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1.UMLDIAGRAMFORLIBRARYMANAGEMENTSYSTEM

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AIM:

TodrawUMLdiagramsforLibrarymanagement systemusingUmbrellotool.

INTRODUCTION:

In the Unified Modeling Language, a use case diagram can summarize the details of yoursystem's users (also known as actors) and their interactions with the system. To build one, you'll use aset of specialized symbols and connectors. An effective use case diagram can help your team discussandrepresent:

- Scenarios in which your system or application interacts with people, organizations, orexternalsystems
- Goalsthatithelps thoseentities(knownasactors) achieve
- The scope of

yoursystemCommoncom

ponentsinclude:

- **Actors** - the users that interact with a system. An actor can be a person, an organization, oran outside system that interacts with your application or system. They must be externalobjects thatproduceor consumedata.
- **System** - a specific sequence of actions and interactions between actors and the system. Asystemmayalso be referredto as ascenario.
- **Goals** - the end result of most use cases. A successful diagram should describe theactivitiesandvariantsusedtoreachthegoal.

USECASEDIAGRAMOBJECTS

- Actor
- Usecase
- System
- Package

Theobjectsarefurtherexplainedbelow.

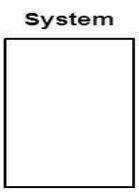
Actor:

Actor in a use case diagram is **any entity that performs a role** in one given system. Thiscould be a person, organization or an external system and usually drawn like skeleton shownbelow.

UseCase:

A use case **represents a function or an action within the system**. Its drawn as an ovalandnamedwiththefunction.

System:



System is used to **define the scope of the use case** and drawn as a rectangle. This an optionalelement but useful when your visualizing large systems. For example you can create all the usecases and then use the system object to define the scope covered by your project. Or you canevenuseitto show thedifferentareas coveredin differentreleases.

Package:

Package is another optional element that is extremely useful in complex diagrams.Similar to **class diagrams**, packages are **used to group together use cases**. Theyaredrawnliketheimageshownbelow.

USECASESCENARIOS:

LOGIN:

To interact with the system, LMS will validate its registration with this

system.Theactorsinvolved are

- Administrator
- Librarian
- member

Viewuserdetails:

1. Toseethedetailsoftheregistered user&thebookscurrentlyborrowed fromthelibrary.

2. Membercaninvolve.

3.Usermustbelogged intothesystem.

Viewbooks:

1. To display the details, when a member, guest or administrator want to see the details on the availablebooks.

2. TheActors involvedin stepareAdministrator,guestandmember.

ReserveBooks:

1. User can reserve a book by inputting the relevant details and the librarian can also reserve a book for amember

Searchbooks:

1.Member or guest can search for a particular book in the book library by book name or category orauthorname.

Issuebooks:

1. Thisusecasecandescribetheprocessofissuingacertainbook foramember bylibrarian.

2. GetthememberIDand bookIDbeforeissueabook.

3. Checktheavailability.

Returnbooks:

