someone rather than just going into the dump.
- Donated books can help generate funds for underprivileged children by NGOs, which can resell them and generate funds.

Buying old books

- The act of passing on an old book can carry a personal touch, making it a meaningful gift option.
- There is a potential for promoting sustainability through the reuse of books instead of disposing of them.
- Whenever students are buying second-hand textbooks, they are creating a path for recycling. In addition to recycling, they are able to save the lives of many trees. This is because more trees are destroyed for the paper manufacturing process.

Common Problems on current platforms

- Missing pages in books that they deliver, spoiled pages, soiled books, slow shipping are just few of the most common reason reasons.
- Shopkeepers refuse to buy some books
- Finding interested customers is very hard.
- Selling all books separately to the different buyers is a lot work that increase for the senders.
- People are very less awarded of NGOs which take books as donations like sisterofthepeople in Lajpat Bhawan.

2.2 Surveys

To more understand what the users would need from such kind of platform which can help them sell their books or donate them, we generated a survey with more than 100 responses. Following are the observations made:

2.3 Interviews

We also conducted some Interviews, to connect directly with the people to know more about, how they are dealing with their old books what they do with them and how would they react to an idea like BookPass which would help them to sell their old books at fair prices, or donating the books to the NGOs which would sell them to generate the funds for the under-privileged children or old age homes.

- Would you tell me about yourself?
- How do you usually buy books ?
- Would you prefer reading books that are pre-owned by someone?
- What alternative you look for rather than buying a new book?
- What do you usually do the old books that are are of no use to you?
- Would you like a platform where you can sell your old books or donate them for a good cause?
- What are the additional features you would like to incorporate into such model?
- Any other observation you would like to add regarding the books selling and buying process.

The insights gained from these interviews are as follows:

- The user are likely to buy the pre-owned books if they get them for fair prices as many platforms online are not very trustworthy and also they are interested in the condition of the books they are looking to buy.



Fig. 1. Survey findings on book acquisition and preferences.

- People find it difficult to sell their old books which are of their no use and eventually have to dump them rather than making it helpful for someone else.
- People lack the contact of such NGOs which take these donated books and resell them for generating funds for the need ones.
- People are usually buying new books as they are not very aware of the old book markets.
- People find it difficult to find some collectable copies of the books as they are not very easily available to online stores or available for a very short period of time.
- Would you like a platform where you can sell your old books or donate them for a good cause?
- What are the additional features you would like to incorporate into such model?
- College students find their textbooks expensive to buy which eventually lead them to use pdfs even if they prefer physical books more.

3 ACADEMIC LITERATURE

Here are few academic Literature we go through to formulate the idea of BookPass, to analyse the market and how we can add more dimension to the problem to make it more relevant to the user.

Some Previous Research Papers Journal Reviewed:

<https://doi.org/10.22214/ijraset.2023.56802> <https://doi.org/10.14419/ijet.v7i2.7.10873> <https://givingcompass.org/article/how-to-boost-literacy-through-book-donation> <https://doi.org/10.22214/ijraset.2023.56802> <https://doi.org/10.22214/ijraset.2023.56802>

4 COMPETITIVE ANALYSIS

Competitive analysis helped us to understand the versatility of the product and how existing products are performing in the market and how we can make ours more adaptable. We conducted a competitive analysis of three existing sites dealing with a similar domain.

AbeBooks

AbeBooks is a platform that deals with the reselling of old books. Users can list their old books with their desired price, and buyers can place orders directly on the platform. **Pros:**

- AbeBooks offers a very large variety of books with a huge collection.
- They have a collection of rare and collectible books.
- AbeBooks has an international presence, allowing people to sell books from one country to another.
- ISBN numbers of books are mentioned, making it easier to find a particular book.

Cons:

- The user interface of AbeBooks is not very appealing.
- There is variation in the price for the same book.
- The order tracking feature is confusing.

BookChor

BookChor is a platform that sells old and used books, and users can also sell their books to earn some profit. **Pros:**

- BookChor has different sections for every price range.
- They offer different categories for children, classics, or prize winners.
- BookChor provides a mobile application along with the website.
- They have a "sell with us" option to allow users to sell their books.

Cons:

- BookChor has fluctuating prices for books.
- Reviews for the platform are not up to the mark.
- Users cannot contact the seller, making negotiations difficult.

