

# Documentation

library Management system  
Diagrams

*3/1/2020*

*Prepared by:*

*Amr ahmed Ibrahim*

*Dr/Atef raslan*

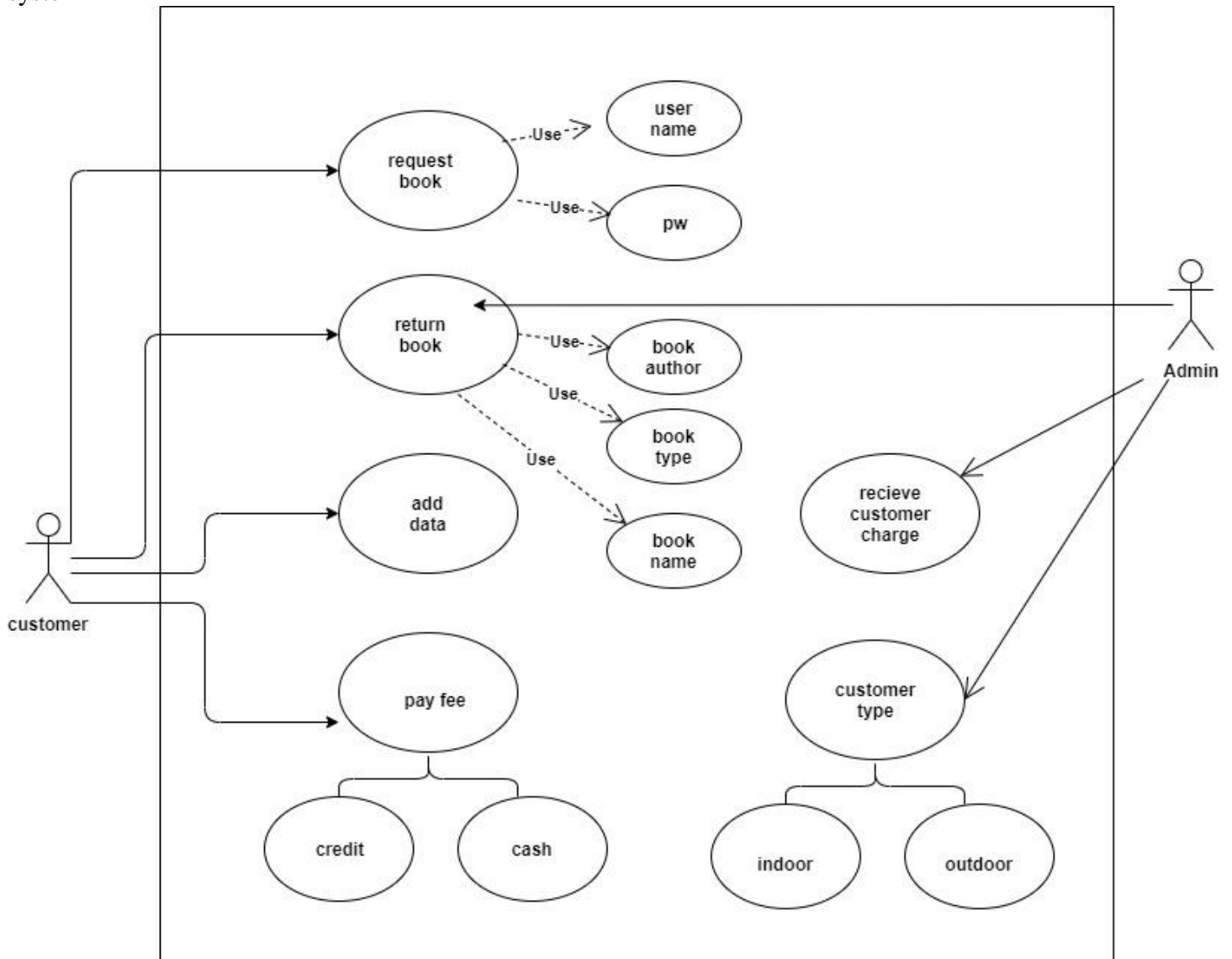
To design an object oriented model for Library Management System using diagrams

## **PROBLEM STATEMENT**

The library management system is a software system that issues books and magazines to registered customer. The customer has to login after getting registered to the system. The borrower of the book can perform various functions such as searching for desired book, get the issued book and return the book.

