Online Library Managment System

FYP- Proposal

By

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2021

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 General Information

Information to be provided in this section gives a specific name to the project as well as pertinent information about the personal involved.

Project Name: online Library Management system   *Starting Date:*

12/27/2021

Controlling Agency: *Final Date:*

Prepared By: *Authorized by:*

Tanzeela/Javeria

1.2 Purposes

The online library management system is an automated library system that handles the various functions of the library.Library managment system software helps in different ways by providing students the facility to learn,gather resources, promote group learning and improve knowledge and skills.The online library management system is used to overcome the entire problem which they are facing currently.

1.3 Document Conventions

Entire document should be justified.
  - ➢ Convention For Main title
    - Font Face :Times New Roman
    - Font Style : Bold
    - Font size :18
  - ➢ Convention For Sub Title
    - Font Face :Times New Roman
    - Font Style :Bold
    - Font Size :14
  - ➢ Convention For Body
    - Font Face :Times New Roman
    - Font Style :Bold
    - Font Size :12

1.4 Project Objectives

The project aims and objectives that will be achieved after completion of this project are discussed in this topic.The project objectives are as follows.

- ➢ Online book reading.
- ➢ A search column to search availability of books.
- ➢ Facility to download required book.
- ➢ Student login page where student can find book issued by him/her and date of return.
- ➢ To design a user friendly graphical user interface which suit the users.

The external oversight committee must approve the project performance measurement plan.

Agency Goals	Project Objectives
Align core library activities	Align and strengthen capabilitiesna cross the library to achive optimum operational effiences while providing enhanced services.
Develop user – centered content	We will develp content in a variety of formats and media to enhance the usability and accessibility of the library's collections.
Modernize operations	We share information,apply best practies, and use data across the library to drive user centered enhancements that will deliver the highest returns while balancing staff workloads.

1.5 Intended Audience and Reading Suggestionshese

documents are intended for people relating to different walk of IT, such as developers,project managers,marketing staff, users, testers, anddocumentation winters and quality assurance staff database developer.

1.6 Project Scope

The Online Library Management System is basically updating the manual library system into an internet –based application so that the user scan know the details of their accounts, availability of the books and maximum limit for borrowing. The project work as a complete user interface for library mangement process and library usage from ordinary users.

- ➢ Online Library Management system is website used to provide information regarding the book in a library to the user.
- ➢ It can be accessed by unlimited number of users.
- ➢ Each user will be assigned a different set of permissions of the Library including basic searching, online reading, book issued
- ➢ It will save users time and effort.
- ➢ A student can search book on any subject or author.
- ➢ All common publisher, author and book record is stored in master table.
- ➢ It eliminates data redundancy.
- ➢ Faster retieval of information about the desired book.

2. Overall Description

Online Library Management System (ONMS) is an Automated Library System that handles the various functions of the library. It provide a complete solution to the library management software. The online library management system is classified into two parts Bar code system and RFID system. Library plays an improtant role in all schools and colleges,no educational institution can exist without library Administration software. It is an important part of every school and college and it helps the librarian to keep records of available books as well as issued books.

Online Library Management System software helps in different ways by providing students the facility to learn gather resources, promote group learning and improve knowledge and skills.

2.1 Product Perspective

Online Library Management System will take care of the current book detail at any point of time.The book issue, book return will update the current book details automatically sot ha user will get the update current details.

2.2 Product Features

The online library management system provides online real time information about the books available in the library and the user information. The main purpose of this project is to reduce the manual work.This software is capableof managing book issues,returns, calculating/managing fine,Generating various reports for Record-keeping according to end user requirements.The librarian will act as administrator to control members and manage books.The member's status of issue/return in maintained in the library database.

The proposed application shall have the following modules or function.
- ➢ Add new books
- ➢ Issue book date
- ➢ Return book date
- ➢ View Book list
- ➢ Online reading books

2.3 User Classes and Characteristics

The system provides different types of services based on the type of user (user/admin). The admin will be acting as the controller and he will have all the privileges of and administrator the menber can be student who will be accessing the online library .

The futures that are avaliable to the admin are :-
- ➢ A admin can issue a book to the user.
- ➢ Can view the different categories of books available in the library.
- ➢ Can view the list of books available in each category.
- ➢ Can take the book returned from the student.
- ➢ Add books and there informations to thed database.
- ➢ Can check the report of issued books.

    ➢ Can access all the accounts of the users.

The feathures that are available to the users are :-

    ➢ Can view the different categories of books available in the library.

    ➢ Can view the list of books available in each catrgory.

    ➢ Can own an account in the library.

    ➢ Can search for a particular book.

    ➢ Can view the book issued to him.

2.4 Operating Environment

The produc twill be operating in a window environment .The Online Library Management System is a website and shall operate in all famous browsers, for a modle.we are taking Microsoft internet,Explorer,Google chrome , Mozila firefox and opera higher version.The only requirement to use this online product would be the internet connection.

The Admine-side components of the software system must operate within a Window operating system environment.

The Users-side components of the system must operate within Commons web browser environnements Development environment is as follows. Final decision on the development environment shall be taken during the design phase.

    ➢ PHP (Codeigniter framework)

    ➢ Database: Mysql

    ➢ Web Server: Xampp

    ➢ Text Editor: Sublime

    ➢ Browser: Google Chrome

2.5 Design and Implementation Constraints

    ➢ **Regulatory Policies:** The are no regulatory policies.

    ➢ **Hardware Limitations:** There are no hardware limitations.

    ➢ **Parallel Operation:** The are no parallel operations.

    ➢ **Control Function**: There shall be no control function.

    ➢ **Safety and Security Considerations:** The Password and a valid username are security. Data protection shall be satisfied by the backup process at the server side.

