Project Helpline

SYNOPSIS

"LIBRARY MANAGEMENT SYSTEM"

1. TITLE OF THE PROJECT
LIBRARY MANAGEMENT SYSTEM
2. INTRODUCTION

The library management deals in management of records. The records include books which are required by different students accordingly. Maintaining these records manually becomes difficult thus we are proving such system a computerized backend.

In this system each member is provided with a member code and all the records are maintained in a table along with the member's code. Any information can be accessed according to member-code anytime from the table and also at the time of issuing books.

The Automated System Have Following Benefits OverManual System

- **Data handling:** It captures the information from different sources, presents it systematically and organizes its storage for efficient retrieval.
- **Quality control:** Paper work would totally be eliminated in the new system as failure data is directly fed into system.
- **System reliability:** System is very reliable as no skipping, missing of data is possible.
- **Maintenance:** No data mismatching is possible due to various checks incorporated in the system.
- **Accuracy:** The data provided by the system will be accurate as all Processing steps are algorithmic and computer based.
- **Centralized Storage:** The data is Processed and stored at central location.
- **Security:** The data is processed and stored using .net framework based application. Hence all the security features related to .net framework are used.

SAILENT FEATURES OF NEW PROJECT

Integrated approach to the package helps in minimizing manual approach.

- User friendly package.

> ➤ Timing and retrieval efficiency.
>
> ➤ In-built validation checks to ensure accuracy.
>
> ➤ Elimination of paper work.
>
> ➤ Suitable help/error message for better user interface.
>
> ➤ Updated information.

3. <u>OBJECTIVE</u>

With the growing information technology industry, automation of their system and management is desired by all kind of commercial enterprises. As the name suggest **Library Management System** will deal in the entire requirement needed for managing the activities of College Library. It will deal with the process of maintaining data about the books and many other things as well as transactions which are taking place in the library with respect to the Issue, Cataloguing, Searching and Return of the books.

Library Management System maintains the record of books in the library, issue, purchasing and return process of the books in the library. Here we are primarily concerned with management of books of library. In this project we identify the need for computer based Library Management Systems.

Hence this covers the following issues:

➤ Maintains data about the books of the library.

➤ Arranging data in logical order for easy maintenance.

➤ Collection of data about books which are issued and requirement for purchasing.

➤ To provide various search options to know the availability of books in the Library.

➤ Data about books which are lost.

➤ Generation of various reports according to the management request i.e. Cataloguing, Searching etc.

Library is a growing organism that requires constant positive changes to meet the need of its user. The invention of computer has brought in a rapid change in the society. Therefore, automation has become the need of the hour. Library automation not only improves the image of

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the library staff but also provides additional services to the users with the existing staff. The impact of automation on the library is quite obvious; it creates new environment where each function redefines the traditional organizational structure and transforms it into new institutional entries. In this unit a brief overview is given about library automation.

Automation is defined as a technique, a process, or a system which operates automatically. According to the Encyclopedia of Library and Information Science, "Automation is the technology concerned with a design and development of the process and systems that minimize the necessity of human intervention in their operation.

Swihart Stanley S and Hefley Beryl F have defined the term 'library automation' as "the processing of certain routine clerical function in the library with the assistance of computer or other mechanized or semi automatic equipment". It may also be defined as a process of mechanization of all the housekeeping operation of a library which is repetitive in nature. The housekeeping operation includes acquisition, cataloguing, circulation, serial control, references and administration work.

Automation is a technique to make a system automated, i.e. self active. For this the electronic machines are used to automate the libraries. By automation, libraries activities such as acquisition, circulation, serial control, information retrieval, cataloguing and indexing can be mechanized by using library software's.

The Library Automation means:-

➢ Computerization of the entire house keeping operation of the library.
➢ Operate a computerization library management system.
➢ Offer new services based on the technologies and also integrate the traditional library operations in the era.

Scope

This application can be used by any Library to automate the process of manually maintaining the records related to the subject of purchasing of books, selecting and ordering items for the collection and maintaining the accounts, Creating records for material held in the collection and providing access to the catalogue-Via an Online Public Access Catalogue (OPAC).

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4. <u>METHODOLOGY</u>

To develop the Library Management System Software, There we are decided the three
Different layers-Presentation Layer, Logical Layer and Database Layer. In Presentation Layer to design the interface of the software. In Logical Layer to decide and write the program for to performing the library task execution under the decide module. In Database layer to analysis and design the database of the Module.

