INDEX

S.NO	DESCRIPTION
1	INTRODUCTION
2	OBJECTIVES
3	PROPOSED SYSTEM
4	FRONT END
5	BACK END
6	HARDWARE REQUIREMENTS
7	SOFTWARE REQUIREMENTS
8	ADVANTAGES
9	LIMITATIONS
10	CONCLUSION
11	BIBLIOGRAPHY

INTRODUCTION:

Library management is concerned with the management of records, which includes books that are required by various pupils. Every organization, big or small, faces challenges in overcoming and managing information on books, students, librarians, addresses, and members, etc. Maintaining these documents manually becomes tedious, therefore we are developing a computerized system that reduces paperwork and is time efficient.

OBJECTIVES :

The goal of this project is to allow students to apply their programming abilities to a real-world scenario or problem, as well as to show them how programming skills aid in the development of effective software.

The library management system is designed to meet the following objectives:

- ❖ *Easy to use and understand.*
- ❖ *Boost the productivity of librarians.*
- ❖ *Search for, add to, update, and browse library materials.*
- ❖ *Aids in the efficient management of library operations.*
- ❖ *Reduces overheads and saves time*
- ❖ *Lower the operational costs of the library*
- ❖ *Customized reports for better management*
- ❖ *Eliminate manual book-issuing and record-keeping processes.*

PROPOSED SYSTEM :

In order to maintain library management software, LMS has the following set of components. These components are efficient to manage library operations accurately.

1) ***Availability of Books :*** *All of this information, such as authors, total number of copies maintained by the library, current available number of books, reference books, non-reference books, and so on, can be seen.*

2) ***Add and update books:*** *LMS can add new books or other materials to the system with the essential details by generating the id of the books automatically. Thus, the librarian can maintain the system effectively.*

3) ***Add and update members:*** *LMS can add new members or and edit the details of existing members of the library who have the membership of the Library.*

4) ***Search option:*** *Librarians can search for library books/materials. He /She can search for books and members of the Library.*

5) ***Transaction :*** *Transaction like issue and return of books can be done any time by the existing members of the Library.*

6) ***Fine calculator :*** *The Librarian can view the issued materials with their due date. And, if any book is overdue, the system will allow calculating fine for the same.*

7) ***Visualization:*** *Various types of graphs and charts can be viewed from LMS for various data sets, and understanding ability can be enhanced very quickly.*

Front end and back end are terms used by programmers and computer professionals to describe the layers that make up hardware, a computer program or a website which are delineated based on how accessible they are to a user. In this context, the user refers to an entity that could be human or digital.

FRONT END

❖ *The layer above the back end is the front end and it includes all software or hardware that is part of a user interface.*

❖ *Human or digital users interact directly with various aspects of the front end of a program, including user-entered data, buttons, programs, websites and other features.*

❖ *Front end components are customer facing.*

In our project on the Library Management System, PYTHON is used as a Front End.

BACK END

❖ *The back end refers to parts of a computer application or a program's code that allow it to operate and that cannot be accessed by a user.*

❖ *Most data and operating syntax are stored and accessed in the back end of a computer system.*

❖ *A back-end application or program supports front-end user services, and interfaces with any required resources.*

❖ *The back-end application may interact directly with the front end or it may be called from an intermediate program that mediates front-end and back-end activities.*

In our project on the Library Management system, CSV FILE is used as the Back End.

HARDWARE REQUIREMENTS:

➜ *A Computer/Laptop with Operating System-Windows 7 or above*

➜ *x86 64-bit CPU (Intel / AMD architecture)*

➜ *4 GB RAM.*

➜ *5 GB free disk space.*

SOFTWARE REQUIREMENTS:

➜ *Python 3.6.x or higher version*

➜ *Pandas Library preinstalled*

➜ *Matplotlib Library preinstalled*

➜ *Ms-Office installed*

ADVANTAGES

❖ *This project can be used for any company, for an infinite number of products and for an infinite number of categories as it is totally generic.*

❖ *The data of the member would be entered in the database.*

❖ *There would be a safe storage of information of the member in the database*

❖ *Quick, easy, flexible generation of the member reports.*

❖ *There would be a dynamic and fully computerized system*

❖ *With the database any data can be added, modified, deleted very quickly.*

❖ *Security features are very much provided in the system*

❖ *User friendly environment.*

❖ *Paper work would totally be eliminated in the new system as failure data is directly fed into the system.*

❖ *The data provided by the system will be accurate as all Processing steps are algorithmic and computer based.*

❖ *No data mismatching is possible due to various checks incorporated in the system.*

LIMITATIONS

❖ *Hard copy of any report cannot be printed*

❖ *Different login platforms for administrators, students and parents is missing*

❖ *User ID and Password control is missing*

❖ *Online and remote operation is missing*

❖ *Internet and cloud based database is missing*

CONCLUSION

Library management systems make it easier for administrators to keep track of all of the functions of the library department. It also allows librarians and users to save time and improve efficiency on time-consuming chores. The school administration would be able to track the work outline and fineness of different librarians' capabilities if they used this type of library management system. They also have the chance to see how well-maintained the record of issued books and collections is. The librarian and the administration department can access various reports to implement new improvements.

As a result, effective library management software is required to conduct smart school activities and keep correct library data.