1. Thisusecasedescribestheprocess ofreturnabook.

2. Ifreturnbookislatemembershouldbepaid fine.

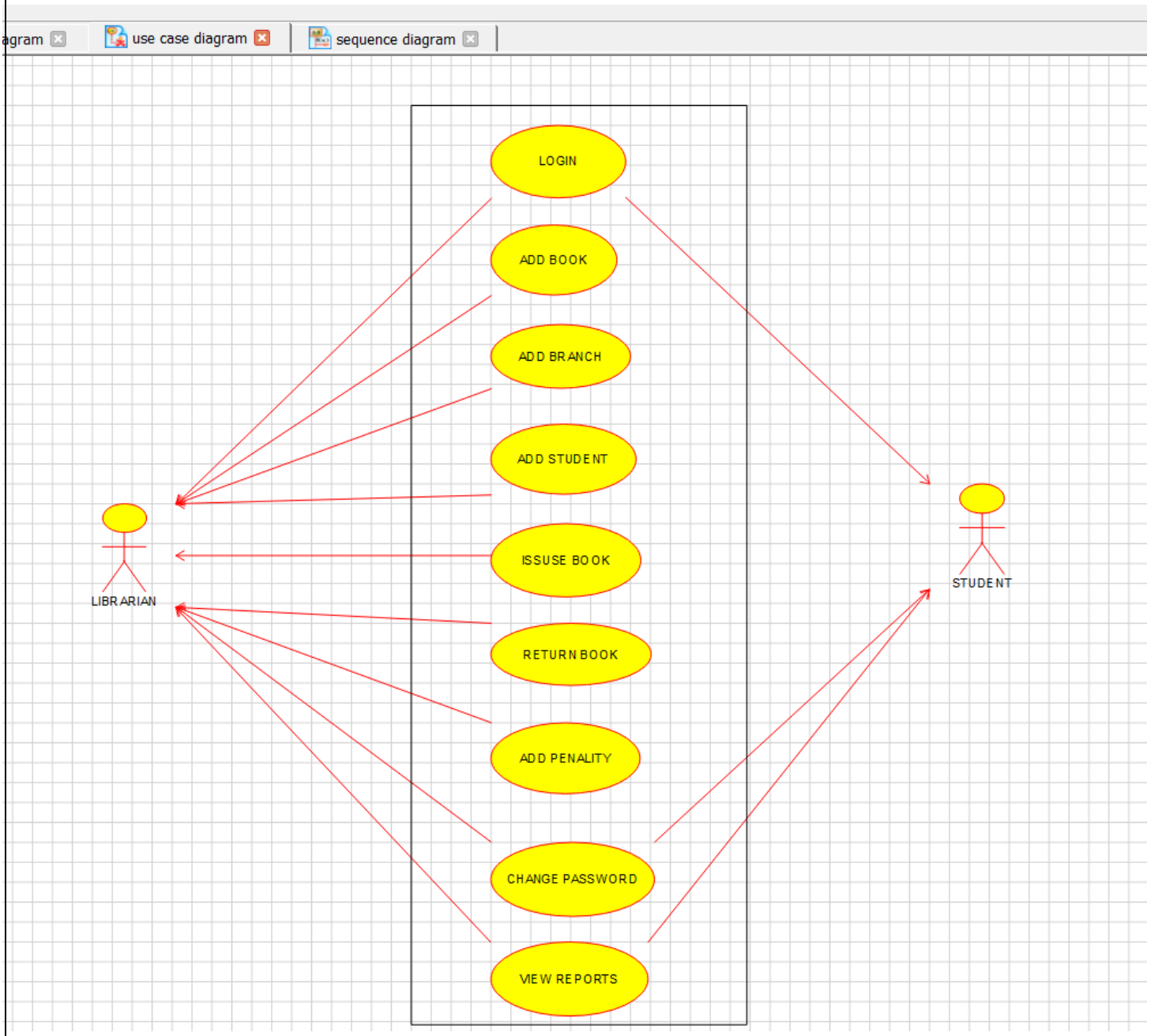
ViewMembers:

To display the details, when a member, guest or administrator wants to see the details of the registereduser.

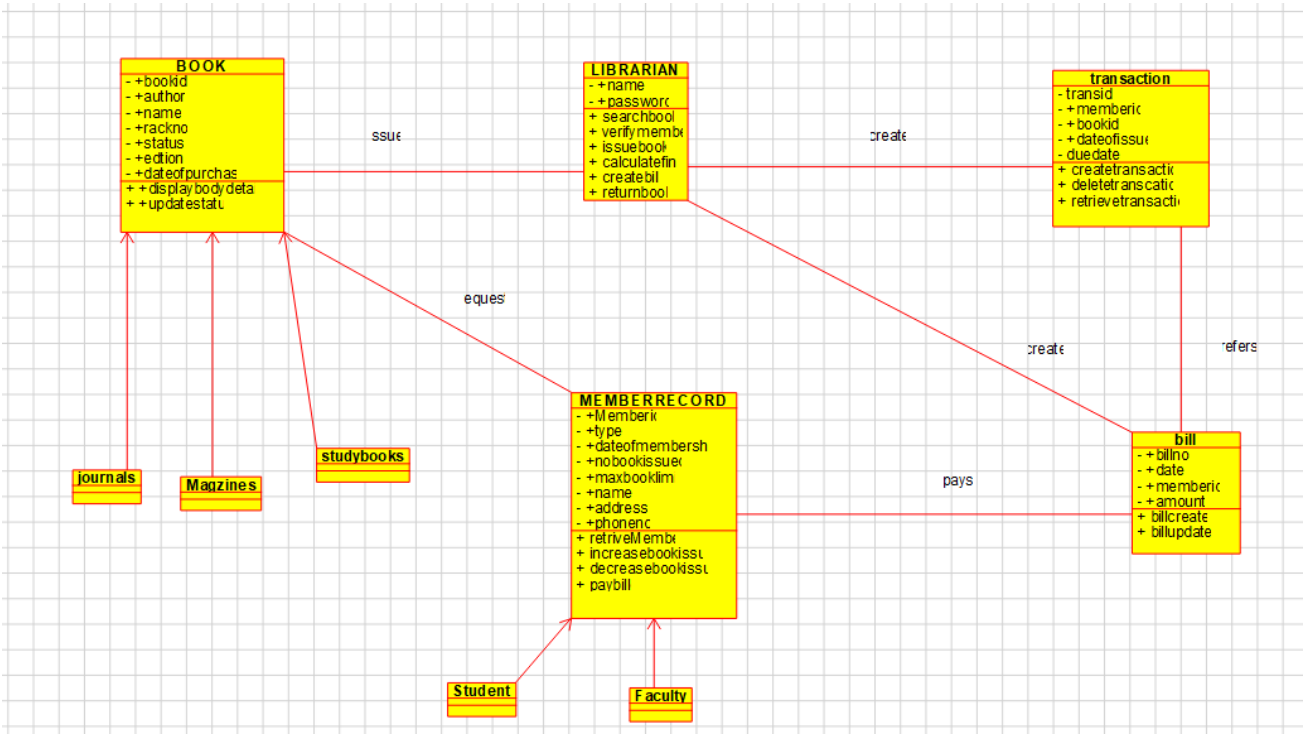
Add/removemembers:

Only administrator is allowed to add or remove a member from library data base .to remove a member,membershould request to leave thelibrary.

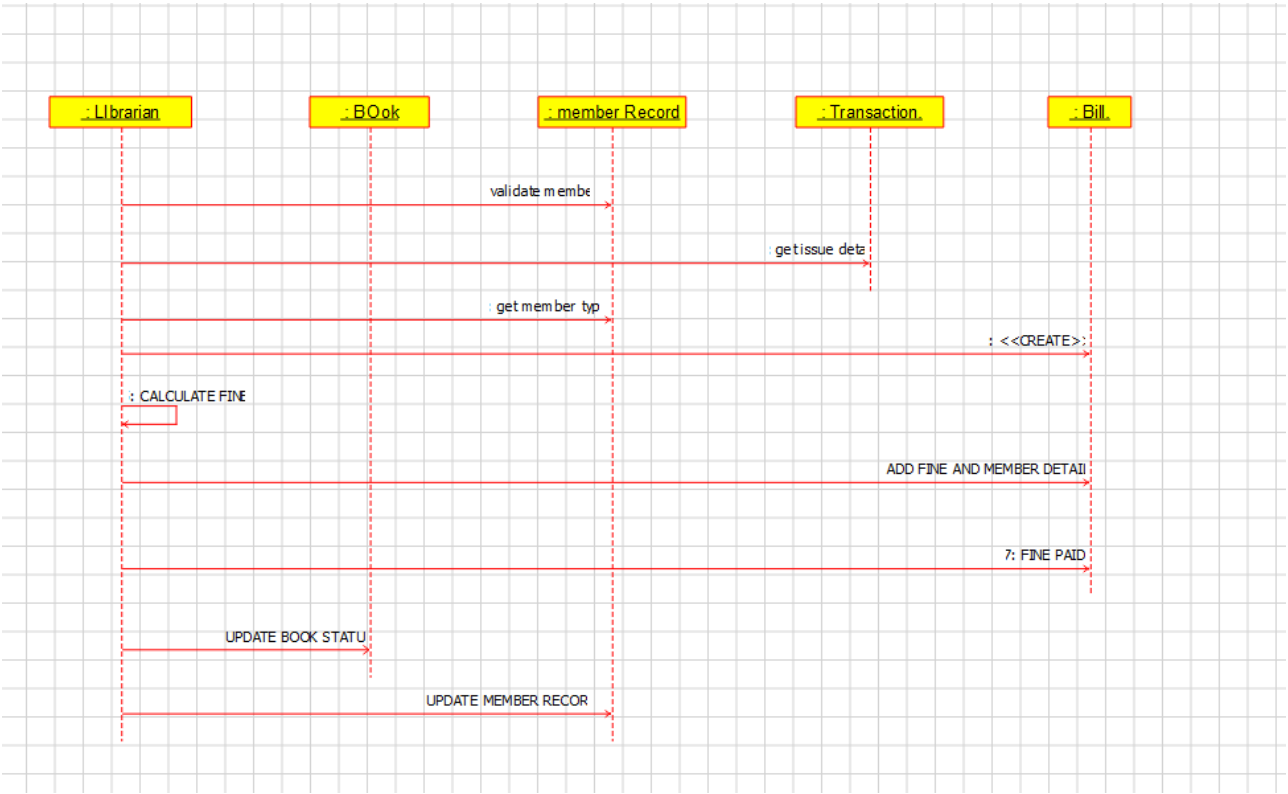
USECASEDIAGRAM:



