Title : Library Management System.

Date : 14/3/24

Page No. : 15

A library management system is software that is designed to manage all the functions of a library. It helps librarian to maintain the database of new books and the books that are borrowed by members along with their due dates

This system completely automates all your library's activities the best way to maintain, organize and handle - countless books systematically is to implement a library management system software.

A library management system is used to maintain library records. It traces the records of the no of books in the library, how many books are issued or how many books have been returned or renewed or late fine charges etc.

You can find books in an instant, issued. reissue books quickly and manage all the data efficiently and orderly using this system. The purpose of library management system is to provide instant and accurate data regarding any type of book, thereby saving a lot of time and effort.

Title :

Date :
Page No. : 16

A) Name of the experiment : class diagram for Library management System.

Purpose:

The purpose of the library management System is to efficiently manage the books, members, and transactions within a library.

Contents:

* Book
* member
* Transaction
* Library.

Procedure:

1. Firstly identify entities and attributes
2. Establish relationships.
3. After that define multiplicity for a class diagram
4. Draw the class diagram.

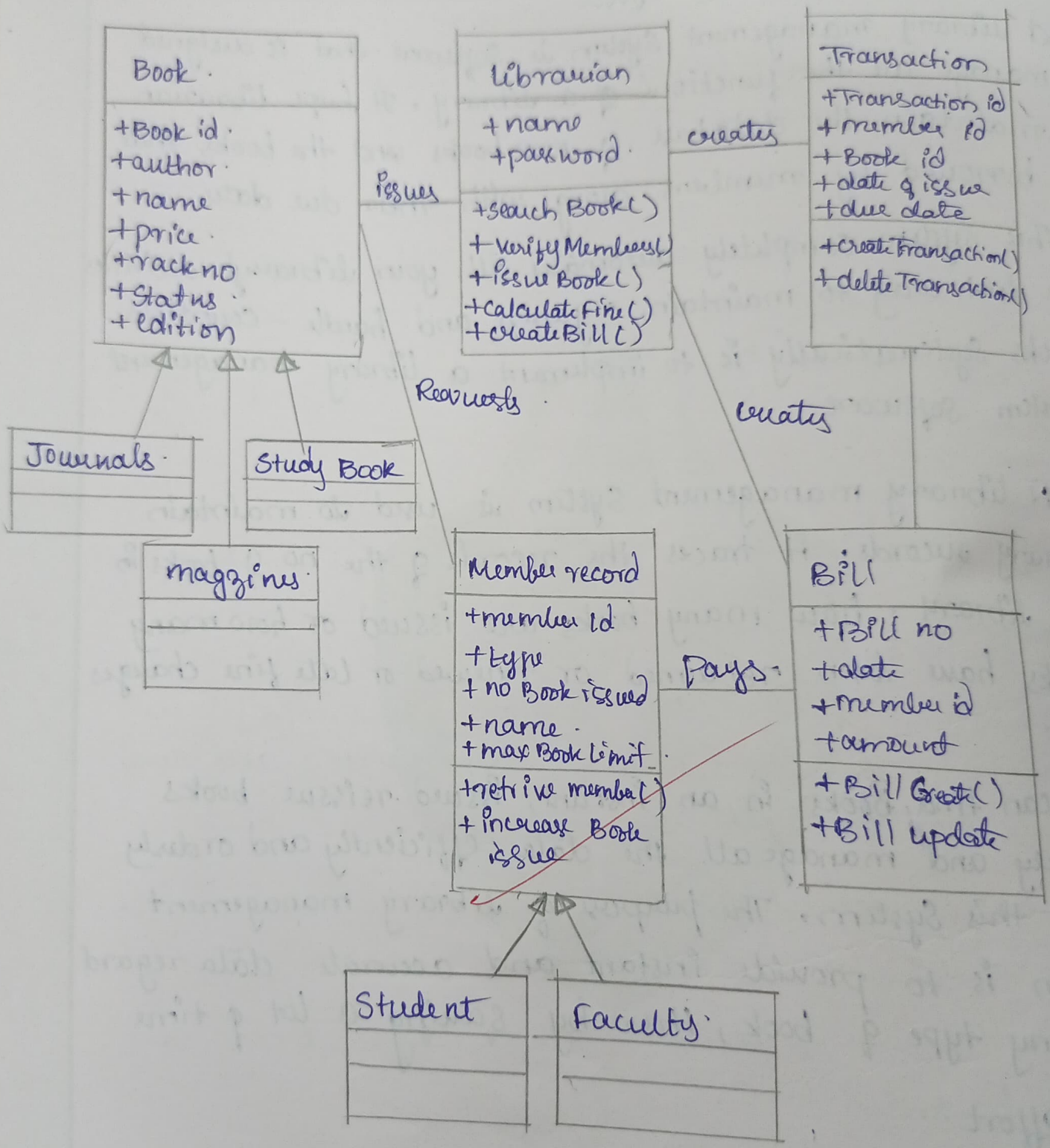
Inferences;

