# Library Management System

## A Python Based Desktop Application & Google Blogger Based E-Library


**Presented By**

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**Abhisek Midya**
**Atish Sarkar**

**Supervised By**

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**Dept. of Computer Science,**
**Syamaprasad College**

# Domain Description

- In the world of automation, Technologies reduce paper works in office.
- In field of management by technology, here is our project about - Library Management System
- Promises to reduce time, energy and paper works in library.

# Motivation & Scope of the Work

To eliminate time taking paperwork.

To develop well organized system for book borrowing from library.

To minimize the task and effort being performed by librarian and borrower.

To create a more effective system.

# Review

- There was no authentication system (login page).
- No admin panel & user panel was there.
- No scope to add or modify member’s or book’s details.
- No e-library page was attached to the system.
- Lack of security was an issue.

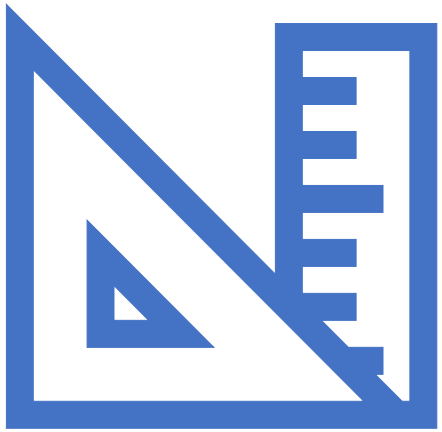
- Review is Based on :-
  https://www.youtube.com/watch?v=GODYXAnBDvc

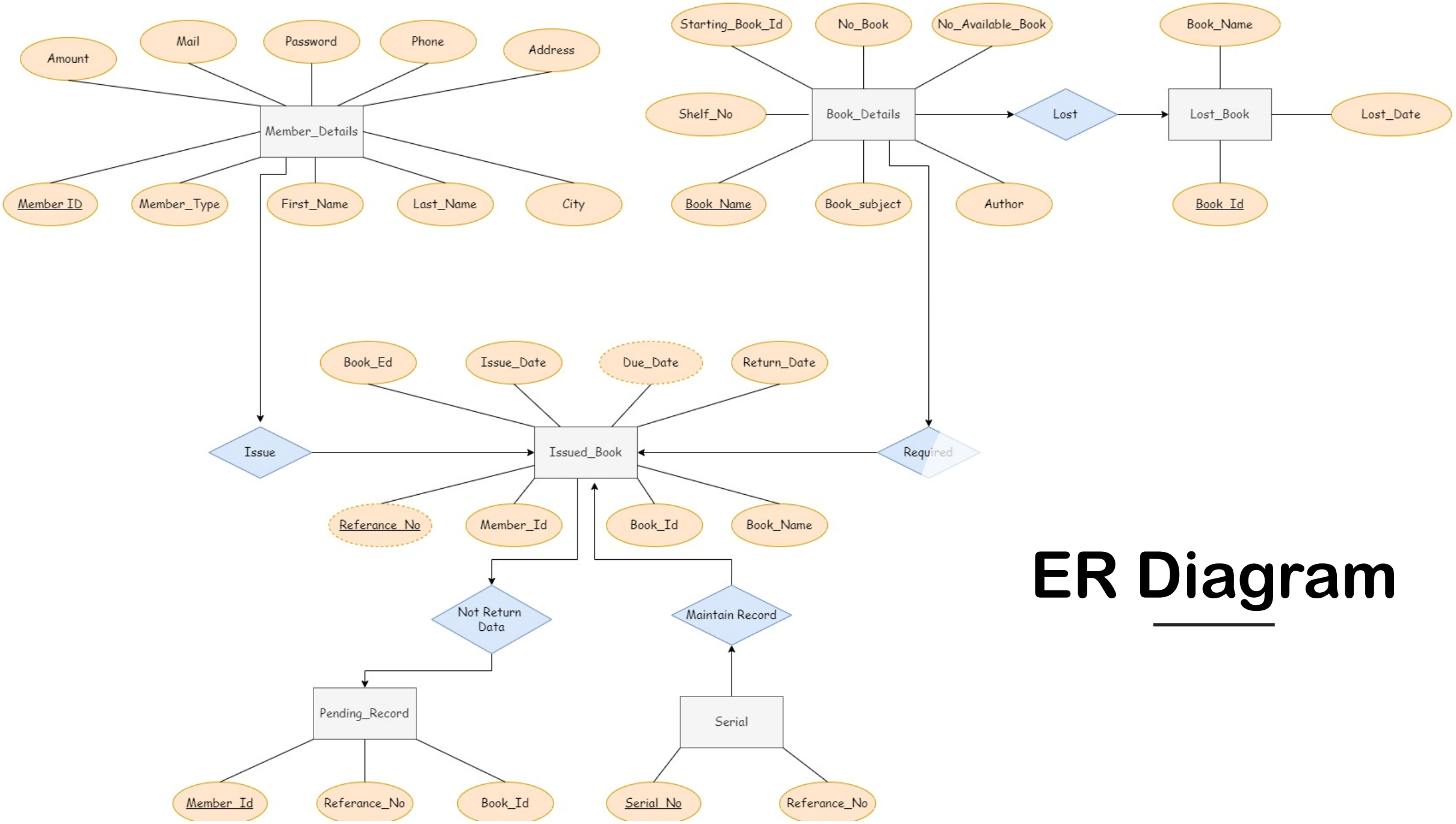
# Problem Formulation

- Book’s, User’s information maintained easily.
- Ease of  Borrowing or Returning Books.
- Ease of Tracking all records.
- Easily Manageable Library  System for Administrator.
- E-Library and E-mail reminder.