    ➢ **Reliability Requirements:** Total number of bugs in the system shall not exceed 1% of the total line number of code. Expect connection reliability which is out of range

2.6 User documentation

Any user of the software system is the target audience for user documentation generated about the software system. A range of short document types (e.g., guidelines, tutorials, frequently asked questions) in HyperText Markup Language (HTML) and/or Portable Document Format (PDF) format must describe the use of the software system.

2.7 Assumptions and Dependencies

The following assumptions are made with regard to this project:
- ➢ The coding should be free.
- ➢ The system should be user-frriendly so that it is easy to use for the user.
- ➢ The information of all user,books and libraries must be stored in a database that is accessible by the website.
- ➢ The system should have more storage capacity and provide fast access to the database.
- ➢ The Online Library System is running 24 Hours a day.
- ➢ Users may access from any computer that has internet browsing Capabilities and an internet connection.
- ➢ Users must have their correct usernames and passwords to enter into their online accounts and do actions.
  The dependencies are
- ➢ The specific hardware and software due to which product will be run.
- ➢ On the basis of listing requirement and specifications the project will be developed and run.
- ➢ The end users(admin) should have proper understanding of the product.
- ➢ The system should have the general report stored.
- ➢ The information of all the users must be stored in a database that is accessible by the library system.
- ➢ Any update regarding the book from the library is to be recorded to the database and the data entered should be correct.

3. System Features

3.1 Database-storage

Description and priority proposed database is intended to store, retrieve, update and manipulate information related to books which include.

- ➢ Books availability
- ➢ User information
- ➢ My Account
- ➢ Calculation of fines

Responses for adminstrator

The adminstrator can login and logout. When the administrator logs into the library system. The system will check for validity of login. If the login and password are validity, the response to his action is the administrator will be able to modify,view and deleting and all other functions that can be performed on the database.

3.2 Functional Requirement

This section gives the list of functional and non functional requirements which are applicable to the online library management system.

3.2.1 Interface Requirement

This section describes how the software interface with other software products or users for input or output.
Describe how this product interface with the user.

GUI

Describes the graphical user interface if present. This section should include a set of screen dumps or mokcups to illustrarte user interface features.

1. Description

The user interface must be customized by the administator.

2. Criticality

This issue is essential to the overall system.all the modules provided with the software must fit into this graphical user interface and acomplish to the standarddefined.

3. Technical issues

In order to satisfy this requirement the design should be simple and all the different interface should follow a standard template. There will be the possibility colors and image, plus switching between interface with the minimum impact for the user.

4. Risks

To reduce the circumstances under which this requirement might not able to be satisfied,all the designers must have been developed web sites previously and they must be aware of html restriction and cross browsers implementations before starting the entire design team will be trained in basic html development and macromedia firework, this tool will be used instead of photoshop.

5. Dependencies with other requirement

All user interface should be able to interact with the user management module and a part of the interface must be dedicated to the login/logout module.

4. External Interface Requirements

This section of the SRS describes the interface requirements for the system. Requirements for user, hardware, software, and communication interfaces are defined.

4.1 User Interfaces

This subsection of the SRS defines the UI requirements for the OLMS

4.1.1 Online Library Management System

The UI for the OLMS must comply with the requirements of the application.

4.1.2 Online Library Management System

The user must be presented with a login page when accessing any page.The software provides good graphical interface for the user and the administrator can operate on the system, performing the required task such as create, update, viewing the details of the book.

- ➢ It allows user to view quick reports like book issued/returned in between particular time.
- ➢ It provides stock verification and search facility based on different criteria.
- ➢ The user interface must be customizable by the administrator.
- ➢ All the modules provided with the software must fit into this graphicaluser interface and accomplish to the standard defined.
- ➢ The user interface should be able to interact with the user management module and a part of the interface must be dedicated to the login/logout module.

4.2 Hardware Interfaces

- ➢ Operating system : window 10
- ➢ Hard disk : 40GB
- ➢ RAM : 256MB
- ➢ Processor : pentium(R)Dual-core CPU

4.3 Software Interfaces

The software packeg is developed using HTML,PHP,CSS,JAVASCRIPT,BOOTSTRAP as front end which is sported by the in microsoft window operating system. MySQL server as the back end to store the database.

4.4 Communications Interfaces

The customer must connect to the internet to access the website :

- ➢ Dialup Modem of 52 kbps
- ➢ Broadband internet
- ➢ Dialup or Broadband connection with a internet provider.

5. Other Non-functional Requirements

This section of the SRS describes the non-functional requirements for the software system. Performance, reliability, availability, security, and maintainability requirements are included. In addition, business rules are defined.

5.1 Performance Requirements

The proposed system we are going to develop will be used as the chief performance system within the different country of the world which interact with the students and users. Therefore , it is expected that the database whould perform functionally all the requirements that are specified by the user

5.2 Safety Requirements

The documents may get crashed at any certain time due to various or operating system failure. Therefore, it is required to take the database backup so that the database is not lost.proper ups/inverter facility should be there in case of power supply failure.

5.3 Security Requirement

Some security requirement are as following
 - System will use secured database.
 - Normal users can just read information but they cannot edit or modify anything except their personal and some other information.
 - System will have different types of users and every user has access constraints.
 - Proper user authentication shoula be provided.
 - No one should be able to hack user's password.
 - There should be separate accounts for admin and members such that no member can access the database and only admin has the rights to update the database.