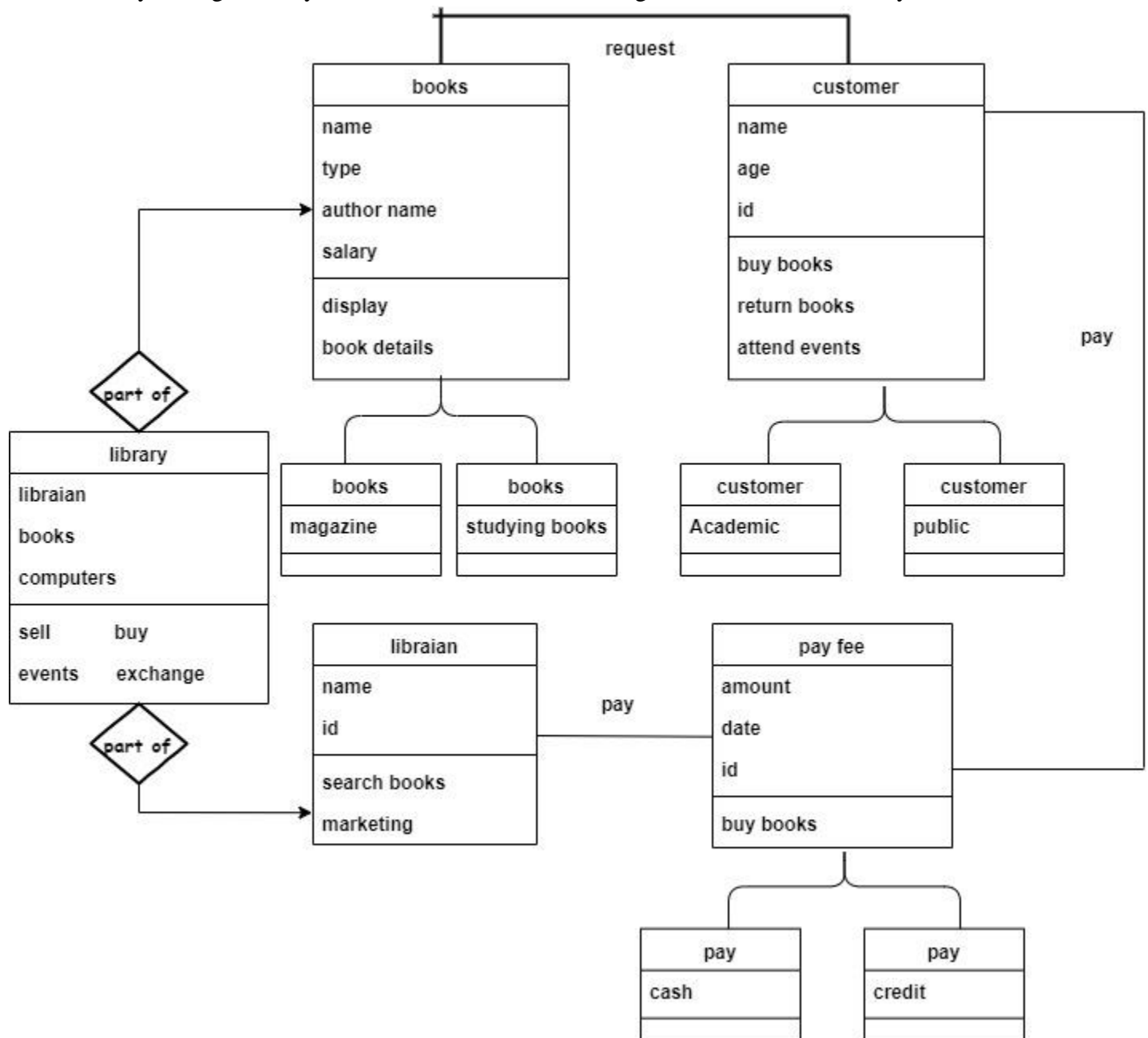
## USE CASE DIAGRAM

Use case is a list of actions or events. Steps typically defining the interactions between a role and a system to achieve a goal. The use case diagram consists of various functionality performed by actors like user, librarian and system