# Design Description

ERD & DFD




Amount
Mail
Password
Phone
Address
Member_Details
Member ID
Member_Type
First_Name
Last_Name
City
Starting_Book_Id
No_Book
No_Available_Book
Shelf_No
Book_Details
Book_Name
Book_subject
Author
Lost
Lost_Book
Book_Name
Lost_Date
Book_Id
Book_Ed
Issue_Date
Due_Date
Return_Date
Issue
Issued_Book
Required
Referance_No
Member_Id
Book_Id
Book_Name
Not Return Data
Maintain Record
Pending_Record
Serial
Member_Id
Referance_No
Book_Id
Serial_No
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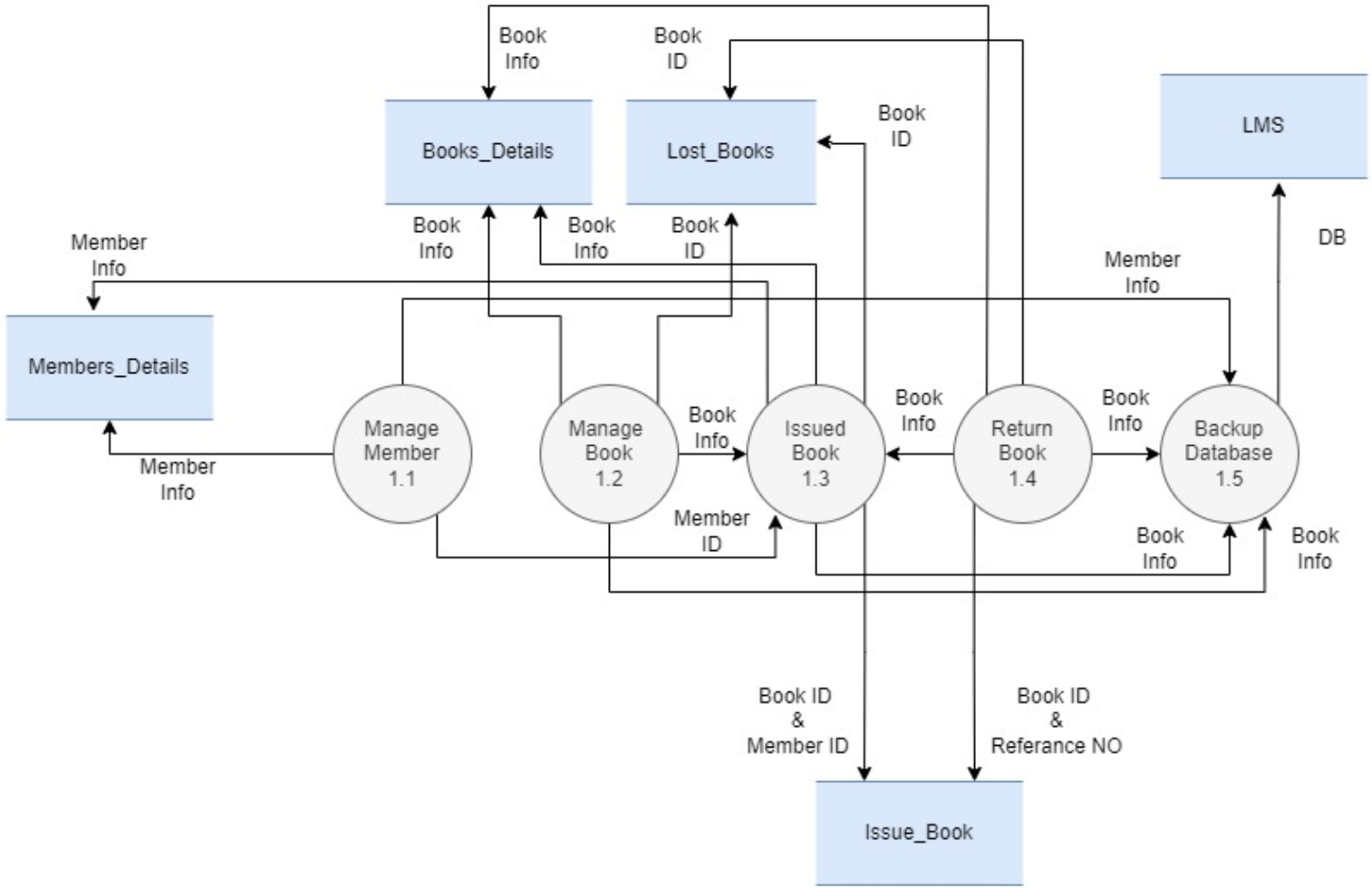
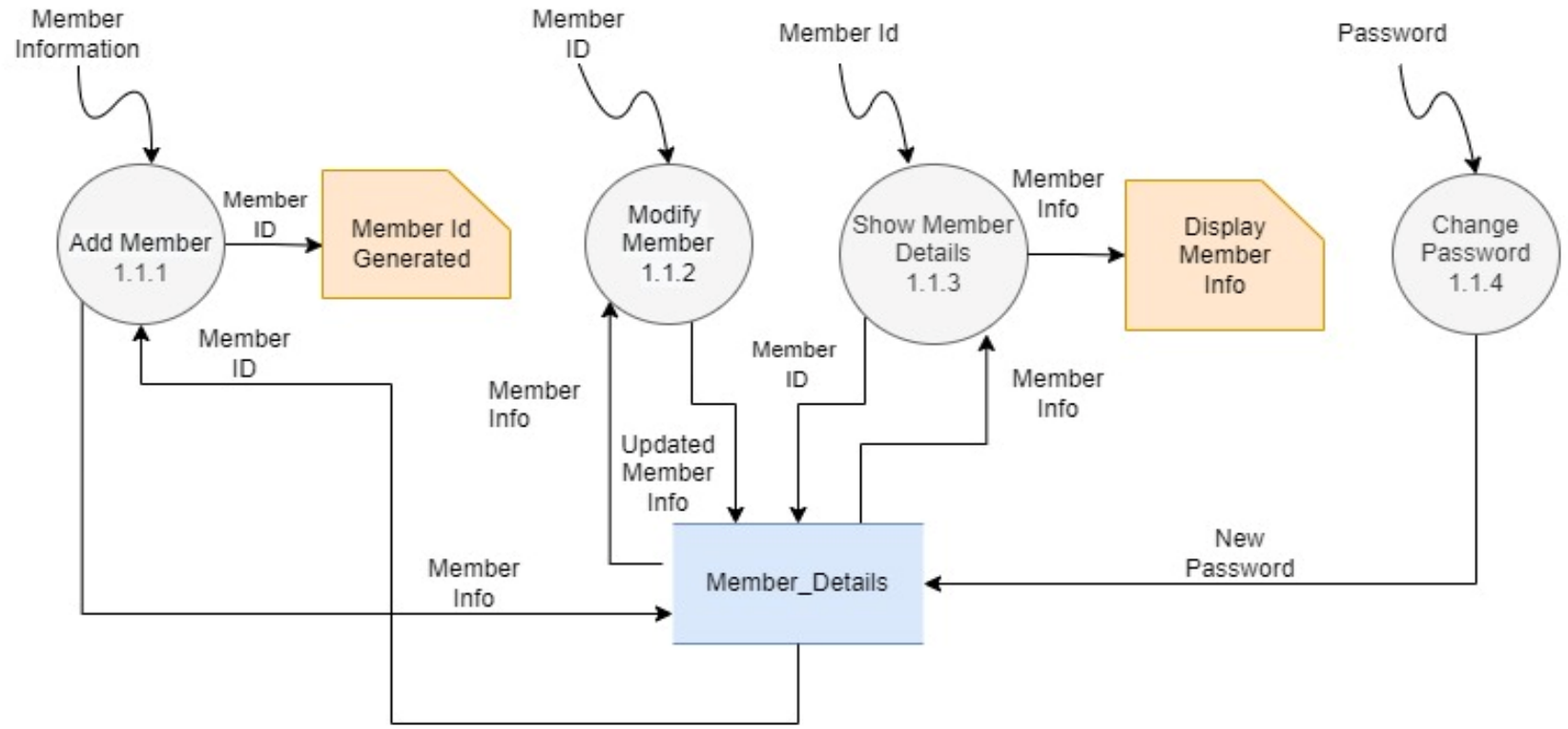
# ER Diagram

