

An Android Application for Online Library Management System (AAOLMS)



ISSN: 2455-1910

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ABSTRACT: An Android Operating System has become more popular and it makes a platform and holds a maximum number of Users when compared to all other platform. Before the introduction of the Android Operating System the access to the Library documents was done only by the Admin or librarian. No institute can provide books for each and every user in their premise. They can provide only limited number of books in the library. Balancing the availability of books is a great challenge to the admin. This paper suggests a method for the library access to go public that is the public can also access the library database like Colleges and Schools. The Library Access Application helps the patrons to access their required information and queries without computers or the librarians but through their android devices which saves their time and energy. The Application recovers the data put away in the library database through the library server for instance checking whether the books are accessible in the library or acquired without interceding anybody. Client's entrance of library will be put away in the database for proposal amid a scan for books. Due-date of the obtained books from a library will be suggested by the application as a warning before the due date. Clients are favoured to recommend books for the library and they are advised about their proposal, by the Librarian. This paper brings another thought of people in general to get to the library.

Key Words: *Library, Android, Online, Database, Transactions, Distributed etc.,*

INTRODUCTION: An Android Application for online library Management System chapter gives complete information about the aim, objective and operation environment of the system.

PROJECT AIMS AND OBJECTIVES:

- i. The project aims and objectives that will be achieved after completion of this project discussed in subchapters.
- ii. The aim and objectives are as follows:
- iii. Online book issue.
- iv. Student login page where they can find books issued by his/her and date of return.
- v. A search column to Search availability of books.
- vi. A faculty login page where faculty can also find the books.

- vii. The special feature in this android app is to reserve the books in the library.
- viii. If the books are completely reserved, the remaining members will be in waiting list.
- ix. If the person reserves the book in Android app, we provide the coupon code to that member.

BACKGROUND INFORMATION: The Library Management is an Android Application and also Web Application which refers to library systems which are generally small or medium size. It is used by administrator to manage the library using a computerized system where he/she can record various transactions like issue of books, returning of books, addition of books and addition of new students. Books maintenance modules are also included in this Android/web Application system

which would keep track of the students using the books in library and also detail description about the books a library contains. There will be no loss of books record or member record which generally happened when a non-computerized system is used. All these foundation modules can help custodian to deal with the library with more comfort and in a more effective manner when contrasted with library framework which are non-modernized.

EXISTED SYSTEM:The Library Management System doesn't have any change in the last 20 years.The biggest change is in search and the need to simplify search for end users. It is non computerized system. The librarians manually register the memberships in library, thereby work flow is increased. Books updating will makes waste of time and calculate the due date if the books submission will be out dated. In present existing system the staffs of library are involved in the following tasks.In membership process the user has to fill membership forms and they are provided with member id, this is done only by librarian.Librarian issues book to the user after authenticating the user.While returning the book by the user, librarian checks the due date and calculates fine if applicable.Librarian updates the data base by adding the new books.In this system user does not know about the issued books, since user have to wait until the book is available. To check availability of books in library user have to visit library physically and this leads to waste of time and usage of books are inefficient.

DISADVANTAGES OF EXISTED SYSTEM:

Some problem being faced in manual system as follows:

- i. Fast report generation is not possible
- ii. Tracing a book is difficult.
- iii. Information about issue/return of the books is not properly maintained.
- iv. Major problem is database maintenance.
- v. Books in the library cannot be used efficiently.

PROPOSED SYSTEM:In this Library Management System provides the following solutions:The additional feature in this android application is to book your core (or) interested books in your library. If the books are not available at that particular time, then user can visit the details of students who have already taken the particular books. They can directly send request for the book required by them to the students who had through the App. Also students can transfer the books by their own without interference of librarian. Librarian

can act as admin and can find the students who have the book out of their limited time and can send him a copy of penalty amount to the student. Student also will be remind the date of returning book by the App. This makes easy for students for finding their required book even they are not available at library. This brings efficient usage of book in library by the students. Availability of books can be predicted by the users, since user need not visit library daily for required book. User can directly approach library only when the required book is available. This system leads to save the time of user form unnecessary visit to library. Due to some security reasons we are not providing users to take book initially from the library. Issuing of book can be done only by the librarian. Users can only transfer their book to other user account with in their limit. While transferring the book between users if user had reached to out of their limit transferring of book will be failed.

ARCHITECTURE:The following architecture illustrates the functionality of the Library management system for multiple access domains through centralised authentication system.

