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Library Management System

Mandhare Gayatri D.[1], Pawar Shravani P.[2], Raut Mukta V.[3], Salunke Rutuja S.4, Raut Mukta V.[5]

[1] Department of Computer Science Sharadchandra Pawar Institute of Technology Email: nigadeaditi2006@gmail.com
[2] Department of Computer Science Sharadchandra Pawar Institute of Technology Email: nigadeaditi2006@gmail.com
[3] Department of Computer Science Sharadchandra Pawar Institute of Technology Email: muktaraut2601@gmail.com
[4] Department of Computer Science Sharadchandra Pawar Institute of Technology Email: rutujasalunke373@gmail.com
[5] Department of Computer Science Sharadchandra Pawar Institute of Technology Email: muktaraut2601@gmail.com

ABSTRACT :

Users and library management professionals can both benefit from the Library Management App. The library administrator can use the app to upload information about the book, including its location. The user can then view the books that are available and make a loan request. Let's now examine the library management app's salient features. In the past, libraries kept track of each reader's book pass and register. In order to borrow a book, we first painstakingly search every book on the library's shelves before going to the desk and writing down our name, roll number, and loan period. When we consider this, we realize how time-consuming and busy the library administration was.The goal of this post is to create an Android library management system that will make the aforementioned task easier to do.

Manual library procedures struggle to meet the volume of user requests for books and other library services and are unable to handle the needs of today's information requests.

1.INTRODUCTION :

Organizing and overseeing library tasks is the primary goal of the Library Management system. Every type of book can be found in a library. This software is for Android, and it can only be accessed by registered users. The purpose of the library management system is to automate the process of entering new book entries and accessing information about books that are available in the library. All of the books are listed in this system. This system allows users to keep track of their records and lend books to library members. This system gives faculty, students, and librarians their own login and interface. Databases can be changed by librarians. Users can view book specifications and do book searches. We anticipate that under the proposed system, every member will have an identity card that they can use to pay fines, check out library books, and more. They can message the librarian from anywhere in the college to suggest new books. The book issued by the library authority will be sent to the book lending database whenever a member wants to check out a book. Additionally, the student's information will be kept in the library database.

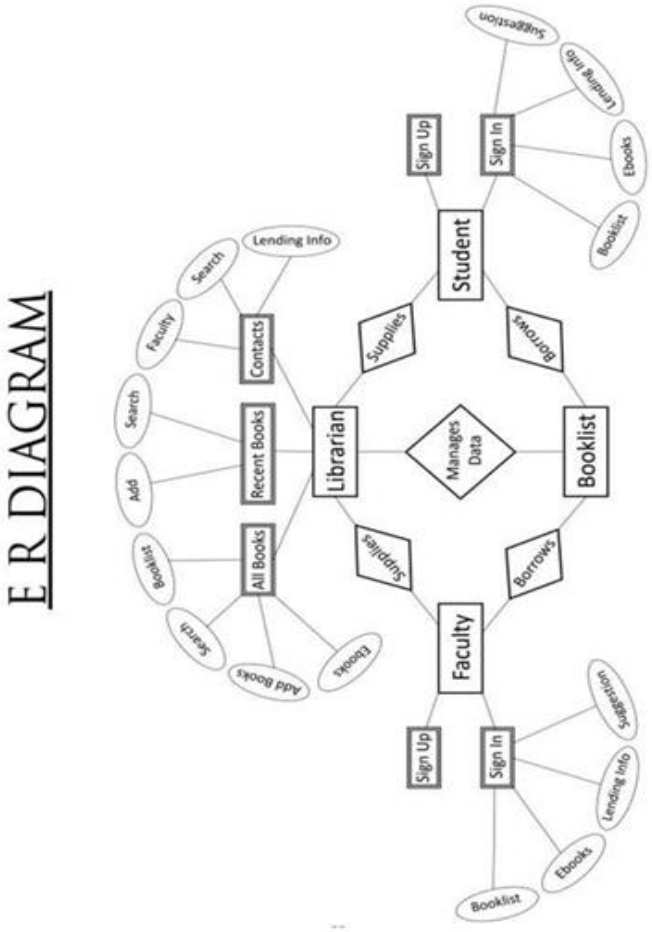
2. Background of Study.