Lable-0 DFD
For
Library Management System

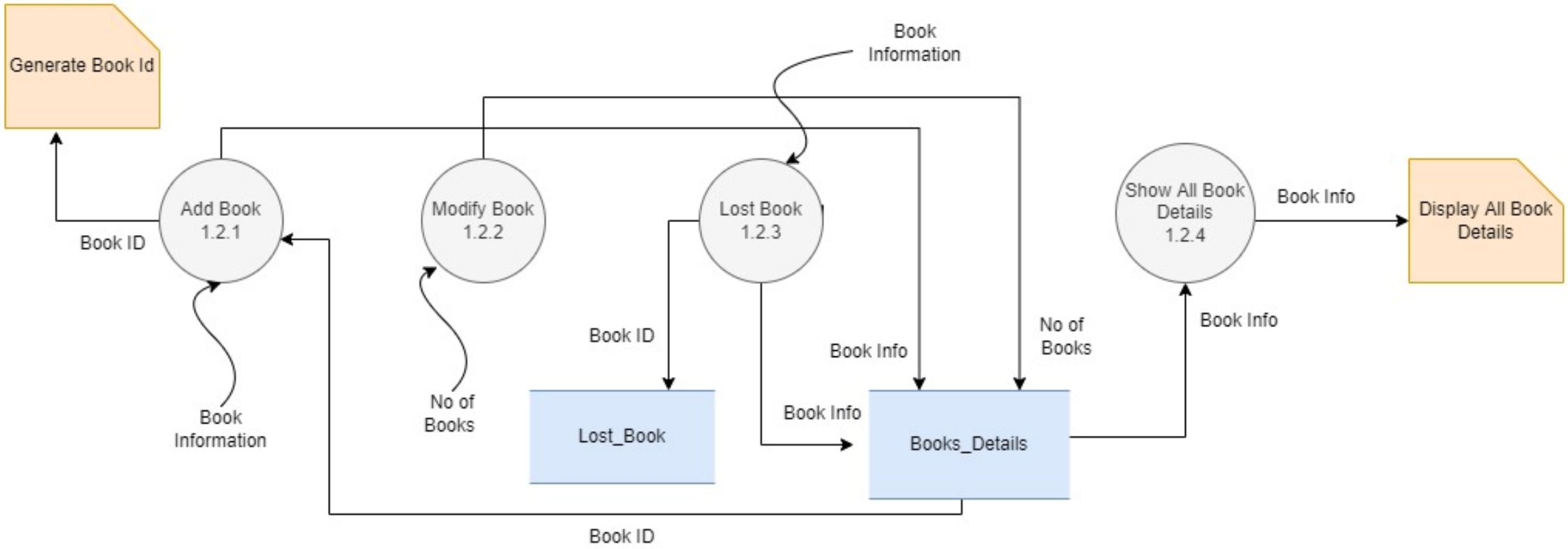
# Data-Flow Diagram



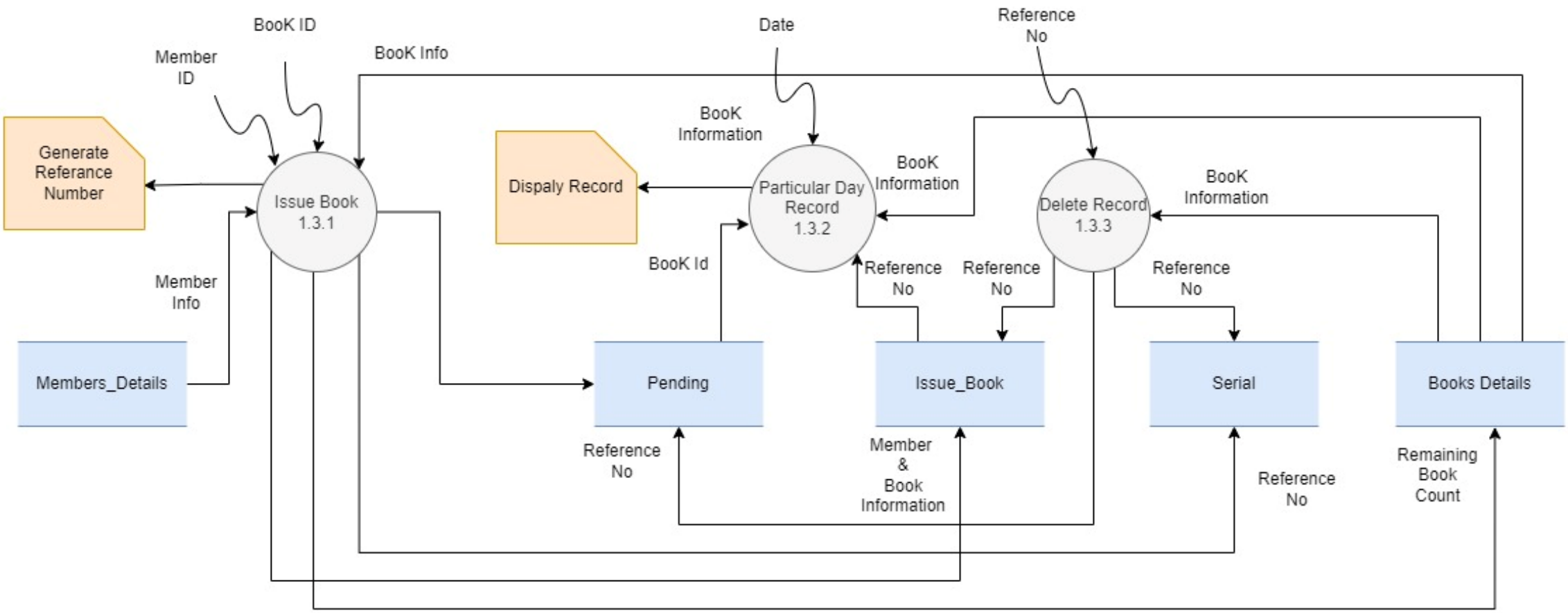

Lable-1 DFD
For
Library Management System



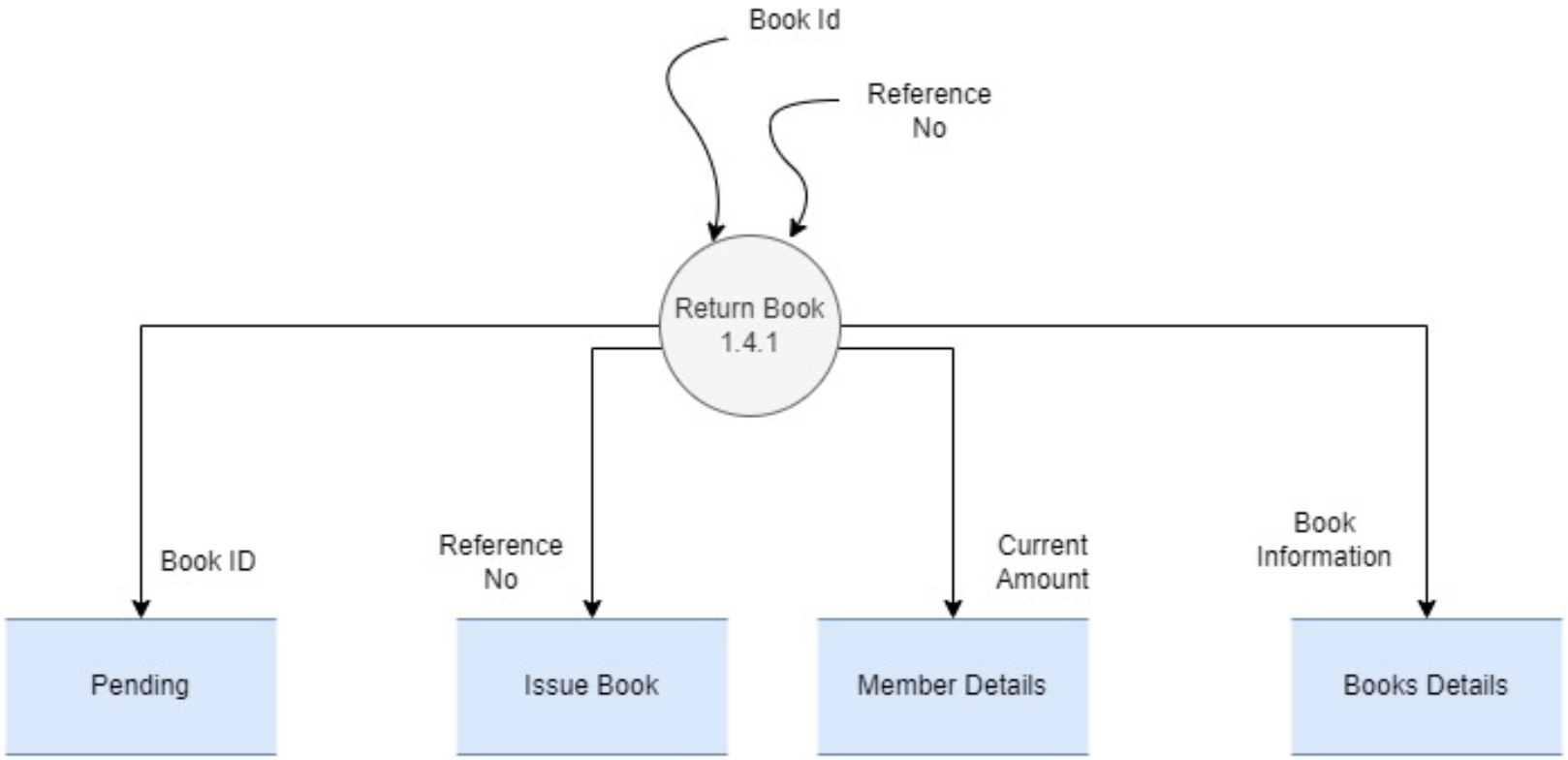

Lable-2 DFD
For
Manage Member
Module 1.1




Lable-2 DFD