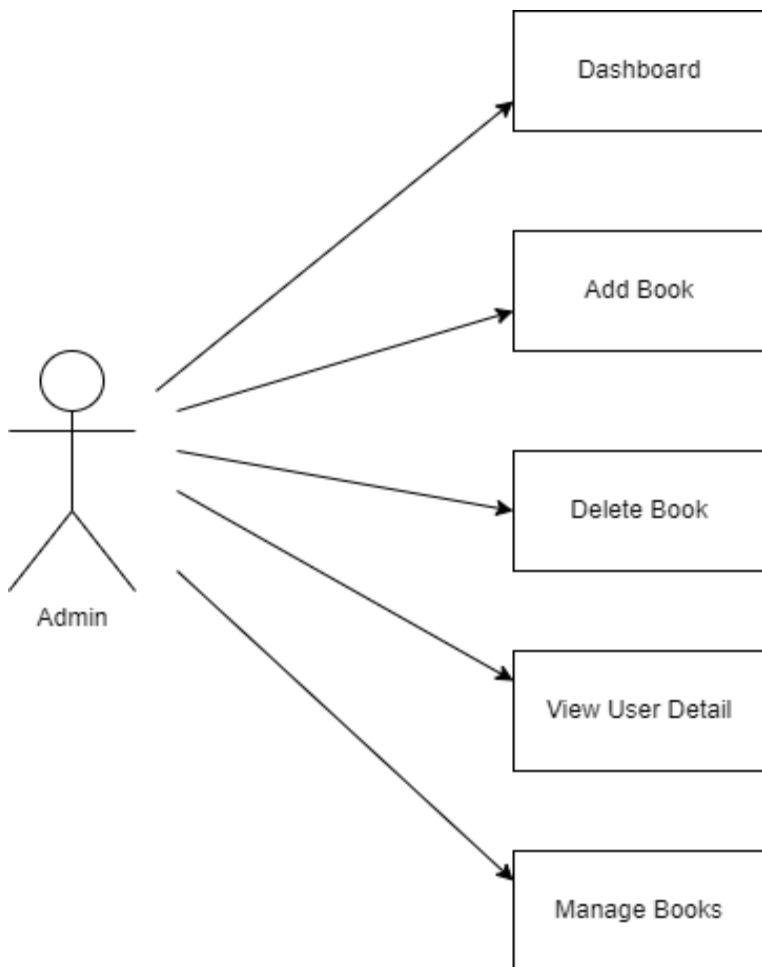## 5.4 Software Quality Attributes

The Quality of the database is maintained in such a way so that it can be every user friendily to all the user of the database.

6. WBS Project Management

Online Library Management System

Admin
- admin dashboard
- book categories
- manage author
- delete and add book
- update the detail
- search student by using their student ID
- view student detail change own password

User
- login
- student can view the dashboard
- update personal profile
- view issue book
- book return date time
- change their password
- recover personal password

Use Case Diadram

Admin Diagram

User Diagram

Class Diagram

book
+book ID
+author
+ name
+ track no
+ status
+edition
+ date issue
+display book

Admin
+ name
+ password
+ search book
+ issue book
+ calculate fine
+ return book

Transaction
+ trans ID
+ member ID
+ book ID
+ date issue
+ due date
+ create transaction()
+ delete transaction()

issue

create

request

Novels

study book

Magazine

User Record
+ user ID
+ name
+ address
+ max book limit
+ phone no
+ no book issue
+ increase book issued()
+decreased book issue()