1. understanding the concepts of classes
2. Model the class diagram for system.

B) Applications:

* public libraries
* Schools & universities
* Digital libraries.

Class Diagram for Library management system



Title :

Date :

Page No. : 17

B) Name of the experiment : usecase diagram for library management system.

Aim :

To design and implement library system through usecase diagram.

purpose :

* used to gather requirements of a system.
* used to get an outside view of a system.

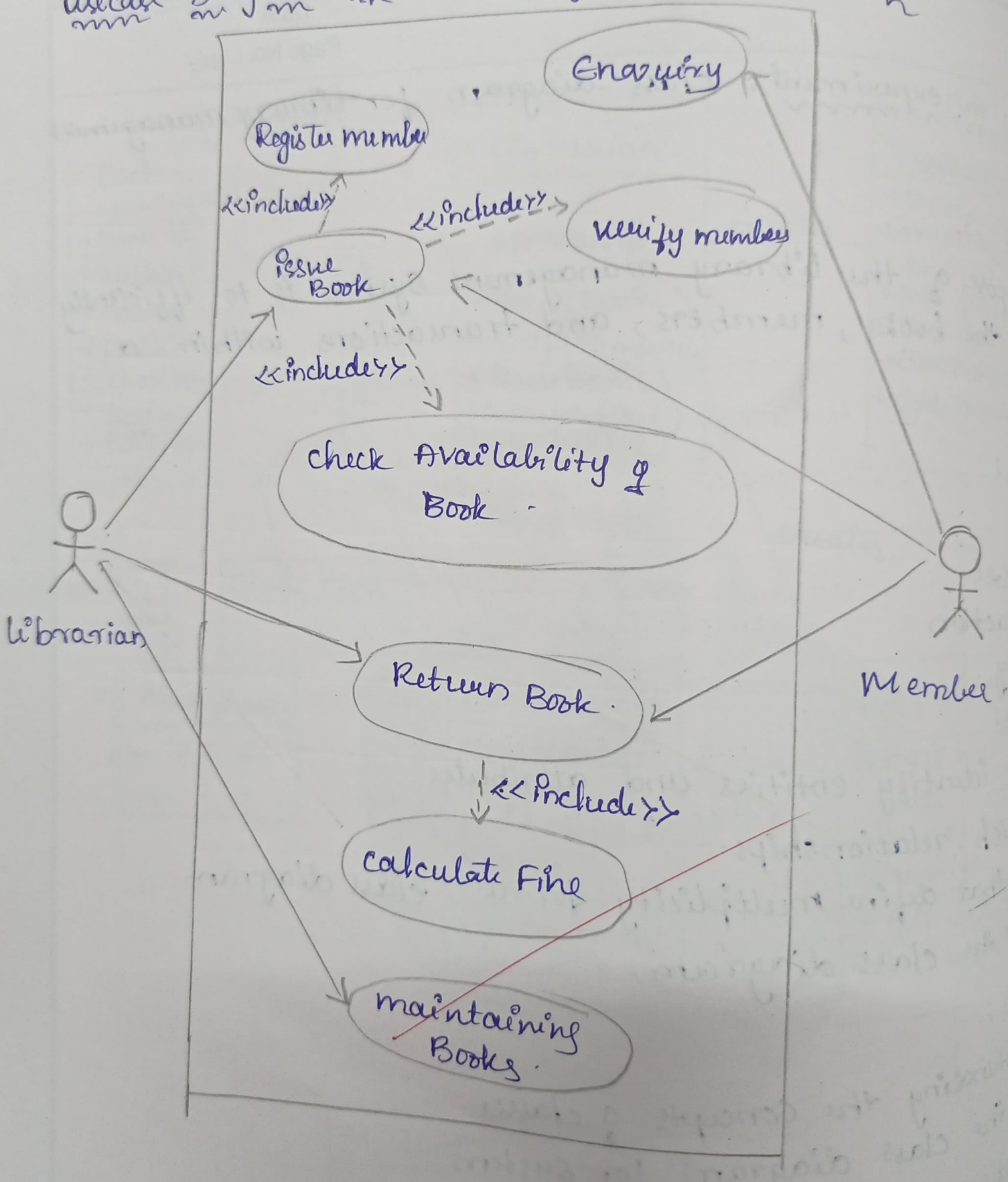
procedure :

