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Android App for Online Library Reissue System

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***Abstract*— The paper focuses on developing Android Application for online reissue of books by scanning BAR code present on each book in Institute. This application can further be extended to any University by detailed study of procedure followed for reissuing in that particular University.**
***Index Terms*— Android Application, Books Reissue, Bar Code Scanner, Zxing Library, Library Management.**

I. INTRODUCTION

Library Management System is used to manage the catalog of a library. The task of keeping records of available books as well as issued books by the librarian and the task of Re-issuing books in the library for every 2 weeks by students is tedious. This paper explains the drawbacks of the current system and also explains a mechanism which provides better service to the user.

II. FEASIBILITY REPORT

Present System

For reissuing of books, student has to bring books from His/her place into the library, and then reissue the books and take them back again.

Drawbacks of the above system

1. If student is ailing, reissuing becomes problem and unnecessary fine has to be paid.
2. Some books are heavy so carrying them becomes problem.
3. If many people have come for reissue at same time, then it becomes time consuming process.
4. Books can be reissued only in working hours of staff working there.
5. If there is no power supply, we cannot reissue books.

Proposed System

1. It provides "better and efficient" service to students.
2. Books can be reissued at any time of the day.
3. Low budget and requires less maintenance.
4. Easy to use, student just needs to scan QR code and reissue the books.
5. It is safe as it authenticates user.
6. Prevents students from the hectic task of carrying loads of books each time they want to reissue
7. Students can get notifications regarding fine, last issue date and so on

III. FEATURE REPORT OF PROPOSED APPLICATION

1. *Signup Facility*

   Student need to sign up to use the application. To signup user needs to enter username and password. Incomplete credentials won't be accepted.

2. *Login Facility*

   Student can login using id number and password provided by Institute's Library during registration process. After entering correct credentials, student will be logged in with two options *scan book* and *add book*

3. *Mobile Devices*

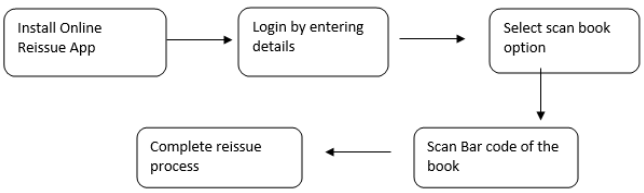
   Application will be supported in all android devices. Technology like bootstrap can be used to achieve this.

4. *Add book*

   For further reissue, student should add book by clicking on add book button, then user needs to add following details:
   - Username
   - Book name
   - Bar code number

5. *Scan Book*

   This feature lets the user to scan QR code on book and reissue the book. After clicking on Scan Book button, bar code scanner will be activated, when we place the camera on bar code , bar code will be read and scanned number will be checked against the details added by the user. And if details match, BOOK CORRECTLY SCANNED message will be displayed. Scan issued books using a barcode scanner in the app. QR Code & Barcode Reader uses the camera of a mobile device to read barcodes and QR codes. The program automatically recognizes the type of encoded data. This is actually faster than simply typing the title of the book and reissuing.



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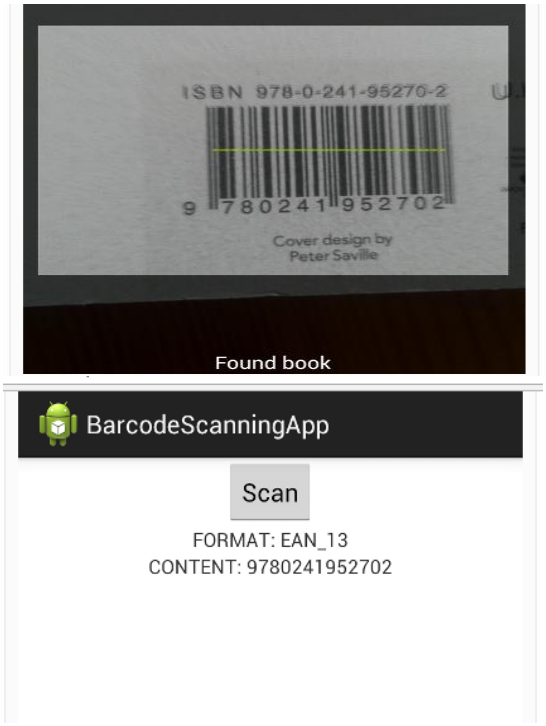


IV. TECHNOLOGY USED IN ANDROID APP

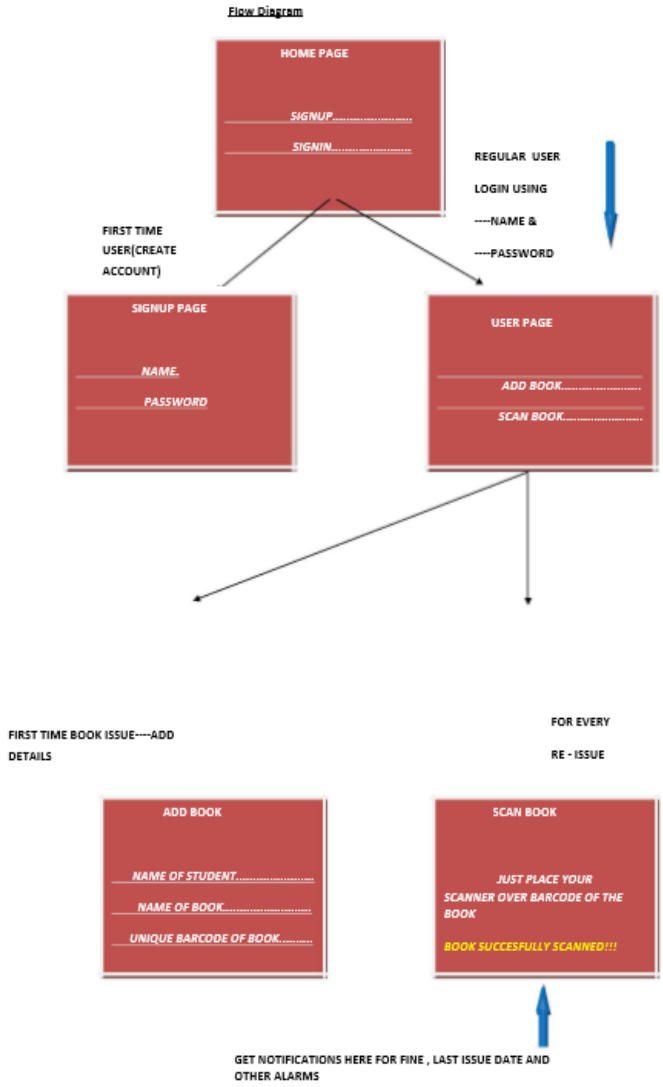
App can be made using android studio and can be tested on Geny motion

1. *Android Studio:* The Official IDE for Android. Android Studio provides the fastest tools for building apps on every type of Android device

2. *Genymotion* is an easy-to-use Android emulator that has been designed to help app developers test their products within a safe, virtual environment.

3. *SQLite database* is an open source SQL database that stores data to a text file on a device. Android comes in with built in SQLite database implementation.

4. *ZXing* is an open source library that provides access to tested and functional barcode scanning on Android. Many users will already have the app installed on their devices, so you can simply launch the scanning Intents and retrieve the results Scanning via Intent method involves importing a couple of classes into app and lets ZXing take care of instances where the user does not have the scanner installed.



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