Object Diagram

object diagram

Admin

ID =1

first name=Tanzeela

last name =Noreen
phone no =030...........
address = multan

user

ID =1

user name= javeria
address = Lahore
phone no = 030.......
status employee

Book

book issue/book return

book ID

book name =
book author name =
book edition =
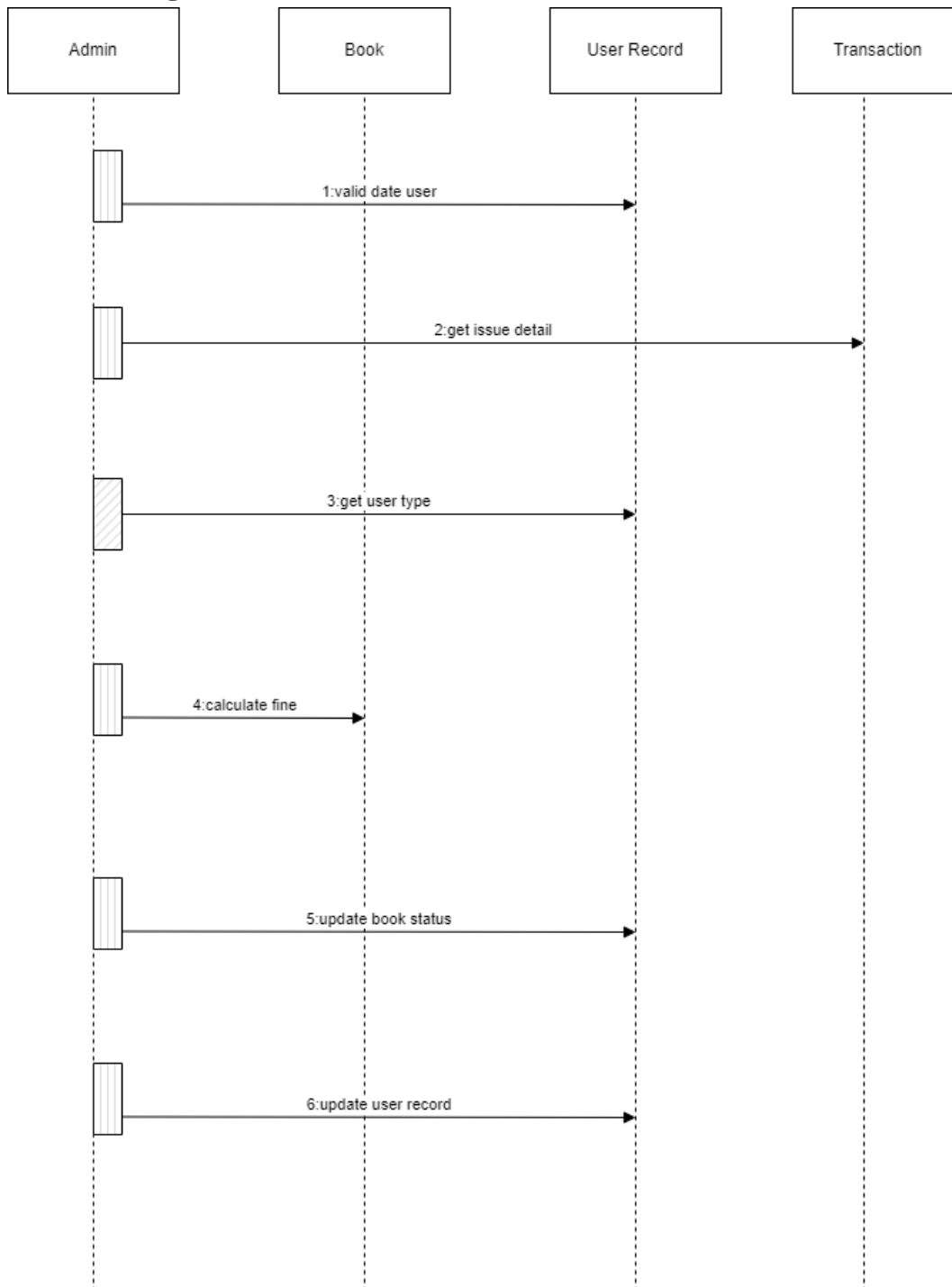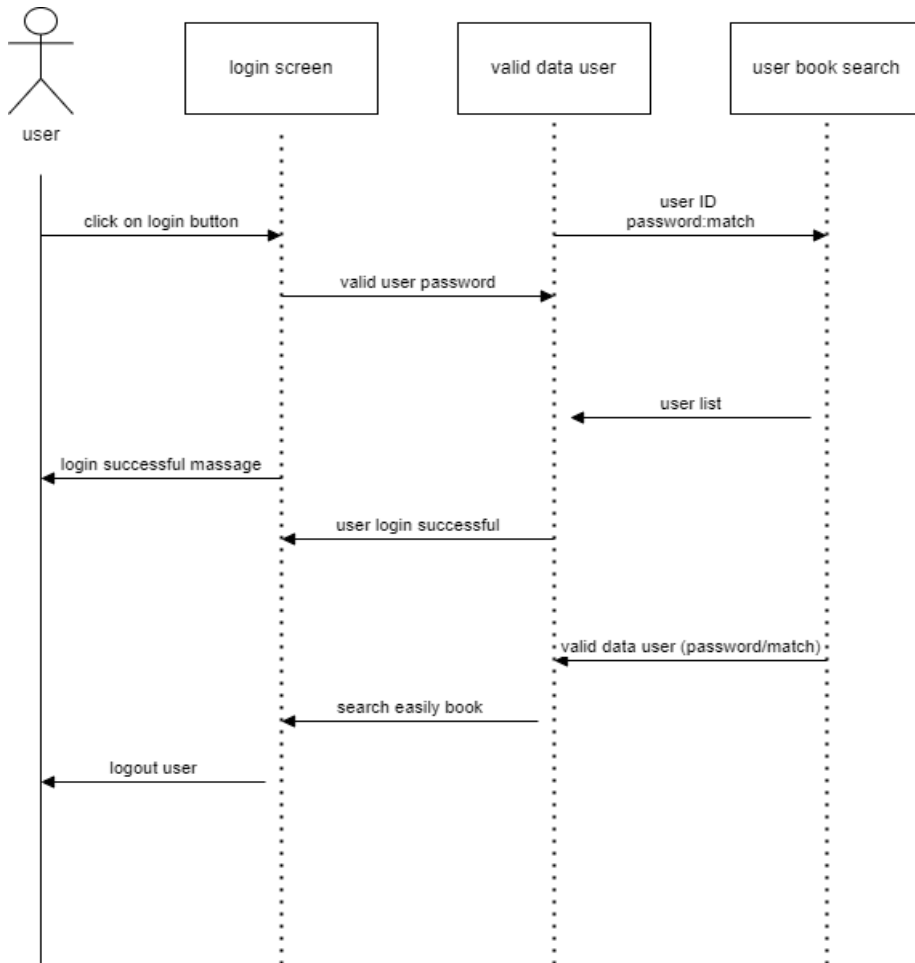book status =
issue date =
return date =

