Project Report

On

Library Management System

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Introduction

The project called "library management system" intends to create an automated system to manage all of the library's everyday operations. This project has a number of capabilities that are typically not available in standard library management systems, such as the ability for administrators to log in.

Additionally, it offers an admin login feature that allows the administrator to keep an eye on the entire system. It also features a feature where admins can view a list of the books they have been issued, along with the date they were issued and returned, after login into their accounts. In general, this project of ours is being developed to assist the library's employees and library as efficiently as possible while also minimising human labour.

CHAPTER -1

This chapter provides an overview of the system's purpose, goals, historical context, and operational environment.

1.1 PROJECT GOALS AND IMPLICATIONS

This chapter discusses the project's goals and objectives that will be reached after it is finished. The following are the goals and objectives:

- No paper usage.
- Check the availability of books online.
- Check the returning dates and borrowed books easily.

1.2 BACKGROUND OF PROJECT

1.2 PROJECT BACKGROUND The term "Library Management System" refers to library systems, which are often modest or medium-sized. Using a computerised system, the librarian may keep track of a variety of transactions, including the lending out and returning of books as well as the adding of new books and students.

This system also includes modules for books and student maintenance that would track the students utilising the library and provide a thorough description of the books it holds. There won't be any loss of book records or member records with this computerised system, which typically occurs when a non-computerized system is employed.

In comparison to non-computerized library systems, all of these modules can assist librarians in managing the library more conveniently and effectively.

1.3 OPERATION ENVIRONMENT

Processor	Intel Core Processor or Better performance
Operating System	Window 10 or extended version
Memory	4 GB RAM or more
Database	MySql or sql

CHAPTER -2

System analysis

We will examine and analyze the Library Management System development process in this chapter, covering the software requirement specification (SRS) and comparison of the proposed and current systems. Before the creating process begins, the SRS component includes both functional and non-functional requirements to provide a thorough description and overview of system needs. Additionally, the existing vs. proposed comparison shows how the new system will be more effective than the current one.

2.1 SOFTWARE REQUIREMENT SPECIFICATION

2.1.1 GENERAL DESCRIPTION

PRODUCT DESCRIPTION:

A computerised system called a "Library Management System" aids a librarian in managing the day-to-day operations of the library electronically. It lessens the possibility of paper work being time-consuming, file-losing, or file-damaging. It can aid users in managing transactions or records more efficiently and quickly.

PROBLEM STATEMENT:

The issue was there before the computerised system, and it includes:

- **File loss:** When a computerised system is not used, human surroundings always causes a file to be lost. Sometimes records may be lost as a result of human error.

- **Damaged file** :Without a computerised system, files are frequently destroyed as a result of accidents like members accidently dumping water on them. Additionally, certain natural disasters like floods or fires could harm the files.

- **A difficult record :**To search If there is no automated system in place, it is always tough to look through a lot of records.

- **Taking up a lot of room:**If a computerised system is not used, as the number of records grows, so does the need for physical storage of files and records.

- **Costly to operate**:Due to the lack of a computerised system, adding each record manually will increase the expense of managing a library.

2.1.2 SYSTEM OBJECTIVES:

Enhancement of performance and control : The system was created to address the current issues and challenges facing libraries. The system has bug-free functionality and can add and validate users.

Saves money:Less labour will be needed to maintain the library once the automated system is in place, bringing down overall costs.

Saves time:The librarian can search records with just a few mouse clicks and a small number of search terms, saving him important time.

Online choice Postage stamp :A complete description of the workshops taking place at the college and in surrounding colleges will be available from the librarian.

Lesson Notes:Lesson notes can be uploaded by the teacher in a PDF file no larger than 10MB.

2.1.3 SYSTEM REQUIREMENTS

2.1.3.1 NON-FUNCTIONAL REQUIREMENTS

Product Requirements:

EFFICIENCY REQUIREMENT: When a library management system is put into place, users and librarians will have much easier access to the library because searching for and purchasing books will be done much more quickly.

RELATIVELY REQUIRED: The system's member registration, member validation, report creation, book transaction, and search functions should be executed precisely.

USABILITY PRESCRIPTION: The system is made to be user-friendly so that library personnel and students can do the various duties quickly and effectively.

2.1.3.2 FUNCTIONAL REQUIREMENTS

1.1 Librarian LOGIN

Describe the feature:

The librarian logs in to the system using this feature. Before they can access the system, users must provide their user id and password. The user id and password will be checked, and if either is found to be invalid, the user will be prevented from accessing the system.

Admin Feature:

- Admin Dashboard
- Admin can add/update/delete books
- Admin can issue a new book to a student and also update the details when student returns book
- Admin can search students by using their student ID
- Admin can also view student details
- Admin can change own password
- Admin can add/delete/update the details a member.

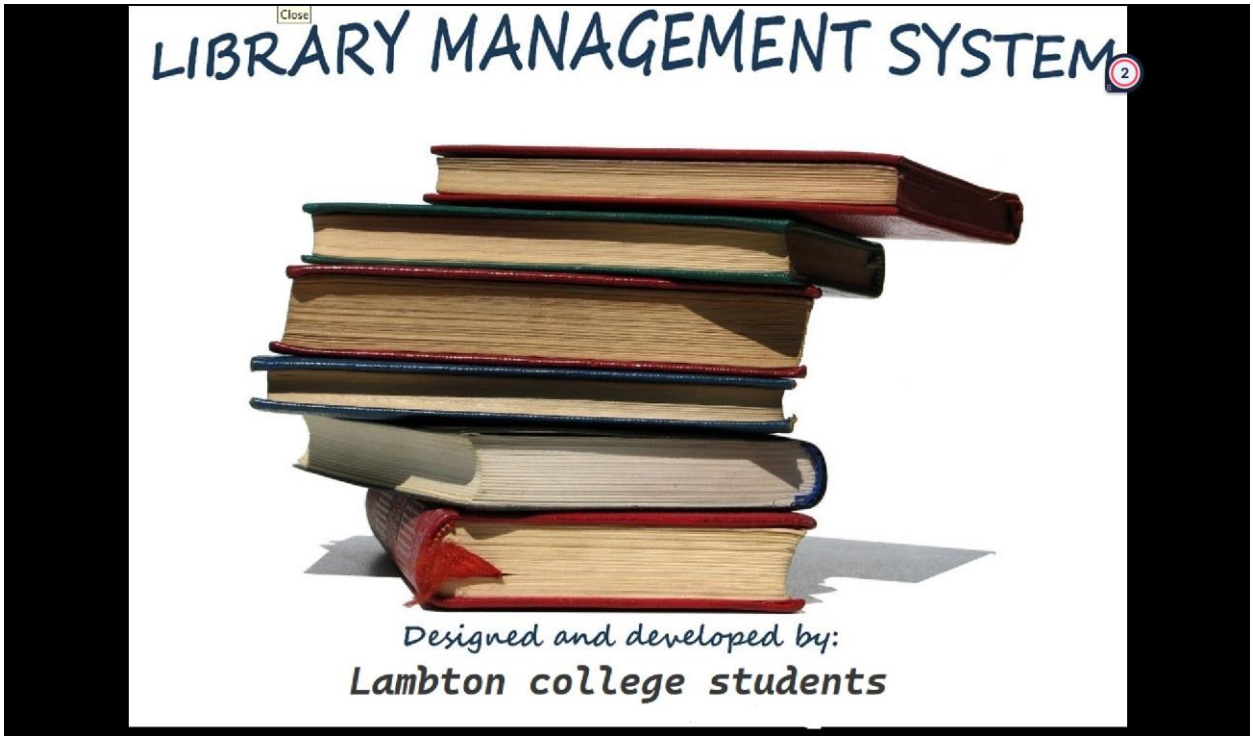
- Admin can also check the list of available books and borrowed books.