For
Manage Book
Module 1.2




Lable-2 DFD
For
Issue Book
Module 1.3

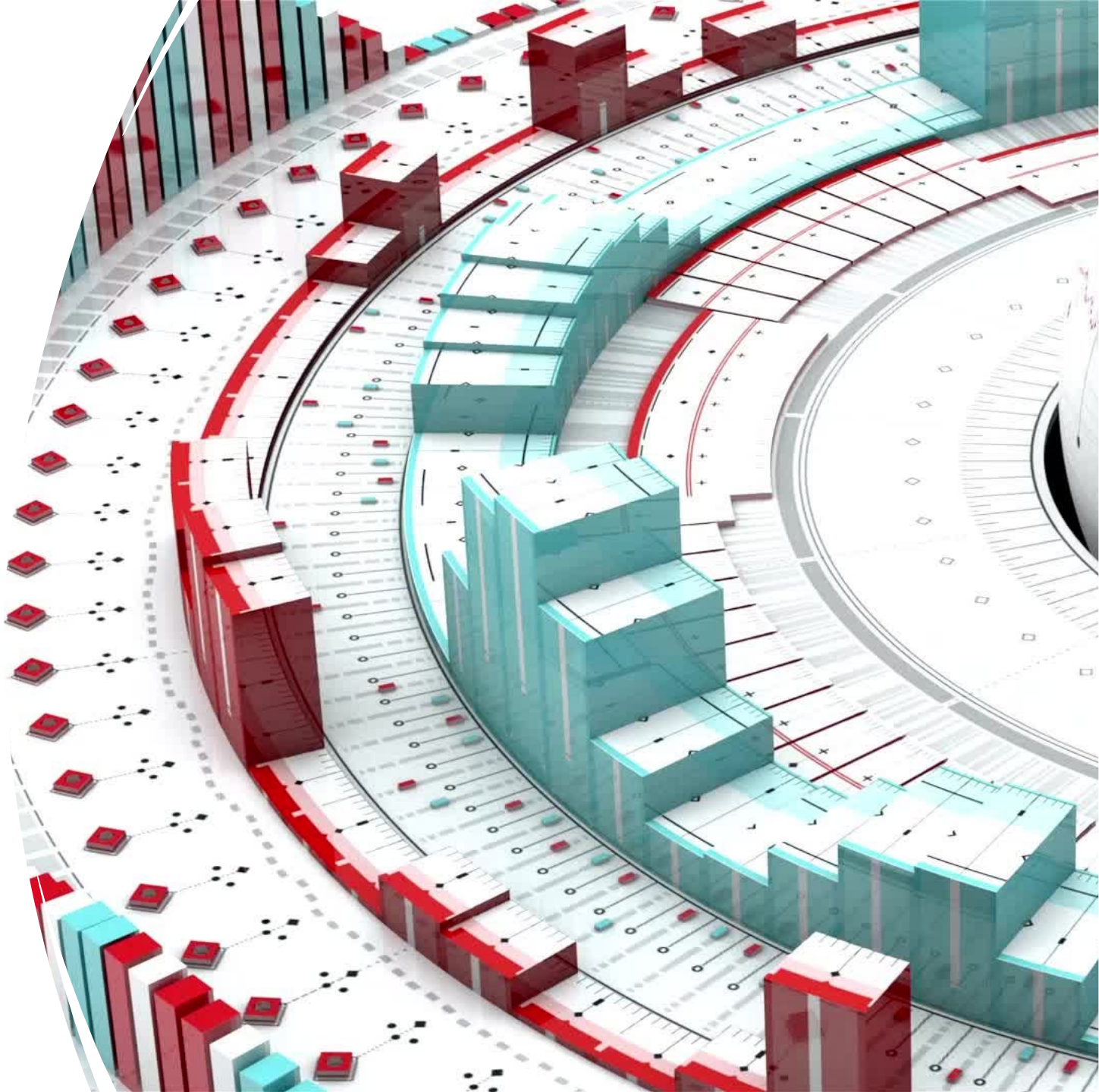



Lable-2 DFD
For
Return Book
Module 1.4

# Implementation

- Implementation is the stage where the theoretical design is turned into a working system.