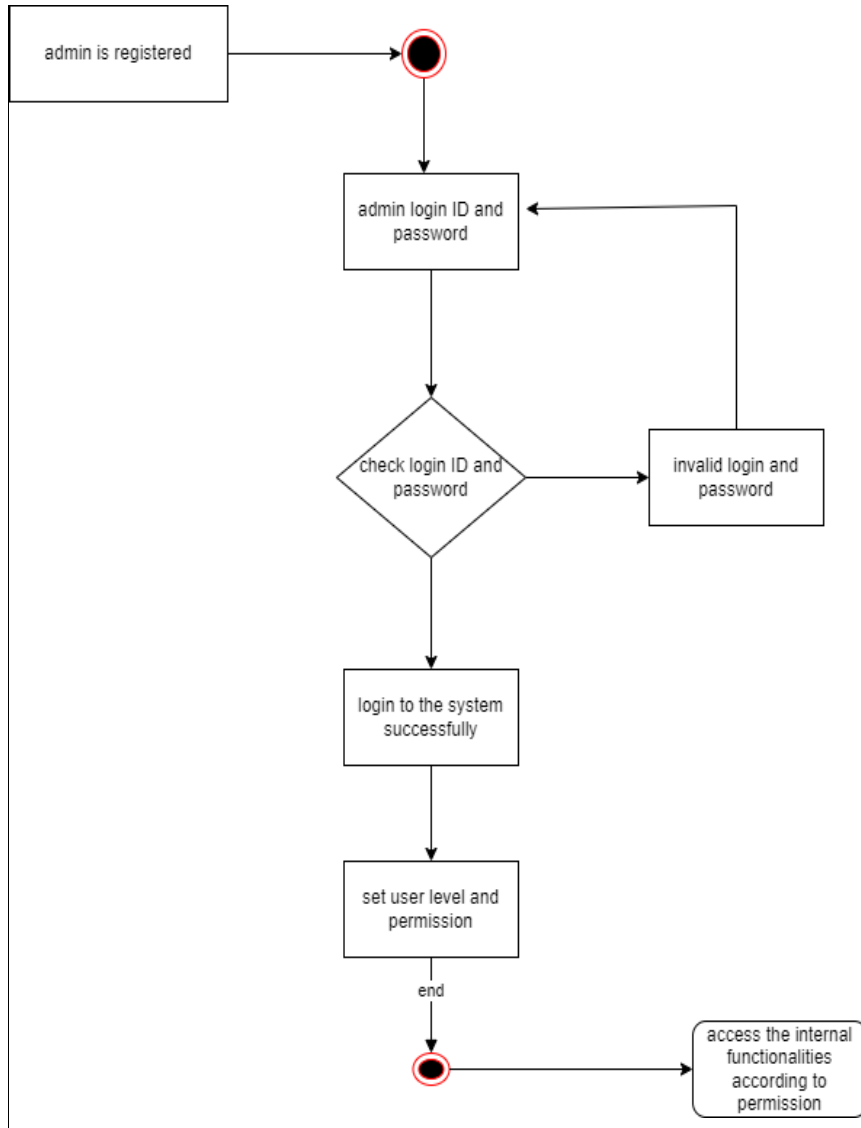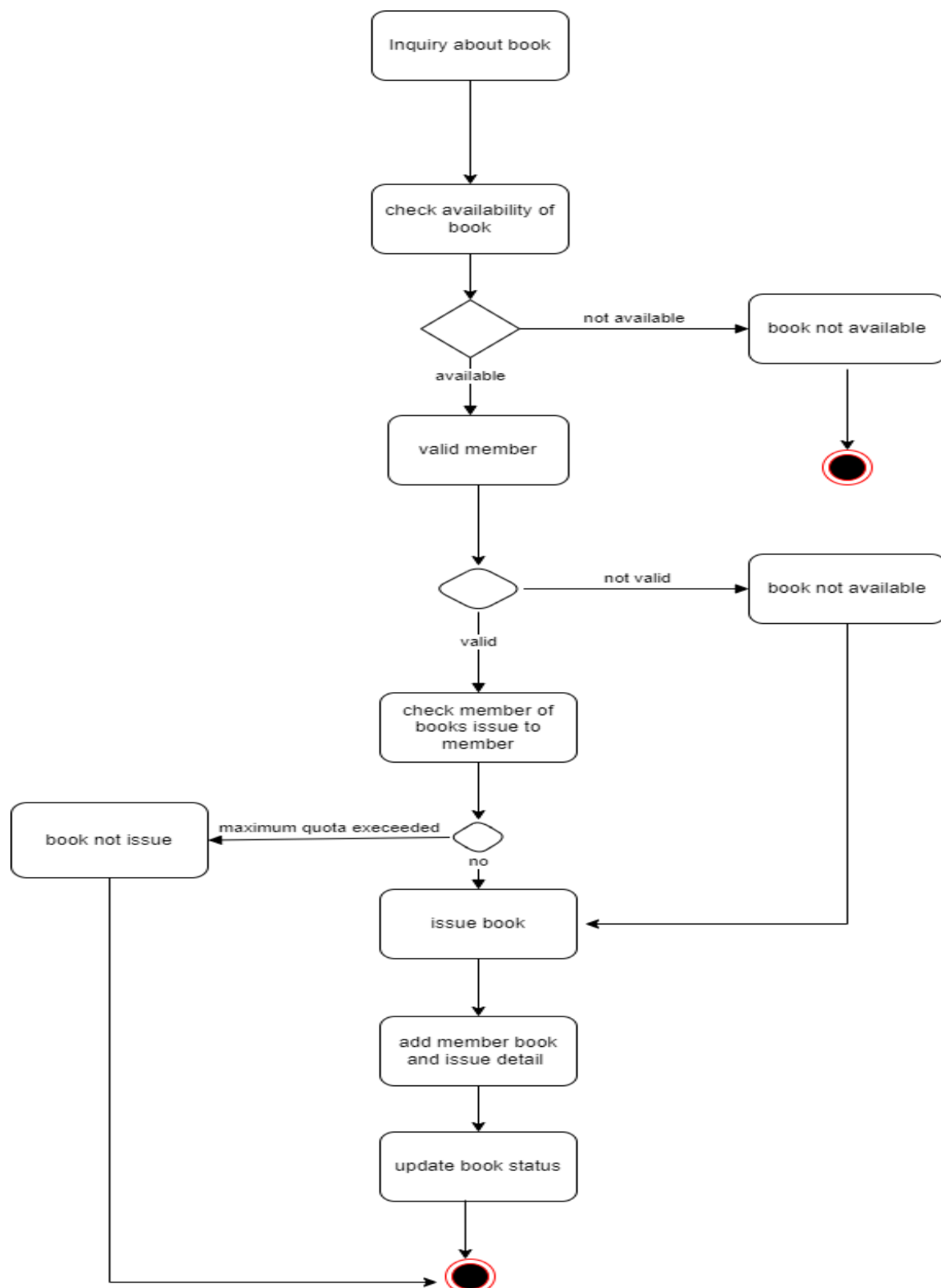# Sequence Diagram
Admin Diagram