Etsy

Etsy is a platform where people can sell products of multiple domains, including old books. **Pros:**

- Etsy has a very user-friendly UI, making it easier for users to navigate.

- They offer a detailed order tracking system.
- Listing products on Etsy is very easy.

Cons:

- Etsy deals with a variety of products, making it hard for users to find particular books.
- Etsy doesn't have its own authentication system specifically for books.
- Due to its international presence, Etsy has high delivery charges.

5 THING REQUIRED & ADDITIONS

Recommendation Based System

Recommendation systems are sophisticated algorithms that provide users with customized recommendations, relieving them of the task of making decisions in the face of a plethora of options. These systems assist both producers and consumers by directing people toward products they might not have otherwise thought about.

Two fundamental components of every recommender system are users and items. Recommendations are given to users, who act as consumers or customers; items are the goods or materials being recommended.

A database of individuals and goods is usually used as the recommendation algorithm's input, while recommendations are the algorithm's output. This study presents a fresh method for book recommendations to consumers by utilizing a combination of content filtering, collaborative filtering, and association rule mining techniques to produce effective recommendations.

Community Based Platform

The platform's features also aim to bring book lovers together in one place, creating a supportive, engaging, and favorable environment.

Gamification

In order to improve user engagement and offer incentives for further donations, we have decided to incorporate gamification into the site. The goal of the app's techniques—badges, levels, leaderboards, and points—is to keep users engaged and motivated. Individuals are inherently motivated to monitor their progress since it represents development and progress. Progress bars are strong inducers because they play on our dislike of being unfinished.

Users are urged to contribute towards reaching the donation target by including a donation counter or progress bar on the detail page. Incorporating social sharing into the points or levels system also encourages users to interact with their social networks, which may increase engagement and perhaps boost donations.

6 PATENTS/ CONCEPTS:

During our research, we found similar patents in the field:

- (1) **BookBunk:** BookBunk is a platform similar to ours, dealing with the reselling of books. Additionally, it provides information regarding stores where people can buy these books.
- (2) **Bookora:** Bookora is another platform aimed at college students, helping them sell, buy, and donate used textbooks locally. It addresses the difficulties students face in purchasing and selling textbooks, considering the rising cost of education. Furthermore, it allows students to donate their textbooks to non-profit organizations or programs.

7 AEIOU FRAMEWORK

Activities

- Selling old books
- Donating books
- Buying old books
- Conducting surveys and interviews
- Conducting competitive analysis
- Referring to academic literature
- Formulating platform features
- Implementing user feedback

Environment

- Online platform accessible via web and potentially mobile devices
- Target users: book enthusiasts, students, individuals interested in sustainability
- Potential partnerships with NGOs, educational institutions, and bookstores
- Global reach with potential for international book exchange
- Focus on promoting sustainability and literacy

Interactions

- Users listing their old books for sale or donation
- Users browsing and purchasing/donating books
- Communication between buyers and sellers/donors
- Feedback loop: Users providing feedback to improve platform features and usability
- Engagement with NGOs or educational institutions for book donation drives or fundraising activities

Objects

- Old books available for sale or donation
- Platform features such as listings, search functionality, communication tools, payment systems
- User-generated content including book descriptions, seller profiles, and reviews
- Analytics data for tracking user behavior and platform performance
- Potential physical objects involved in book packaging and shipping

Users

- Sellers: Individuals looking to sell their old books for various reasons, including decluttering, generating extra income, or promoting sustainability.
- Buyers: Book enthusiasts seeking affordable options for expanding their personal libraries or collectors searching for rare editions.
- Donors: Individuals willing to donate their old books for charitable purposes, such as supporting underprivileged communities or educational initiatives.

- NGOs and educational institutions: Potential partners interested in receiving donated books to support their programs or fundraising efforts.
- Platform administrators: Responsible for managing the platform, ensuring smooth operations, resolving disputes, and implementing new features based on user feedback.

By using the AEIOU framework, we can gain a comprehensive understanding of the various elements involved in the BookPass project, including user interactions, environmental factors, and the overall ecosystem in which the platform operates. This analysis can inform the development of user personas, use cases, and requirements gathering processes, ultimately leading to a more effective and user-centric platform design.