- The system can be implemented only after thorough testing is done and if it is found to work according to the specification.



Project1 - Project Professional

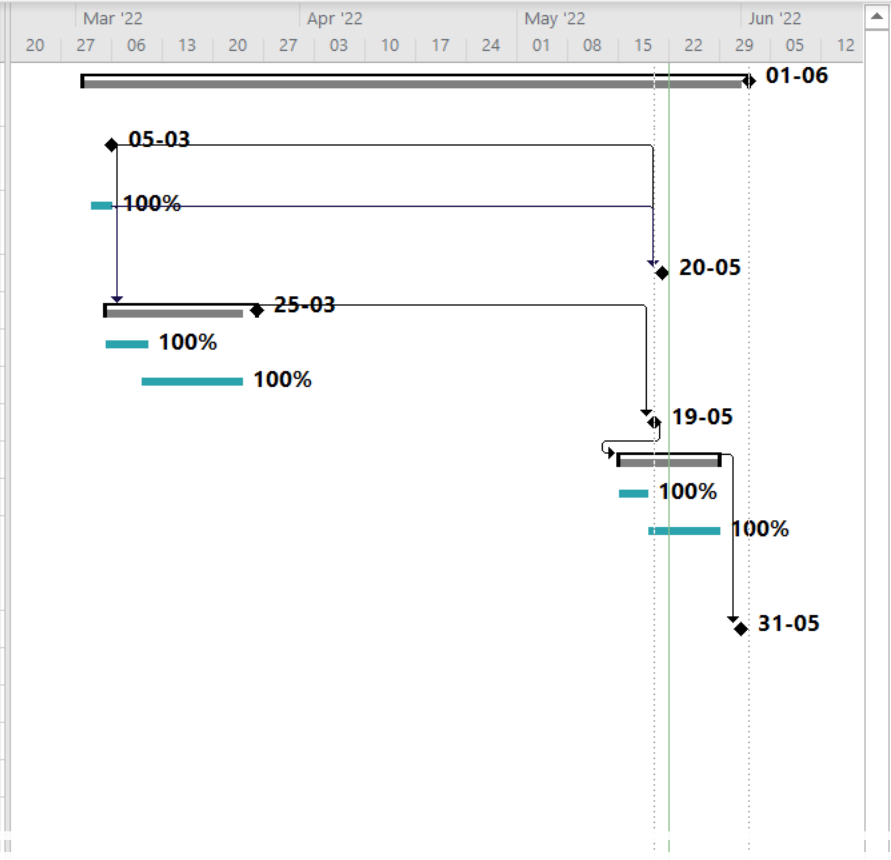
Abhisek Midya

File Task Resource Report Project View Help Gantt Chart Format Tell me what you want to do

