Library Management System

Overview: The User can login and use the service and can only Access purchased books. The user can buy or rent new books.

General description:
1) User
2) User can manage books in their inventory
3) User can also sell books in Library

Classes: (Methods)
1) User -> selectbooks(), name(), LibraryID()
2) Books -> Pages(), Modules(), volume(), Bookname(), Author()
3) Author -> Authordetails()
4) Payment -> SelectPayment()
5) selectCategory -> BookCategory()
6) Rentor purchase -> Payment(), Rent(), Purchase()
7) Library Database Access -> Username()
8) Library staff -> LibraryID()

Functional Requirements :-

1) Registration : User has to scan his ID to system for further Authorisation

~~2) Recreation :~~

2) Access books : User can be able get his required books and can also select volumes and edition

3) Library Manager Access : The User ID, LibID and books that have been purchased will be stored to Managers Database

4) Recommendation : The system should recommend User new books depending on the topic of interest

5) Membership plan : User can purchase the monthly or weekly or yearly membership

6) Catalog : The book will be arranged according to the details

Interface Requirements :

Software Interface : software uses API's to communicate with other systems :

User Interface : User must made be accessible with different plans with different number of accesstime & resource. A such interface for library management system manages member data, history section to find books,

Communication interface : SMS / Email / integration for registration and payment Confirmation..

Non-functional requirements :-

1) logging time & the Access time:

2) Security requirements :- Like unauthorized Access of books by user and unwanted Access should be avoided and handled

3) Scalability requirements :- All books should be available to ~~other~~ all users i.e after payment.