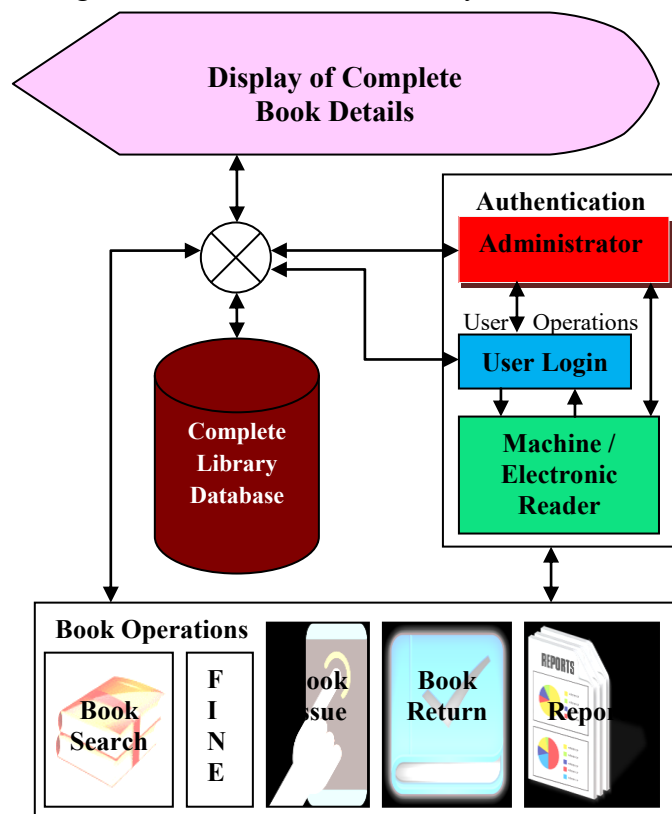


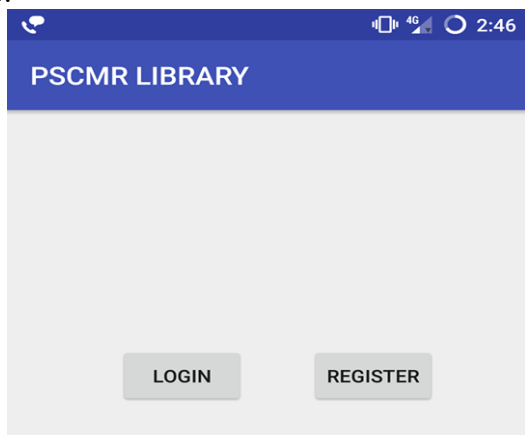
Figure 1:Architecture of Generalised Library Book Access Architecture

The above architecture shows the library management system. Entire system is controlled by the admin (librarian). In this system only two users are involved librarian students & faculty. Entire data

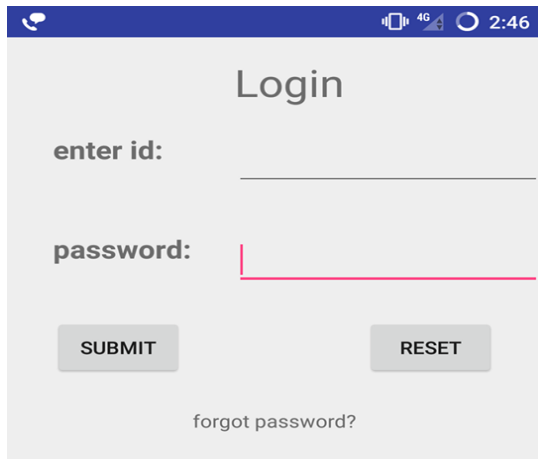
of books and members are maintained in data base. Operation performed by admin are searching for availability of books, tracing the status of particular book, calculating fine amount for the user if eligible, getting member details & updating the data base that is adding books to data base. Operations performed by the students and faculty are searching books, transferring books among users, returning the book and creating account in app by their own. Book data base has attributes like book id, book title, book author, branch etc. Books can be uniquely identified by their id. Here books can be searched by any of above attributes. Member data base has attributes like member id, member name, phone number, branch etc. Members can be uniquely identified by their member id.

RESULTS:

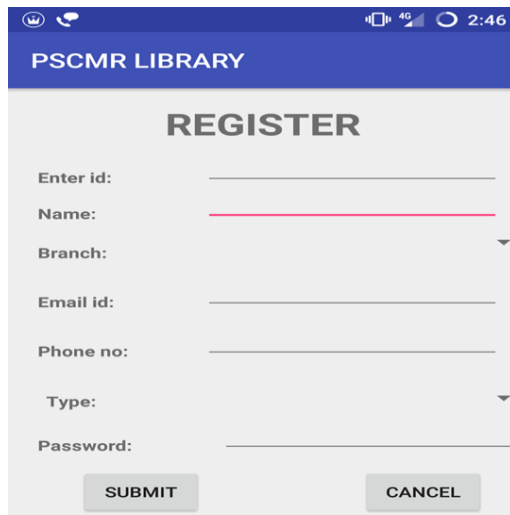
Home:



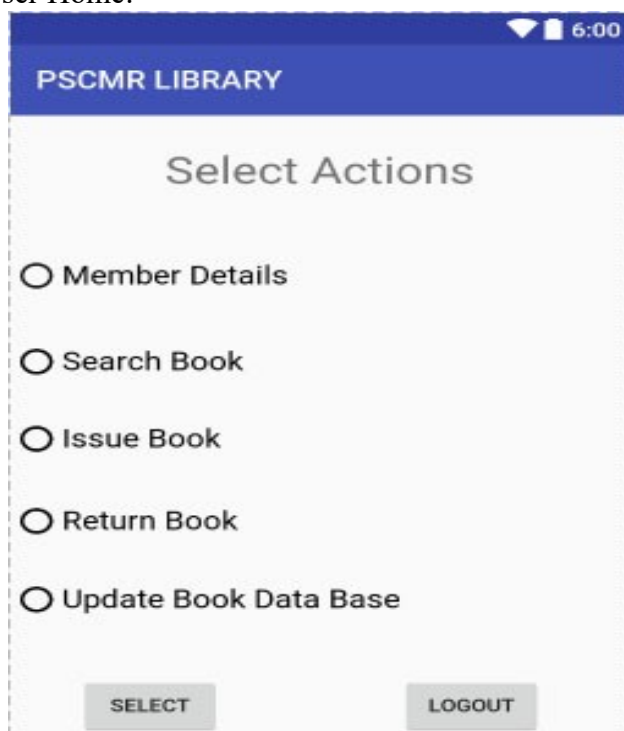
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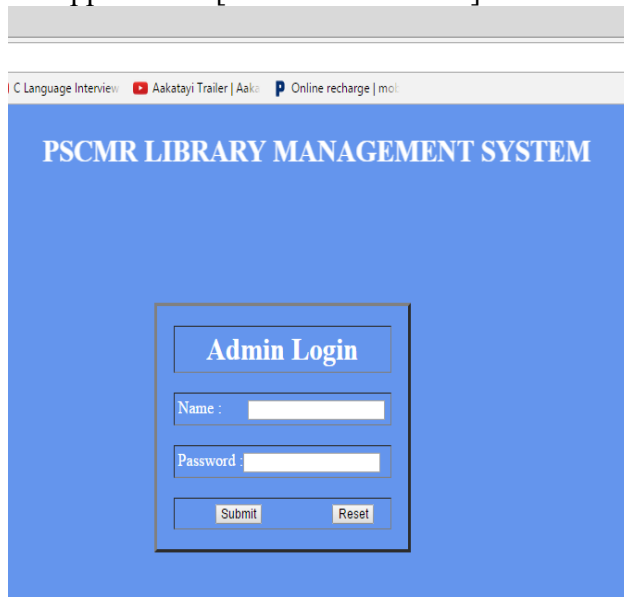
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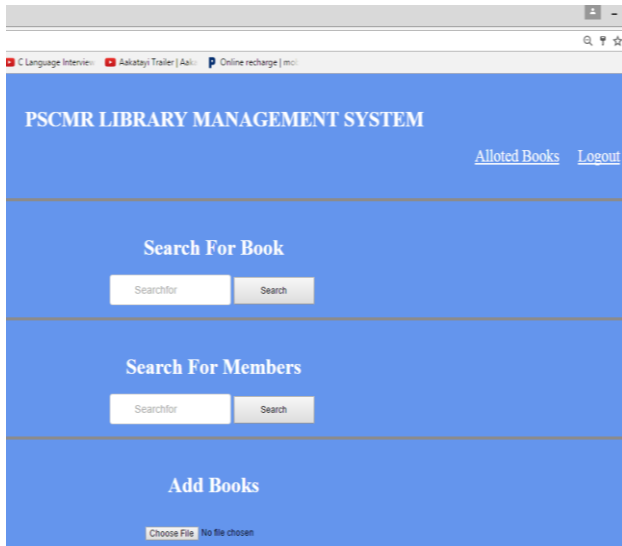
User Home:



Web Application: [Administrator Side]



Administrator Home:



Book Operations [Web Application Side]:

Bookid	Booktitle	Subject	Author	Branch	Idno	Name	PhoneNo	IssueDate	Returndate
00001	c-programming	c language	sai ram hira	cse	13kt1a2907	sai ram	123456789	2017-02-02	2017-03-09

CONCLUSION: This paper is applicable for any library management system to enhance their development to distributed environment, cloud computing and Big Data. The Android Application Development environment allows using this application in a flexible manner.

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