Gantt Chart | Paste | Cut | Copy | Format Painter | Calibri | 11 | Mark on Track | Respect Links | Inactivate | Manually Schedule | Auto Schedule | Inspect | Move | Mode | Task | Summary | Milestone | Deliverable | Information | Notes | Details | Add to Timeline | Planner | Scroll to Task | Find | Clear | Fill

View | Clipboard | Font | Schedule | Tasks | Insert | Properties | Link To | Editing

| | Task Name | Duration | Start | Finish | Predecessors | Resource Names | Mileston |
|---|---|---|---|---|---|---|---|
| 1 | **Project Library Management System** | **66 days** | **Wed 02-03-22** | **Wed 01-06-22** | | **Abhisek Midya,Ahin Subhra Halder,Atish Sarkar, Avijit Halder** | **Yes** |
| 2 | **Identify Problem Domain** | **3 days** | **Thu 03-03-22** | **Sat 05-03-22** | | **Abhisek Midya,Ahin Subhra Halder,Atish Sarkar, Avijit Halder** | Yes |
| 3 | **Study And Selection Of System Model** | **3 days** | **Thu 03-03-22** | **Sat 05-03-22** | | **Abhisek Midya,Ahin Subhra Halder,Atish Sarkar, Avijit Halder** | No |
| 4 | **Documentation** | **55 days** | **Sat 05-03-22** | **Fri 20-05-22** | **2,3** | **Ahin Subhra Halder,Avijit Halder , Atish Sarker** | **Yes** |
| 5 | **Design** | **16 days** | **Sat 05-03-22** | **Fri 25-03-22** | **2,3** | **Abhisek Midya,Ahin Subhra Halder** | **Yes** |
| 6 | ER Diagram | 5 days | Sat 05-03-22 | Thu 10-03-22 | | **Abhisek Midya,Ahin Subhra Halder** | No |
| 7 | Data Flow Diagram | 10 days | Thu 10-03-22 | Wed 23-03-22 | | **Abhisek Midya,Ahin Subhra Halder** | No |
| 8 | **Coding** | **40 days** | **Fri 25-03-22** | **Thu 19-05-22** | **5** | **Abhisek Midya,Ahin Subhra Halder** | **Yes** |
| 9 | **Testing** | **12 days** | **Sun 15-05-22** | **Sat 28-05-22** | **8** | **Ahin Subhra Halder,Avijit Halder,Abhisek Midya** | **No** |
| 10 | Prepare Test Cases | 4 days | Sun 15-05-22 | Wed 18-05-22 | | **Ahin Subhra Halder,Avijit Halder** | No |
| 11 | Perform The System Level Testing Using BLACK BOX Testing | 8 days | Thu 19-05-22 | Sat 28-05-22 | | **Abhisek Midya** | No |
| 12 | **Maintenance** | **2 days** | **Sat 28-05-22** | **Tue 31-05-22** | **9** | **Ahin Subhra Halder,Atish Sarkar,Avijit Halder,Abhisek Midya** | Yes |