8 PERSONAS

9 CCS CONCEPTS AND USER-DEFINED KEYWORDS

Two elements of the “acmart” document class provide powerful taxonomic tools for you to help readers find your work in an online search.

The ACM Computing Classification System — <https://www.acm.org/publications/class-2012> — is a set of classifiers and concepts that describe the computing discipline. Authors can select entries from this classification system, via <https://dl.acm.org/ccs/ccs.cfm>, and generate the commands to be included in the \LaTeX source.

User-defined keywords are a comma-separated list of words and phrases of the authors’ choosing, providing a more flexible way of describing the research being presented.

CCS concepts and user-defined keywords are required for for all articles over two pages in length, and are optional for one- and two-page articles (or abstracts).

10 EVALUATION PLAN

Final Goal: Building a strong and user-friendly platform that enables donations, book reselling, and the development of a thriving book community is the project’s ultimate goal. Our goals are to offer a flawless user experience, employ gamification to encourage donations, and foster a feeling of community among readers.

How Will You Evaluate It? What Metrics Would You Use?

• Metrics for User Engagement

- Duration of use on the platform: To determine total user engagement, calculate the average amount of time spent interacting with the platform.
- Regularity of visits: To gauge how sticky a platform is, keep track of how frequently users return.
- Interaction with characteristics of the community: To assess community engagement, keep an eye on user activity in forums, events, and community debates.

• Effectiveness of Gamification

- Points earned: Evaluate how many points users have racked up by using different gamification features like leaderboards, levels, and badges.
- Level progression: Monitor how well a gamified experience is working by tracking users’ progress across various levels.
- Interaction with gamification features: Evaluate how much users engage with gamification features and how that affects their behavior.

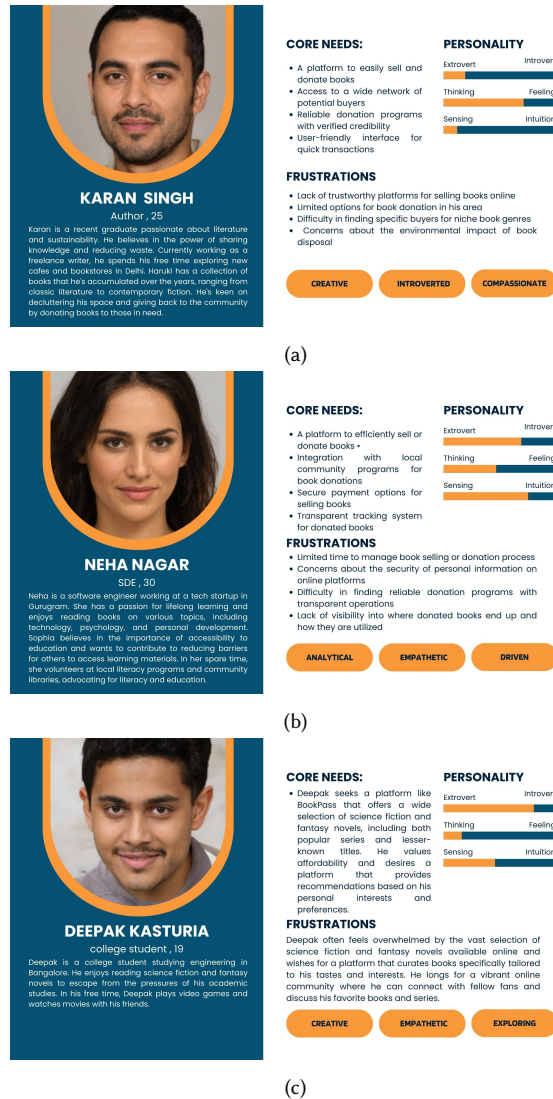


Fig. 2. Subfigures

Metrics for Donations and Book Reselling

[label=–]The quantity of books mentioned: To assess the platform's inventory, keep an eye on the amount of books that are offered for donation or sale. Conversion rate: Calculate the proportion of site visitors who complete a transaction or give money in order to gauge how well the platform facilitates transactions. Donation frequency: To gauge how well the donation feature is working, keep track of how frequently books are donated.

User Input and Contentment

- Surveys and feedback forms: To learn about user happiness, pain spots, and suggestions for improvement, collect user feedback via surveys and feedback forms.
- Reviews and ratings: To determine user happiness and pinpoint areas for improvement, ask users to rate and review books, sellers, and the platform as a whole.