➢ Carry out web-based surveys of ILS curricula, as they relate to coverage of LMSs and related topics, and of ILS professionals, to determine their workplace needs for education in this specific area

➢ Invite selected respondents from to test the teaching materials being developed for the range of hosted LMSs

➢ Carry out a literature review of both the developing demands on LMSs in terms of the search facilities they offer and on practical methods of teaching basic interface design, and develop new teaching materials, using as testers people selected from.

➢ Evaluate, by means of post-test questionnaires for developers and course participants.

In this to collect the information for the exits Library System. To study about the introduction, Problem of the system. To analyze the aim of the project. To collects the actual information about the library from the original record of the organization. To decide the step of the solution of analyze problem using the decided methodology and technology of the project. To design the interface of the project using the design interface software (Visual basic 6.0). Designed interface is user-friendly.

<u>Features of Library Management System:</u>
➢ Only basic knowledge of computers is required for operation of Library Management System. As it has user-friendly application interface.

➢ Library Management System is Customizable and User Configurable.

➢ An inbuilt settings module makes Library Management System flexibility to cater to diverse organizational needs

5. <u>DATA MODELING</u>

<u>Book Catalog Table</u>

Field Name	Type	Constrains
Access_no	Text	Not Null
Category	Text	Primary Key
Title	Text	Not Null
Edition	Text	Not Null
Author	Text	Not Null
Publisher	Text	Not Null
Yr_publish	Text	Not Null
No_copy	Number	Not Null
Available_copy	Number	Not Null
Borrow_copy	Number	Not Null

Borrower record Table

Field Name	Type	Constrains
borrower_id	Text	Primary Key
First Name	Text	Not Null
Last Name	Text	Not Null
mi	Text	Not Null
status	Text	Not Null
course	Text	Not Null
Add	Text	Not Null
contact	Text	Not Null

Fine Table

Field Name	Type	Constrains
Member ID	Text	Not Null
Fine Out	Number	Number

Pay Date	Date/Time	Not Null

Global Variable Table

Field Name	Type	Constrains
Total Issue Books	Number	Not Null
Renewal Counters	Number	Not Null
Max Fine Ball	Number	Not Null
Membership Duration	Number	Not Null
Membership Fee	Number	Not Null
Renewal Fee	Number	Not Null

Current Borrow Table

Field Name	Type	Constrains
db_no	Text	Primary Key
Access_no	Text	Not Null
Category	Text	Not Null
Title	Text	Not Null
Edition	Text	Not Null
Author	Text	Not Null
Publisher	Text	Not Null
Yr_publish	Date/Time	Not Null
Borrow_date	Date/Time	Not Null
Due_date	Text	Not Null
Borrower_id	Text	Not Null

Requirements Table

Field Name	Type	Constrains
ID	Text	Primary Ket
TITLE	Number	Not Null
AUTHOR	Number	Not Null
PUBLISHER	Number	Not Null
NOOFBOOKS	Number	Not Null

User Table

Field Name	Type	Constrains
Username	Text	Primary
Password	Text	Not Null

Modules to cover the general library functions of:

- ➢ Acquisitions–Selecting and ordering items for the collection and maintaining the accounts.
- ➢ Cataloguing–Creating records for material held in the collection.
- ➢ Providing access to the catalogue-Via an Online Public Access Catalogue (OPAC). This is an Online Computerized Catalogue through which library materials are processed and retrieved.

Logic Model

Logic models are narrative or graphical depictions of processes in real life that communicate the underlying assumptions upon which an activity is expected to lead to a specific result. Logic models illustrate a sequence of cause-and-effect relationships-a systems approach to communicate the path toward a desired result.

