**Experiment 1**

For this project we were entailed with the task to make a “Library Management System”. (Group - I)

INTRODUCTION:

This project work aims at automating Library Management System.

‘LIBRARY MANAGEMENT SYSTEM’ consist of tasks such as registering students, maintaining book records, details of borrowers, late fee structures, etc. Data file handling has been effectively used in the program to cater to the needs as and when required. Database is a collection of interrelated data to serve multiple application i.e. database programs create files of information. So we see that files are worked with most inside the program itself.

About the project:

Our aim is to make a software which can facilitate the collection and display of the data from students and moreover store it in an easily accessible and understandable format for the use of the Librarian/Library Management.

DBMS:

The software required for management of data is called DBMS. It has three models.

* Elation Model: - It stores information in form of rows (cardinality) and columns (degree).
* Hierarchical Model: - In this type of model, we have multiple records inside a single record.
* Network Model:- In this, the data is represented by collection of record and relationships is separated by a associates

**For this project we are using MYSQL as a database.**

Software Requirement:-

* ⦁ Operating System: - Windows 8/10/11
* ⦁ Platform: - Visual Studio Code
* ⦁ Database: - MySQL 5.5.16
* ⦁ Languages: - C

Advantages of Project:-

* Saves time of teachers and administrators.
* Library Fees collection.
* Improving book keeping standards.
* Complete book entry automation.
* Effortless book data management.
* Publishing of online Forums and Assignments.
* Easy management of class information analytical reports.
* Ordering books for library accordingly

SCOPE:

* In this system one can include accounting system, good backup, and restore facility.
* System is flexible enough to possess the ability to easily and efficiently surf between the data of a number of students and display it all on command.
* It increases borrowing systems efficient and much more dynamic so as to provide good support from the student and good user system interaction.

FUNCTIONAL REQUIREMENTS:

* User Management : User Registration, Login and Authentication, Role Management(diff role for student, Instructor and Admin)
* Book Management: Search for available books.

For the completion of this project, some basic software requirements were are follows:

* IDE : Visual Studio Code
* Repository : GitHub
* Text Editor : Microsoft Word