



AN-NAJAH NATIONAL UNIVERSITY

FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

Computer Engineering Department

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My Book is Your Book

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Disclaimer

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Abstract

The "My Book is Your Book" project aims to help all kinds of students, including those with vision problems, by providing easy access to educational audiobooks. The main idea is to bring all the books together in one online place that students can use to share books, ask for them, and easily search for what they need. The project also has cool features like suggesting good books for you and having a helpful chatbot.

This system will also let students who want to help volunteer to turn books into audiobooks, making it easier for visually impaired students to use them for studying. Importantly, the system is connected to a database that is always being updated. This helps share knowledge, encourages volunteering, and keeps important books.

In summary, this project not only helps with environmental concerns by reducing the need to print books but also makes education better for all students in our university.

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1. Introductions

Books are indispensable tools for students, serving as gateways to knowledge, inspiration, and intellectual growth. They act as companions throughout the academic journey, providing valuable insights, diverse perspectives, and in-depth information on a myriad of subjects. Beyond the curriculum, books contribute to the development of critical thinking, analytical skills, and a lifelong love for learning. In essence, books play a pivotal role in shaping the academic and personal pursuits of students, making them an essential resource for educational success and holistic development.

The process of reprinting books comes with a significant financial burden for both students and educational institutions. The costs associated with paper, ink, and printing technologies contribute to the already substantial expenses of education. Moreover, reprinting exacerbates the environmental impact, as it leads to the consumption of valuable natural resources and the generation of considerable waste. In a world increasingly attuned to environmental sustainability, the negative repercussions of printing books are evident. "My Book is Your Book" recognizes the dual challenges of costliness and environmental impact, offering a forward-thinking solution that not only alleviates financial burdens but also champions a more sustainable approach to knowledge sharing.

In the ever-evolving landscape of education and technology, the "My Book is Your Book" initiative emerges as a pioneering solution to address the challenges associated with traditional book exchanges among students. Recognizing the importance of sustainability in today's world, where environmental consciousness is paramount, this project takes a novel approach to facilitate the sharing of knowledge resources while embracing eco-friendly practices. In addition, it's for all students, including those who can't see well, and it's all about sharing books. We're making a website where students can give away or ask for books. It's like an online library.

We are also adding some cool features, like a search tool to find books easily, a suggestion system to recommend good books, and a helpful computer program you can talk to if you need assistance. Plus, we're giving students a chance to help out. They can turn books into audio versions for their peers who can't see well. This way, everyone can access the knowledge they need for their studies. The best part is that our system

will always have the latest information about which books are available. This helps us share knowledge, help each other, and save money too.

2. Constraints, Standards, and Earlier course work

2.1 Constraints

We had some challenges with our project. Firstly, the internet connection was not great, which was a problem because our website and app need the internet all the time. We fixed this by boosting the internet speed. Another issue was that laptops had limited storage space and were running slowly.

At the beginning, we were worried because we didn't know much about the Flutter language, which we used for the front end. Surprisingly, it's not even taught in university courses! We also struggled with PhpMyAdmin, the database program we used. It was tough to understand, and this meant we spent more time on the application and less on building a complete website with all the basic features.

It's important to note that we made mobile applications for the first time, and we learned everything on our own using free online resources.

2.2 Standards/Codes

As for our standards and codes, we developed the application using Flutter, an open-source framework by Google. The website is built with HTML, CSS, and JS. For the back end, we used PHP and phpMyAdmin as databases.

2.3 Earlier Coursework

In our previous coursework, we made a mobile application for the first time, entirely through self-learning and with the help of free online resources.

3. Literature Review

In the digital age, individuals have been utilizing free online platforms for item exchanges, including books, CDs, and DVDs. Many websites facilitate the exchange of books, providing an alternative to selling them at reduced prices to bookstores or through garage sales. Users now maximize the value of their used books by swapping them with others on these online platforms.

The appeal of online book-swapping lies in its cost-effectiveness – users only need to cover postage expenses for the exchange. Notable book-exchange websites like **Readitswapit.co.uk**, **PaperBackSwap.com**, and **BookMooch.com** have gained popularity in this space.

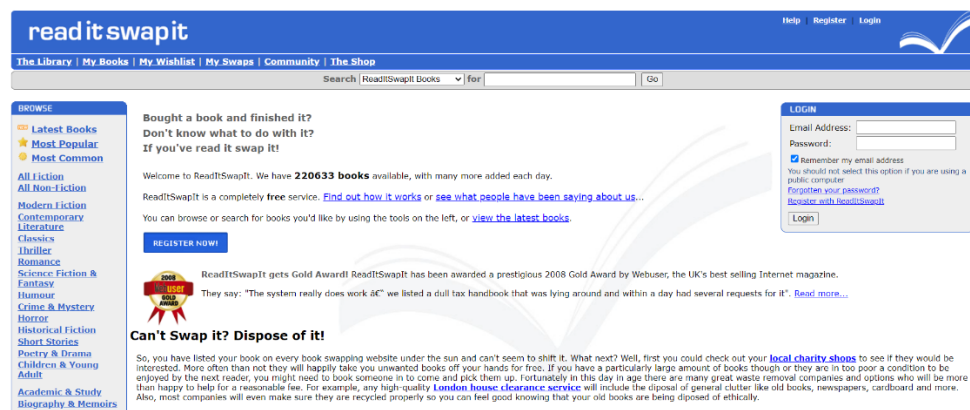


Figure 1: readitswapit.co.uk

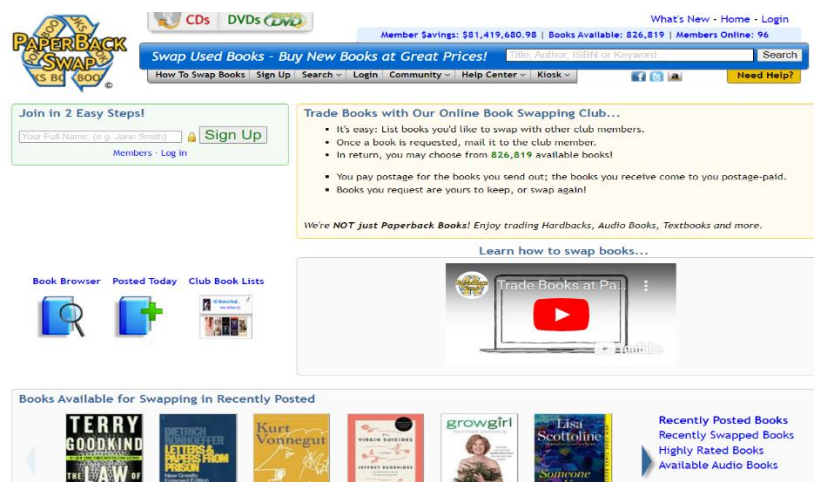


Figure 2: paperbackswap.com



Figure 3: bookmooch.com

Inspired by the success of existing book-exchange websites, our project seeks to enhance this service by simplifying the book-exchange process. Unlike other item-swapping services, we focus specifically on book exchanges due to the significant impact reading has on learning, especially in young individuals.

