LIBRARY MANAGEMENT SYSTEM

PROBLEM STATEMENT :

The project titled "Library management system" is a library management software for monitoring and controlling transactions in a library. This focusses on operations like adding new member, new books and updating new information, searching books and facilities to borrow and return book. The report generation facility of library system helps to get a good idea of which are the books borrowed by the member makes user possible to generate reports we include certain feautures like automatic fine calculation for late returns, classify the book subjectwise etc., we also include barcode for easy access of information. The entire system is essential to meet demands so this system uses several programming and database techniques to consolidate the work involved in this.

LIBRARY MANAGEMENT SYSTEM

USECASE DIAGRAM:

AIM:

To draw (or) design the usecase diagram for Library Management system

ACTORS INVOLVED:

Student

Faculty

Librarian

ACTIVITIES:

1. Login:

The student, Faculty and Librarian who wish to join as member of that librarian will login.

2. Add BOOK:

The application will add books of current trend to the library and also add books of various domain

3. check availability:

The application will check availability

of a particular book in a library.

4 Issue BOOK:

If the student or faculty who login and after checking the availability of book if a particular book is available the librarian can issue the book.

5 Return BOOK:

After reading the book, the student or Faculty should return the book to the librarian within the due date.

6 calculate due date:

If a student or faculty after reading the book who does not return the book, then the due date will be calculated.

7. Sending message:

After calculating the due date the application will send the message to their Phones as e-mail or through message that particular user has not return the book

8. calculate fine

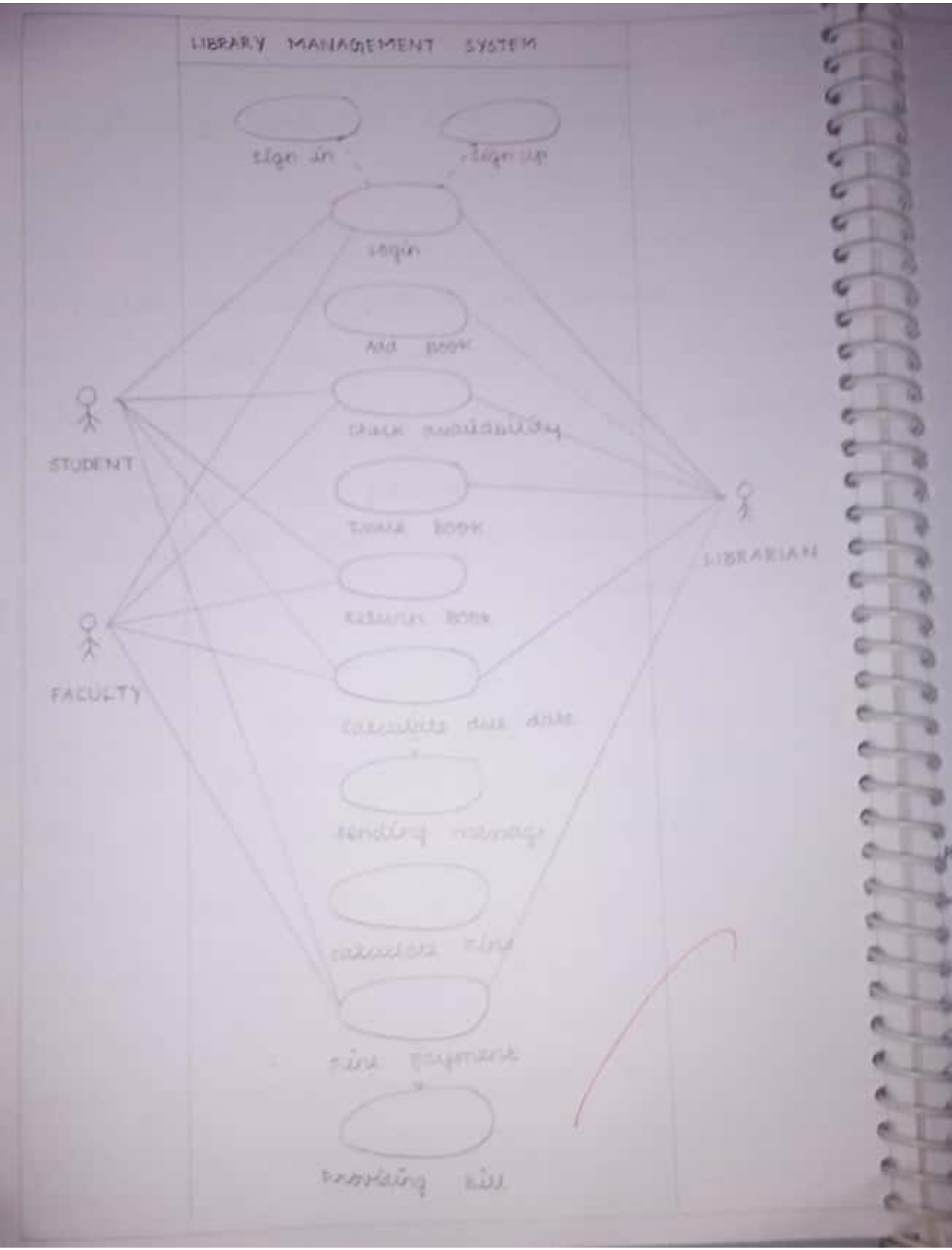
The librarian will calculate fine if user returning the book