4) Reliability : User should be able to select required books easily

5) Should have less response time

6) App compatibility

Project Estimation :-

1) Books cost : 1000000$

2) Programme cost : 10$ per LOC , 130000 LOC

Total cost => 13,00,000 $

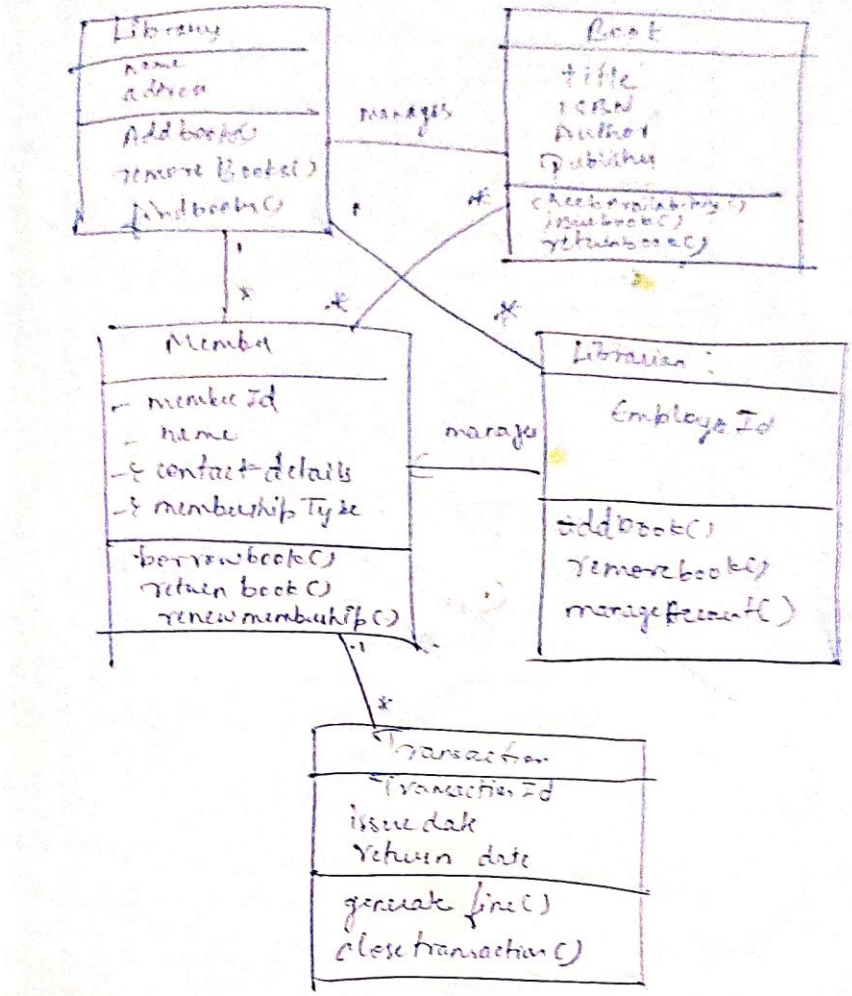
Overall cost : 1000000 + 1300000

-> 1,400,000$

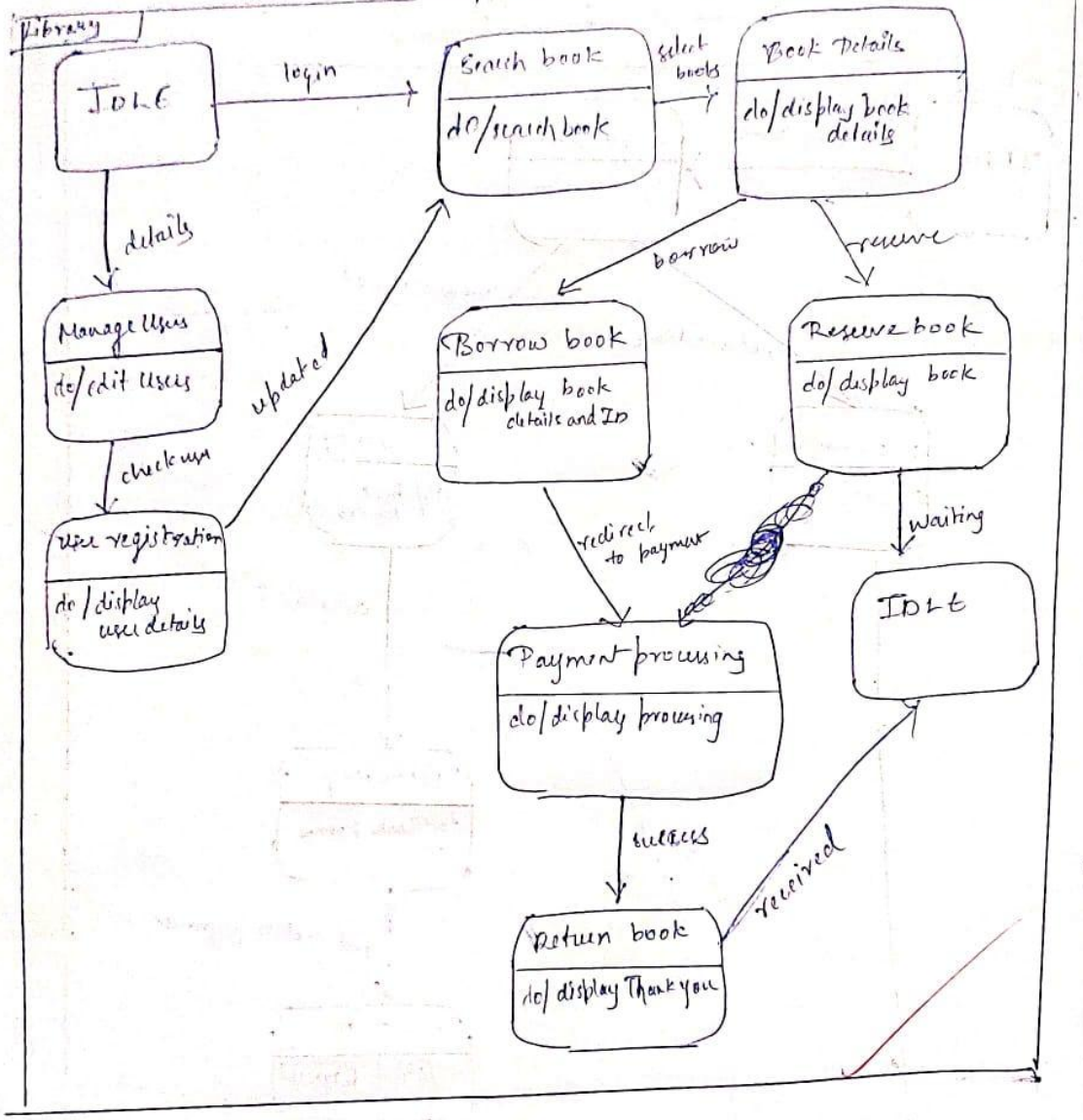
1.4m$

Sept 30/9/24

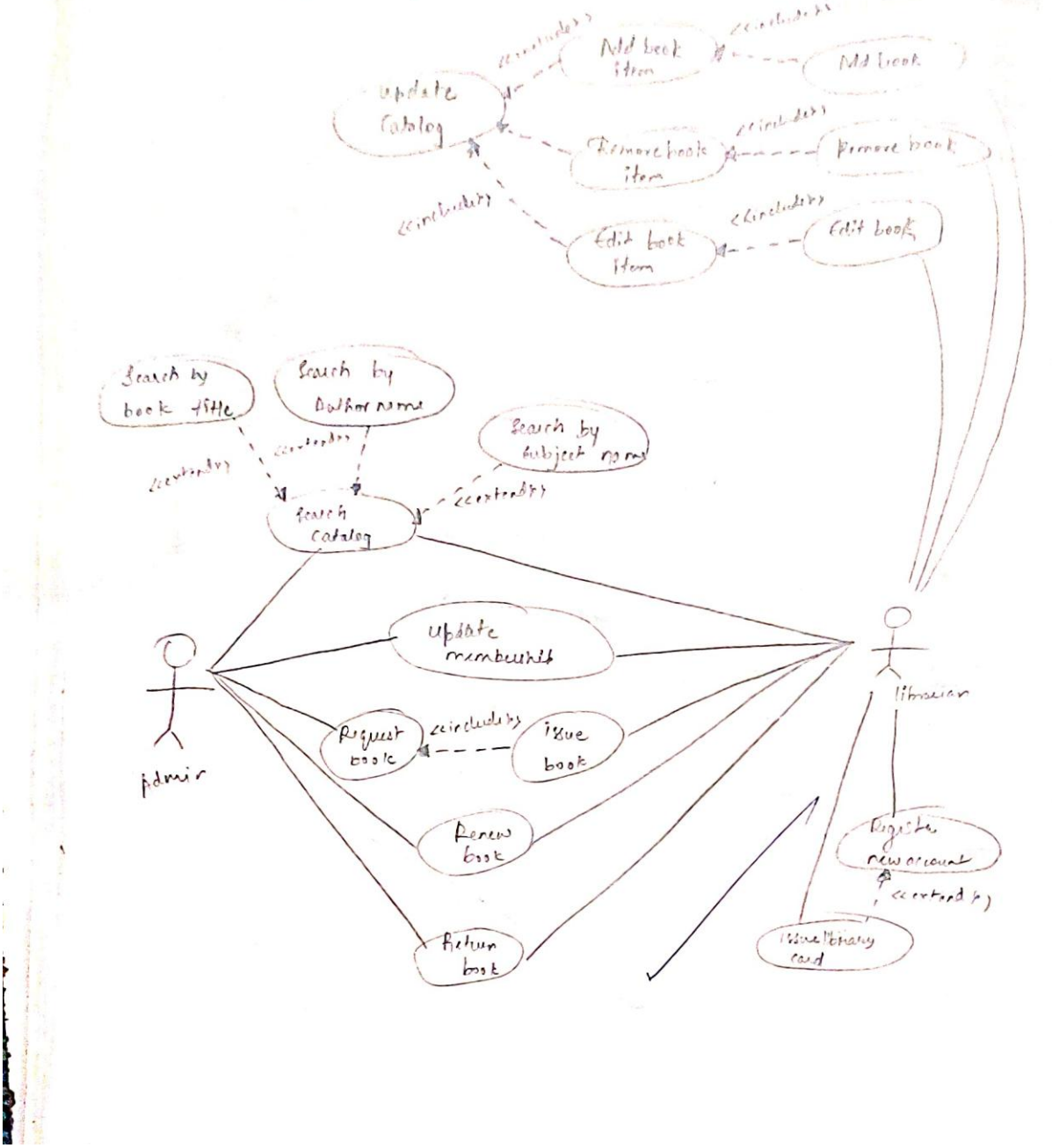