Existing literature discusses various book and item exchange approaches, all of which require users to maintain wish lists, detailing items they seek in return for those they are willing to exchange. Recognizing the limitations of this approach – the need for constant updates and the possibility of incomplete or outdated lists – we propose a novel book-exchange system named "MyBookisYourBook."

"MyBookisYourBook" stands out by utilizing a recommendation-based book-exchange mechanism. It suggests books of interest to users, promoting unexpected exchanges and enhancing serendipity. Uniquely, it is the only book-exchange system, to our knowledge, that incorporates a recommendation mechanism into the exchange cycles. Additionally, unlike most existing tools limited to pairs of users, "MyBookisYourBook" supports multiple exchange cycles involving more than two users simultaneously.

"MyBookisYourBook" is a valuable contribution to the realm of book exchanges, offering a unique approach where users and books discover each other through serendipity. This discovery process introduces users to books that contribute to their knowledge or provide entertainment. The project's innovative recommendation mechanism sets it apart, providing an attractive and efficient option for book enthusiasts.

4. Methodology

4.1 Tools and Programming Languages

4.1.1 Web Application

- **HTML, CSS, JavaScript (Frontend):**

- HTML (Hypertext Markup Language): HTML is the standard markup language used to create the structure of web pages. In our project, it defined the layout and organized the content, such as text, images, and links.
- CSS (Cascading Style Sheets): CSS provided styling for the web application, ensuring a visually pleasing and consistent design. It controlled aspects like colors, fonts, and layout to enhance the user interface.
- JavaScript: JavaScript added interactivity to the web application. It facilitated dynamic features, including real-time updates, user input validation, and responsive elements, enhancing the overall user experience.

- **PHP (Backend)**

PHP served as the server-side scripting language, enabling dynamic content generation and database interactions. It played a crucial role in managing user requests, processing data, and ensuring the seamless functioning of the web application.

- **PhpMyAdmin**

PhpMyAdmin was employed for efficient database management. It provided a user-friendly interface for handling MySQL databases, enabling the organization and retrieval of data essential for the web application's functionality.

- **XAMPP**

XAMPP facilitated a local server environment during development. It bundled Apache, MySQL, PHP, and Perl, creating a simulated live environment for testing the web application before deployment.

4.1.2 Mobile Application:

- **Flutter and Dart**

Flutter, an open-source UI toolkit, and Dart, the programming language for Flutter, were utilized for the mobile application. This combination allowed for the development of a cross-platform app with a single codebase, ensuring consistency across Android and iOS platforms.

- **Android Studio**

Android Studio, the official IDE for Android development, played a key role in building and testing the Flutter-based mobile application. It provided tools for designing user interfaces, debugging, and ensuring optimal performance on Android devices.

4.2 Technologies:

4.2.1 Artificial Intelligence (AI)

AI technology was integrated into the project to enhance user experience through the recommendation system. AI algorithms analyzed user preferences and behaviors, providing personalized book suggestions and optimizing the book-exchange process.

AI technology improved the overall functionality of the application, making the book-exchange mechanism intelligent and responsive to individual user needs.

How the Artificial Intelligence (AI) was implemented:

- **Recommendation Engine:** The AI-driven recommendation engine is designed to understand user preferences, reading history, and engagement patterns. Leveraging machine learning algorithms, it continually analyzes user interactions to suggest books tailored to individual tastes. This adaptive system

improves accuracy over time, ensuring users receive relevant and intriguing book recommendations.

4.2.2 Decision Tree

Decision tree algorithms within the AI framework were utilized to make informed book recommendations. These algorithms analyzed user interactions and preferences, contributing to the creation of a dynamic and adaptive book-exchange mechanism.

Decision tree technology played a crucial role in the recommendation system, ensuring that book suggestions were tailored to individual users, promoting engagement, and increasing the efficiency of the book-exchange process.

How the decision tree was implemented:

- **Chatbot Decision Logic:** The Decision Tree model is implemented within the AI chatbot to guide conversations and responses. Decision nodes are strategically designed to understand user intents and guide the chatbot towards appropriate actions, whether it's providing information, assisting with book listings, or facilitating exchanges.
- **User Support and Issue Resolution:** Decision Tree branches are crafted to efficiently handle user queries and support requests. By mapping out various scenarios and potential user inputs, the Decision Tree ensures the chatbot responds effectively, providing assistance and resolving issues seamlessly.

4.2.3 Database

We chose MySQL, an open-source relational database, for storing and managing application data due to its scalability, flexibility, and robust performance. This choice is crucial for our application's primary feature — providing shop owners with detailed business analysis through fast and reliable queries. To handle the database efficiently, we utilized phpMyAdmin, a popular MySQL administration tool written in PHP, and tested our database using the XAMPP server for a reliable development environment.

4.3 Methodology

Our project was executed following a systematic and iterative methodology to ensure effective development, testing, and refinement. The methodology comprised the following key phases:

- **Project Planning:**

Objective Definition: Clearly defined the objectives of the project, focusing on the development of a user-friendly and intelligent book exchange platform.

Scope Definition: Outlined the features and functionalities of the web and mobile applications, ensuring alignment with user needs and project goals.

Resource Allocation: Identified and allocated resources, including team members and technology tools, to ensure efficient project execution.

- **Requirement Analysis:**

User Stories: Collected and analyzed user stories to understand the needs and expectations of students participating in book exchanges.

Functional and Non-functional Requirements: Defined both functional (features) and non-functional (performance, security) requirements to guide the development process.

- **Design Phase:**

Wireframing and Prototyping: Developed wireframes and prototypes for both web and mobile applications to visualize the user interface and flow.

Database Design: Modeled the database structure, ensuring optimal organization of user and book-related data for efficient retrieval.

- **Development:**

Frontend Development: Implemented the frontend using HTML, CSS, and JavaScript for the web app, and Flutter and Dart for the mobile app. Ensured a consistent and intuitive user experience.

Backend Development: Utilized PHP for the web application backend, integrating with the MySQL database. Ensured seamless communication between frontend and backend components.

- **Integration and Testing:**

Unit Testing: Conducted unit testing to ensure individual components functioned as intended.

Integration Testing: Integrated different modules to assess the overall system performance and compatibility.

- **Maintenance and Updates:**

Continuous Monitoring: Ensured ongoing monitoring of the applications for performance, security, and user satisfaction.

Updates and Enhancements: Implemented periodic updates and enhancements based on user feedback and emerging technological trends.

Throughout the entire methodology, collaboration, communication, and adaptability were key principles, allowing us to respond effectively to evolving requirements and user needs.

4.4 Requirements

In this section we are spectating the functional for all the application which involves functional and nonfunctional requirements.