* ~~used to gather requirements~~ Identifying actors. to determine who interacts with the system.
* list use cases, identify key actions or functionalities.
* Draw lines to show which actors participate in each use case.
* Refine and validate.

Inferences :-

* Identification of usecases
* Identification of ~~actors~~ actors

Usecase Diagram for Library management System



Title :

Date :

Page No. : 18

c) Name of the experiment: Sequence diagram for library management System.

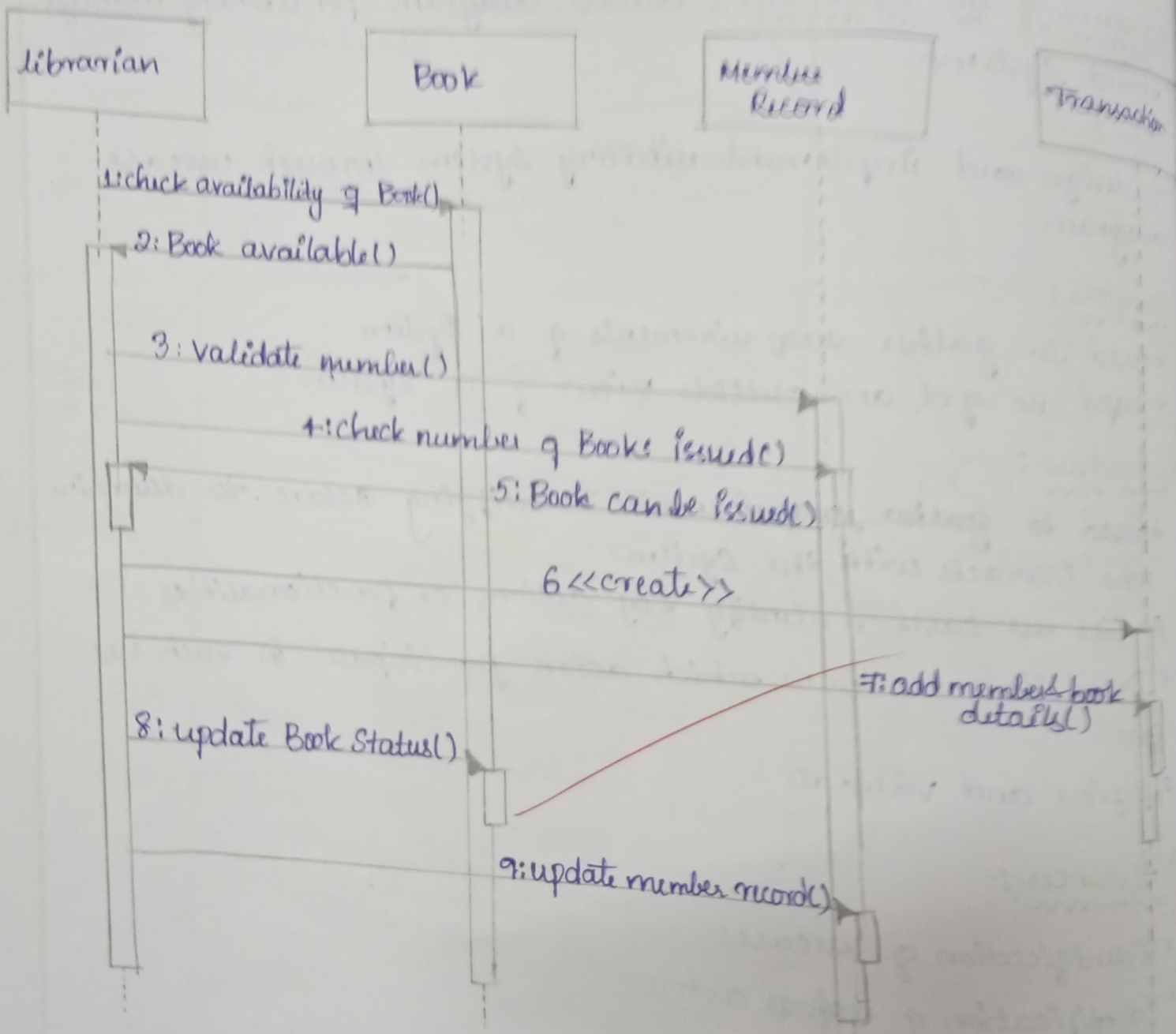
Aim:

To design and implement library management System through Sequence diagram.

Procedure:

1. determine the actors and objects involved in the interaction
2. Identify the interactions between actors and objects
3. Sequence the interactions in chronological order, showing the flow of messages.
4. Draw the diagram
5. like this way sequence diagram for library management System is created.

Sequence diagram for library management system



Title :

Date :

Page No. : 19

D) Name of the experiment: Collaboration diagram for library management system.

Aim:-

To design and implement library management system through collaboration diagram

procedure:

1. Determine the main objects or entities in the systems such as book, member, and librarian
2. Identify the interactions between these objects
3. Draw the diagram
4. Refine and validate

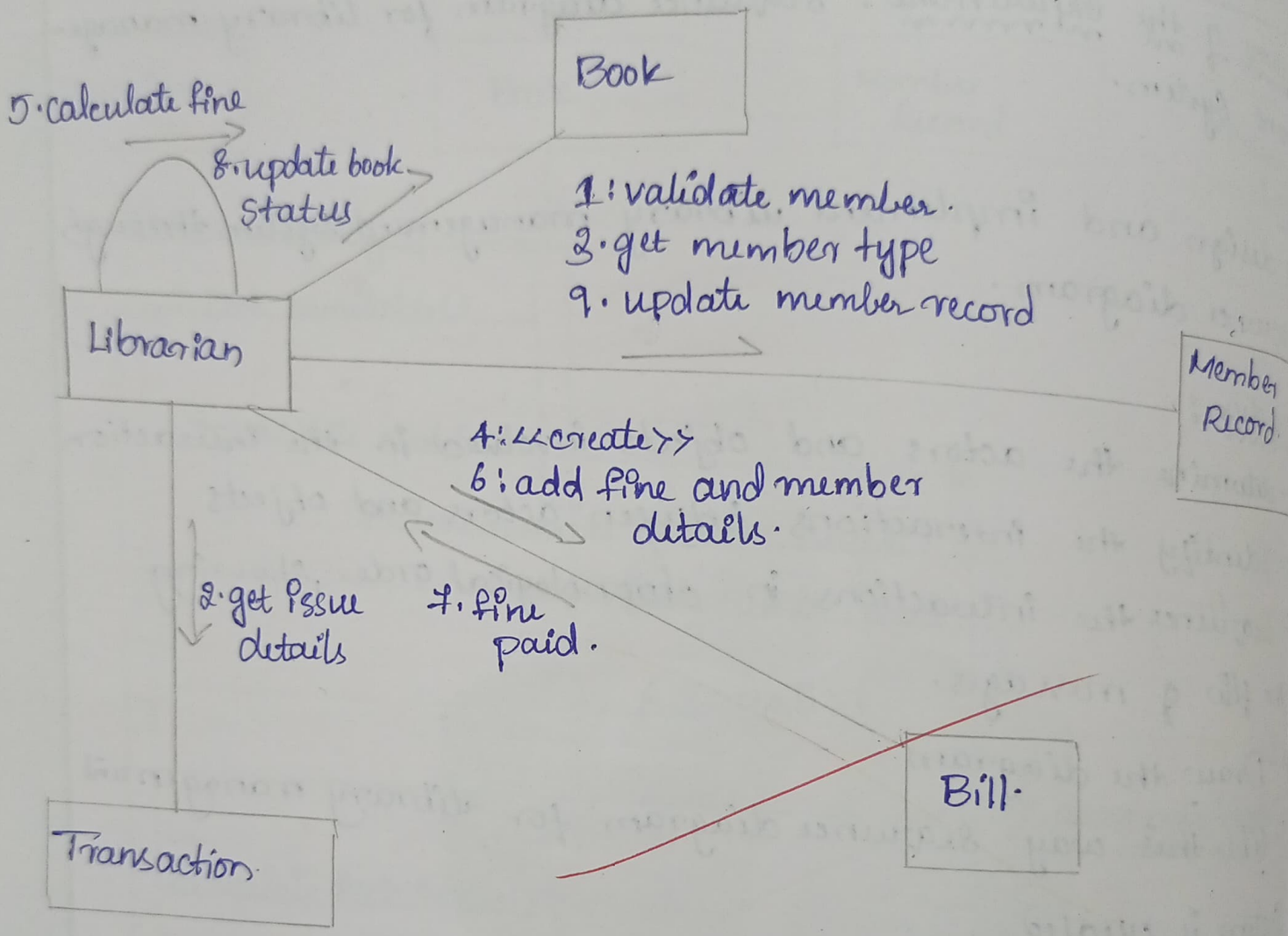
Purpose:

1. To capture dynamic behaviour of a system.
2. To describe the message flow in the system
3. To describe interaction among objects

Contents:

* objects
* lines
* messages.

collaboration diagram for library management System



Title :