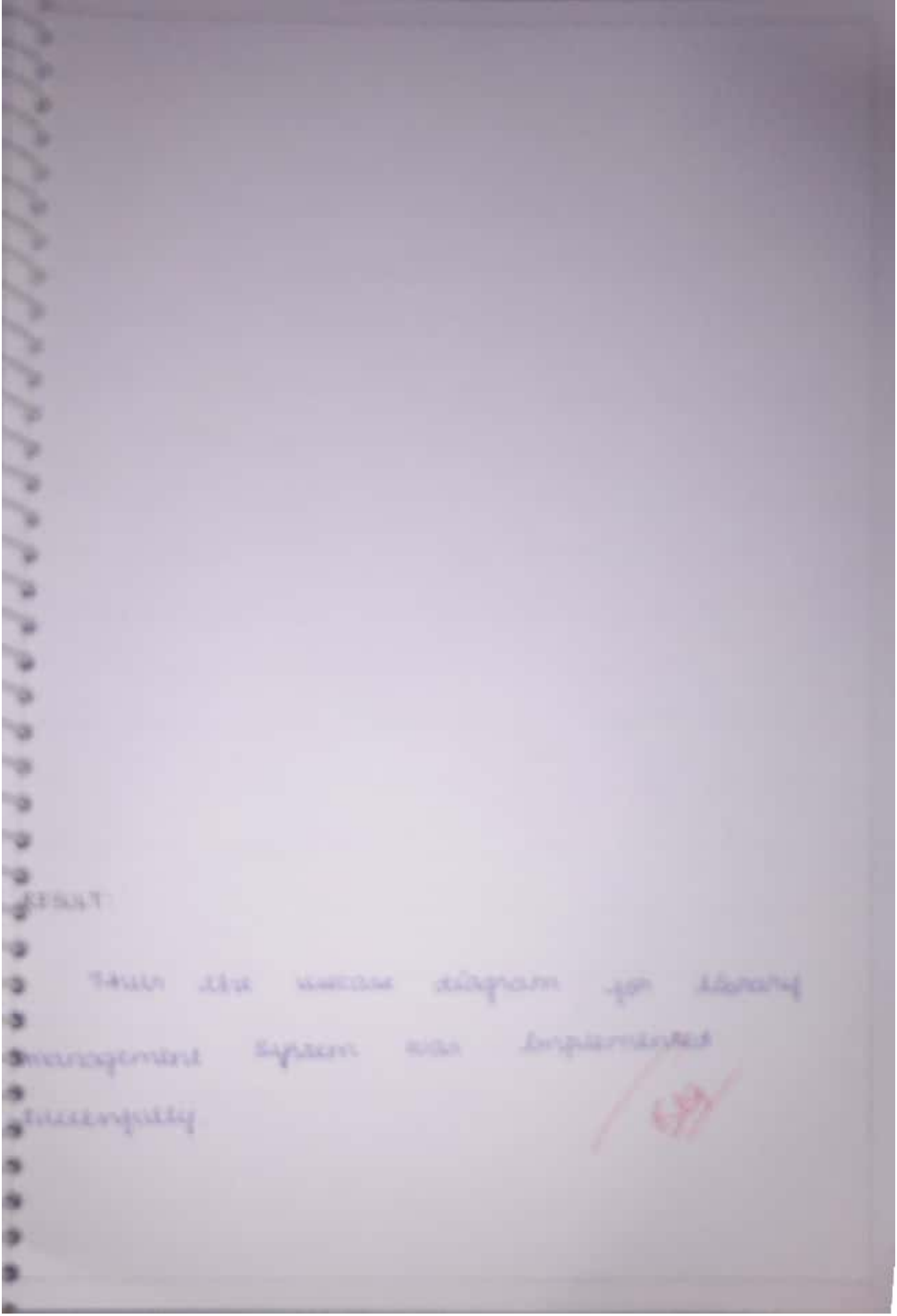
9. Fine payment

The students or faculty can do pay fine who going to return the book

10. providing bill

The students or faculty after paying the fine amount can get the bill issued by the librarian