4.4.1 Functional Requirements

The functional requirements specifications identify the operations and activities that a system must be able to perform.

User Authentication:

- **Registration:** Users should be able to create accounts by providing the necessary details.
- **Login:** Registered users must have the ability to log in securely.

Book Listing:

- **Add Books:** Users should be able to list their books for exchange, providing details such as title, author, and condition.
- **Search and View:** A search functionality should allow users to find and view available books based on various criteria.

Exchange Mechanism:

- **Initiate Exchange:** Users must be able to initiate book exchanges with other users.
- **Accept/Reject Exchange:** system admin should have the option to accept or reject exchange requests received from other users.

Book Donation Feature:

- **Donation Functionality:** Users should have the option to donate books without engaging in an exchange, contributing to a culture of knowledge sharing and community support.

Volunteer Contribution:

- **Audiobook Transcription:** Provide a platform for student volunteers to contribute by transcribing books into audiobook formats, supporting visually impaired peers in their academic pursuits.

Comprehensive Search and Filter Options:

- **Advanced Search:** Enable users to perform advanced searches with filters such as genre, author, publication date, and user ratings for a refined book discovery experience.

Recommendation System:

- **AI-Powered Recommendations:** The system should provide intelligent book recommendations based on user preferences, history, and interactions.

User Profiles:

- **Personal Profiles:** Users should have profiles displaying their listed books, exchange history, and recommendations.
- **Accessibility Features:** The platform should accommodate users with visual impairments, ensuring an inclusive experience.

Notification System:

- **Notification Alerts:** Users should receive notifications for exchange requests, messages, and system updates.

Admin Panel:

- **User Management:** An admin panel is required to manage user accounts, monitor activities, and address any reported issues.
- **Content Moderation:** Admins should have tools to moderate book listings, ensuring compliance with platform guidelines.

Accessibility and Usability:

- **Responsive Design:** Both web and mobile applications must feature responsive design for a seamless user experience on various devices.
- **Intuitive Interface:** The user interface should be user-friendly, promoting easy navigation and clear interaction

Feedback Mechanism:

- **User Reviews:** Allow users to leave reviews and ratings for exchanged books and overall user experience.
- **Feedback Form:** Provide a feedback form for users to report issues or suggest improvements.

Dynamic Database Updates:

- **Real-time Inventory:** Ensure the database is dynamically updated to reflect changes in the available book inventory, promoting a current and accurate platform.

4.4.2 Non-Functional Requirements

A non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. This should be contrasted with functional requirements that define specific behavior or functions.

Non-functional requirements are:**User Friendly:**

- Easy to navigate
- Provides user friendly interface.
- Has a very high graphical user interface.

Performance:

- The system works well on different devices.
- Ability to accommodate capacity for the number of new and current customers on the system.
- Ability to respond time if the user makes a request until completed his request.
- Highly performed fast and easy to navigate another page.

Accessibility:

- Meaningful title for page is provided so the user can access the desired page easily.

- Technical standards of HTML, CSS and XML are used.

Usability:

- The system is easy to use and learn for the beginners and intermediate

Availability:

- The system will be available all days and anytime 24/7

Reliability:

- Reduce the probabilities of failures

Security:

- The system provides log in function.
- No one is authorized to display the information of registered users.

4.5 Design

4.5.1 Physical Database design

The physical design of our database optimizes performance while ensuring data integrity by avoiding unnecessary data redundancies. During the physical design, we converted the entities into tables, the instances into rows, and the attributes into columns. We end up with the physical database described as listed in table 1

The following tables from table 2 to 14 give details on each table. The list below is the database tables.

Table 1: Database Tables

Table Name	Description
Admin	This table contains the admin information
Books	This table contains the books information
book_audio	This table contains the audio books information
book_pdf	This table contains the electronic books information
donated_book	This table contains the donated books information
Events	This table contains the events information
News	This table contains the news information
Request	This table contains the confirmed borrowed request information
Review	This table contains the students review information
Students	This table contains the student's information
temp_request	This table contains the borrowed request information
voluntary_work	This table contains the voluntary work information
voluntary_work_audio	This table contains the voluntary work uploaded information

Table 2: admin info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	admin_name	varchar(100)	utf8_unicode_ci		No	None			 Change
2	email 	varchar(100)	utf8_unicode_ci		No	None			 Change
3	password	varchar(20)	utf8_unicode_ci		No	None			 Change

Table 3: books info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	book_id	int(5)			No	None		AUTO_INCREMENT	Change
2	book_name	varchar(100)	utf8_unicode_ci		No	None			Change
3	author_name	varchar(100)	utf8_unicode_ci		No	None			Change
4	edition	varchar(20)	utf8_unicode_ci		No	None			Change
5	category	varchar(50)	utf8_unicode_ci		No	None			Change
6	des	text	utf8_unicode_ci		No	None			Change
7	pic	varchar(200)	utf8_unicode_ci		No	None			Change
8	quantity	int(3)			No	None			Change
9	type	varchar(50)	utf8_unicode_ci		No	None			Change

Table 4: book_audio info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	audio_id	int(5)			No	None		AUTO_INCREMENT	Change
2	book_name	varchar(100)	utf8_unicode_ci		No	None			Change
3	author_name	varchar(100)	utf8_unicode_ci		No	None			Change
4	edition	varchar(10)	utf8_unicode_ci		No	None			Change
5	category	varchar(20)	utf8_unicode_ci		No	None			Change
6	pic	varchar(200)	utf8_unicode_ci		No	None			Change
7	des	text	utf8_unicode_ci		No	None			Change
8	file	varchar(200)	utf8_unicode_ci		No	None			Change

Table 5: book_pdf info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	pdf_id	int(5)			No	None		AUTO_INCREMENT	Change
2	book_name	varchar(100)	utf8_unicode_ci		No	None			Change
3	author_name	varchar(100)	utf8_unicode_ci		No	None			Change
4	edition	varchar(10)	utf8_unicode_ci		No	None			Change
5	category	varchar(20)	utf8_unicode_ci		No	None			Change
6	pic	varchar(200)	utf8_unicode_ci		No	None			Change
7	des	text	utf8_unicode_ci		No	None			Change
8	file	varchar(200)	utf8_unicode_ci		No	None			Change

Table 6: donated_book info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(10)			No	None		AUTO_INCREMENT	Change
2	student_ID	int(10)			No	None			Change
3	book_name	varchar(100)	utf32_unicode_ci		No	None			Change
4	author_name	varchar(50)	utf32_unicode_ci		No	None			Change
5	edition	varchar(5)	utf32_unicode_ci		No	None			Change
6	category	varchar(100)	utf32_unicode_ci		No	None			Change
7	pic	text	utf32_unicode_ci		No	None			Change
8	request_status	varchar(100)	utf32_unicode_ci		No	None			Change
9	receipt	varchar(10)	utf32_unicode_ci		No	None			Change
10	note	text	utf32_unicode_ci		No	None			Change
11	added_to_books	varchar(5)	utf32_unicode_ci		No	None			Change

