Online Library Management System

1. Introduction:-

1.1 Purpose:-

The purpose of this application are as follows :

- The software is for the automation of a library.
- It provides the following facilities for

The Operator :

- Can enter details related to a particular book.
- Can provide membership to members.

Admin :

- Can read and write information about any member.
- Can update, create, delete the record of membership as per requirement and implementation plants.

2.) Scope :

The different areas where we can use this application are :

- Any education institute can make use of it for providing information about author, content of the available books.
- It can be used in offices and modifications can be easily done according to requirements.

3.) Technology Used :

Back End :   MS Access, Apache Tomcat server.'

Q1- What software used to draw ERR Diagram?

Online Tool DBDIAGRAM.ion

Q2- Version of mysql

5.0.1

Q3- Tool to test client side sql

Dzone online tool

q4-What php version?

PHP

Q5-Web server used

Interserver server

Q6-browsers?

Chrome, Opera, Mozilla/ all latest

Q7-operating system?

Windows 7

4.) <u>Assumptions</u>

- This application is used to convert the manual application to the online application.
- Customized data will be used in this application.
- User does not have right to enter information about books.

5.) <u>Overview</u> :

The project is related to library management which provides reading services to its members. Any person can become a member of the library by filling a prescribed form.

They can get the book issued, so that they can take the book home and return them.

PHP is a server-side language. To run it, we would need a server such as an apache server. In local computers, XAMP is a software which comes with the apache server and the MySQL database.

PHP was used in this project to implement the backend functionality.

6.) <u>Functionality :</u>

- Online membership.
- Keeps the track of issues and submission of books .

__Feasibility__

Feasibility phase:

1. Identify the origin of the information at different level.
2. Identify the expectation of user from computerized system.
3. Analyze the draw back of existing system (manual) system.

WORKING OF PRESENT MANUAL SYSTEM

The staffs of library are involved in the following tasks.

1. <u>Membership process :</u> the person has to fill membership form and they are provided with member id.

DRAWBACKS OF PRESENT SYSTEM

Some of the problems being faced in manual system are as follows:

1. Fast report generation is not possible.
2. Tracing a book is difficult.
3. Information about issue/return of the books are not properly maintained.
4. No central database can be created as information is not available in database.

PROPOSED SYSTEM

There will be three major components :

1. Stock maintenance.
2. Transaction entry.
3. Reports.

Proposed system provides with following solutions :

1. It provides "better and efficient" service to members.
2. Reduces the workload of employees.
3. Faster retrieval of information about the desired book.
4. Provide facility for proper monitoring reduce paper work and provide data security.
5. All details will be available on a click.

EER diagram and Relational Database Schema.

It is clear that the physical objects from the previous section; the member, books, library – correspond to entities in the