Inputs

1. Library Management System for maintained the record of books to must have input data from the end user.

2. To enter the record of new books.

3. Prepare the cataloguing as input data is requirement of activity of College Library.

4. To provide various search options to know the availability of books in the Library.

5. To search the data in database.

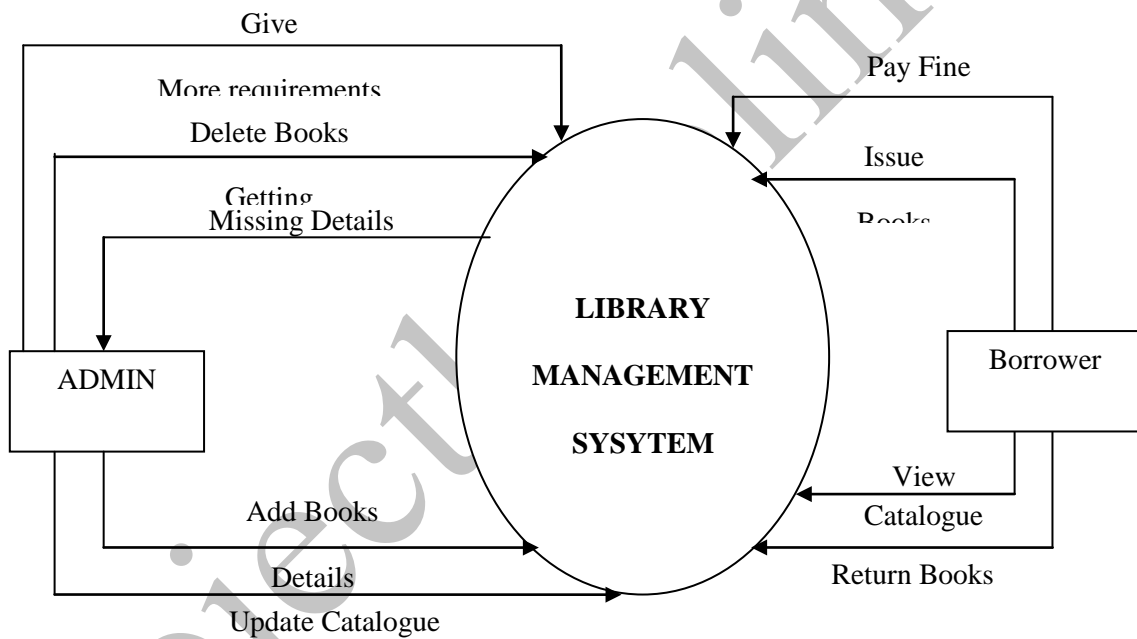6. To enter the cost, discount of the relative book.

Process Logic

In Library Management System has Perform the various type of processing. These are following:

1. Selecting and ordering items for the collection and maintaining the accounts.

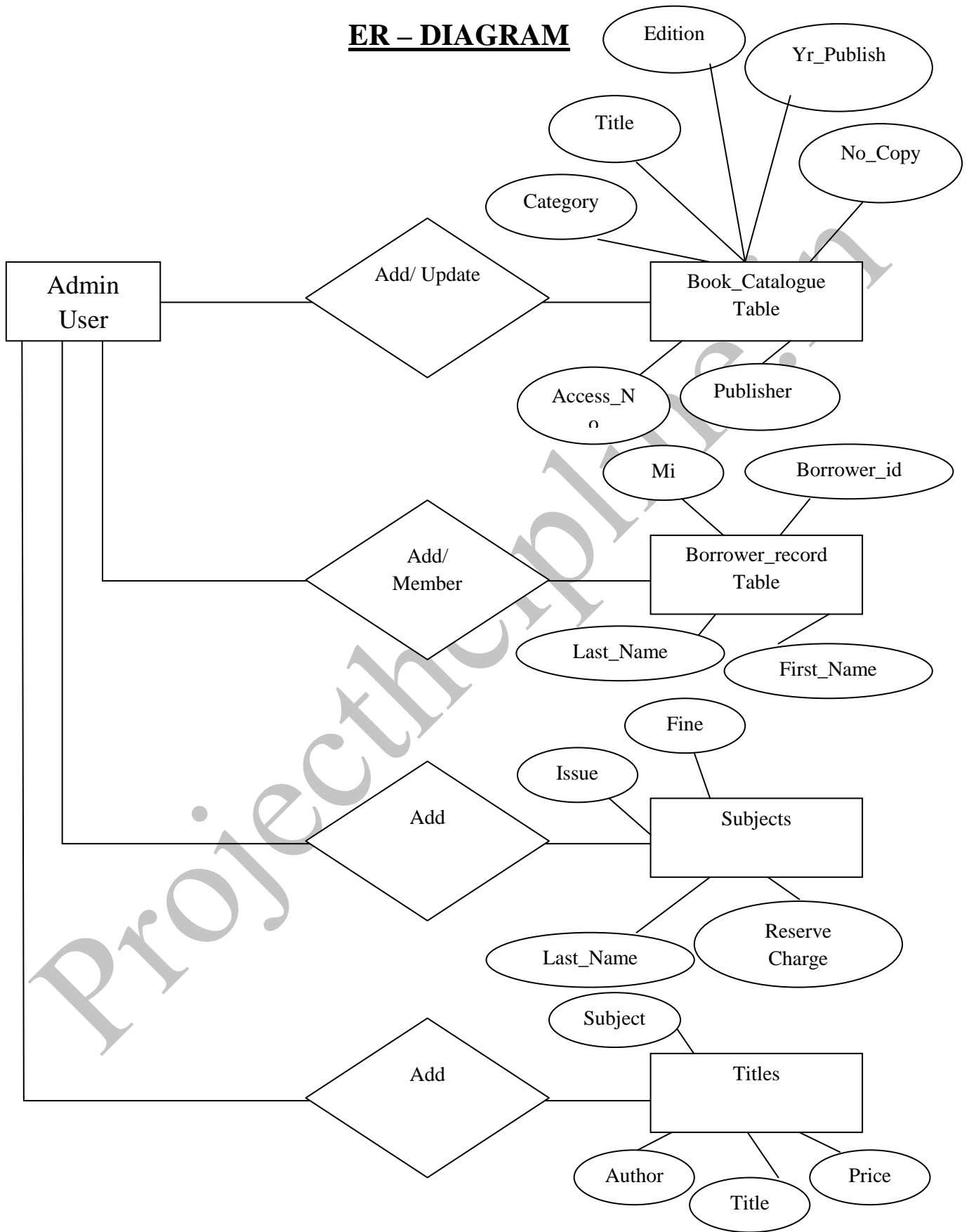2. Creating records for material held in the collection.