Table 7: events info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	event_ID	int(5)			No	None		AUTO_INCREMENT	Change
2	title	varchar(100)	utf8_unicode_ci		Yes	NULL			Change
3	des	text	utf8_unicode_ci		Yes	NULL			Change
4	event_pic	varchar(100)	utf8_unicode_ci		Yes	NULL			Change
5	event_date	varchar(15)	utf8_unicode_ci		Yes	NULL			Change

Table 8: news info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	news_ID	int(5)			No	None		AUTO_INCREMENT	Change
2	title	varchar(100)	utf8_unicode_ci		Yes	NULL			Change
3	des	text	utf8_unicode_ci		Yes	NULL			Change
4	news_pic	varchar(100)	utf8_unicode_ci		Yes	NULL			Change
5	news_date	varchar(20)	utf8_unicode_ci		No	None			Change

Table 9 request info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	request_id	int(10)			No	None		AUTO_INCREMENT	Change
2	student_id	int(10)			No	None			Change
3	book_id	int(10)			No	None			Change
4	duration	varchar(50)	utf8_unicode_ci		No	None			Change
5	receipt_date	varchar(15)	utf8_unicode_ci		No	None			Change
6	request_status	varchar(50)	utf8_unicode_ci		No	None			Change
7	receipt_status	varchar(50)	utf8_unicode_ci		No	None			Change
8	note	text	utf8_unicode_ci		No	None			Change

Table 10: review info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	ID	int(5)			No	None		AUTO_INCREMENT	Change
2	student_ID	int(10)			Yes	NULL			Change
3	book_id	int(5)			Yes	NULL			Change
4	review	text	utf8_unicode_ci		Yes	NULL			Change
5	rate	int(1)			Yes	NULL			Change
6	review_date	date			Yes	NULL			Change

Table 11: students info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	student_ID	int(10)			No	None			Change
2	student_name	varchar(100)	utf8_unicode_ci		No	None			Change
3	email	varchar(100)	utf8_unicode_ci		No	None			Change
4	password	varchar(30)	utf8_unicode_ci		No	None			Change
5	phone	varchar(20)	utf8_unicode_ci		No	None			Change
6	arabic_name	varchar(100)	utf8_unicode_ci		No	None			Change

Table 12: temp_request info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(5)			No	None		AUTO_INCREMENT	Change
2	student_id	int(10)			No	None			Change
3	book_id	int(10)			No	None			Change
4	duration	varchar(20)	utf8_unicode_ci		No	None			Change
5	receipt_date	varchar(20)	utf8_unicode_ci		No	None			Change

Table 13: voluntary_work info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	vw_id	int(10)			No	None		AUTO_INCREMENT	Change
2	vw_bookName	varchar(100)	utf8_unicode_ci		No	None			Change
3	vw_authorName	varchar(100)	utf8_unicode_ci		No	None			Change
4	vw_bookEdition	varchar(5)	utf8_unicode_ci		No	None			Change
5	vw_bookCategory	varchar(50)	utf8_unicode_ci		No	None			Change
6	vw_picture	varchar(100)	utf8_unicode_ci		No	None			Change
7	vw_file	varchar(100)	utf8_unicode_ci		No	None			Change
8	complete	varchar(10)	utf8_unicode_ci		No	None			Change

Table 14: voluntary_work_audio info Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id 	int(10)			No	None		AUTO_INCREMENT	 Change
2	vw_ID	int(10)			No	None			 Change
3	student_ID	int(10)			No	None			 Change
4	Pnumber	varchar(10)	utf8_unicode_ci		No	None			 Change
5	select_date	varchar(20)	utf8_unicode_ci		No	None			 Change
6	upload_date	varchar(20)	utf8_unicode_ci		No	None			 Change
7	file	varchar(100)	utf8_unicode_ci		No	None			 Change
8	note	varchar(500)	utf8_unicode_ci		No	None			 Change
9	status	varchar(20)	utf8_unicode_ci		No	None			 Change

4.5.2 Website design

The main page of the site contains basic information, such as the main menu that directs the user to the login interface and creating an account, and many information is displayed, such as the latest books that have been added, the most popular books, and also news about the activities that will be implemented.