Entity-Relationship model, and the operations to be done on those entities(holds, checkouts, and so on) correspond to those relationships. However, a good design will minimize redundancy and attempt to store all the required information in as small a space as possible.
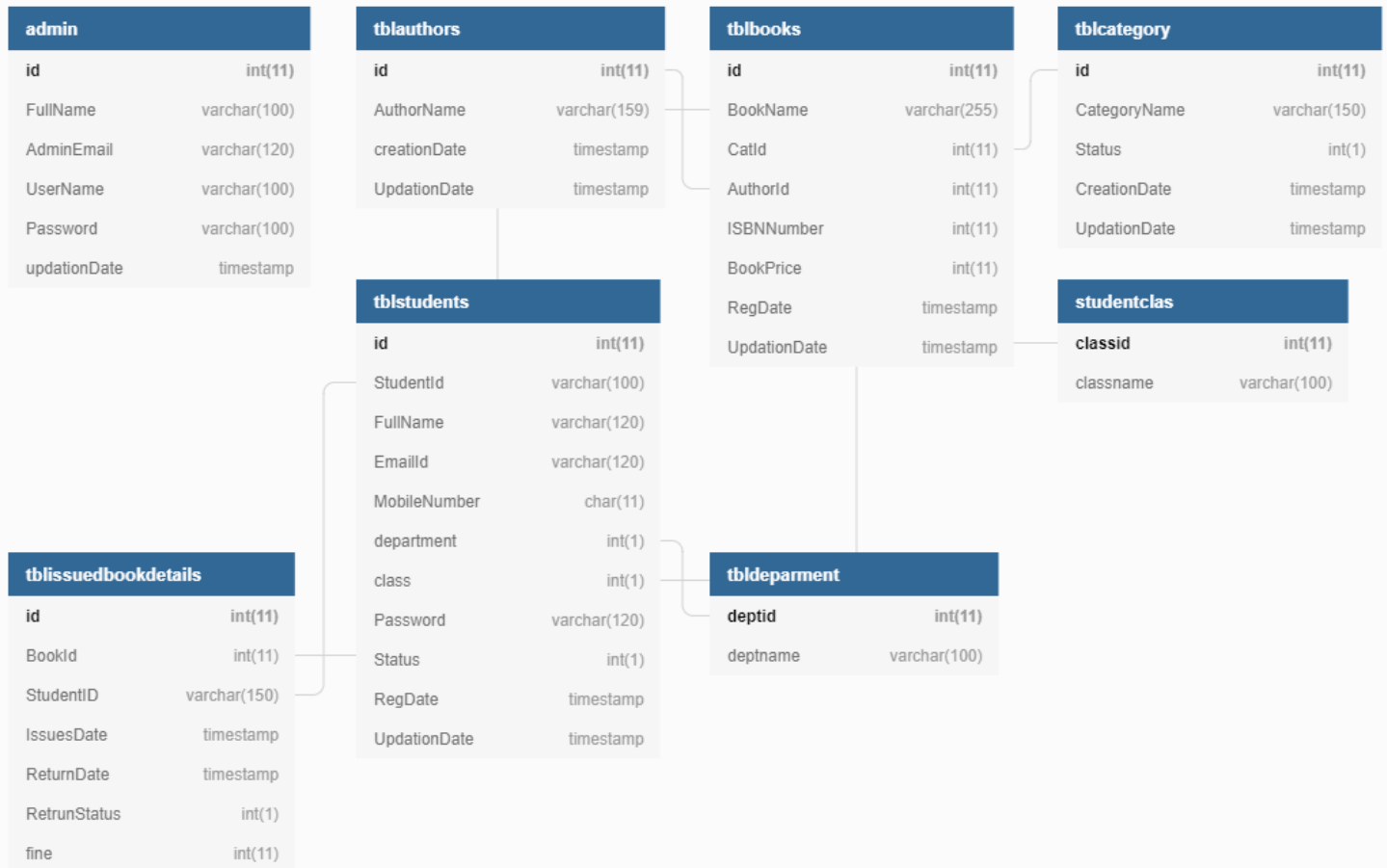
Advanced Options:

We can make everything dynamic and follow the latest trends to query and display the things in solution.

MySQL code:

We use traditional queries, but could make all the code dynamic; if we query to select we can use all the variables dynamically.

Simple EER diagram
(see last page)

Relational Database Schema

admin

id	int(11)
FullName	varchar(100)
AdminEmail	varchar(120)
UserName	varchar(100)
Password	varchar(100)
updationDate	timestamp

tblauthors

id	int(11)
AuthorName	varchar(159)
creationDate	timestamp
UpdationDate	timestamp

tblbooks

id	int(11)
BookName	varchar(255)
CatId	int(11)
AuthorId	int(11)
ISBNNumber	int(11)
BookPrice	int(11)
RegDate	timestamp
UpdationDate	timestamp

tblcategory

id	int(11)
CategoryName	varchar(150)
Status	int(1)
CreationDate	timestamp
UpdationDate	timestamp

studentclas

classid	int(11)
classname	varchar(100)

tblstudents

id	int(11)
StudentId	varchar(100)
FullName	varchar(120)
EmailId	varchar(120)
MobileNumber	char(11)
department	int(1)
class	int(1)
Password	varchar(120)
Status	int(1)
RegDate	timestamp
UpdationDate	timestamp

tblissuedbookdetails

id	int(11)
BookId	int(11)
StudentID	varchar(150)
IssuesDate	timestamp
ReturnDate	timestamp
RetrunStatus	int(1)
fine	int(11)

tbldeparment

deptid	int(11)
deptname	varchar(100)

Future Scope

FUTURE SCOPE OF APPLICATION :

This application can be easily implemented under various situations. We can add new features as and when we require. Reusability is possible as and when require in this application. There is flexibility in all the modules.

SOFTWARE SCOPE:

- **Extensibility**: This software is extendable in ways that its original developers may not expect. The following principles enhances extensibility like hide data structure, avoid traversing multiple links or methods, avoid case statements on object type and distinguish public and private operations.

- **Reusability**: Reusability is possible as and when required in this application. We can update it next version. Reusable software reduces design, coding and testing cost by amortizing effort over several designs. Reducing the amount of code also simplifies understanding, which increases the likelihood that the code is correct. We follow up both types of reusability: Sharing of newly written code within a project and reuse of previously written code on new projects.