2.3 SOFTWARE TOOLS USED

- Eclipse
- JDK
- Databases(MySql)

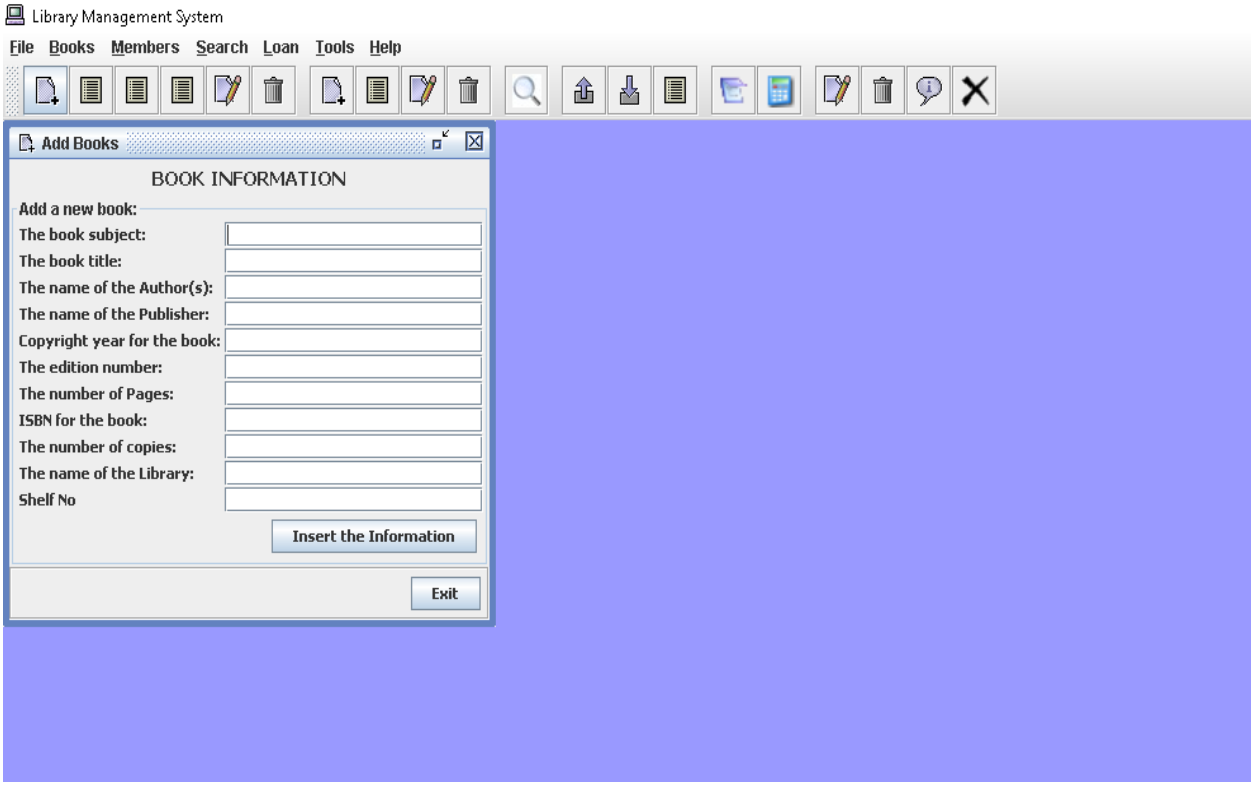
Project Screenshots:

1.Welcome screen:

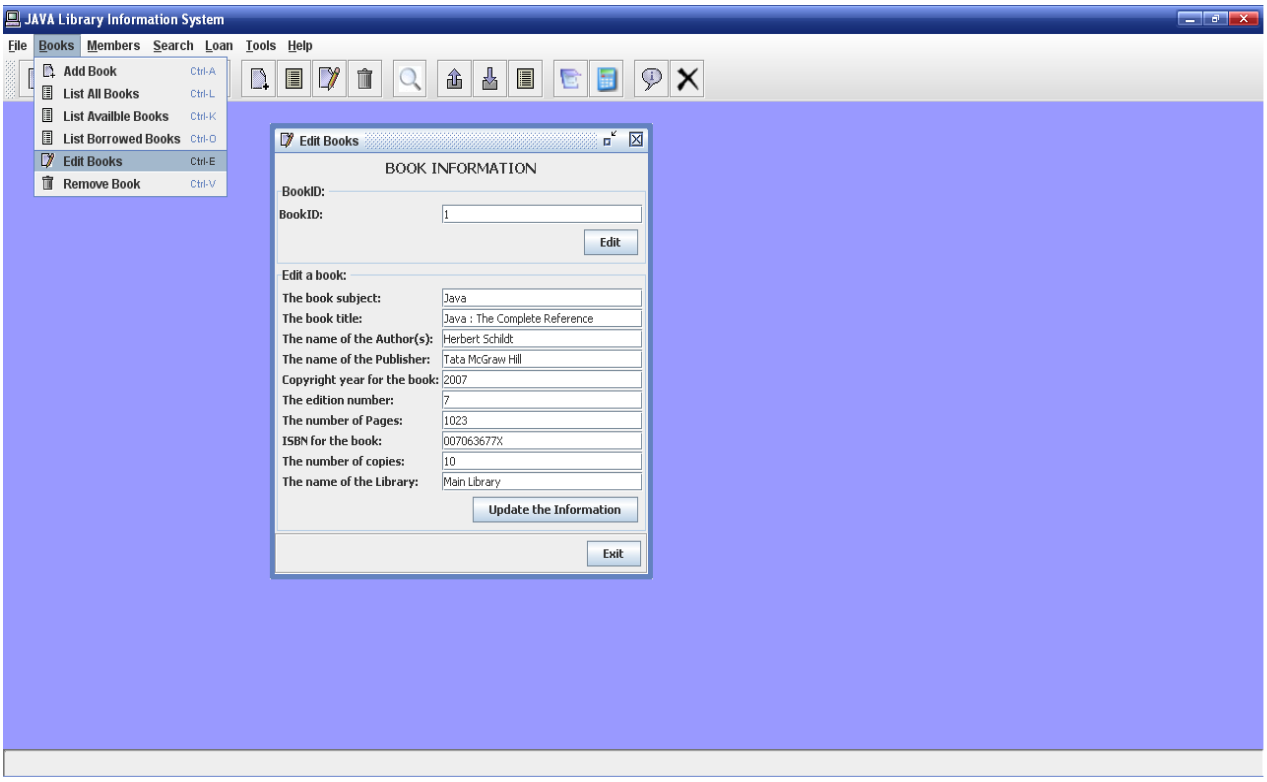


2.Admin login:

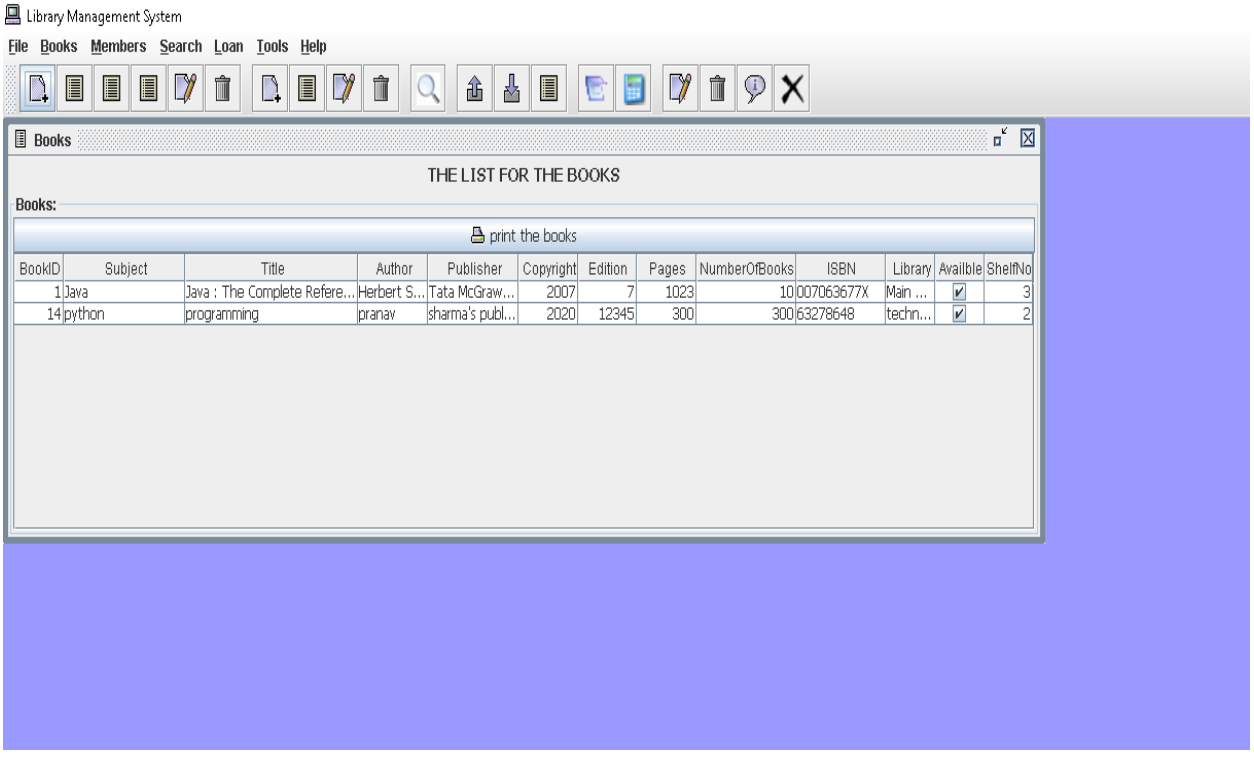
3. Add book



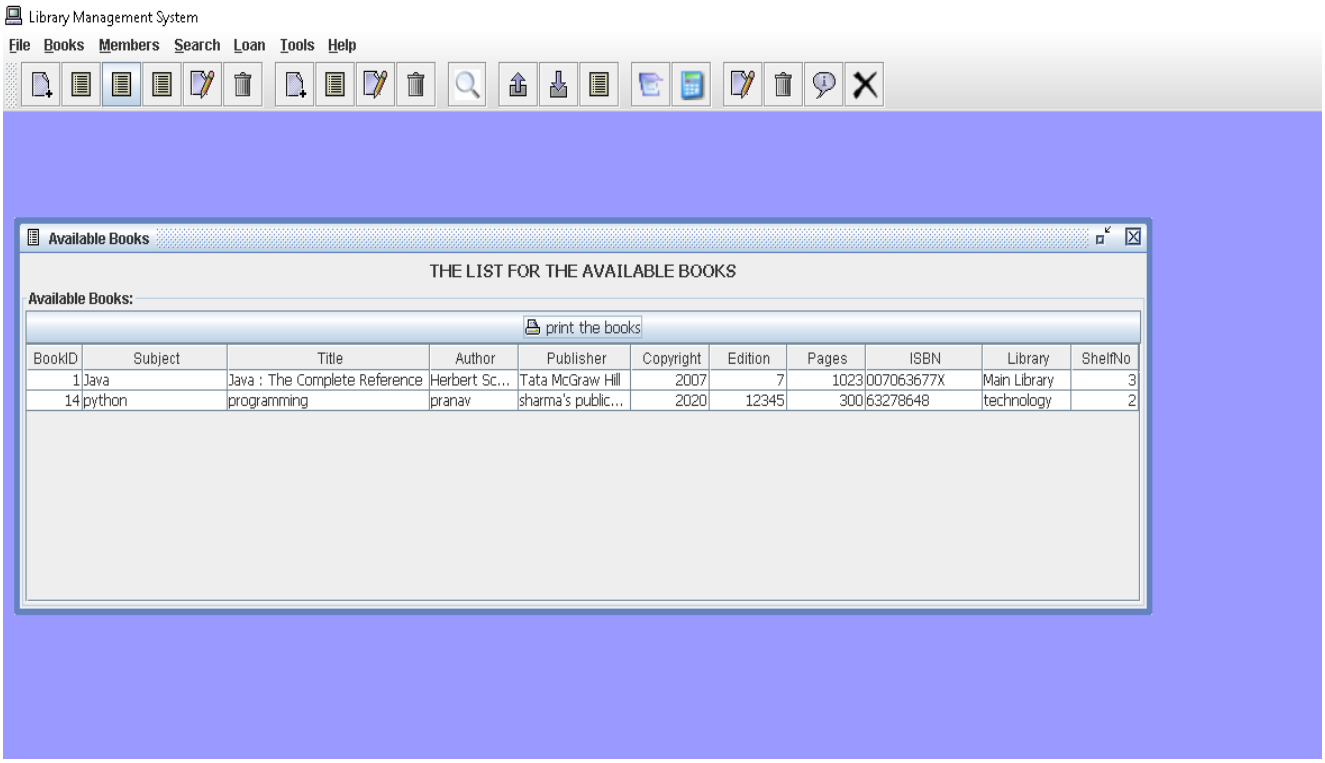
4.Edit book:



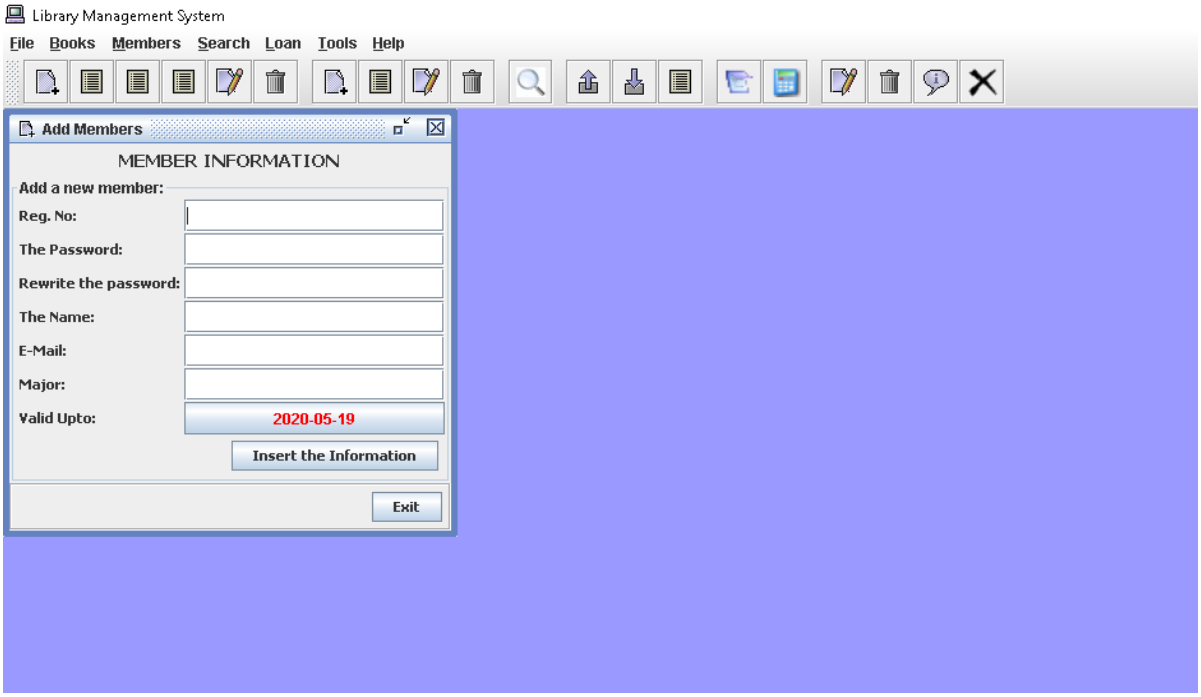
5. List of all Books:



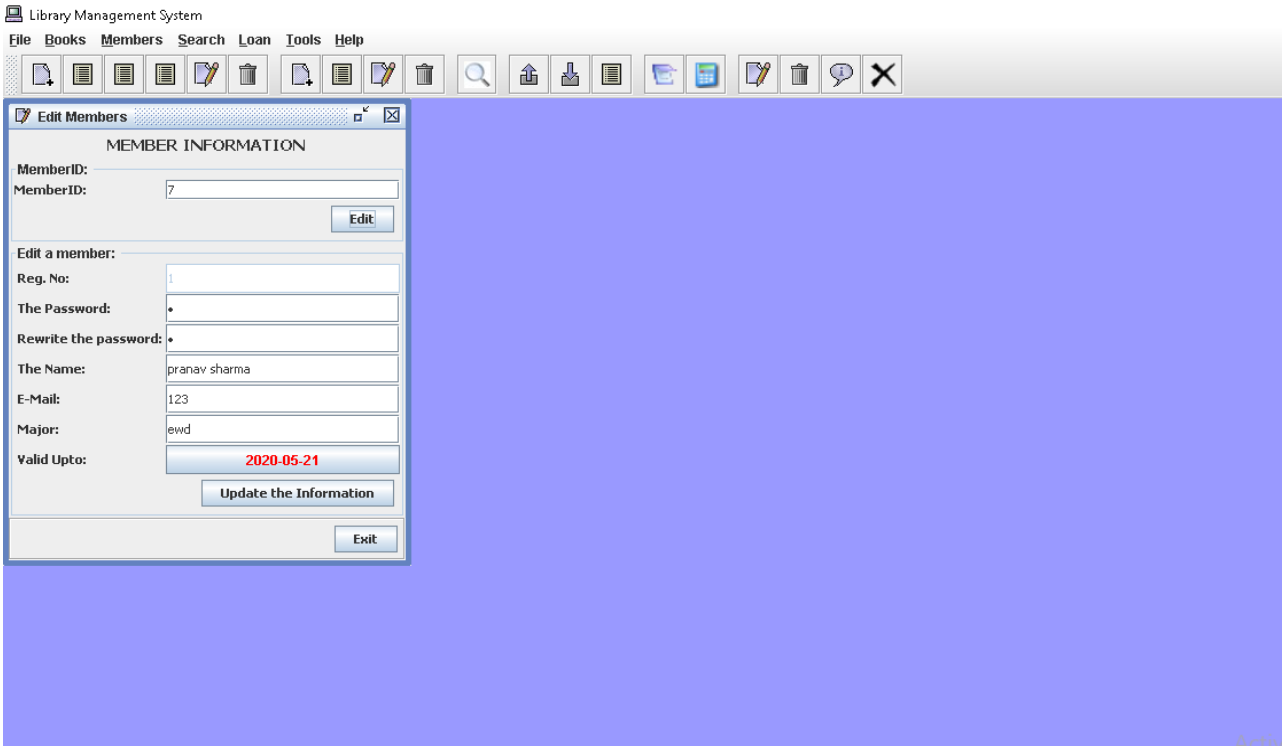
6.List of Available books:



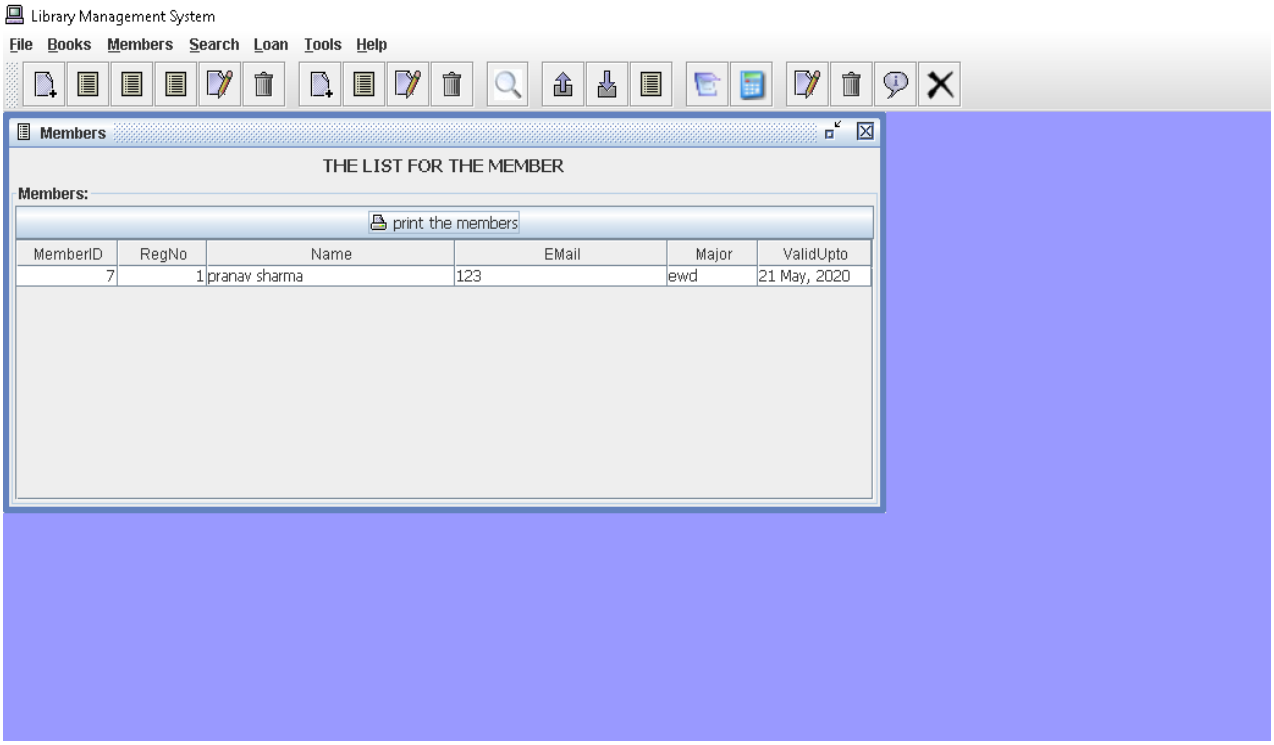
7.Add member:



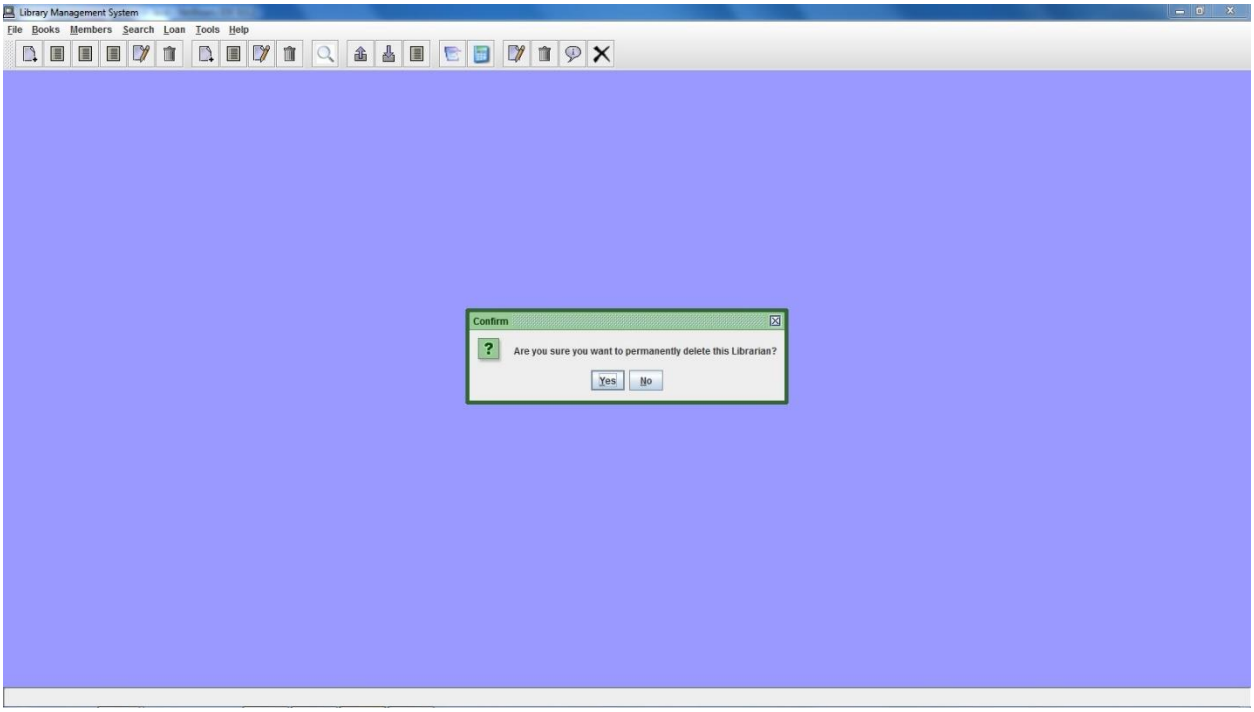
8.Edit member:



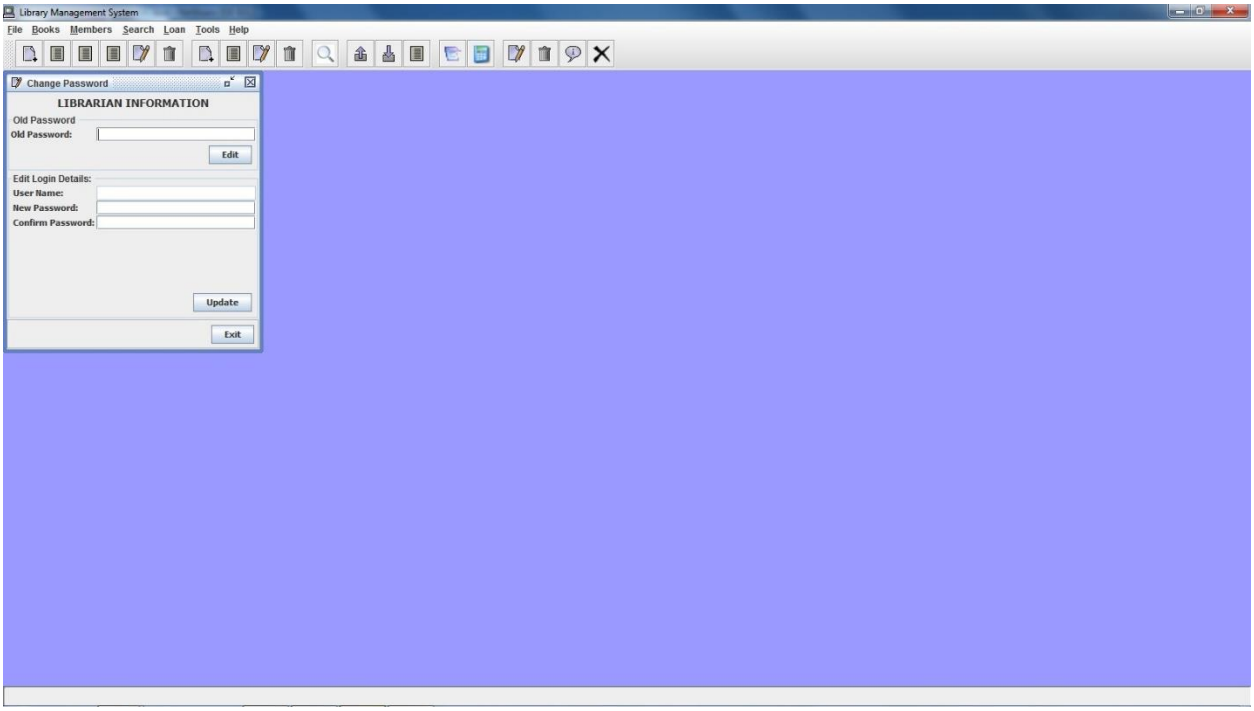
9.List of all members:



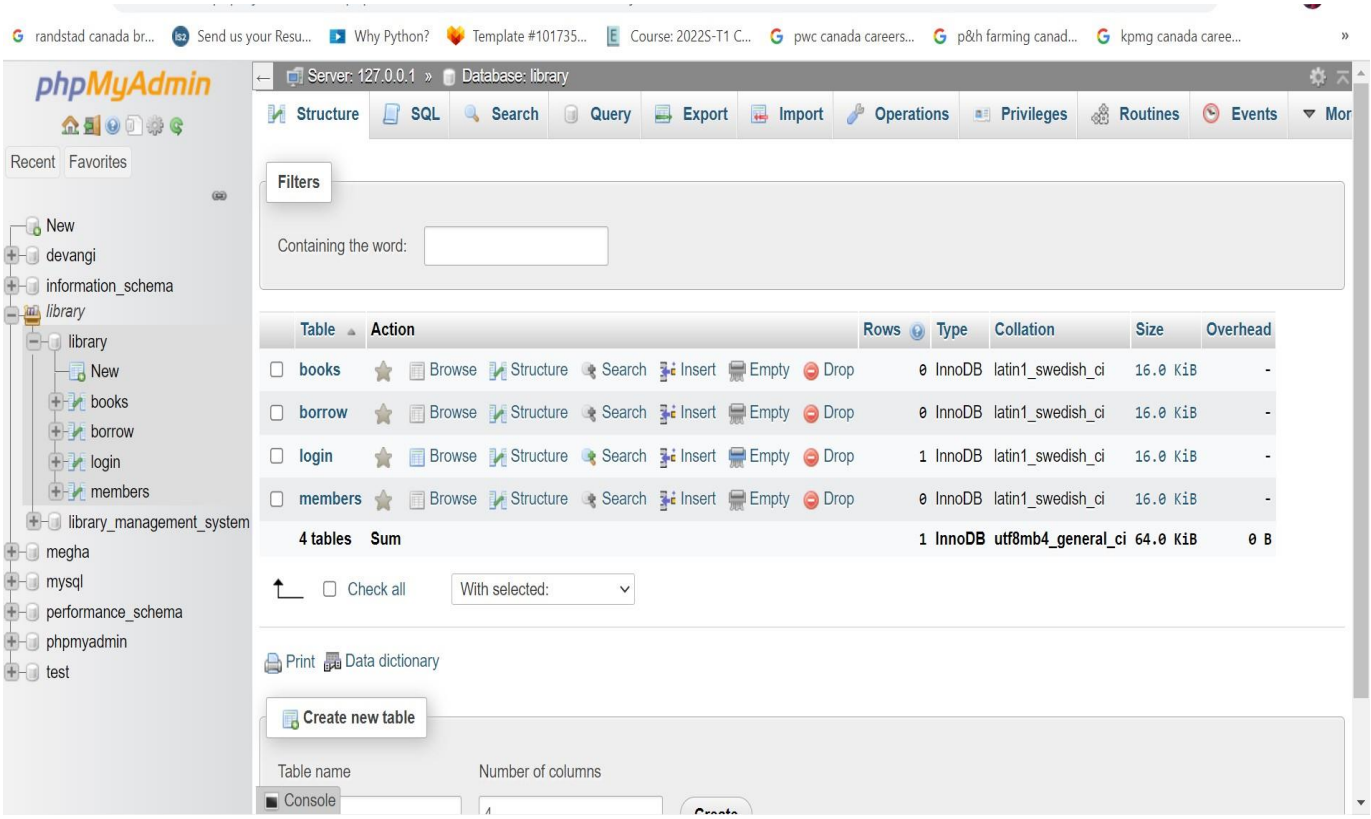
10.Delete Librarian



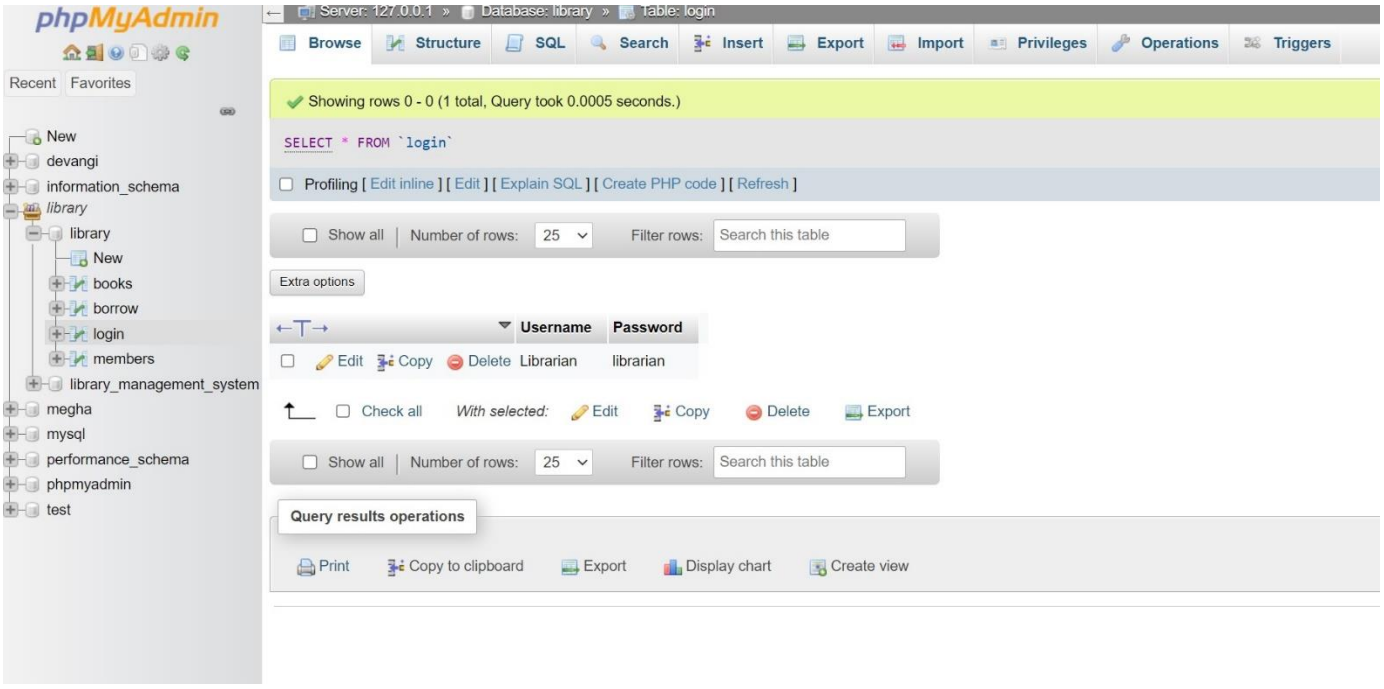
11. Change Password



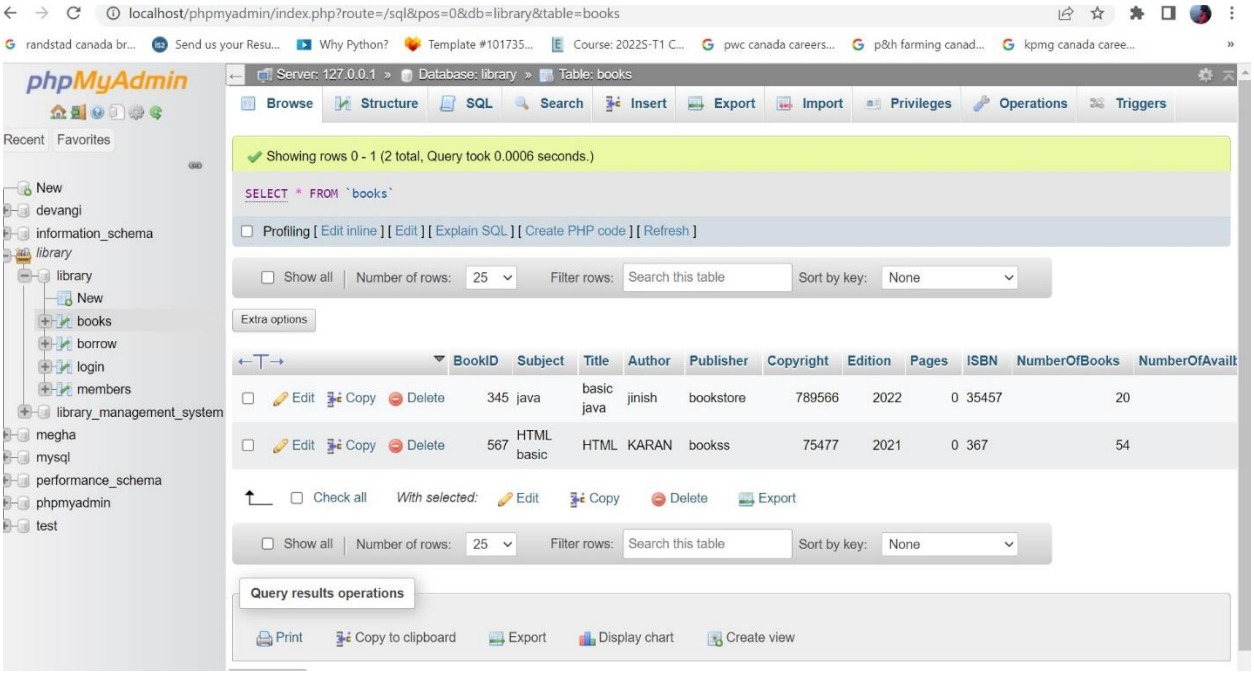
Databases Tables:



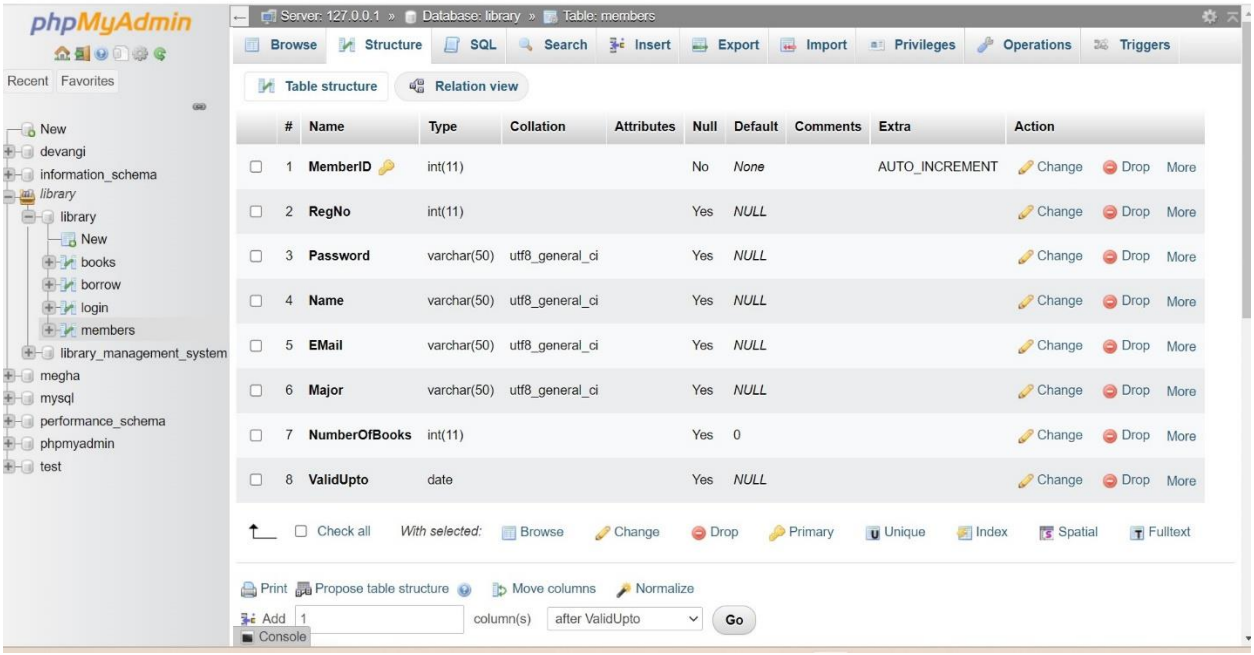
Login Table:



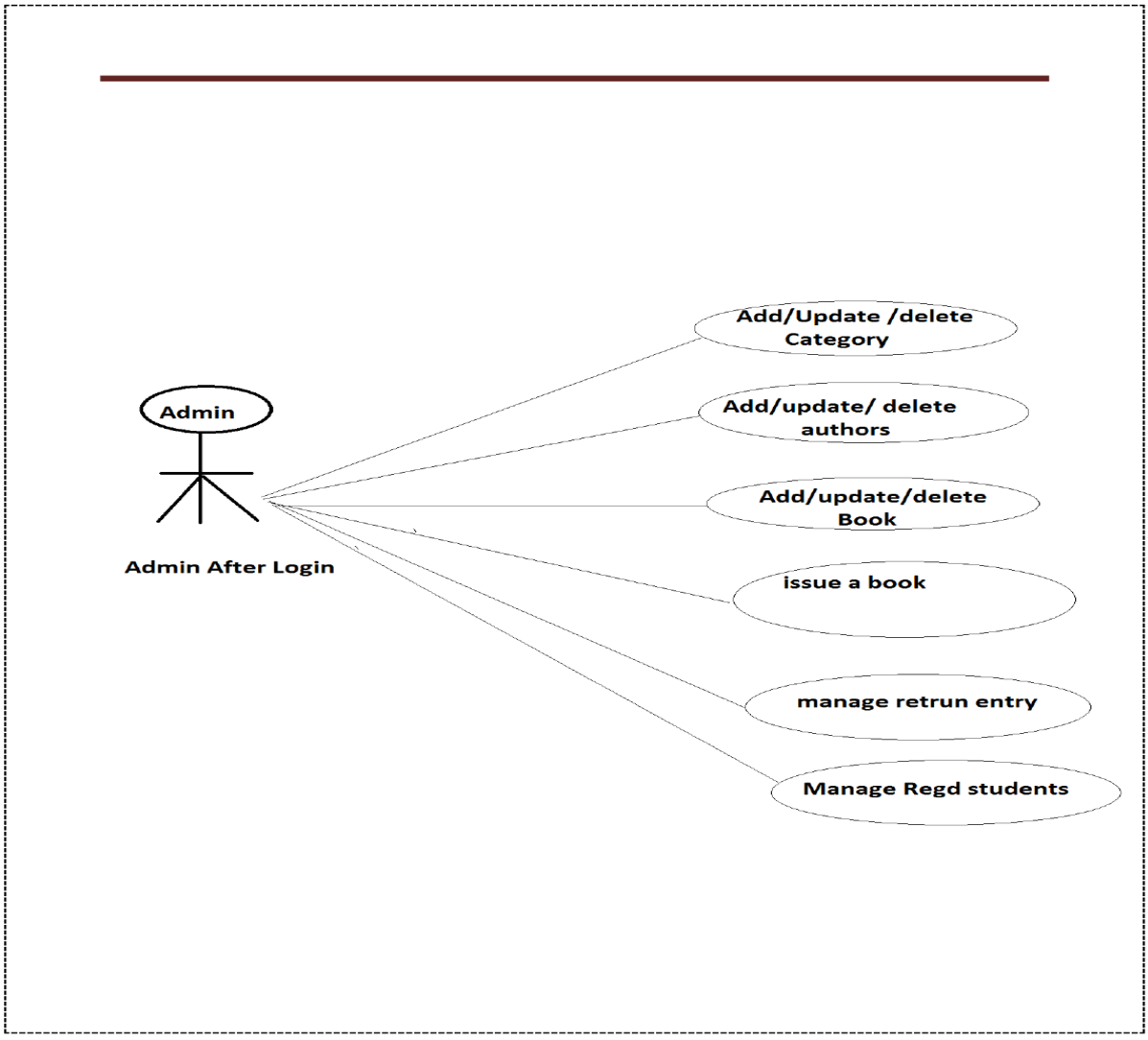
Books Table:



Member Table:



Data flow diagram:



Conclusion & future scope:

This software offers a computerized library management system that will be useful to both library staff and students. The entire process is done on the software, allowing and staff to create reports and transact with books. Future plans for this facility include adding many more features like e-lectures and video tutorials and also accessibility for students directly. Additionally, a feature Of group chat where students can discuss various issues of any subject can be added to this project thus making it more interactive more user friendly, and a project which fulfills each user’s need in the best way possible.