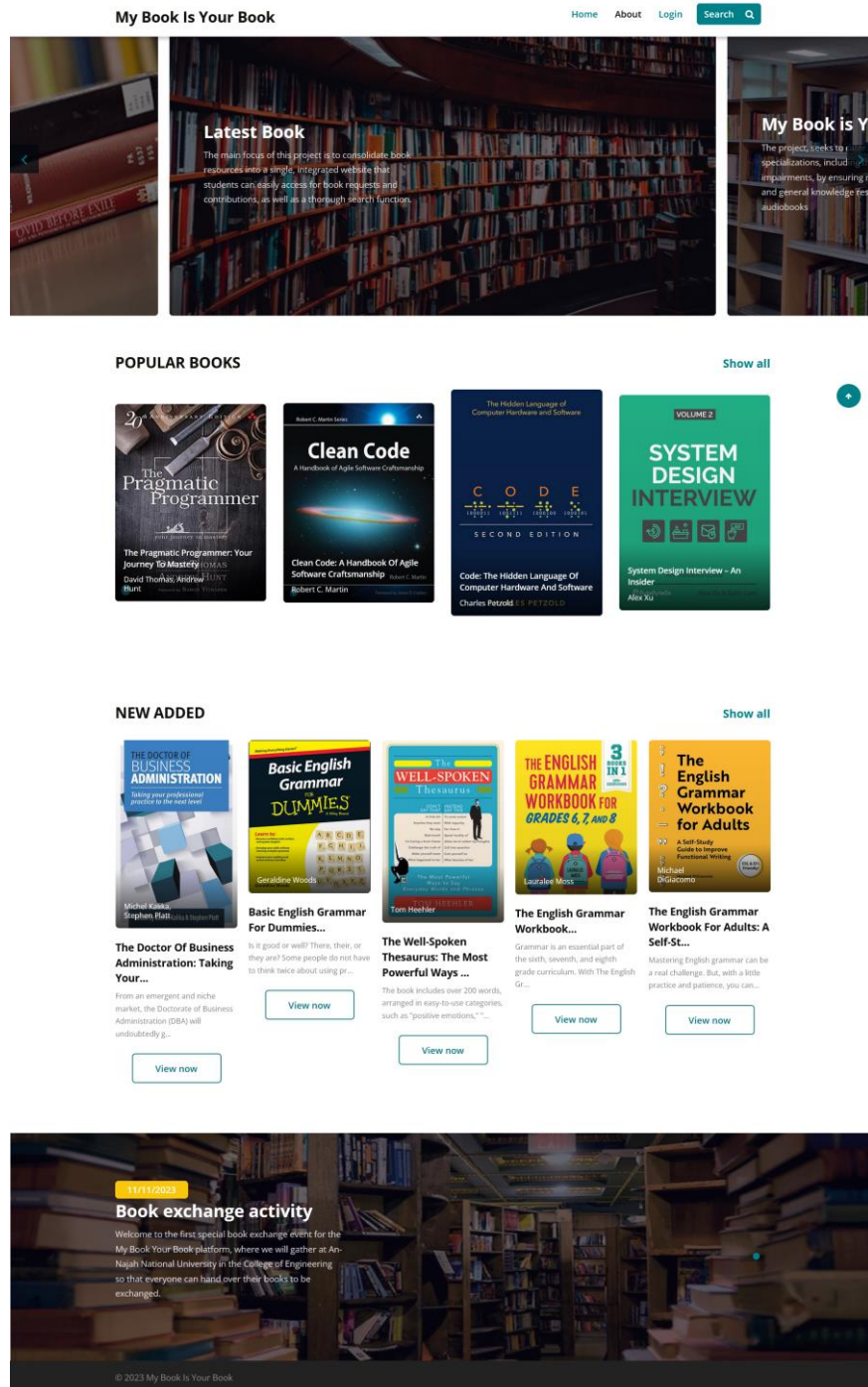


Figure 4: home Screen

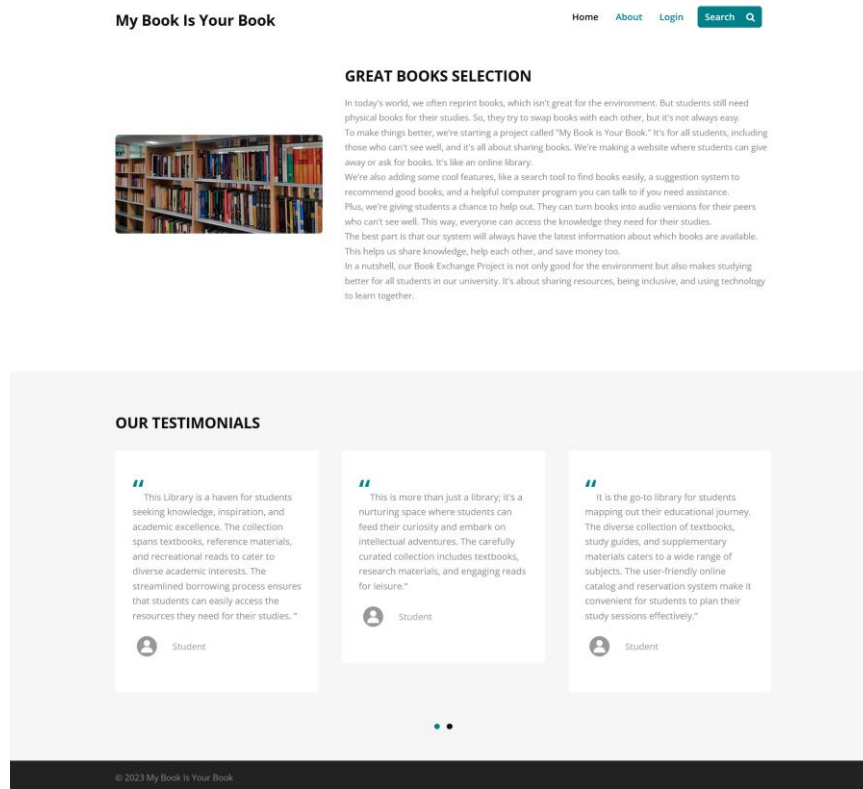


Figure 5: about us page

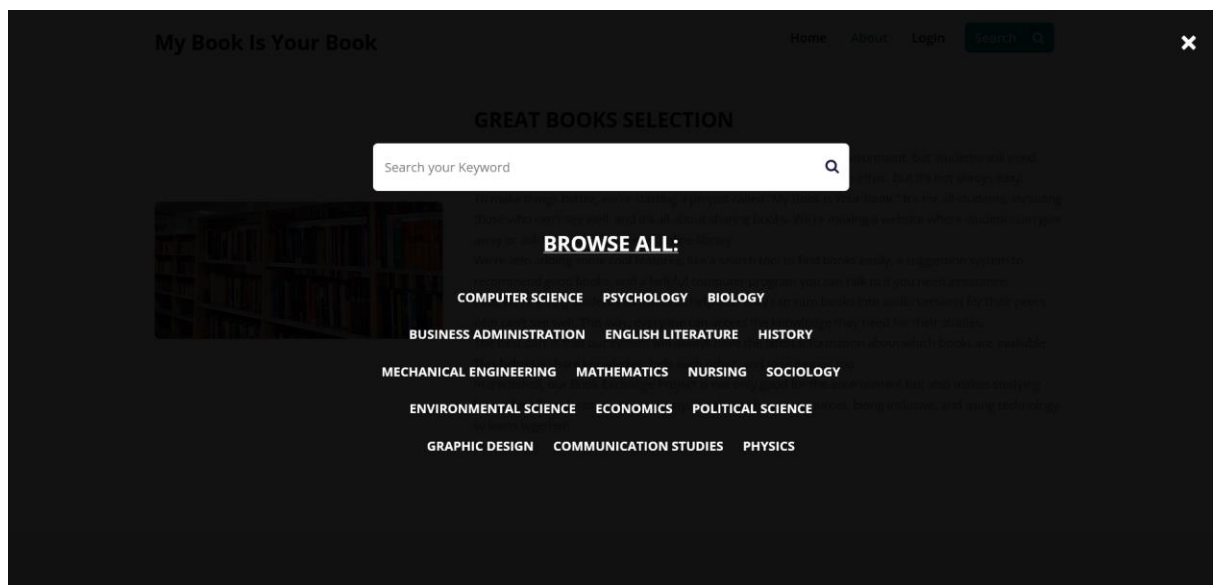
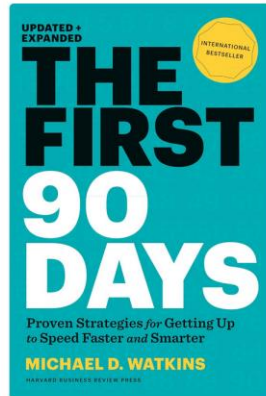


Figure 6: search page



THE FIRST 90 DAYS: PROVEN STRATEGIES FOR GETTING UP TO SPEED FASTER AND SMARTER

Transitions are a critical time for leaders. In fact, most agree that moving into a new role is the biggest challenge a manager will face. While transitions offer a chance to start fresh and make needed changes in an organization, they also place leaders in a position of acute vulnerability. Missteps made during the crucial first three months in a new role can jeopardize or even derail your success.

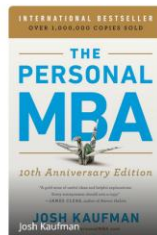
[Login To Request Book](#)

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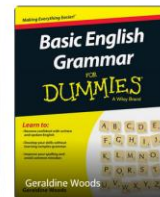

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Is it good or well? There, their, or they are? Some people do not have to think twice about using pr...

