A REVIEW: BOOKS IN LIBRARY MANAGEMENT SYSTEM BASED ON RFID TECHNOLOGY

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ABSTRACT

RFID (Radio Frequency Identification) provides one of the best solutions for the identification of assets. RFID is a new generation which provides auto identification and data collection technique. RFID allows identification of tagged books, using radio frequency. RFID based Library Management System will help us to increase the flow of transaction for a library, in our daily lives due to their low cost and easy to use characteristics, RFID tags for a library management system to protect the books from unauthorized capturing and usage In the proposed method a book or a magazine or a CD is identified with the RFID tag. Whenever a book is issued to any user of the library, the RFID reader will capture the information of that books. a database of number of books to be issued and returned and recording the information of the authorized student

INDEX TERMS: RFID READER , Radio Frequency Identification (RFID), Library Management System, Barcode**.**

INTRODUCTION

Radio Frequency Identification (RFID) systems will become pervasive in our daily lives due to their low cost and easy to use characteristic[1]. RFID provides one of the best solutions for the identification of assets. RFID is a new generation which provides auto identification and data collection technique. RFID allows identification of tagged books, using radio frequency. RFID based Library Management System (LMS) will help us to increase the flow of transaction for a library[2] This paper presents a methodology of using low cost RFID tags for a library management system to protect the books from unauthorized capturing and usage.[1]

Library management system is used to maintain the records related to number of books issued and the number of books returned to the library by the student, searching of books available in library, sending message to the student regarding the due date of book to be returned and fine applicable if the book is not returned on time by using the GSM technology and necessary requirements for the library to manage day to day operations taking place in the library[3] Now-a-days, there are lots of colleges and Universities around the world and some of them consist of students up to thousands or more[4]

WHAT IS RFID?

RFID is short for Radio Frequency Identification. Generally a RFID system consists of 2 parts: A Reader, and one or more Transponders, also known as Tags. RFID systems evolved from barcode labels as a means to automatically identify and track products and people [4].

LIBRARY AND ITS FUNCTIONS

Library; is collection of all the sources, resources, including books,[2] DVDs, and all other informative materials on a one common place. Besides all above some libraries do have access points, for maps, prints, or other documents. A good librarian arranges the library in order to easy, quick, efficient reach to all the materials to the users.[2],this is Handheld RFID device

Fig 1: Handheld RFID device

RFID Card Reader
[3]RFID reader transmit the wireless signal at 125 KHz. Interfaced RFID reader continuously transmit the electromagnetic field across it. The range is max of 10cm. When the RFID card comes within this range, the RFID card gets powered up and provides data to the RFID reader

WORKING
No high speed wireless communication with main unit. ,No security feature[3],this are using rfid existing system.[3] , The primary aim of the research is to uniquely identify Individual students based on their unique tag identifiers[4]
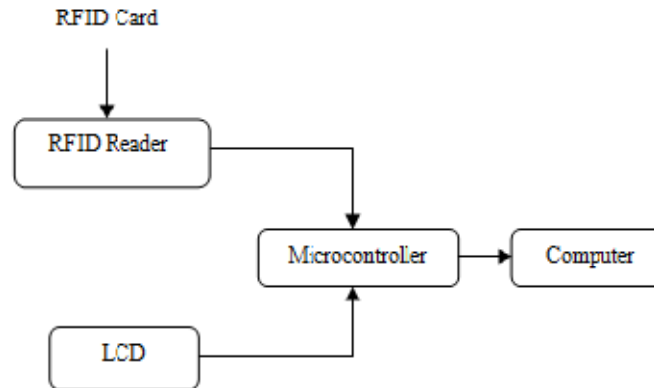

Fig. 2: Block diagram of existing system

OVERALL SYSTEM ARCHITECTURE
When a student enters class, the RFID reader reads his/her student ID card, while the Web-camera simultaneously takes his/her photo and sends it to the PC. After some time, the professor submits all data for storage in a database.[4], In libraries there are tasks, such as check-in and check-out, that can be further automated by use of this technology[5] This RFID system can also be implement for Library Management System. When student enters into library it scans the student ID same as attendance and only allow authenticate students in the library and when ever student leaves the library it checks for the RFID tag.[4] The architecture for library management system using RFID is shown in below figure.3 [4]As shown in the below figure.3 for library management, RFID card will be used for entry and exit checking in and from library, for book checking (availability) purpose and for book withdrawal and return purpose.

Fig 3.Architecture of Library Management System

NEED FOR IMPLEMENTING RFID TECHNOLOGY IN LIBRARY MANAGEMENT SYSTEM [5]

Use of barcodes in library management is still very common. Each item in a library is labeled with a barcode which is used for circulation management.[5]This type of management system always requires a line-of-sight, meaning that when items are borrowed and returned, each item needs to be processed separately. This is where electromagnetic (EM) tags come into play. These tags work by creating an electromagnetic field to which the security gate system will react to when an active tag comes close enough to the gate. The main library adopts RFID technology aim of improving the self service. Patrons can borrow and return the items using automatic lending machines, which require a library card and a PIN.

ADVANTAGES OF SYSTEM

The implementation of RFID technology will definitely quickened the entire of process of recording attendance and library management [4]. Manual Process of attendance taking and book issue and return will be totally removed which will save time, man power requirement and it provides very authenticate output. Compared with the time consumption in data entry for different technologies, RFID technology saves considerable amount of time and greatly improves the operation efficiency. Labor cost is reduced. With rapid development of RFID, its technology is continuously improving and its application is involved in more and more fields [5]

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CONCLUSION

We have consulted in our research have shown how a on RFID - technology may be developed. This system is flexible, which means that it may be extended by adding more modules and extra components. The cards that have been employed for this specific system are RFID cards. These cards can be put to use at the university and may replace student library ID cards. RFID technology continues to develop, and the time has come for us to avail ourselves of its promise and convenience. The main aim of this research has been to demonstrate potential uses of RFID-technology and build a system reliant on it. Radio Frequency Identification (RFID) Systems have been in use in libraries for book identification, for self checkout, for anti-theft control, for inventory control, and for the sorting and conveying of library books and audio visual materials. These applications can lead to significant savings in labor costs, enhance customer service, lower book theft and provide a constant record update of media collections. In this paper, the technical features of a modern RFID system are described to provide a guideline for the evaluation of different systems and in a paper more extra add the advanced technology ,as per about in library system we are adding the different branch are different code generate. As per like coding system and different branch system.

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