- **<u>Understandability:</u>** A method is understandable if someone other than the creator of the method can understand the code (as well as the creator after a time lapse). We use the method, which small and coherent helps to accomplish this.

- **<u>Cost-effectiveness:</u>** Its cost is under the budget and make within given time period. It is desirable to aim for a system with a minimum cost subject to the condition that it must satisfy the entire requirement.

Scope of this document is to put down the requirements, clearly identifying the information needed by the user, the source of the information and outputs expected from the system.

<u>Conclusion</u>

From a proper analysis of positive points and constraints on the component, it can be safely concluded that the product is a highly efficient GUI based component. This application is working properly and meeting to all user requirements. This component can be easily plugged in many other systems.
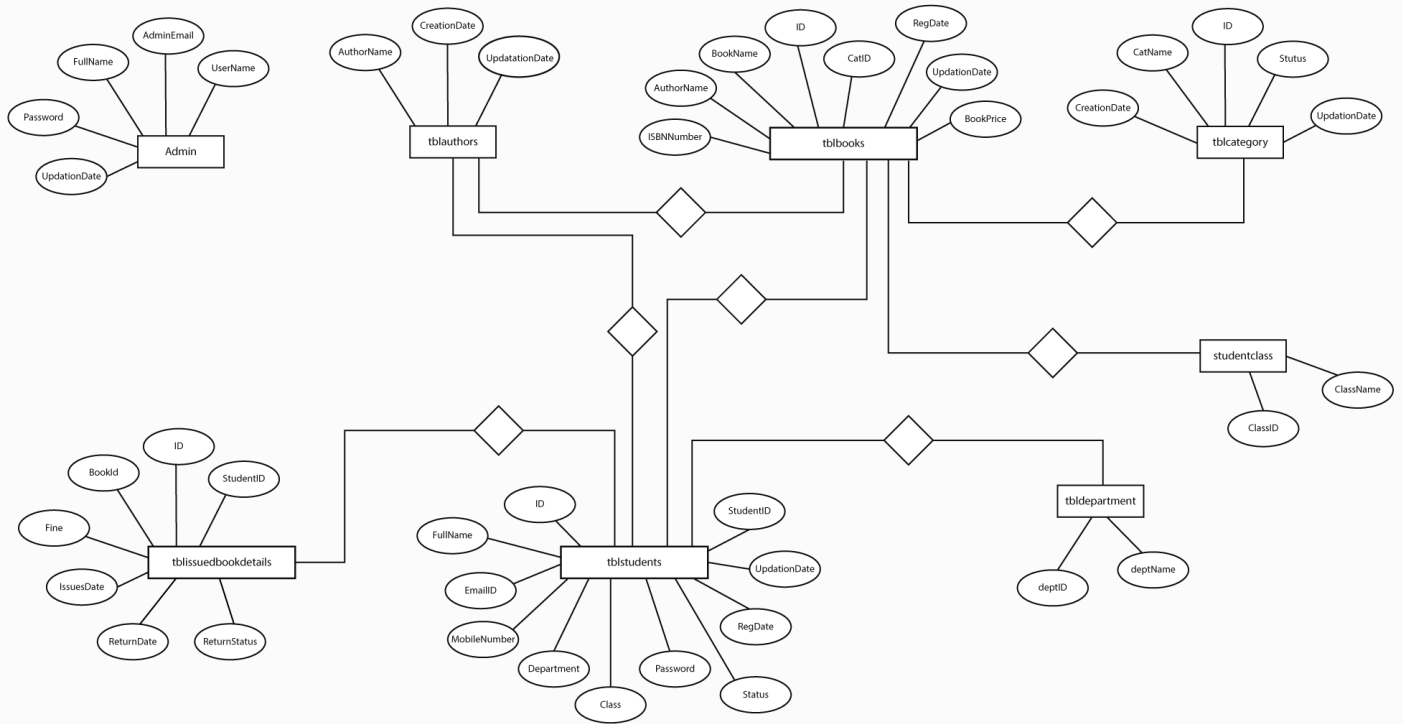
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<u>Bibliography</u>

Books:

- **Beginning Java Objects: From Concepts to Code -by Jacquie Barker)**
- **Introduction to Java Programming (NIIIT publication)**
- **The Complete Reference Java(McGrawhill; Herbert Schildth- reprint 2008)**
- **Introduction to MS-Access(Aptech)**

Web Sites:

- www.apache.org

- www.wikipedia.com

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Above EER data flow diagram drawn using paint