[View now](#)

Figure 7: books details

Sign in

Enter your email and password to sign in

[Sign in](#)

Don't have an account? [Sign up](#)

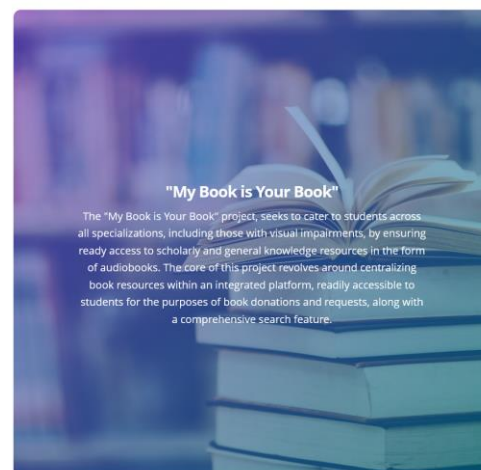


Figure 8: login page

Sign Up
Enter your information and wait for admin approve

Enter Student ID

Enter Student Name

Enter Student Arabic Name

Enter Student Phone

Enter Student Email

Enter Password

Sign in

Do you have an account? [Sign in](#)

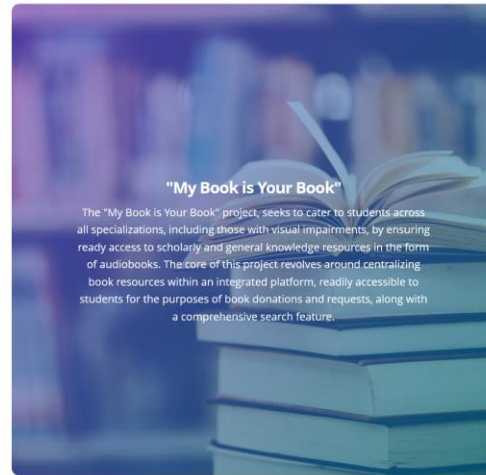


Figure 9: sign up page

Admin Dashboard

This is the home screen for the admin dashboard, it contain some report numbers and the main menu for the admin

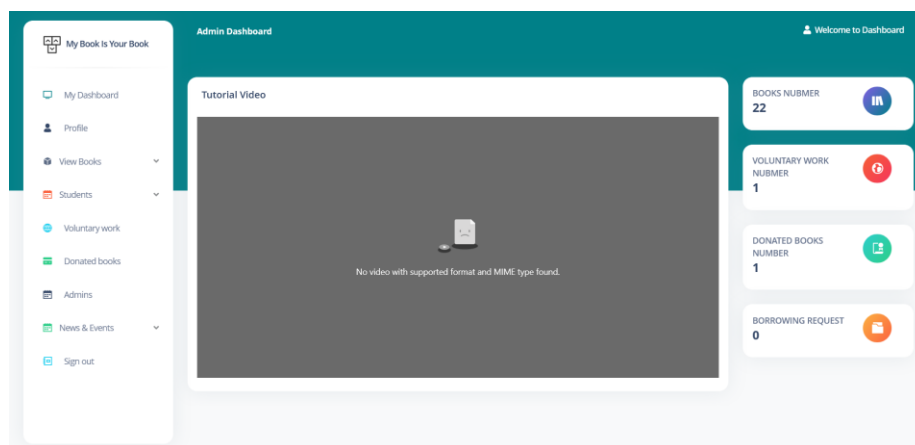


Figure 10: admin home screen

Admin Dashboard Welcome to Dashboard

Add New Electronic Book

Use this form to add a new electronic book to the system

Enter Book Name

Enter Author Name

Enter Book Edition

Enter Book Category

Enter Book Description

Book Picture

Browse... No file selected.

Book File PDF

Browse... No file selected.

Add

Figure 11: add pdf book

Admin Dashboard Welcome to Dashboard

Paper Book Add New Paper Book

PIC	BOOK NAME	AUTHOR NAME
	The Pragmatic Programmer: Your Journey To Mastery	David Thomas, Andrew Hunt
	Clean Code: A Handbook of Agile Software Craftsmanship	Robert C. Martin
	Code: The Hidden Language of Computer Hardware and Software	Charles Petzold

Figure 12: view paper books

Admin Dashboard Welcome to Dashboard

Add New Paper Book

Use this form to add a new paper book to the system

Enter Book Name

Enter Author Name

Enter Book Edition

Enter Book Category

Enter Book Quantity

Enter Book Description

Enter Book Type

Book Picture

Browse... No file selected.