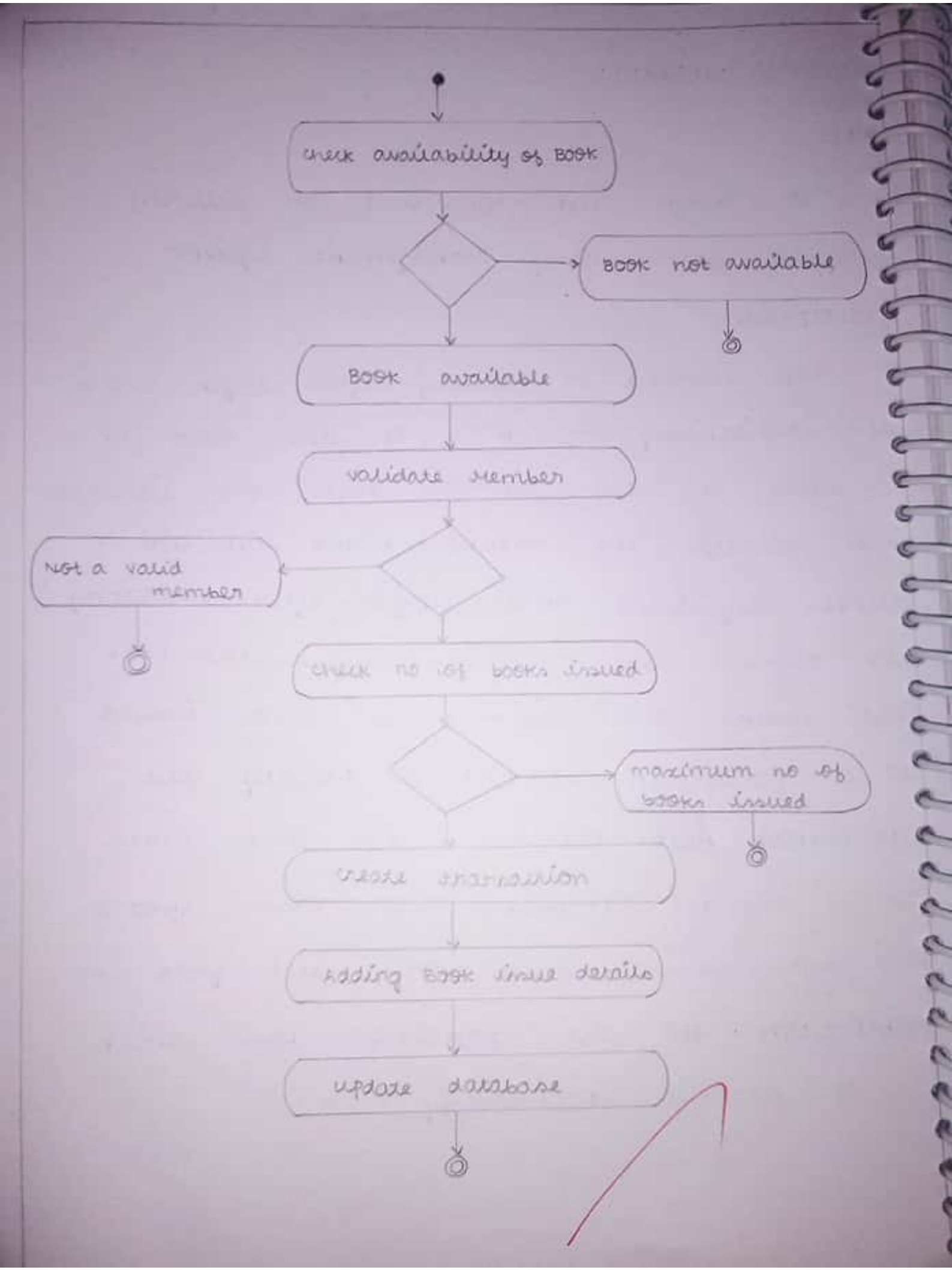
ACTIVITY DIAGRAM :

AIM :

To design and construct an activity diagram for Library Management system.

DESCRIPTION :

The student or Faculty after login, check the availability of book. If the book is available in the library then the librarian will validate the member based on the details registered while login. After validating the member the librarian issues the book also checks the number of books issued to a particular student or Faculty. The application will maintains the book issue details in a database and also update the book name, author name and year of publication for the particular book which is of current technology.



RESULT:

The construction of activity diagram for library management system was implemented successfully.