VIEW 1

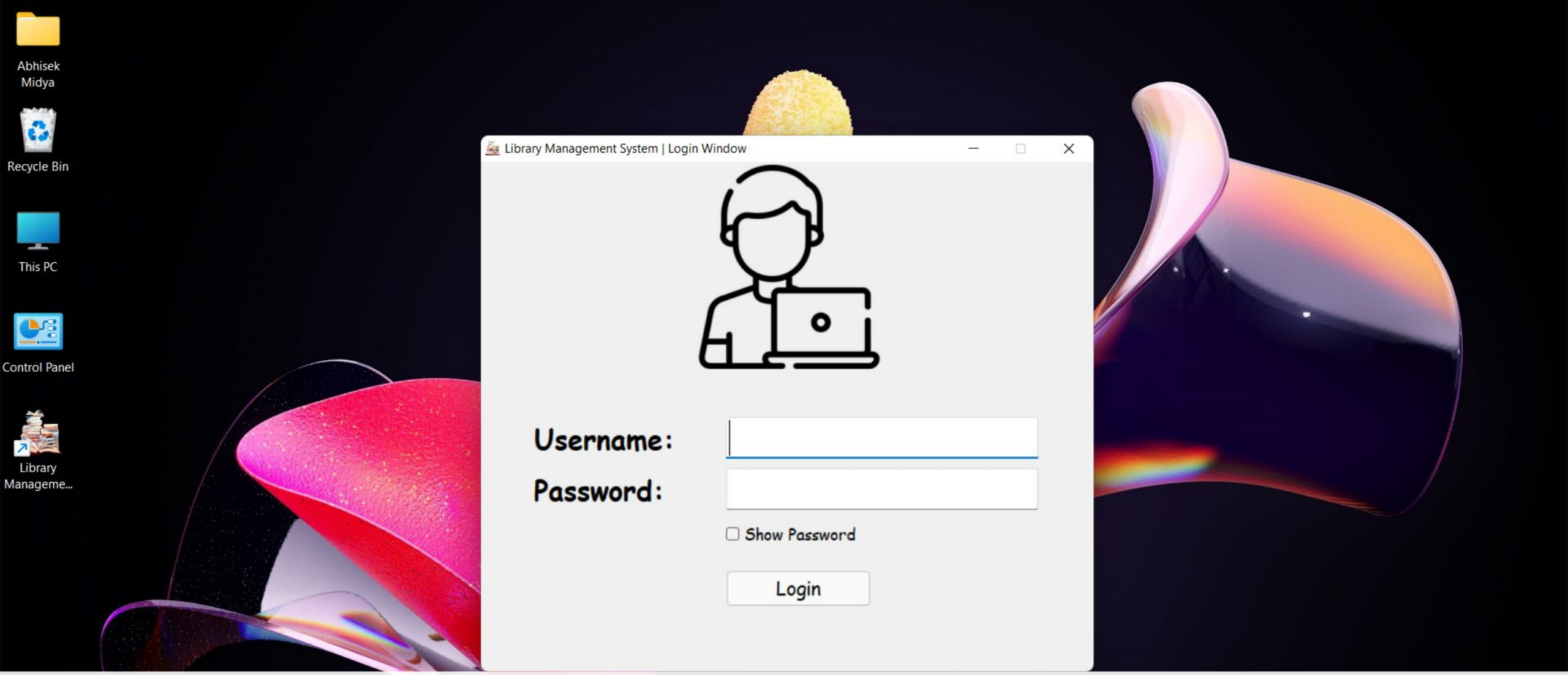
# GNATT Chart

Ready | New Tasks : Manually Scheduled

30°C Haze

ENG IN

08:12 PM 22-May-22


Abhisek Midya
Recycle Bin
This PC
Control Panel
Library Manageme...
Library Management System | Login Window
Username:
Password:
Show Password
Login
34°C
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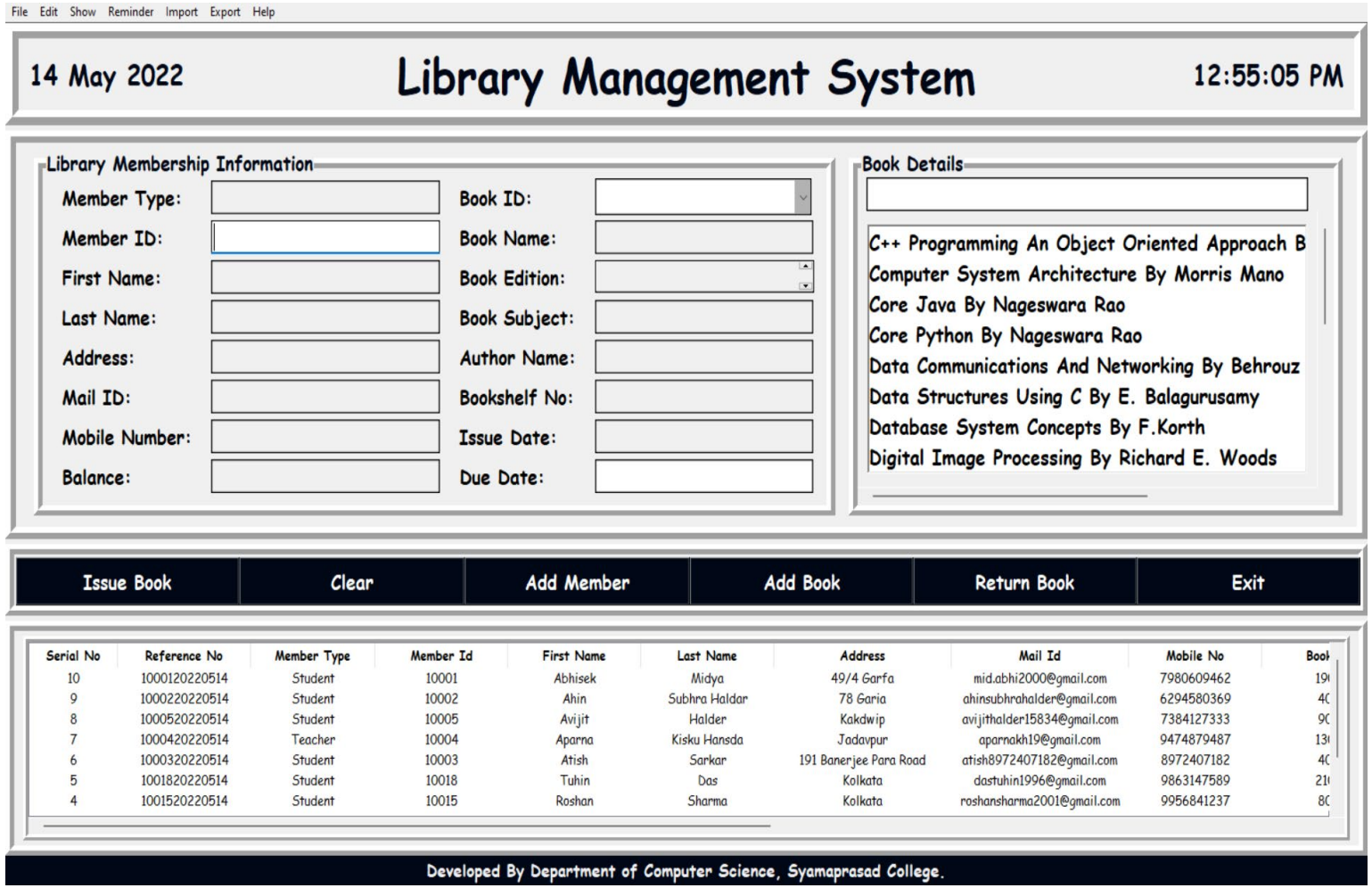
14-May-22