Library management System

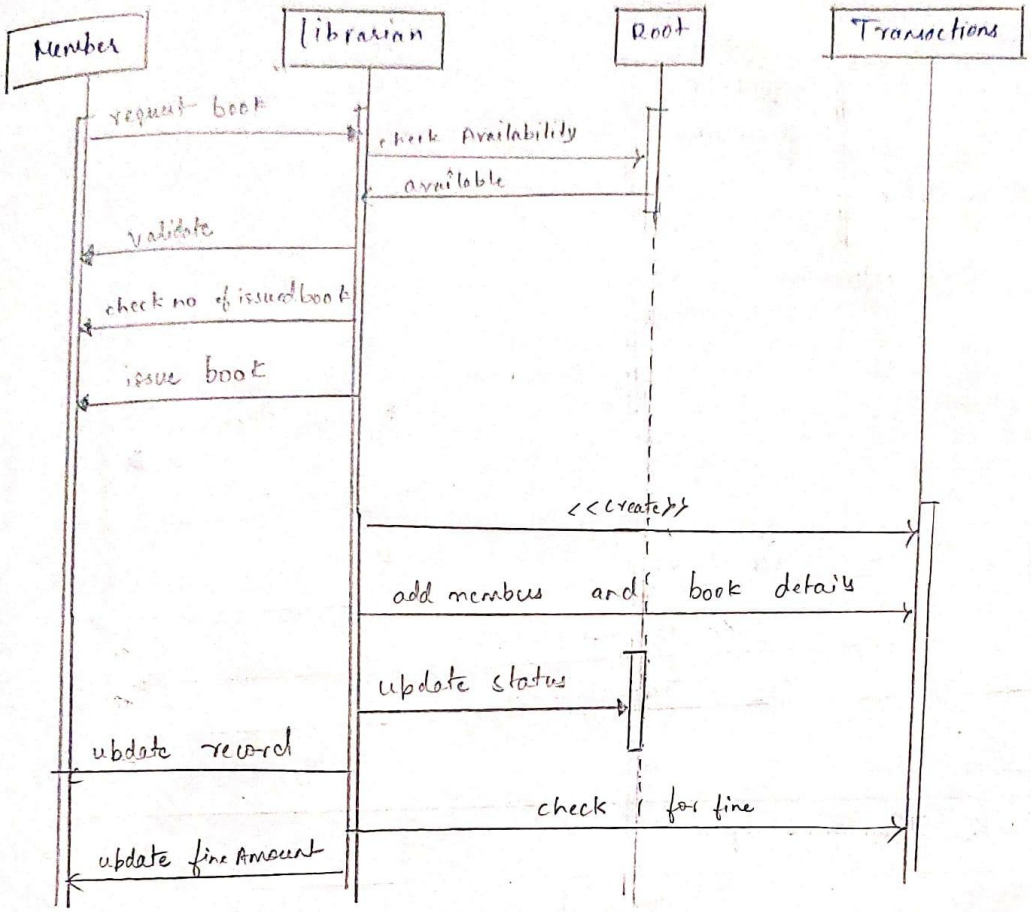


State diagram for Library Management System



Library Management System



Sequence diagrams

1) Library Management System