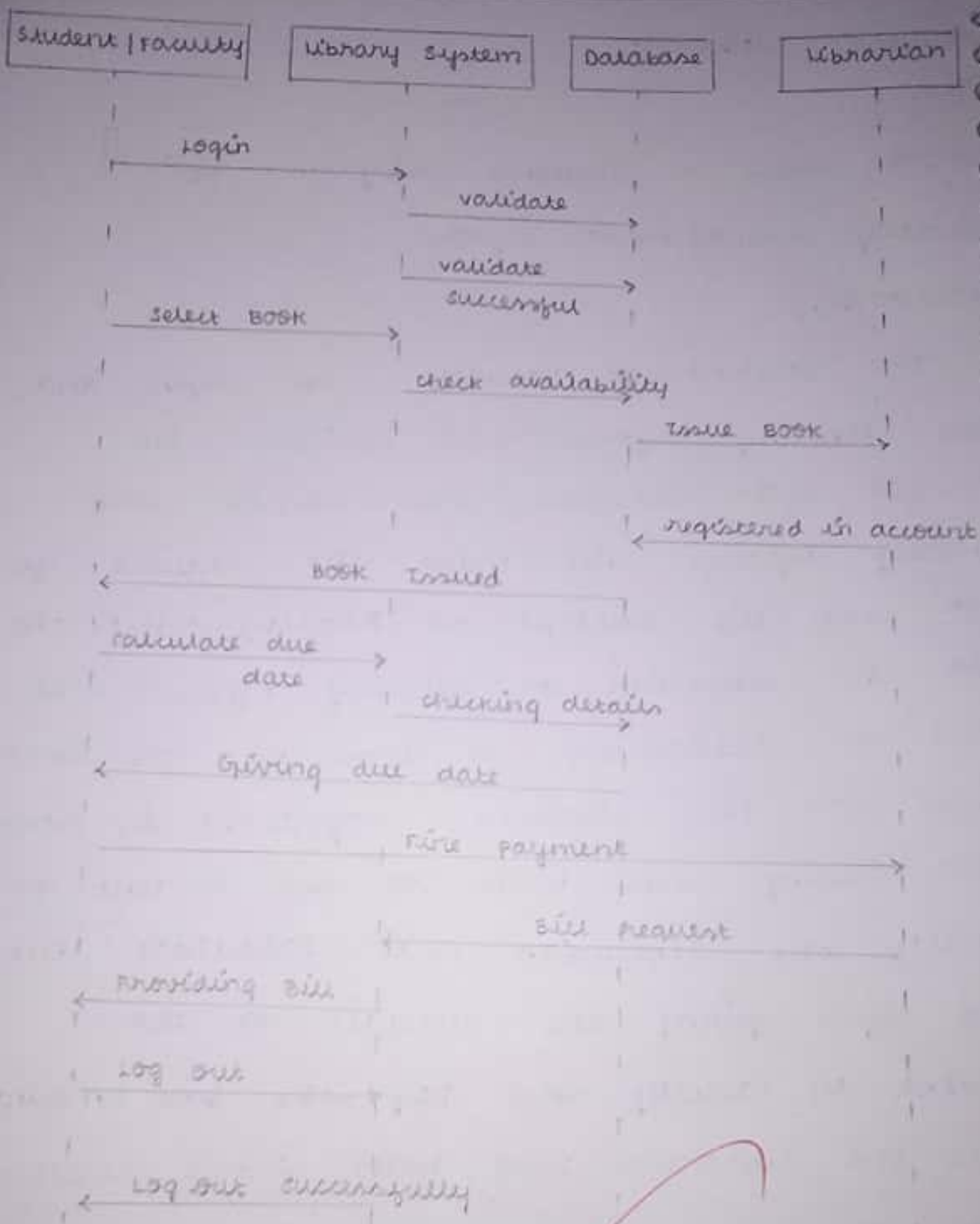
SEQUENCE DIAGRAM:

AIM:

To draw a sequence diagram for library management system.

DESCRIPTION:

The student or Faculty who login and the library system will validates the member after validating the member the library system will make the request for book. Then the student or Faculty select the book. The librarian or library system will check the availability of book. Then the librarian issues book. The librarian registered in account after issuing the book to the student or Faculty the librarian will calculate due date. After giving the due date to the student or Faculty will pay the fine amount Then the librarian will make a bill request. Then the library system sends the message to the student or Faculty that the logout was done successfully.



RESULT:

Thus the sequence diagram for library management system was done successfully.