User diagram of sequence

Activity Diagram

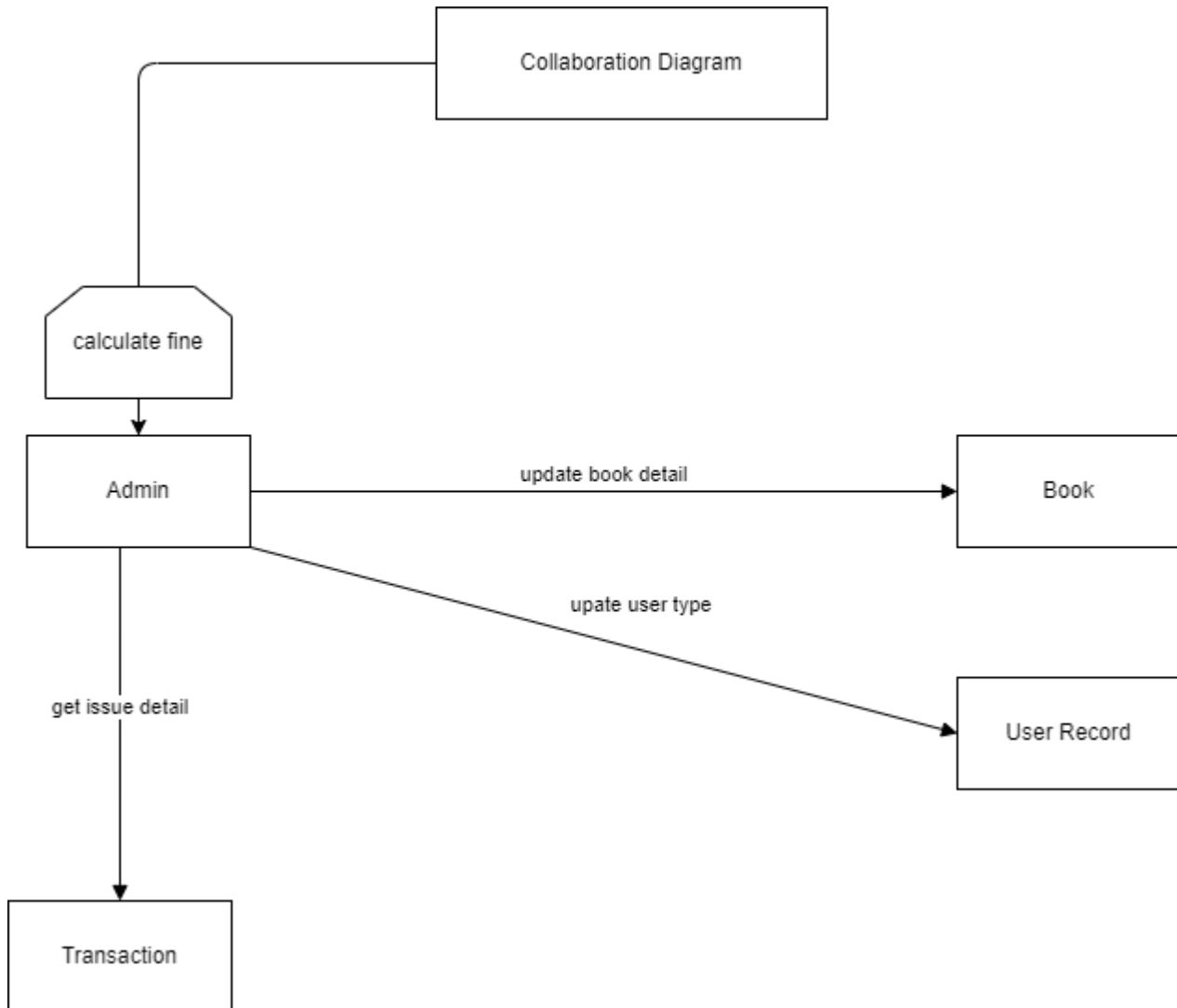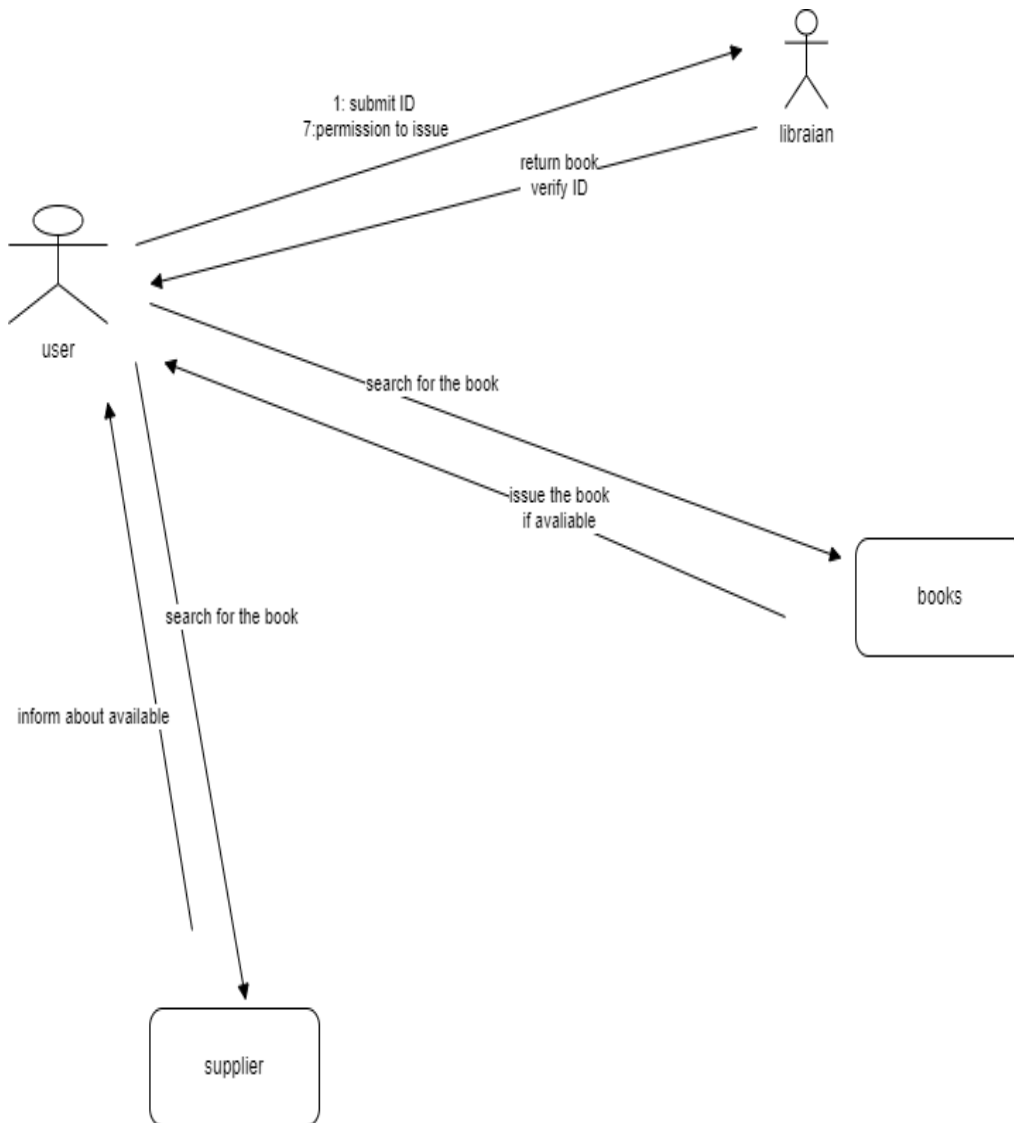## Admin Diagram :

