

# Android based Application for Automating Public Libraries

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**Abstract:- This paper deals with summarized study of different techniques that are used to automate the library management. Most of the libraries are still using the traditional approach due to which there is a wastage of resources and it is a time consuming process to manage all those huge data manually. Most of the ideas that are put forward is limited only to automate school or college libraries. There is a need to automate the public libraries also. So there are various techniques that are mentioned which can be employed in automating the public libraries.**

## I. INTRODUCTION

The world today is detached with millions of applications which made the work easier. People today are dependent on application for each and everything from buying groceries to clothing, booking tickets etc, but there isn't any application that are helpful for the people to access the libraries online. There are hundreds of public libraries on India, and there are millions of books that are present in those libraries .But due to improper maintenance and management those books wasted being in the racks .Lot of resources are wasted mostly people are unaware about the types of books available in the libraries .There are few technologies that are implemented to help people with these problems but there is no application which together automates all the libraries that are available in cities. All the applications that are implemented till date are only limited to single libraries none of them are applicable to multiple libraries. So there is need to integrate these libraries. In this paper we have discussed few technologies that are used to automates the library management and their drawbacks followed by conclusion.

## II. RELATED WORK

- This paper proposes the system that will computerize the library management by providing the student and teacher login where in they include the student maintenance module that will reduce the loss of books that happens in case of non-computerized library management. The accuracy of this technique is limited only to college or school libraries.
- The system proposed in this paper is again suitable for single library where the user can track the different books available in library just by knowing either the book name or the author name .People can even access the daily newspapers online, materials that are required for preparing for public sector examinations etc, by being a member of the library.
- The idea proposed here is to automate each and every process taking place in the library starting from registration to checking the availability of books, due-dates of borrowed books etc, which is helpful for the users or the public along with which the facility of adding the books, editing the information of books, deleting the books are provided to the admin there by saving a lot of time for both user and admin.
- The technique proposed here is to lessen the misplacing of books that was frequently taking place in libraries. By this technique one easily know the rack number of the book the he/she want and whenever the book is moved ,notification will be sent automatically to the admin .This technique is implemented using a chip which must be present in each and every rack for sensing the movement of books.
- The technique mentioned here again computerizes the work of library by providing a better access to both the user as well as the admin. They provide a facility of reserving the books beforehand online and also providing the user with the suggestions of books based on their interest and user can give the review about the book. The major drawback here is that it is limited to schools, colleges or single individual libraries.
- The idea presented in this paper is again applicable to universities or colleges providing a facility of searching the books for users .Librarians are the one who issues the books, generates the fine for the books that are returned by the user after the due-dates, provides notification to the user regarding the same etc. The feature or technology used here is Java, which is "write once" and "run anywhere" kind of application which can run on multiple platform. This development tool has various advantages like polymorphism, automatic garbage collection etc. This Java interactive database management can be made a

part of mobile-based application which can be used for public libraries.

- The idea proposed by the authors in this paper is to provide an Android Application for monitoring and controlling the transactions in informing that is happening in the library. The web server used at the admin end makes use of low power draw, no noise raspberry pi. This pi is used for storing the data that is related to faculties and books So that cost of implementation of server is somewhat reduced. But the idea is again limited only to some department libraries or to college or university library, But not the Public Libraries . The proposed system also has a notification system that push messages to mobile users about current updates by using ‘Google Cloud Messaging’.
- Bluetooth Library Manager as suggested by the author in this paper mainly focuses on reducing the work of college libraries, making it more useful for students and faculties by saving their time and energy. It is built on Android platform as a mobile Application to the user. This uses encryption and decryption algorithm for security. But the main drawback here is communication , that is this system uses the Bluetooth for communication which can be accessed within the premises of college or library but not outside. So this is applicable only to colleges and universities.

### III. RESULT

The technologies that are mentioned in the above papers have few drawbacks. Some of the technologies are limited only to colleges, Universities and some are limited only to single library. Most of the technologies are either web-based or Bluetooth based where it is accessible only inside the premises of college or library. Though, they save the time of admin by automating most of their work. They will not save the travelling time of user in case of distant library. So considering these things our idea overcomes the drawbacks by providing a Android based application for users and web-based application for the admin, where user can check the availability of books and their location from anywhere. By doing this the number of users for the public library will considerably increase.

### IV. CONCLUSION

In this survey, there are various methods depicted to automating the public libraries. These methods can be deployed for the college libraries or for any particular library. But there is no single application to integrate all the public libraries in and around the city and there is no platform which integrates the user and the libraries. There isn't any platform that provides information about the types of books available in library to the user. The future enhancement of this paper, is to develop the single application that integrates all the public libraries.

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