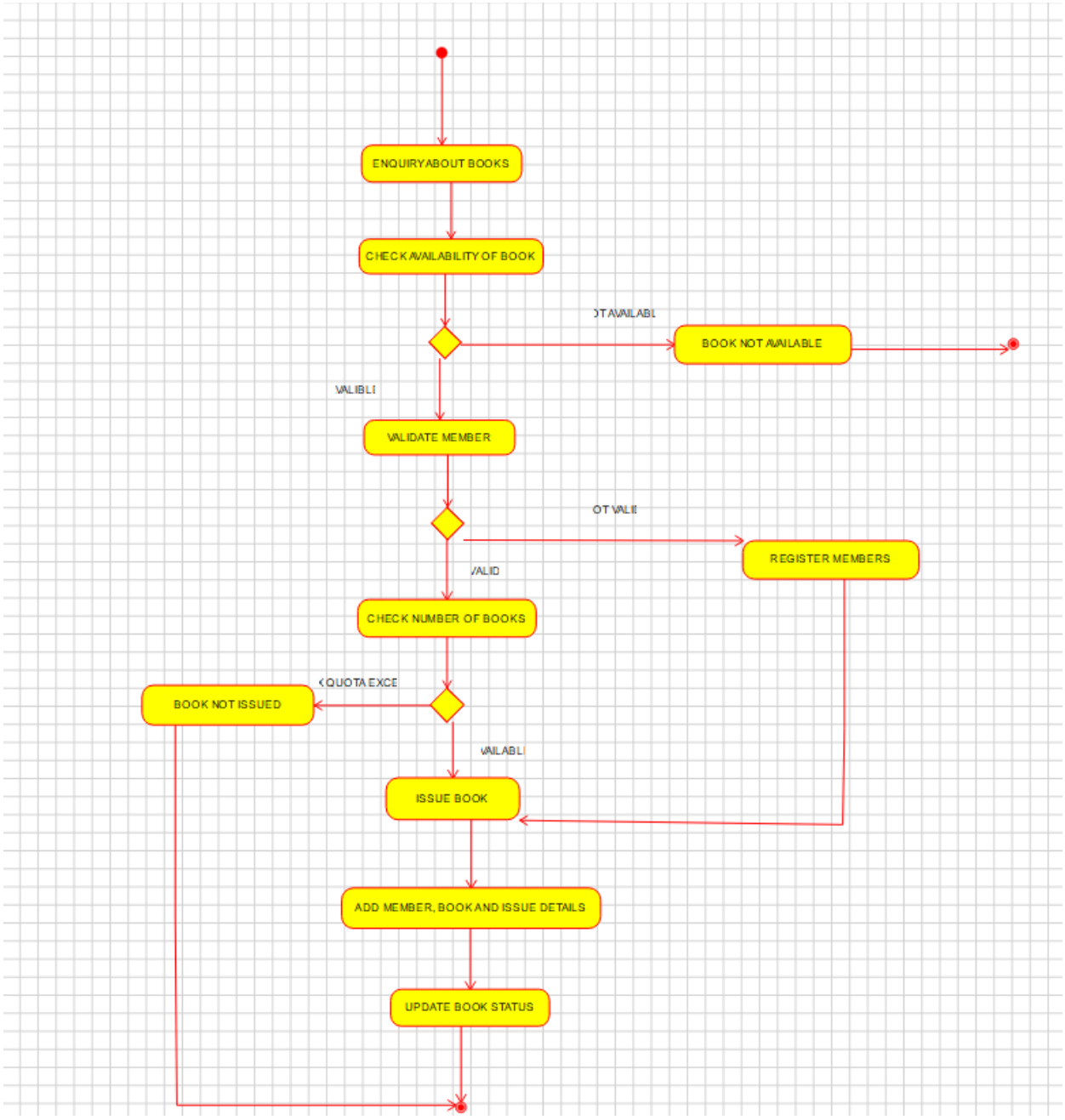
CLASSDIAGRAM:



SEQUENCEDIAGRAM:



ACTIVITYDIAGRAM:



RESULT:

Thus,theuse-casediagramforonlinevotingsystemisdrawnandverifiedsuccessfully.