RFID Based Library Management System

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Library Management Systems are systems used to manage all processes handled by a library like adding books, search issues, issuing books and returning them. A lot of problems appear as a result of the used conventional system from typos in data entry, that result in losing the integrity of data and creating uncertain environment for the librarian, to some possible human mistakes in calculations.

The proposed system which is RFID based library management system handles these processes in a more effective and time saving way. This way is intended to be accomplished by turning all traditionally processed issues into RFID based processes.

Radio Frequency IDentification which abbreviated RFID is a wireless technology that is used to uniquely identify items- in this case the items are the books. Depending on this aspect, some of the library processes are implemented using the proposed technology, which are adding a book, removing a book, searching, shelf management and inventory management. Adding and loaning books would be easier taking in terms of the easy identification of the book to be processed, since each book is attached a tag number which allows it to be uniquely identified. Another process which is searching for a specific book on a shelf by reading all the books tags on that shelf and alarming the librarian when he reaches the desired book. In addition, shelf management process tends to be easier being turned into RFID based one, since you can pre-define the desired order of the books on a certain shelf and then check for any misplaced books. Finally, inventory management would be an easier process since it is possible to read up to 30 books per second using an RFID reader.

By implementing the RFID technology we expect most of the problems that come along with working with traditional library systems to be solved.