Books Tracking and Review Application

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Abstract

The majority of libraries today still utilise traditional methods to distribute books to its consumers. Librarians gather information on the customer and the book while one person is speaking with the librarian, the others must wait until he or she has finished the process this makes it difficult for other people to obtain the books. So our objective is to simplify this manual entry procedure so that individuals may advance to the essential steps without having to wait for others to finish them. People profit from our paper in various ways, such as "Pre-Booking" the necessary books before arriving at the library, so that the book is ready to take up when you arrive, and another feature may be "Transfer of Book" to understand this. What this feature does is assume person1 has a book, now person2 needs the same book that person1 has, before person2 can withdraw the book person1 must return the book for that both of them must get to the library, now to save time what we propose is if both person1 and person2 meet and exchange the books with each other to approve this, notification regarding the transfer will be sent to both their applications they must confirm then the transfer will start. Other features include "review of the books" that individuals borrowed, which includes the reason they borrowed the book as well as some other information.

Keywords: Pre Booking, Transfer of books, Review.

1. Introduction

The primary purpose of this paper is to make it easier for individuals to borrow books more quickly and effectively. This is possible with the use of smartphones. Because smartphones are nearly universally used, we developed an application that can be downloaded and installed. This application collects all of the information required by the librarian and establishes an account for the librarian, after which the librarian will have information on the individual who has drawn books in that library. This software maintains track of the books borrowed from the library, the fine amount (if applicable), reviews of various books in that library, and pre-booked books. Most people waste so much time just waiting here, and this puts pressure on the librarian, who may register false info, causing difficulties in the future. Also, since some additional features are incorporated in our solution, users may find it quite beneficial. As we consider how things may be done digitally, this solution might assist us promote that vision. Our paper's motivation is to assist individuals in doing their responsibilities without issues, so that human mistakes may be eliminated and the process can work smoothly. For our paper, people must create an account similar to a normal login system; after successfully creating an account, the user must enter his/her username and password to login; after that, the home page will be displayed, which contains the books available in the library; from there, the user can navigate to various pages, that are the books borrowed by themselves, those books return dates, and the fine to be paid (if any) for payment, we will be providing a payment gateway that is secure.

Similarly, the librarian will have his or her own account to which they can log in using the same method as before, and they will be able to see who has borrowed books and when are they due to return them. First, we create separate accounts for people who have registered as library members; each of them is provided with a separate login ID and password, which is set by the user they can use these ID's to login in the application that we designed and they can see the books that they've borrowed from the library. The librarian will also be given login IDs so that he or she can keep track of the borrowed books. The other feature of our application is the "Book Transfer." To understand how this works, simply assume two people. The first person has a book that the second person requires. To ensure that the second person receives the book from the first person, they should meet physically and then use the application on their respective devices to select the "Book Transfer" option. They must then exchange the books with each other. Following that, the second individual will receive a confirmation message on his or her device, and he or she must confirm acquisition of the book. This will be acknowledged since the first person returned the book and the second person borrowed the identical book without having to go to the library.

2. Existing system

There are many other applications that can keep track of the books that people borrow from the library, but the additional feature that we are providing is the physical transfer of

books between two individuals, so that we can save the time of both people at the same time. There is currently no mobile or online application that execute book transfer, however there are various other applications that give reviews for books that people are reading. The key difference between our suggested system and the present system is that new functionality, in addition to database monitoring, will be offered.