3. Search the registered books and members-Via an Online Public Access Catalogue (OPAC).

4. Calculate the actual cost of book.

5. Report of available books.

6. To view the requirements of library.

6. <u>CONTEXT LEVEL DFD</u>

Give

More requirements

Delete Books

Getting
Missing Details

Pay Fine

Issue

Books

ADMIN

LIBRARY

MANAGEMENT

SYSYTEM

Borrower

Add Books

Details

Update Catalogue

View

Catalogue

Return Books

ER – DIAGRAM

Edition

Yr_Publish

Title

No_Copy

Category

Admin User

Add/ Update

Book_Catalogue Table

Access_No

Publisher

Mi

Borrower_id

Add/ Member

Borrower_record Table

Last_Name

First_Name

Fine

Issue

Add

Subjects

Last_Name

Reserve Charge

Subject

Add

Titles

Author

Title

Price

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7. . TOOLS/PLATFORMS, HARDWARE & SOFTWARE REQUIREMENTS

Tools/Platform

S/W and H/W requirements

Hardware Requirements

Processor	:	Pentium IV 2GHz and Above
RAM	:	2GB RAM
Monitor	:	15" Color Monitor
Keyboard		
Mouse		

Software Requirements

Operating system	:	Windows XP /or upgrade
Developing Tool	:	Visual Basic 6.0
Database	:	MS Access

Language to be Used

VISUAL BASIC is a high level programming language which evolved from the earlier DOS version called BASIC. BASIC means Beginners' All-Purpose Symbolic Instruction Code. It is a very easy programming language to learn. The code looks a lot like English Language. Different software companies produced different versions of BASIC, such as Microsoft QBASIC, QUICKBASIC, GWBASIC and IBM BASICA and so on. However, people prefer to use Microsoft Visual Basic today, as it is a well-developed programming language and supporting resources are available everywhere. Now, there are many versions of VB exist in the market, the most popular one and still widely used by many VB programmers is none other than Visual Basic 6.

VISUAL BASIC is a VISUAL and events driven Programming Language. These are the main divergence from the old BASIC. In BASIC, Programming is done in a text-only environment and the program is executed sequentially. In VB, programming is done in a graphical environment. In the old BASIC, you have to write program code for each graphical object you wish to display

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it on screen, including its position and its color. However, In VB, you just need to drag and drop any graphical object anywhere on the form, and you can change its color any time using the properties windows.

On the other hand, because the user may click on certain object randomly, so each object has to be programmed independently to be able to response to those actions (events). Therefore, a VB Program is made up of many subprograms, each has its own program code, and each can be executed independently and at the same time each can be linked together in one way or another**.**

Output

After the processing and validation of data in LMS to provide the following outputs:-

- ➢ Report of available books.
- ➢ To view the account details of purchase book.
- ➢ To view the requirement of library.
- ➢ To view report of publisher.
- ➢ To view the list of purchase book.

8. . LIMITATION

This application has Perform the limited activity of College Library Management System .These limitation are following:-

- ➢ This application do not support the networking.
- ➢ It maintained the limited operation of data.
- ➢ Reporting is not in well formed.

9. CONCLUSION

Library Management Program has been created keeping in mind the needs of Small and Medium scale libraries. It's efficient software that includes all the basic functionalities like making data entries for new books, newspapers and magazines, registering a new user, editing and deleting records that are required for smooth functioning of a library. Additionally the user login and book history are also stored and can be accessed by the administrator. It also facilitates the librarian to create new user groups and edit their access levels and functions (like that of the assistants). Apart from this the general users are also given the rights to not only keep track of the books that they have issued and fines due but they too can search for the books/magazines/newspapers that interest them

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