Purchasing, cataloging, and borrowing materials of any kind are all done by school libraries [5]. In these situations, the majority of those working in the library management system are responsible for maintaining records of both students and books, manually checking books, and recording published books. All of these tasks must be completed by hand, and managing a large library's collection of materials can be problematic. A group of workers operate many library amenities by hand. Every program of people at work is susceptible to mistakes produced by staff members who are inattentive, tired, or distracted. Library manual procedures are finding it difficult to handle the current surge in information requests and the volume of book and study information requests from borrowers.Finding a specific book across multiple shelves is time-consuming on a fundamental level. The customer may frequently be searching for a book that is unavailable in these circumstances. Electronic tools will not connect to any library that still uses a manual operating system. Furthermore, answering a question on a specific web site becomes nearly impossible. Sharing publications and information becomes increasingly challenging and time-consuming. A growing proportion of content will be inaccessible to users of manual libraries as information technology develops and more resources become totally digital.

3.PROPOSED METHODOLOGY :

This application is very economically viable to develop. The company didn't have to spend a lot of money developing the system that was already in place. All that needs to be done is create a development-friendly environment under efficient monitoring. By doing this, we can make the related resources as usable as possible. The company won't be able to make additional investments in itself, even after the development. As a result, the system is financially viable.

4.E-R Diagram :



Online book issue. Enhancement of performance and control. Request a new book from the librarian in this section. The system was created to address the library's present concerns and difficulties. The system has the ability to add and validate users. A digital library's own column. The librarian can save time by searching records with just a few mouse clicks and search terms.

4. IMPLEMENTATION :

4.1 Technologies Used

- Frontend: Android-based mobile application.
- Backend: : jdk 1.5,java,Android studio application.
- Operating system : windows 8,10,11

4.2 User Roles

- Librarian: Manages all Database of library.
- student: Student login page where student can find books issued by him/her.

5. RESULTS AND DISCUSSION :

Less human labor will be needed to maintain the library after the computerized system is put in place, which will lower total costs. A search column allows you to look up the availability of books.

CONCLUSION :

Both computation and testing of the library management system were completed successfully using "test cases." It is easy to use and has necessary options that the user can use to carry out the needed actions. The software is created in a Windows environment with Java coding for the back end and XML coding for the front end.

2. The software accomplishes the following objectives:

- Optimal use of resources.
  Effective records management.
  The operations are made simpler.
  Shorter processing times and the acquisition of necessary data.
  Easy to use.
  Adaptable and portable for future development.

7.REFERENCES :

[1] K. Fontichiaro, 21st Century Learning in School Libraries, Content Technologies, Inc., 2014.
[2] C. Wilders, “Predicting the Role of Library Bookshelves in 2025,” The Journal of Academic Librarianship, vol. 43, no. 5, pp. 384-391, September 2017.
[3] J. Huang, Z. Wen, L. Kong, L. Gi, M. Wou, and G. Chen, “Accelerate the classification statistics in RFID systems,” Theoritical Computer Science, vol. 788, pp. 39-52, October 2019.
[4] Y. Dwivedi, K. Kapoor, M. Williams, and J. Williams, “RFID systems in libraries: An empirical examination of factors affecting system use and user satisfaction,” International Journal of Information Management, vol. 33, no. 2, pp. 367-377, April 2013.
[5] M. Koizumi, Inherent Strategies in Library Management, Chandos Publishing, 2017.
[6] F. Lazarnis, Cataloguing and Classification, Elsevier Ltd., 2015.
[7] C. Lindy, E. Oktaviani, Willy, and Y. Prasetio, “Library System Development Implementing Integrated Book Circulation for Interlibrary Loan,” International Conference on Computer Science and Computational Intelligence, vol. 59, pp. 326-330, July 2015.
[8] K. Antelman, E. Lynema, and A. Pace, “Toward a twenty first century library catalog,” Information Technology and Libraries, vol. 25, no. 3, pp. 128-139, September 2006.
[9] M. Shahbazia, A. Farajpahlou, F. Osareh, and A. Rahimi, “Development of a scale for data quality assessment in automated library systems” Library and Information Science Research, vol. 41, no. 1, pp. 78-84, January 2019.
[10] H. Pelk, Why RAD is better in the current software development market, ITNEXT, 2017.