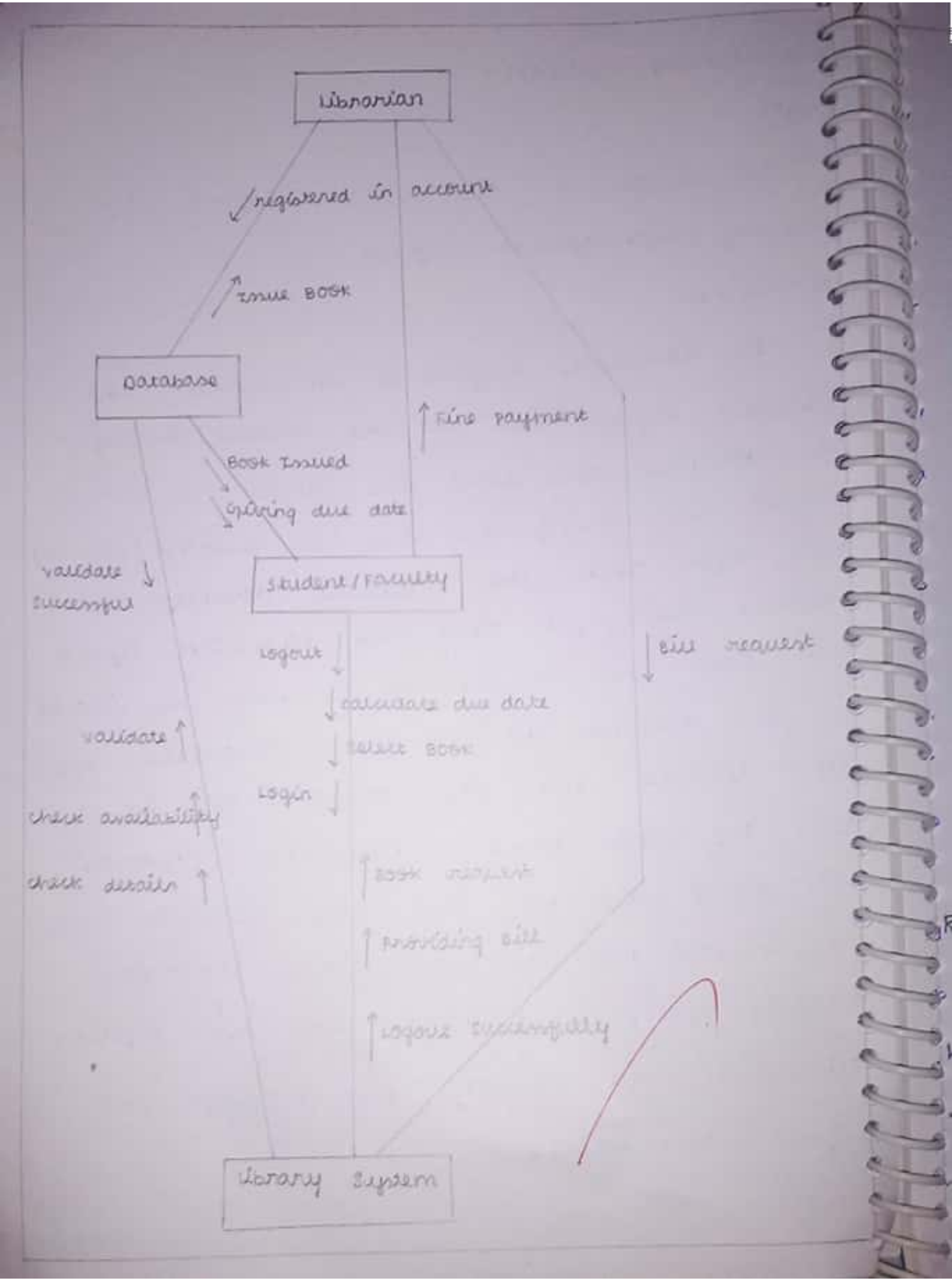
COLLOBRATION DIAGRAM :

AIM :

To design a collobration diagram for library management system.

DESCRIPTION :

The librarian registered in account. The librarian issues book to the student / Faculty. The database will store the details of book issued and giving due date. The student / Faculty will login Then the database display the validate successful. Then the librarian system will have the availability of books is issued to the member. The librarian calculates the fine amount and the amount will be paid by that member and the librarian will prove the bill and the librarian will provide the bill and after that student / Faculty will logout. After that the system / application will display the message and logout successfully.



RESULT:

Thus the collobration diagram for librarian management system was Implemented successfully.