Date : 18/4/24.
Page No. : 20

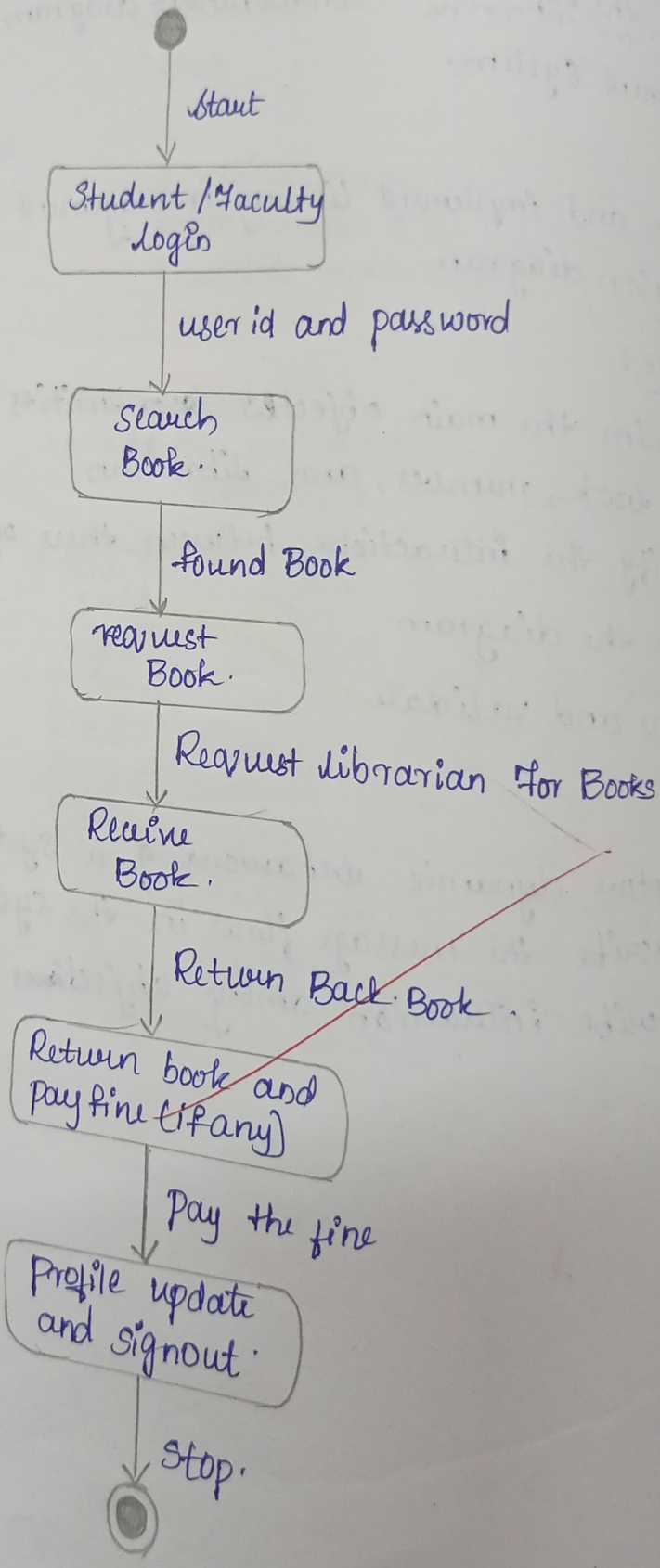
E) Name of Experiment: State chart diagram for library management System.

Aim:
To design and implement library system through statechart diagram.

Purpose:
1. To model dynamic aspects of a system.
2. To model lifetime of a reactive system

procedure:
1. determine the main objects or entities in the system that have distinct states.
2. Identify the possible state for each objects and the events that trigger transactions between states.
3. Draw states and Transitions.
4. Refine and validate.
5. In this way State chart diagram for library management System is created.

State chart diagram for Library management System.



Title :

Date :

Page No. : 21

f) Name of Experiment : Activity diagram for library management System.

Aim:

To design and implement library management System through activity diagram

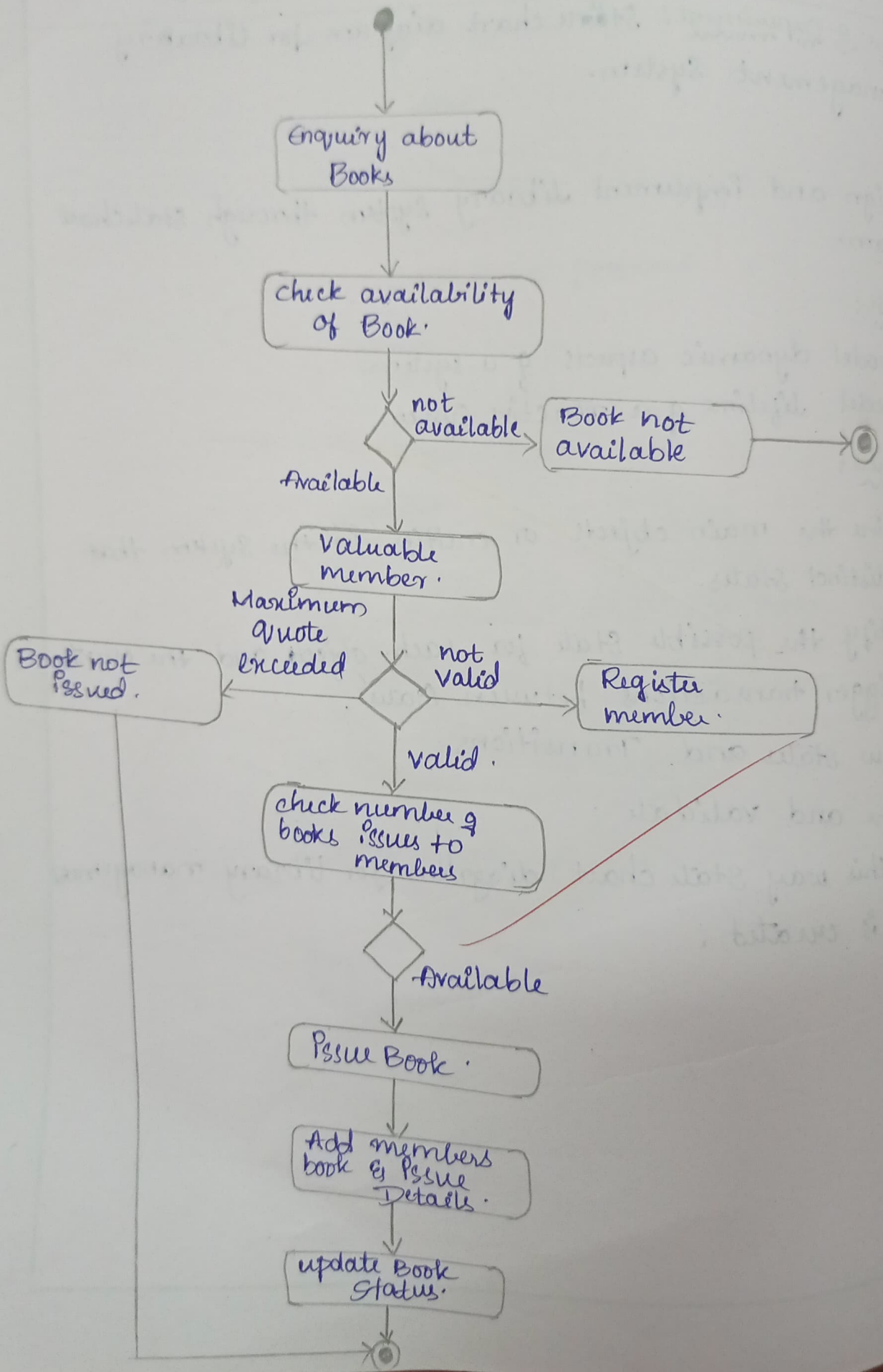
contents:

* Initial / Final State
* Activity
* Forke & join
* Branching
* Swimlanes

Procedure:

1. First initial State is created.
2. Identifying the activities
3. draw the activities
4. connect activities
5. includes decision points
6. use forking & joining wherever necessary

Activity diagram for library management system.



Title :

Date :