User Diagrm :

Collebration Diagram

Admin diagram

User Diadram

1: submit ID
7:permission to issue

librarian

return book
verify ID

user

search for the book

issue the book
if avaliable

books

search for the book

inform about available

supplier

State Transcation Diagram

Admin Diagram :

```
┌─────────────────────┐
│     Admin login     │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│  update book status │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│ add and delete book │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│   check the user    │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│    manage author    │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│    admin logout     │
└─────────────────────┘
```

start

user/faculty login

username and password

search book

found book

request book

request librarian for book

receive book

return book back

return book and pay fine

pay the fine

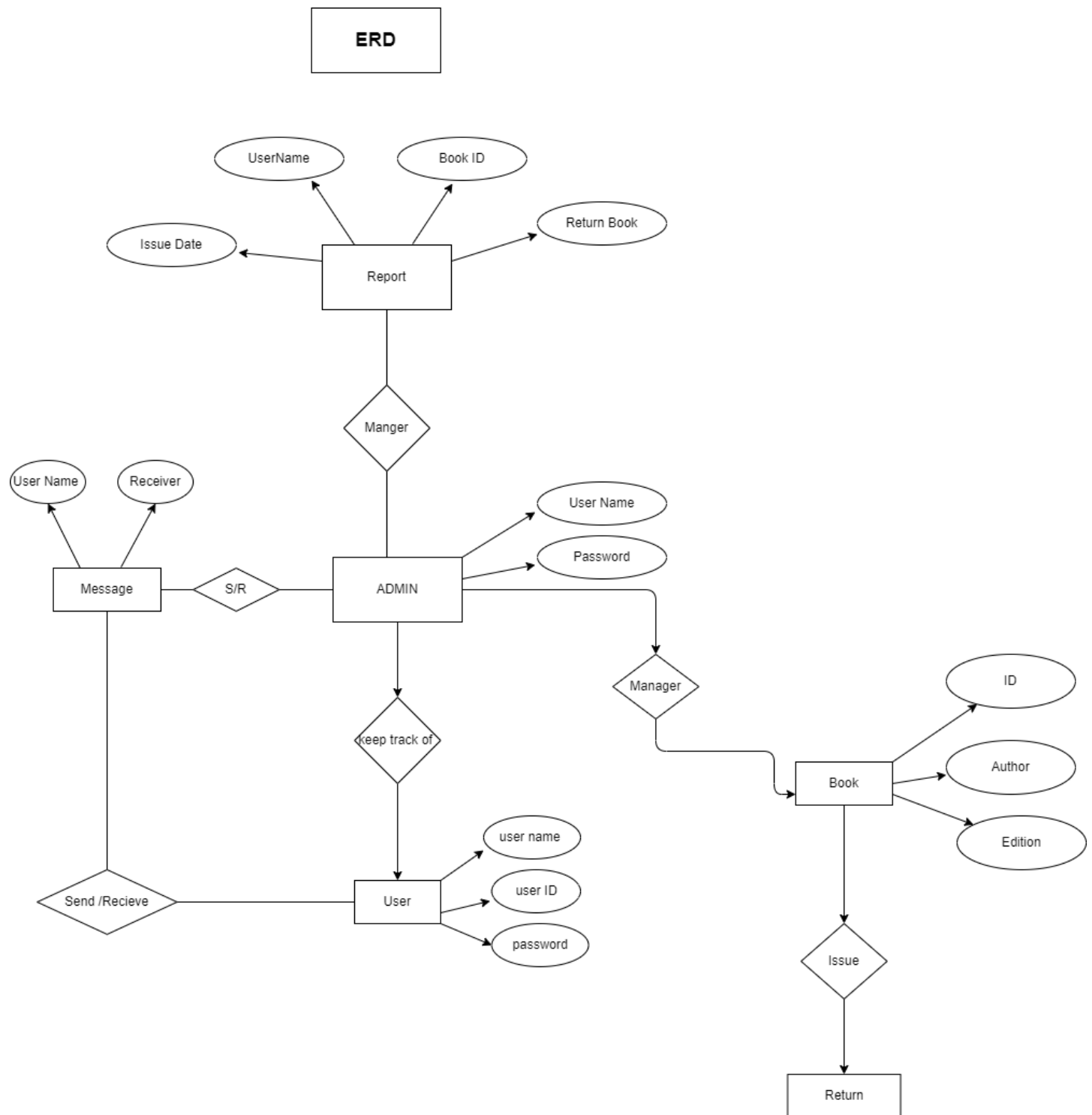profile update and signout

end
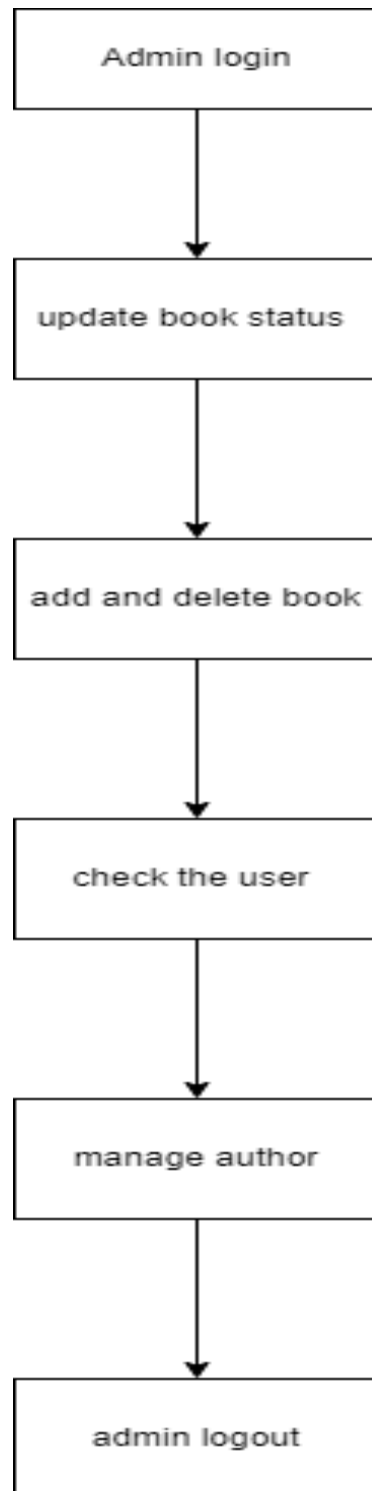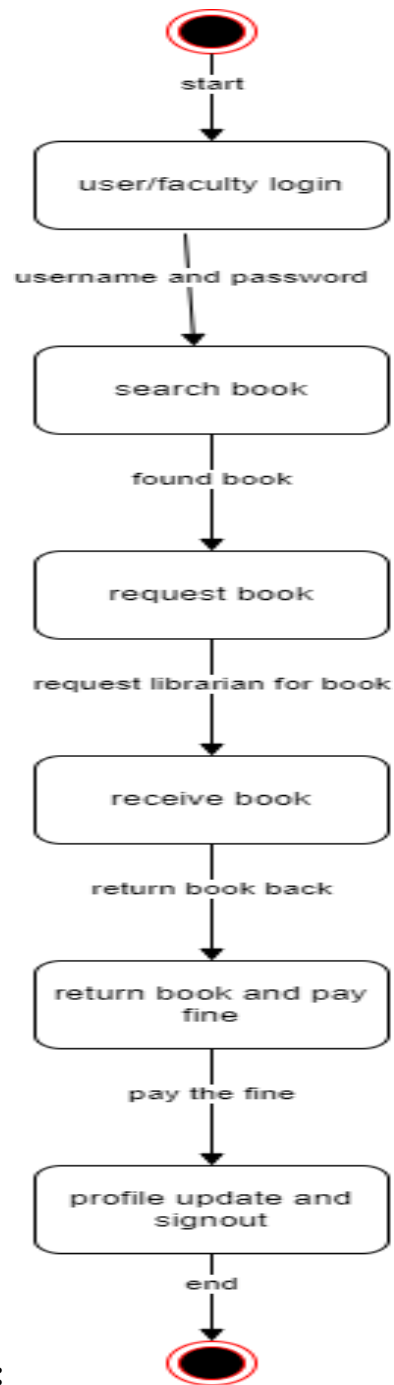
User Diagram :

ERD

7. Tools & Technologies

7.1 Programming Languages

PHP, MySQL ,HTML, JAVASCRIPT,

7.2 Databases/Data storages

MySQL SERVER

7.3 Operating System

Window 10

Appendix A: Glossary

CMS   Cargo Management System

ERD   Entity Relationship Diagram

DFD   Data Flow Diagram

For Approval of any two Consultant Teachers

Teacher Consulted	*Teacher Consulted*
Name: _Maqbool Hussain_____.	*Name: _Muhammad Zubaid_____.*
Designation:lecturer of Computer science .	*Designation:lecturer of Computer science.*
Comments:_____	*Comments:_____*
_____	_____
_____	_____
_____	_____
_____	_____
Signature: _____	*Signature: _____*