CLASS DIAGRAM:

AIM:

To draw or design a class diagram for library management system

DESCRIPTION:

In this class diagram there is a class for many topics. In every class, 1st part describes attributes and 2nd part describes operations

Book class:

This book class consists of attributes such as Bookid, author, name, Price and date of Purchase and it also can have operations such as display book(), update book() and details(). It has many to one cardinality with librarian class and member record class The book includes Journals and magazines

Librarian class:

The class contains the attributes such as name, password, id, phone number, address etc., and

it also can have operations such as update books(), add member(), verify member() etc. It can have 1 to many cardinality register class

REGISTER CLASS

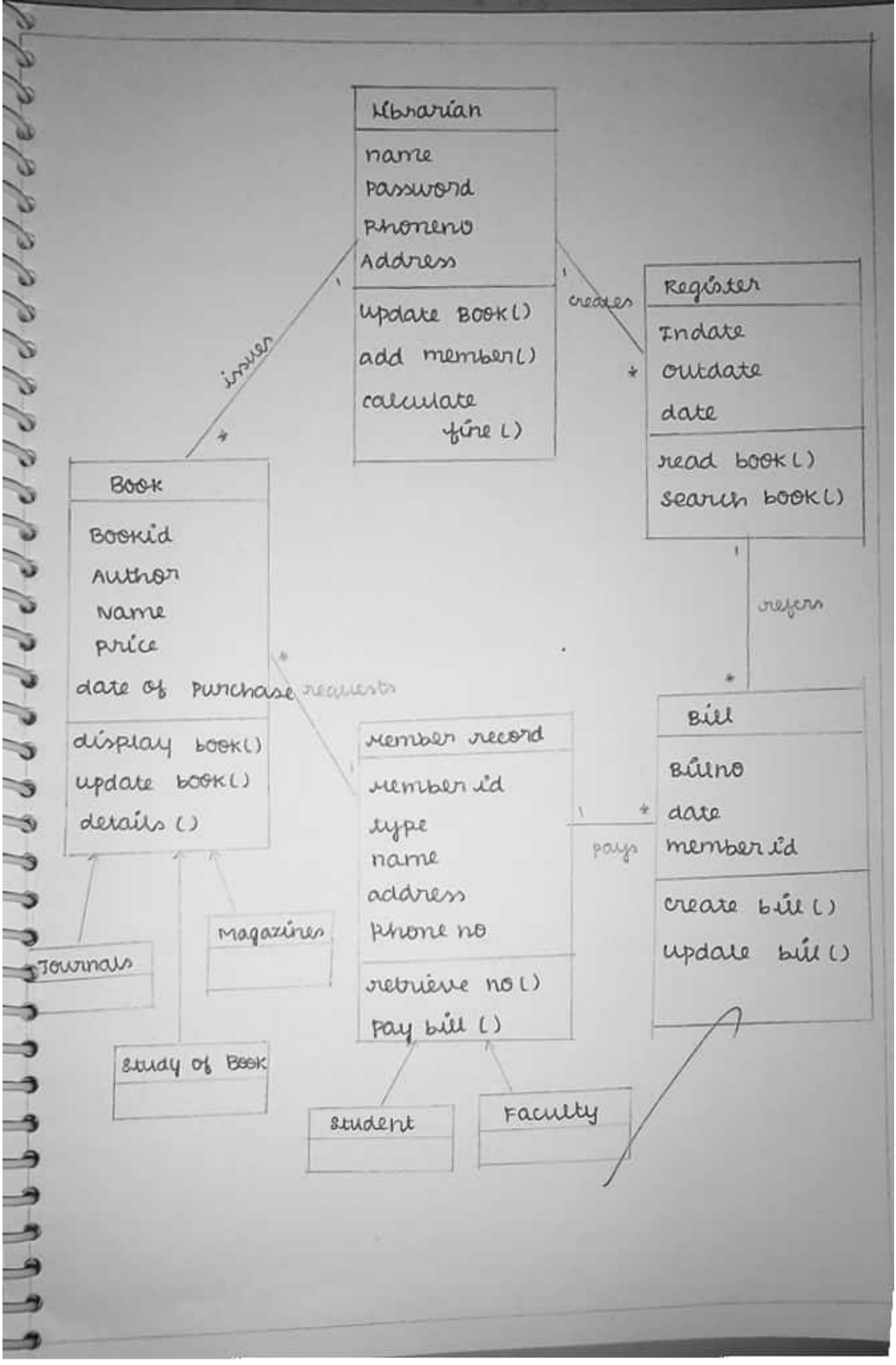
The register class can have the attributes such as indate, outdate, date etc. It can also have operations such as read book(), search book() etc... It has many to one cardinality with member record

MEMBER RECORD:

This class have attributes such as memberid, type, date of membership, name, address, phoneno It can have operations such as retrieve member(), pay bill() etc. It has one to many cardinality with book class This class includes student and faculty.

BILL CLASS:

This class have attributes such as billno, date, memberid. It can have operations such as create bill(), update bill() etc., and



has many to one cardinality book with member record.