Figure 13: add paper book

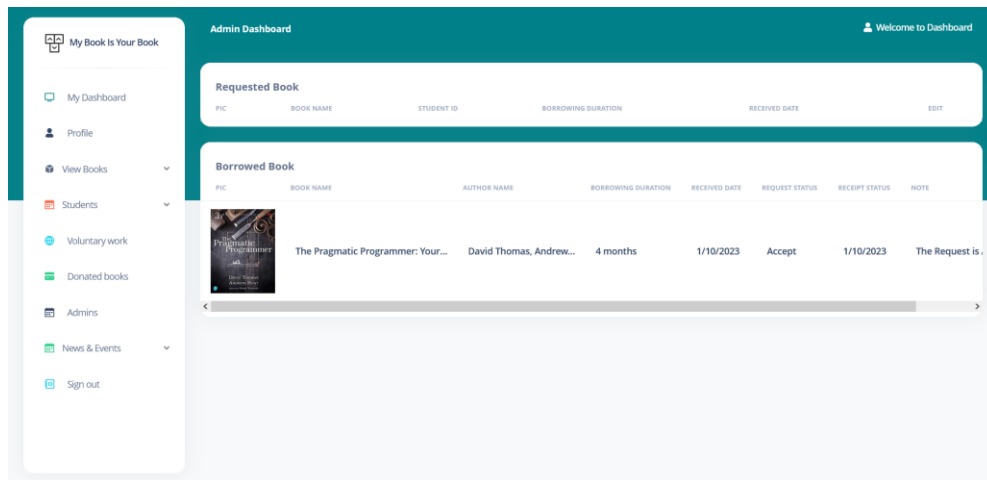


Figure 14: view requested book and borrowed book

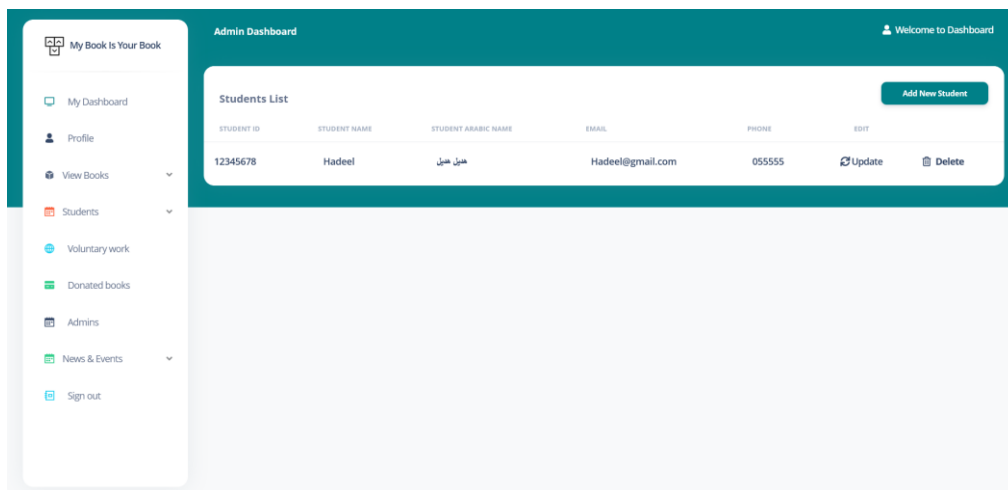


Figure 15: view students list

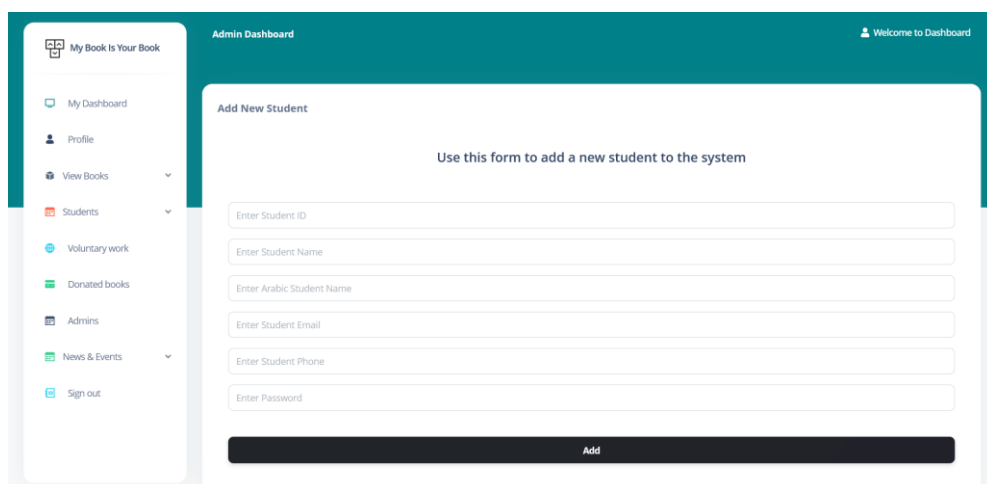


Figure 16: add new student

Admin Dashboard Welcome to Dashboard

My Book Is Your Book

- My Dashboard
- Profile
- View Books
- Students
- Voluntary work
- Donated books
- Admins
- News & Events
- Sign out

View and Edit Student Save

Use this form to update the student information

12345678

Hadeel

هادي هادي

Hadeel@gmail.com

055555

12345

Figure 17: update student info

Admin Dashboard Welcome to Dashboard

My Book Is Your Book

- My Dashboard
- Profile
- View Books
- Students
- Voluntary work
- Donated books
- Admins
- News & Events
- Sign out

Students List Add New Student

STUDENT ID	STUDENT NAME	STUDENT ARABIC NAME	EMAIL	PHONE	EDIT
12345678	Hadeel	هادي هادي	Hadeel@gmail.com	055555	Update Delete

Figure 18: view admin list

Admin Dashboard Welcome to Dashboard

My Book Is Your Book

- My Dashboard
- Profile
- View Books
- Students
- Voluntary work
- Donated books
- Admins
- News & Events
- Sign out

Add New Admin

Use this form to add a new admin to the system

Enter Admin Name

Enter Admin Email

Enter Admin Password

Add

Figure 19: add new admin

Mobile Application

In this section we will display the screens for the mobile application

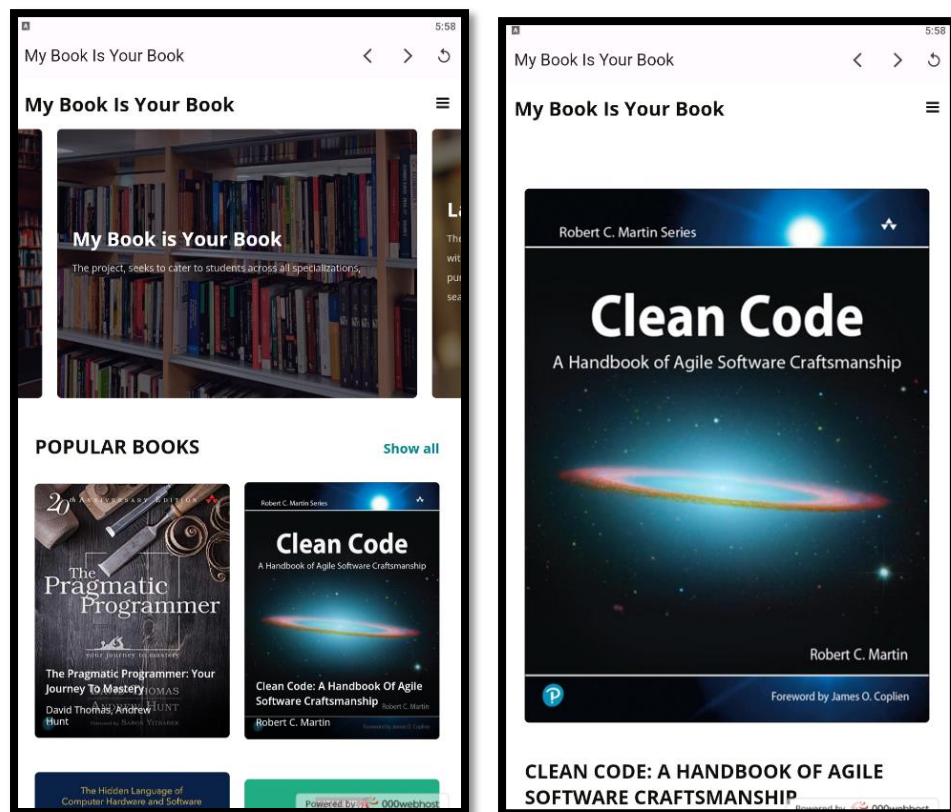


Figure 20: home screens for mobile application

My Book Is Your Book

Student Dashboard Welcome to Dashboard

View and Edit Profile Save

STUDENT INFORMATION

Student ID
12345678

Student Email
Hadeel@gmail.com

Student Name
Hadeel

Student Arabic Name
هديل هديل

Student Password
12345

Student Phone
055555

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Figure 21: student profile

My Book Is Your Book

Student Dashboard Welcome to Dashboard

Use this form to update voluntary work information
You can choose to participate in volunteer work to convert paper and electronic books into audio books
Select voluntary Pages