Page No. : 22

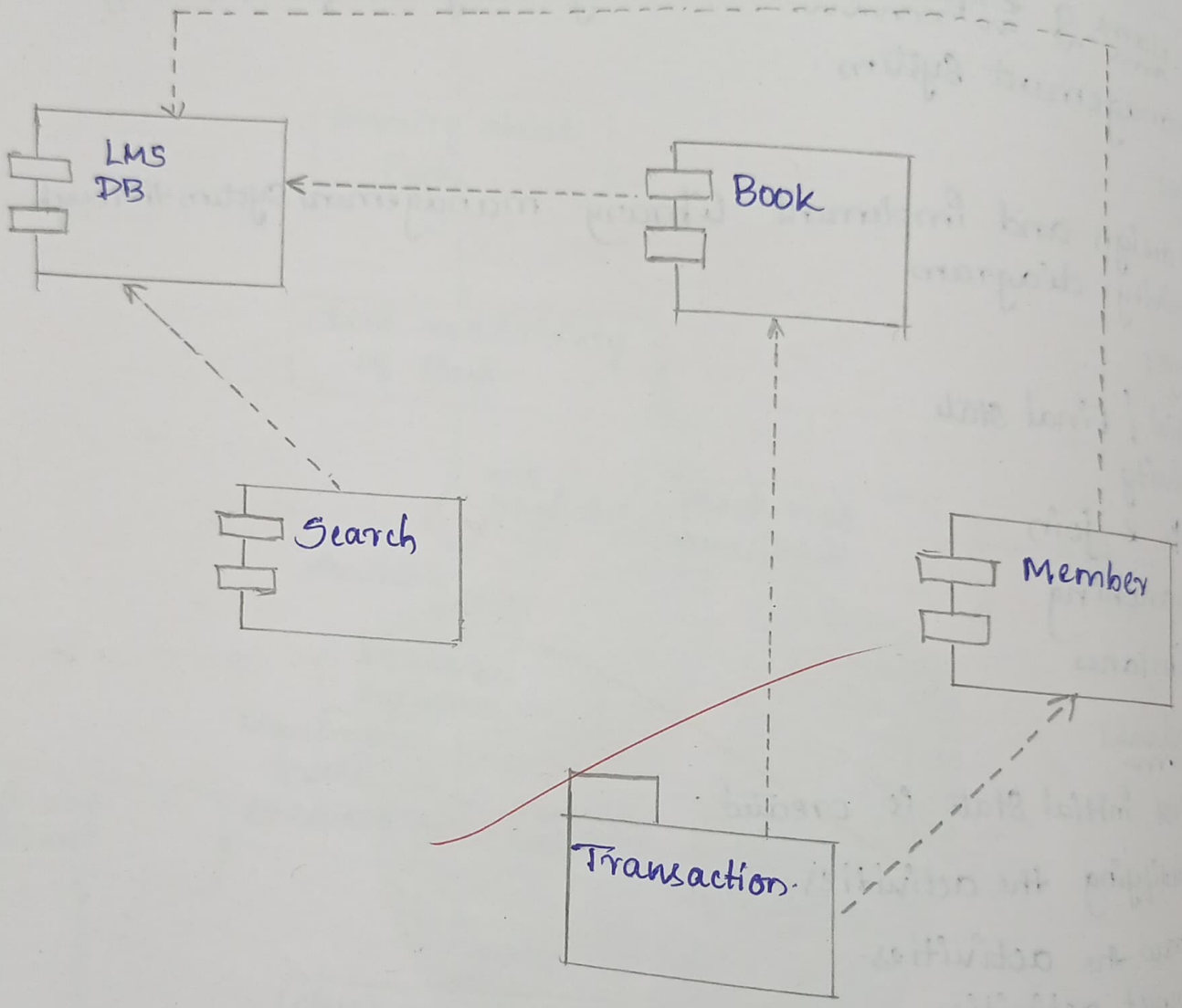
6) Name of Experiment: component diagram for library management system.

Aim:
To design and implement component diagram for library system through component diagram.

contents:
* components
* interfaces
* Relationships.

Procedure:
1. First user. component is created.
2. library system package is created.
3. In it various components created.
4. Association relationships is established between user and other components.

Component diagram for library management system.



Title :

Date :
Page No. : 23

H) Name of Experiment: Deployement diagram for library management system.

Aim:
To design and implement deployment diagram for library management system through deployment diagrams.

Purpose:
1. used to visualize the topology of the physical component of a system.
2. used to describe the static deployment view of a system
3. understanding system deployment.
4. Identifying resource requirements
5. Identifying communication ~~posts~~ paths
6. Support for system planning.

Contents:
* Nodes
* Dependency & association relationships.

Procedure:
1. First user node is created.
2. Various nodes web browser, user interface, member etc created.
3. Association relationship is established between user & other ~~model~~ nodes
4. Dependency is established.

23/1/24

Deployment Diagram for library management System