RESULT:

Thus the class diagram for library management system was done successfully.

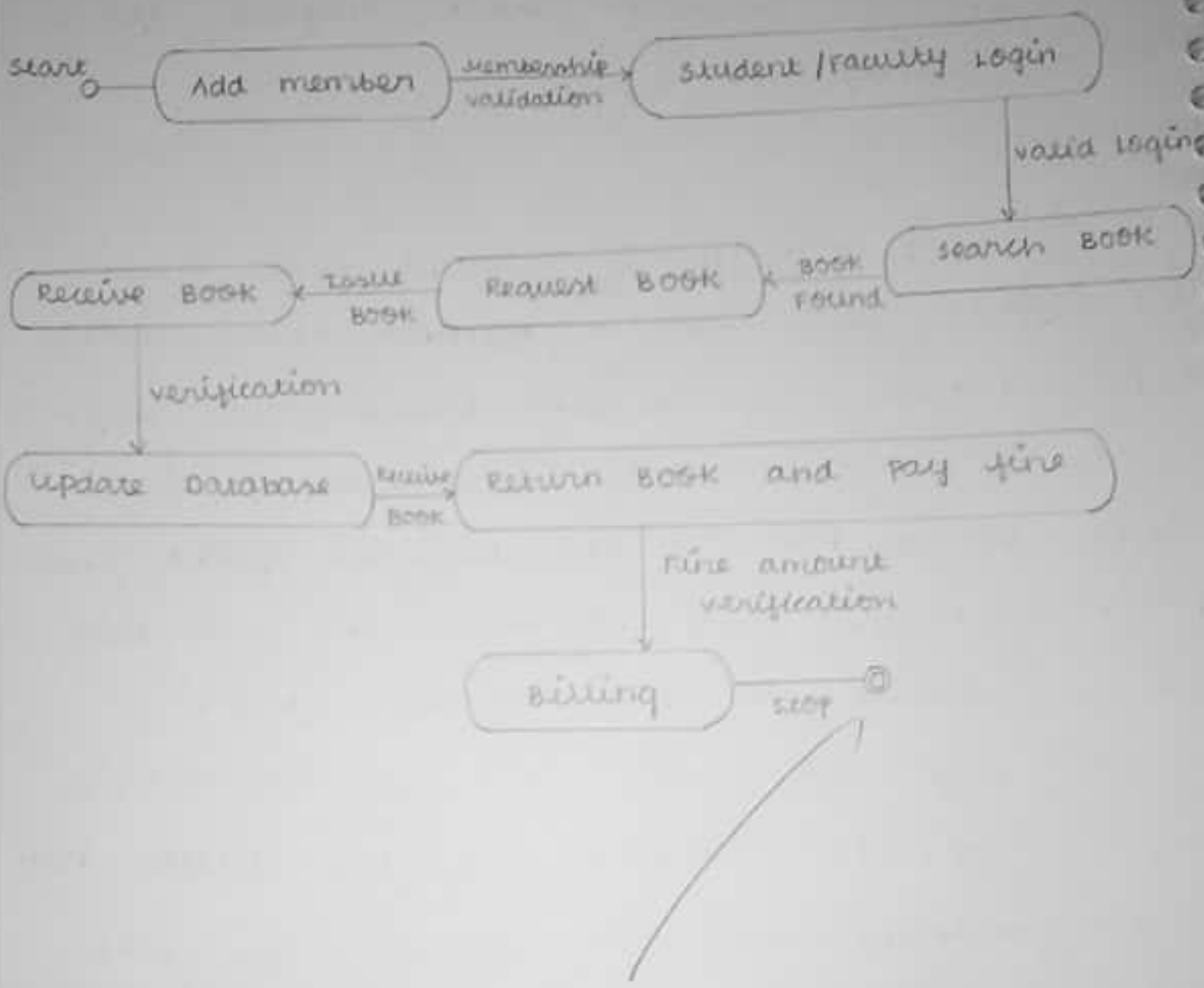
STATE CHART DIAGRAM :

AIM :

To draw a state chart diagram for library management system.

PROCEDURE :

Initially nothing is selected. After that the system will add a member. After membership validation, the student / Faculty will login If it is a valid login, the member will search for a book. If the book is found then the book request will be made and the book will be issued to the member. After receiving the book the membersystem will be verified and the database will be updated and if the member has not return the book within the due date the fine amount will be calculated and after verifying the fine amount the librarian will provide the bill and the student / faculty will logout.



RESULT:

Thus the state chart diagram for library management system was designed successfully.