3. Proposed System

Now, let us go over the development of the application that allows library members to easily borrow books and manage the books they've borrowed, such as the return date of the book to the library, reviews of the books that are available in the library, and Pre Booked books that are waiting in the library to be picked up. This application was created with Android Studio, which in addition to the characteristics listed above, is a widely used application programme for the development of Android applications. We will use the hardware to communicate with the programme in order to accomplish the necessary operations such as booking books, transferring books, and searching books. This technology must also be portable so that it may be used anywhere and whenever the user requires it. Because our proposal is like an application, the hardware requirements of the paper do not need to be sophisticated; a simple device that runs an Android application is sufficient. We also intend to redesign this application to be responsive so that it looks attractive and improves user interactions. To enjoy the capabilities of our software, you will just need an Android smartphone. Any other device that supports Android apps can also be used to interact with our app. For system requirements, our application is created in such a manner that it operates on the majority of devices, allowing the vast majority of the people to use it; moreover, because it can be used by the majority of people, the number of users for the application will expand gradually. Our programme works on any smartphone that supports Android version 4.0 or above. An active network connection will be required to operate the programme, thus these devices must also be able to connect to the internet in order for the application to function properly and fully utilise all of its capabilities.

4. Architecture diagram

As previously stated, both members and the librarian will be able to utilise the application. Both have their own distinct features based on their demands. The first is the member login, which will include all of the required facts that the user need (i.e. specifics of the book borrowed, review of the various books in the library). This application will be immediately linked to the database, which will have all of the

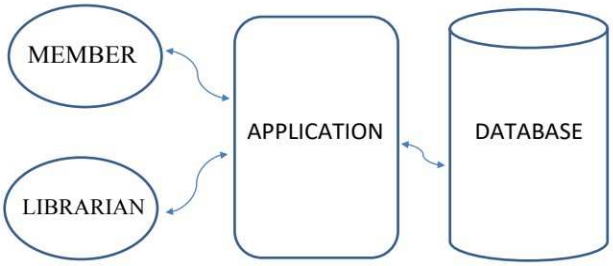

Fig 4.1
Basic Architecture Diagram

information required, and this information will be utilised to ensure that we proceed without incident. Our paper is separated into components, each of which will be developed individually, and the prototype will be created by integrating these modules as one for testing purposes. Those modules are,

a. STUDENT MODULE

The student interface, or the features utilised by the user, will be built and their individual user interfaces will be designed in this module. When a person joins the library, they will be assigned a username and a password, which they will be able to change later. After logging in, the user will be able to see the Home Page, from which they will be able to navigate to all of the other pages specified in the diagram, and each page has its own functionality.

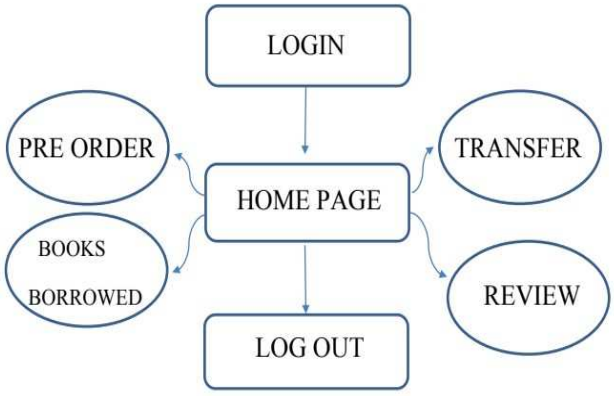

Fig 4.2
User Interface Diagram

b. LIBRARIAN MODULE

This module will have a librarian interface that will allow them to obtain information about members who have borrowed books from the library as well as a history of the books that have been borrowed by a specific user. The librarian will also be able to see all of the books in the library. Our application will be immediately connected to the database. If new books are introduced or old books are removed, appropriate changes be made to avoid unnecessary confusions. The librarian and the member, will obtain login credentials that may be used to enter the application and access their separate portals.

5. Work flow

The suggested system's process will be as follows.

Fig 5.1
Login Selection Page

Fig 5.2
Login Page

Fig 5.3
User Interface

Fig 5.4
Other Options

The application will feature a separate login for library members and the librarian. In this case, the member will play the role of a user, while the librarian will play the role of an administrator. Both the former and latter will feature registration and login, wherein the member may register themselves under the library after which they will be issued with login credentials to use in the application. Members will be able to navigate between numerous pages, including books drawn by members, books moved between persons, books pre-booked by members, and a review of every book in the library. Members can also search the many books that are accessible in the library.