When Would You Be Successful?

Success would be achieved when:

- High user engagement metrics on the platform suggest that users find the offered services and content valuable.
- Users are successfully encouraged to interact with the platform through gamification aspects, which increases engagement and contributions.
- A significant quantity of books are offered for sale or gift, and transactions take place on a regular basis, demonstrating the platform's value and user appeal.
- Positive user reviews and satisfaction scores are obtained, confirming that the platform satisfies users' needs and meets their expectations.
- In general, the platform's success would be determined by its capacity to achieve its goals, satisfy user demands, and cultivate a lively and encouraging community of readers.

11 GANTT CHART

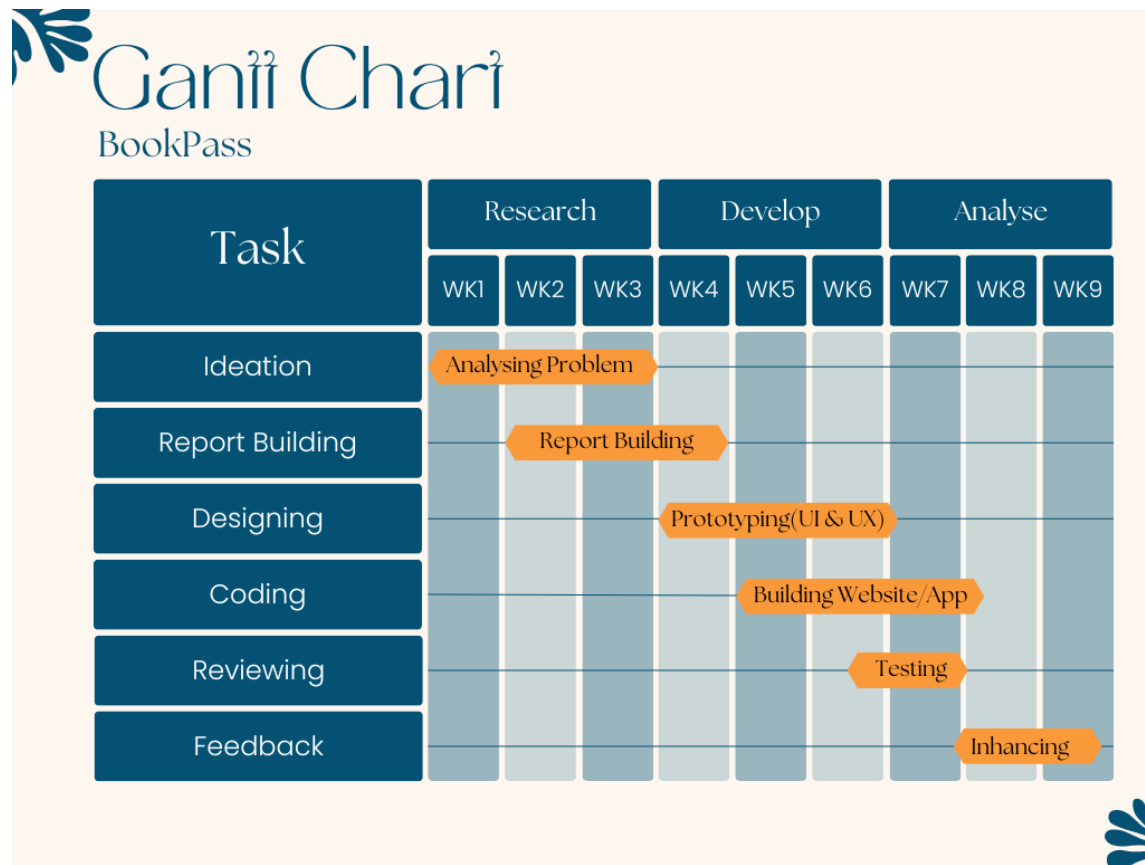
article

MEMBERWISE WORK DISTRIBUTION

- **Rishabh Kumar**
 - Researching over the topic
 - Development of the platform
 - Critical Analysis
- **Abhishek Rana**
 - Project ideation
- **Ayush Kumar**
 - Platform Development
 - UI/UX
 - Research/journals review
 - Problem Identification and Feature additions
- **Md Asif**
 - UI/UX
 - Research Analysis

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