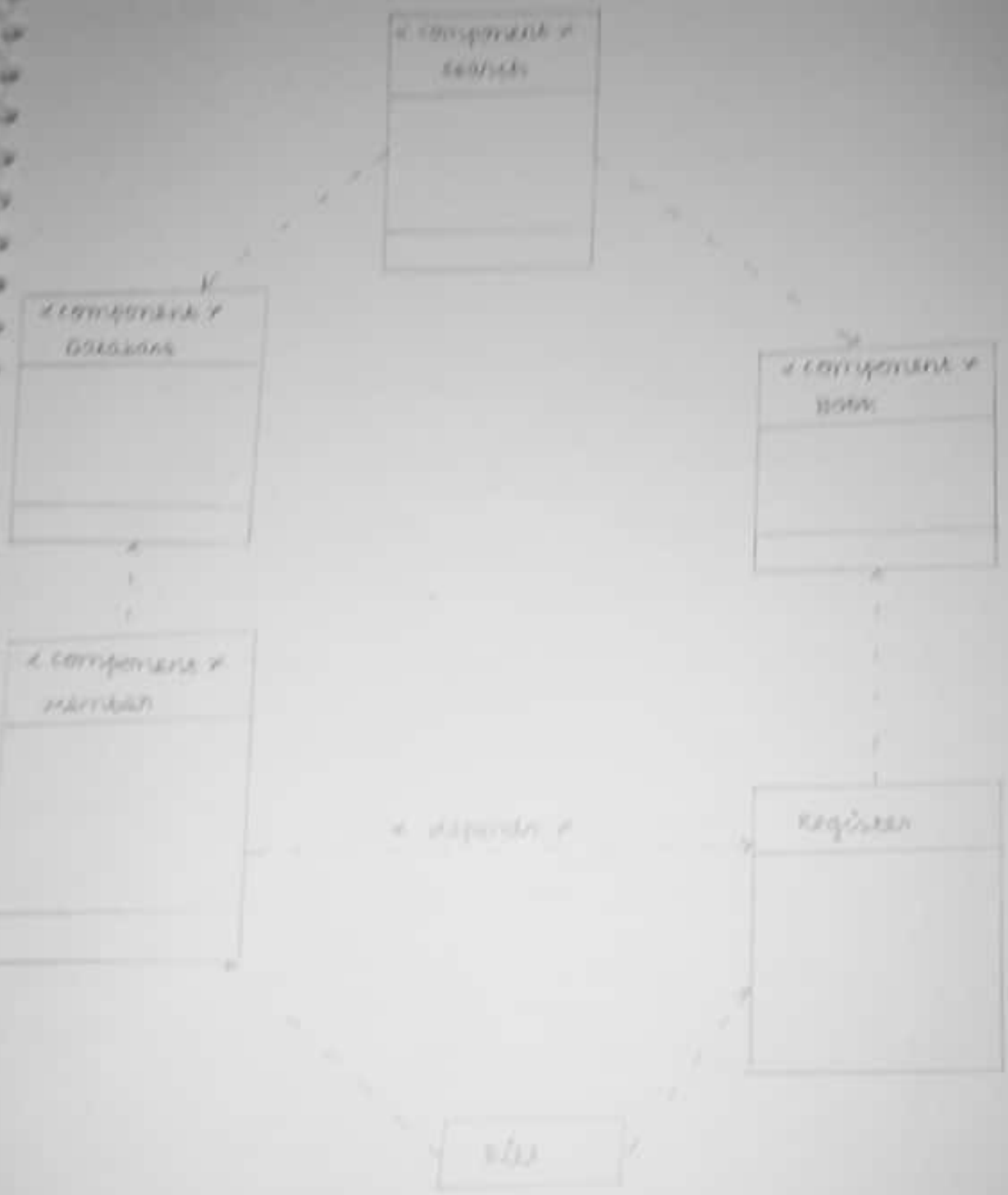
COMPONENT DIAGRAM :

AIM :

To draw or design the component diagram for library management system.

DESCRIPTION :

In the library management system, search database, book and member are components Here the register is a package class. package is nothing but grouping the model elements The member will login / register and search for a book and it will process the stored details in database and if the particular book is available the librarian will issue the book After the book is received the librarian will calculate the due date and if the book is not returned to the library then the fine amount will be calculated and the bill will be issued by the librarian



RESULT:

Thus the component diagram for library management system was designed successfully.

DEPLOYMENT DIAGRAM:

AIM:

To design or draw the deployment diagram for library management system.

DESCRIPTION:

Deployment diagram is nothing but it shows the configuration of rurdime processing nodes and the components that live on them. They are often used to model the static deployment view of a system in the library management system, the user librarian and the database will be the main components. The user, librarian and the database will do the following process involved in the library management system

RESULT

Thus the data flow diagram for library management system was done successfully