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Online Library Package to Boost the Functionality and Usability of the Existing Libraries

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***Abstract*—** The current computational era has given rise to the idea of the digital library. The essential purpose of digital libraries is to enable readers to more easily explore books for reading. The library is a fast-growing process. The prehistoric system of maintaining it is no longer efficient. Library staff handles tedious tasks which involve sorting, lending, returning, classification of books etc. In addition, library users encounter problems for searching, borrowing, renewing the book, queuing, and so on. To overcome these barriers, this paper proposes a smart E-library Application based on Android technology. It mainly focuses on the central operations in a Library like analyzing total books, calculating available books, updating information, searching books and a facility to request and return books. This Software package is an Android Application developed for android O.S based phones, intended to help users to maintain and organize Library Services. This software package is user-friendly. It will allow quick transactions and will make easy to handle the issue and return of books from the Library without much involvement of manual bookkeeping. This software has been developed to maintain all the daily work of the library. It has many features which are generally not available in normal library systems like facility of reader login and a facility of admin login. The admin can monitor the whole system.

Keywords- *Android, digital library, software package*

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I. INTRODUCTION

Books are the biggest source of knowledge. Usually, library systems are implemented manually which is very expensive, monotonous and time consuming.

There are diverse procedures done by the Librarian such as adding new reader, book data, date of issuing books, entering details of all appropriate information about books, etc. For this the reader has to wait for his/her turn as Librarian enters data reader by reader which is very time-consuming process. It is sensible to take benefit of the technology to support so as to improve Library services. As information varies according to time, it becomes complicated task for the Librarian.

This software package involves three modules i.e. administrator, reader and centre coordinator. Administrator monitors the whole system. Readers can request for books according to their centre. And centre coordinator issues books. In this software package, the administrator will record various transactions like issue of books, return of books, addition of new books, addition of new reader of all the centre's/branches of library etc. whereas centre coordinator performs similar tasks but only for their specific centre.

II. OBJECTIVES

- To meet the requirements of users by providing better services.
- To save time of library staff by avoiding routine jobs.
- To minimize massive storage and space problem of large libraries.
- To reduce cost involved in varies library activities.
- To reduce time of users by providing home delivery of books.

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III. PROPOSED SYSTEM

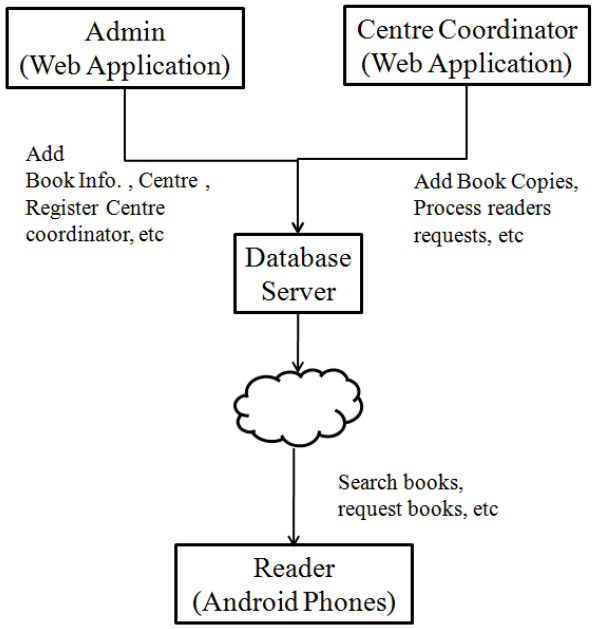

Fig1. Basic Structure of Application

Basic structure consists of admin, centre coordinator and readers. Readers have their android phone on which this application is installed through which they interact with book database without going to library. After installing the application reader needs to register first after which he/she can login and use the application. This software package allows readers to access library activity via android application. It is extremely feasible because reader can access library data from anywhere anytime. It avoids time wastage of reader for searching of books in book shelves. As system is automation, it minimize work load of librarian, it assigns books to reader without involvement of librarian. Reader need not to wait for his/her turn for issuing books. And inquiry about book can be done via application.

Administrator handles the whole system; it includes tasks like adding books, adding centre's and their coordinators, book categories, language categories etc. Centre coordinator tasks include adding the copies of the books to his/her centre, collecting donations, issuing books to readers etc. Reader tasks includes sending requests for issuing book/returning books, giving feedback about the service and suggesting books to be included.

When reader requests for a book the centre coordinator issues the book copy and assigns it to a delivery boy/girl who will deliver that book to the specified address by the reader. After finishing reading the book the reader needs to request for returning the book after which centre coordinator will again send delivery boy/girl to collect the book.

IV. WORKING MODULES

A. Login through Android

Only the registered readers/centre coordinators can login. During registrations readers are given unique username along with password through which they can login through their respective android phones. After login they can change their password.

B. List of Books

List contains different book categories, author name along with their edition, publication year, number of book copies available in library, etc information associated with book. After selecting the type of book reader clicks on request button if they want to issue that book.

C. Issued Books

It will list down all the books that readers have issued.

D. Wish list

It includes list of books suggested for the library by the reader.

E. Readers Review

It includes review regarding the application given by the reader.

V. CONCLUSION

In this paper, we present android based mobile application to support library services and also this system can be beneficial to supervise and improve online library resources. This android application would be able to provide uncompromising information and intellectual requirements to its users with a user-friendly approach. It makes entire process online where reader can search books; admin can generate reports and perform book transactions. It also has a facility for reader login where reader can login and can view status of books issued as well request for book or give some suggestions.

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