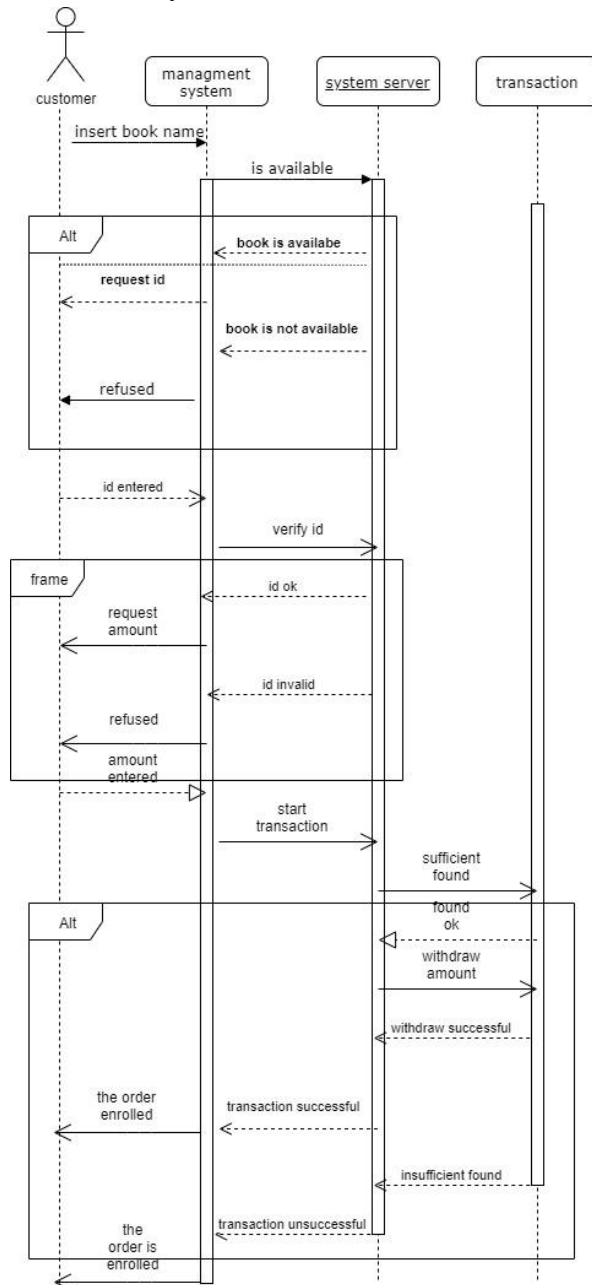
## LASS DIAGRAM

A class diagram in the unified modeling language is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations and the relationships among objects. The library management system makes use of the following classes user, librarian, system and DBA.



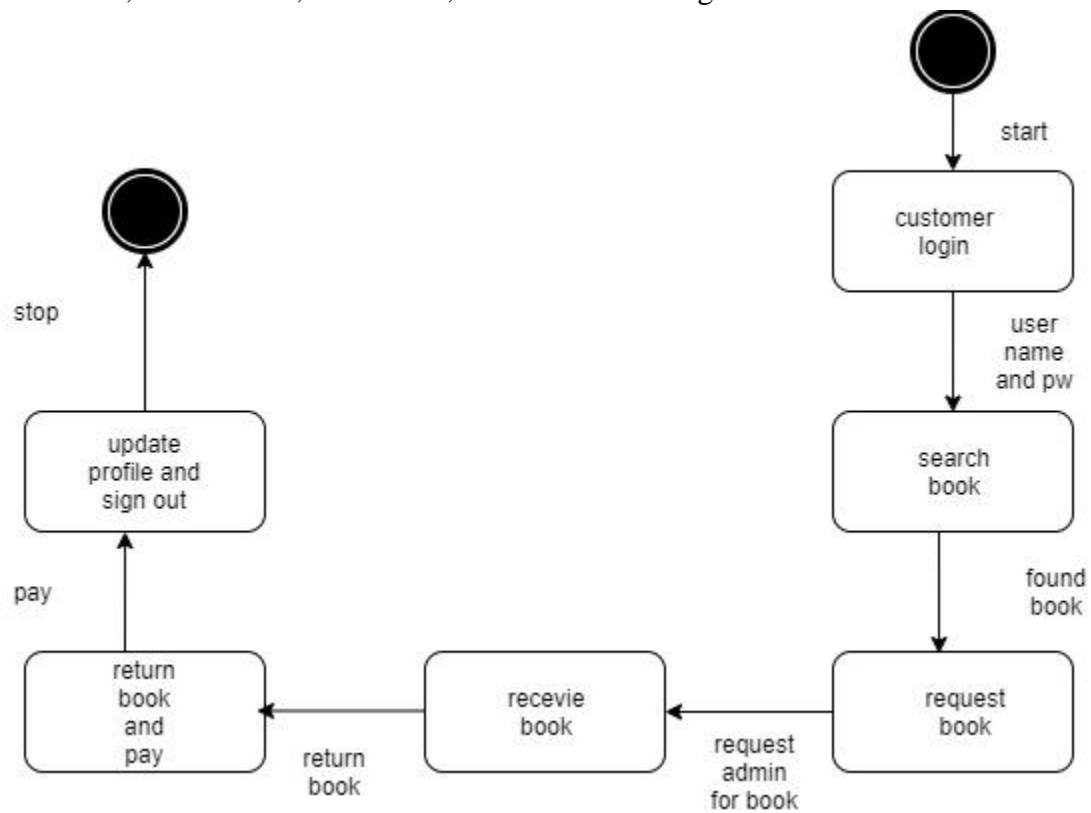
# SEQUENCE DIAGRAM

A sequence diagram represent the sequence and interactions of a given use case or scenario. Sequence diagram capture most of the information about the system. It is also represent in order by which they occur and have the object in the system send message to one another. Here the sequence starts with interaction between user and the system followed by database. Once the book have been selected the next half of sequence starts between librarian and user followed by database.



## STATECHART DIAGRAM

State chart diagram is also called as state machine diagram. The state chart diagram contains the states in the rectangular boxes and the states are indicated by the dot enclosed. The state chart diagram describes the behavior of the system. The state chart diagram involves eight stages such as login, enter details, requesting for book, display book details, search book, issue book, return book and logout.



## COLLABORATION DIAGRAM

Like sequence diagram collaboration diagrams are also called as interaction diagram. Collaboration diagram convey the same informations as sequence diagram but focus on the object roles instead of the times that messages are sent. Here the actions between various classes are represented by number format for the case of identification.