# Login Page

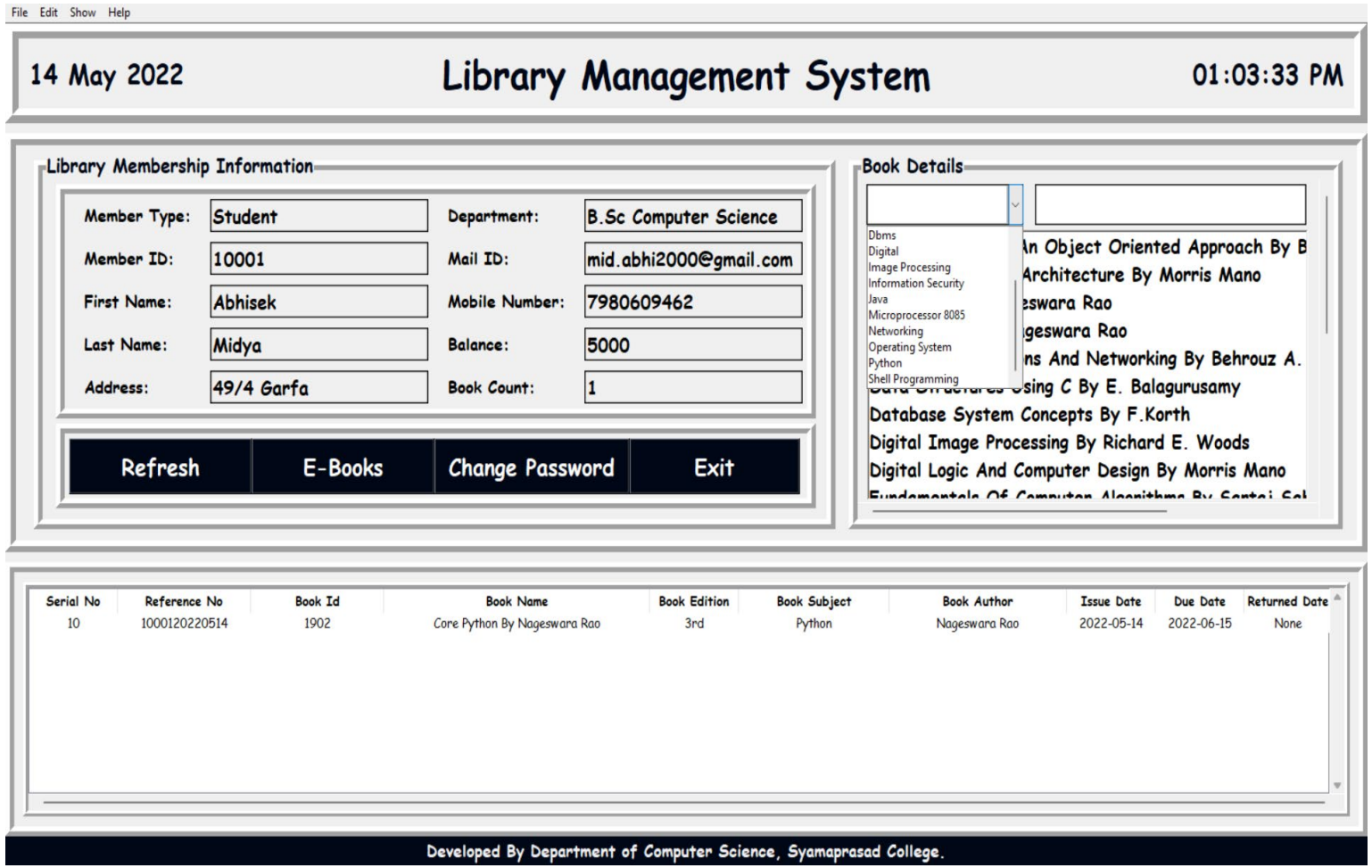
# Admin Panel

- Here, Admin can monitor and manage all the information.
- All the available book related queries should be solved.
- Admin can send email reminders to all the members, whose books are due within two days.



# User Panel

- Users can log in to the system by using their username and password, which have been sent to their email id at the time of registration.
- Users can see all the book details by themself.
- Users can go to the e-library directly from this panel.
- Users can change their password.



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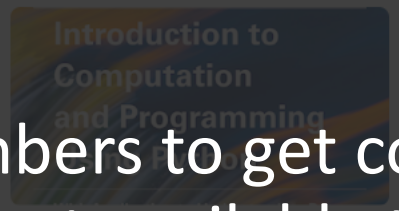


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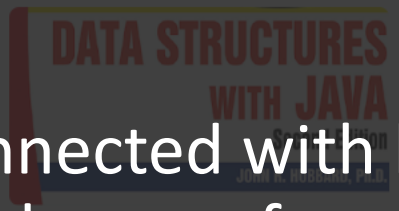


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# SPC E-Library

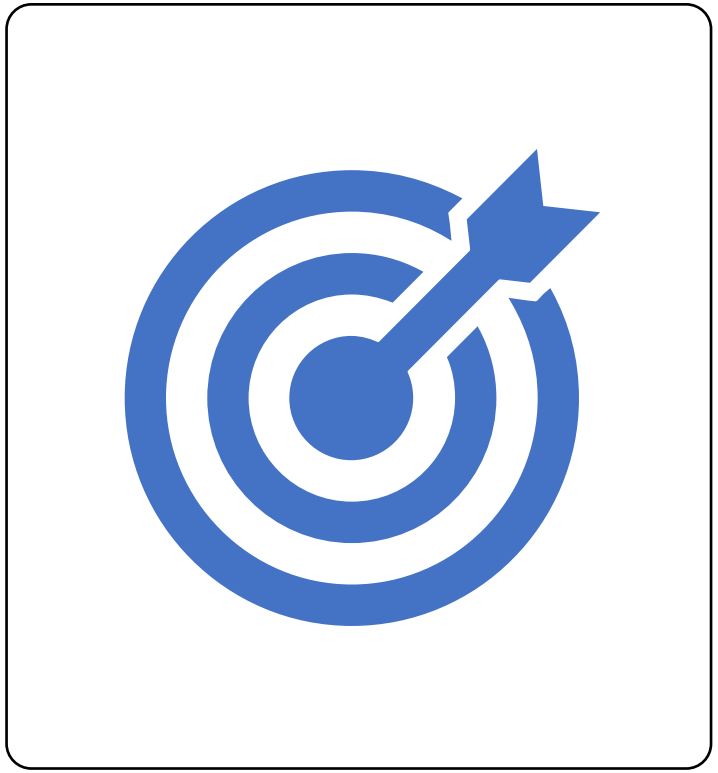
- Our system supports members to get connected with books while required books are not available to borrow from library.

https://spclms.blogspot.com/2022/06/java-complete-reference-herbert-schildt.html

33°C Rain showers ENG IN 15:34 19-06-2022

# Result

- We solved the problem that First Name & Last Name field should take only alphabet.
- Book due date can’t be less than Issue book date if we enter due date less than issue date than system will give an error message.
- If we enter wrong Username and Password then it will give an error message.
- If we add previous recorded book into the database then the system will give an error message.



# Conclusion

- Library Management System of the entire system improves the efficiency.
- It provides a friendly graphical user interface which proves to be better when compared to the existing system.
- It gives appropriate access to the authorized users depending on their permissions.
- It effectively overcomes the delay in communications.
- Updating of information becomes so easier.
- System security, data security and reliability are the striking features.
- The System has adequate scope for modification in future if it is necessary.

# Thank You