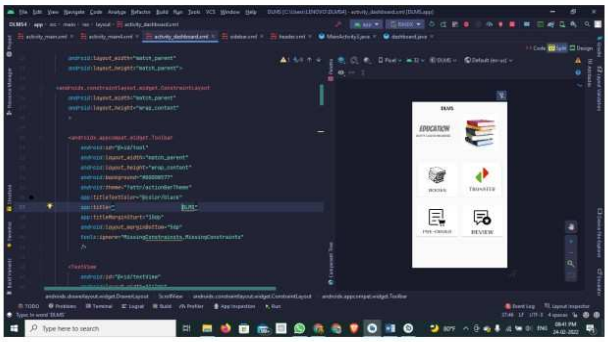

Fig 5.5 Screenshots of Android Studio

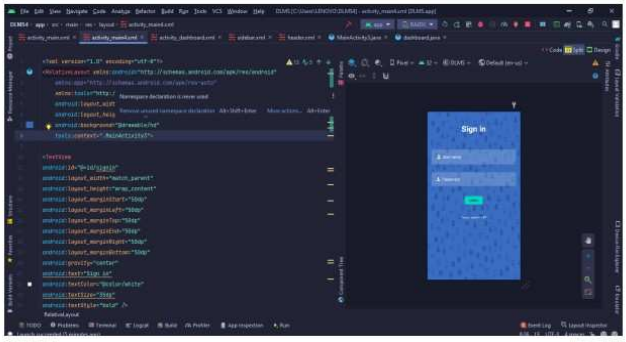

Fig 5.6 Screenshots of Android Studio

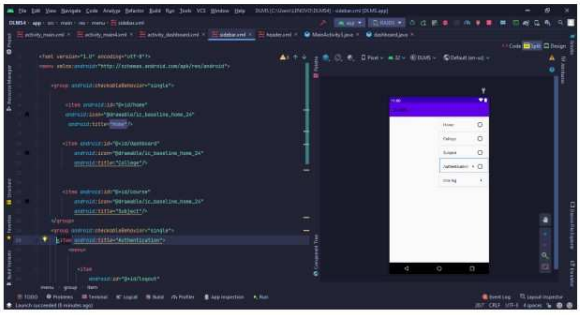

Fig 5.7 Screenshots of Android Studio

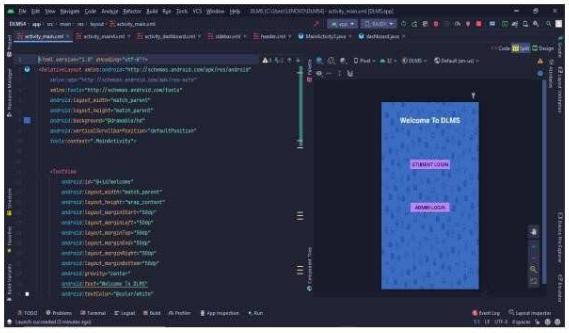

Fig 5.8
Screenshots of Login Selection Page designed in Android Studio

6. Future prospects

Currently, our application should be able to provide information about the books accessible in the library, the ability to transfer books between app users, and the books that have been borrowed by a certain user can also be viewed. The

librarian will be able to keep track of who has borrowed books, who is a member of the library, and any other pertinent information that the librarian requires to continue. However, in order to achieve our long-term objectives, we intend to include book reviews in the application so that users can simply determine which book is the best for obtaining the information they require. This feature will be implemented in the future based on user feedback. Repayment of fines for books returned beyond the due date will be one of the new features, and a separate payment portal will be offered for this.

7. Conclusion

This application will assist most people in saving time, traditional ways of doing things will be altered, and the impact of these changes will encourage others to begin visiting libraries. As more people visit, a disproportionately bigger number of books will be drawn, and people's ability to get information from these books will progressively increase in the future There are also some other benefits, such as people coming together can assist them find people with similar interests, and new contacts will be made as a result of this. To summarise, the release of our application will result in a beneficial shift for the writers who have been waiting for even the smallest acknowledgement for their work, and more recognition will be given to those writers around the world.

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