NUMBER OF PAGES	SELECT DATE	UPLOAD DATE	UPLOADED FILE	NOTE
1 - 10	9-10-2023			

View Voluntary Work

Use this form to update voluntary work information

PDF Book Name
dfvdfv

Author Name
erfe

Book Edition

Figure 22: apply for voluntary work

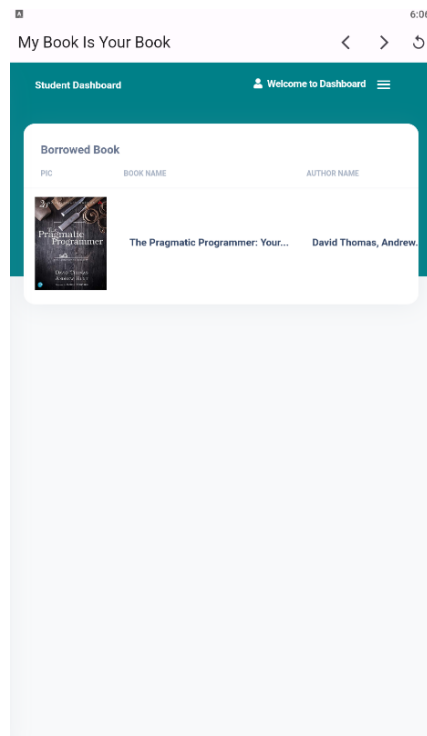


Figure 23: view borrowed books

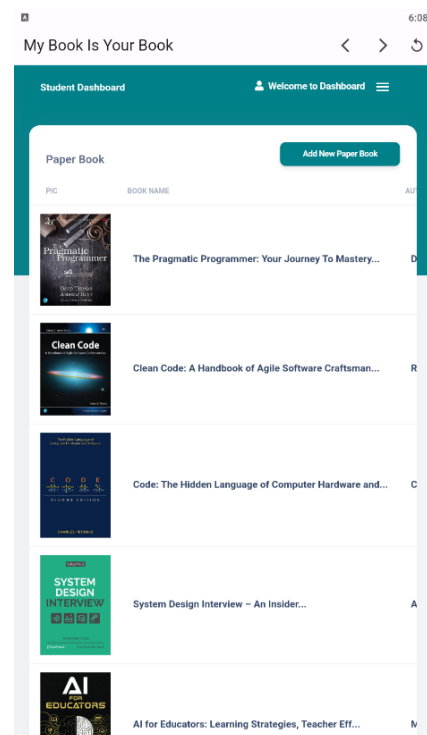


Figure 24: view all books and add paper book

AI virtual assistant, by the smart conversion the student can talk with AI Chat to help him find the required book

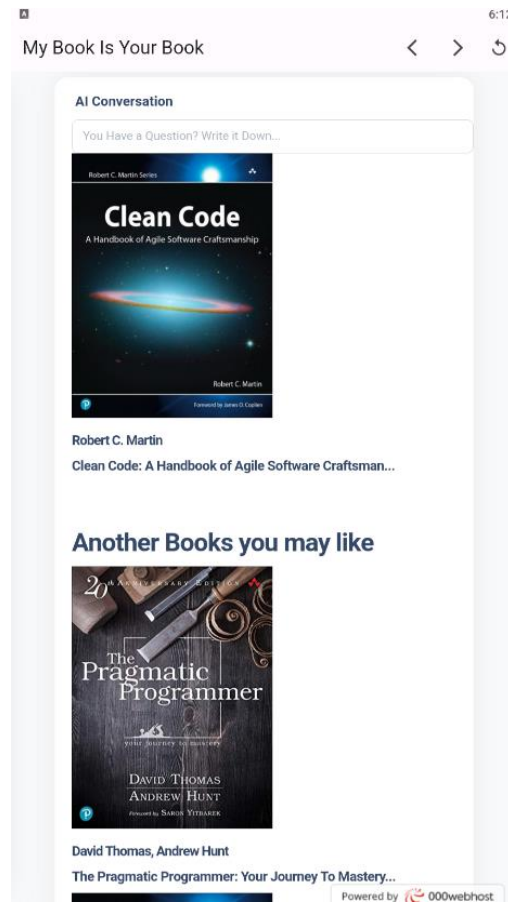


Figure 25: AI virtual assistant

5. Results and Discussion

The successful implementation of our project marks a significant achievement in addressing the needs of students and reshaping the way they access and exchange books. Despite encountering challenges, particularly during the development of the mobile application, our team overcame hurdles and managed to implement nearly all planned features.

The importance of this project cannot be overstated. By providing a unified platform for students, we have streamlined the process of book sharing, making it more accessible and efficient. The impact of our efforts extends beyond mere convenience; it has the potential to alleviate financial burdens on students and contribute to a more sustainable academic environment.

The utilization of AI algorithms in the creation of a virtual assistant adds a layer of sophistication to our project. This virtual assistant is designed to assist students in their book-related queries, enhancing their overall experience with the application. The incorporation of AI reflects our commitment to leveraging cutting-edge technology to benefit the student community.

The challenges we faced, particularly in the development of the mobile application, underscore the complexity of creating a comprehensive platform. However, our team's resilience and problem-solving skills prevailed, resulting in the successful implementation of key functionalities. This not only highlights the dedication of our team but also emphasizes the importance of such initiatives in pushing the boundaries of technology for the betterment of education.

As we move forward, the project opens avenues for continuous improvement. We acknowledge the need for refining the virtual assistant's algorithms to enhance accuracy and responsiveness. Additionally, expanding the dataset for the recommendation system will contribute to making the book suggestions more authentic and valuable for users.

In conclusion, the "My Book is Your Book" project stands as a testament to the positive impact technology can have on student life. It not only addresses practical challenges in book sharing but also demonstrates our commitment to innovation in the academic sphere. As we look ahead, the project's success lays the groundwork for future enhancements and innovations in the pursuit of a more connected and resourceful student community.

5. Conclusions and Future Work

In conclusion, we've successfully created a versatile mobile app that has the potential to revolutionize how students access and exchange books by offering a centralized platform for all their needs.

Each student has a personalized account featuring a recommendation system that considers searches, borrowing requests, and rating history. Our app also boasts a user-friendly chat system, allowing students to easily communicate with a virtual assistant for any queries related to book searches. Students can seamlessly search for, view, donate, borrow, and even volunteer to convert books.

For administrators, we've designed a comprehensive user interface displaying the system dashboard, showcasing books sorted by name, author, or time added. It includes a detailed page with analytical data on book numbers, voluntary work, donated books, and borrowing requests, providing admins with valuable insights into system performance.

While proud of our achievements, we recognize areas for improvement. We aim to enhance the accuracy and quality of the dataset for the virtual assistant model. Additionally, we plan to use a larger dataset from real books to make the recommendation system more authentic and precise. To further refine the mobile app, we're considering adding features like language switching, return reminders, and other functionalities.

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