Programming Exercises

Summer Semester 2022-2023

Online Library Management

1. User Registration and Login (Chau Truong Vinh Hoang)

1.1 Description of the requirement (Use case description)

Name	User Registration and Login
ID	1
Description	The basic function of the system. Users can register as Member or Administrator and use the registration info to login to the platform
Trigger	The user clicks on "Sign up" and "Login
Actors	Member & Administrator
Pre-conditions	- For "Sign up": No preconditions - For "Log in": Users have already created an account through "Sign up"
Post-conditions	- For "Sign up": Users create an new account (as Member or Administrator) - For "Log in": Users successfully login to the system (as Member or Administrator)

Basic Flow		
Description		That is the main scenario when the user create an account and login to the system
Actions		
	1	The user sign up as Member or Contractor and provide registration info
	2	The platform validate and create a new account for the user
	3	The user login to the platform by username and password
	4	The platform validates the info and logs the user in.

Alternative Flow		
Description		The user provide invalid registration info
Actions	**1**	The platform requires the user to re-enter the registration info until it is valid

| **Alternative Flow**		
Description		The user provide wrong username or password
Actions	**1**	The platform requires the user to re-enter the login info until it is correct

Use case diagram
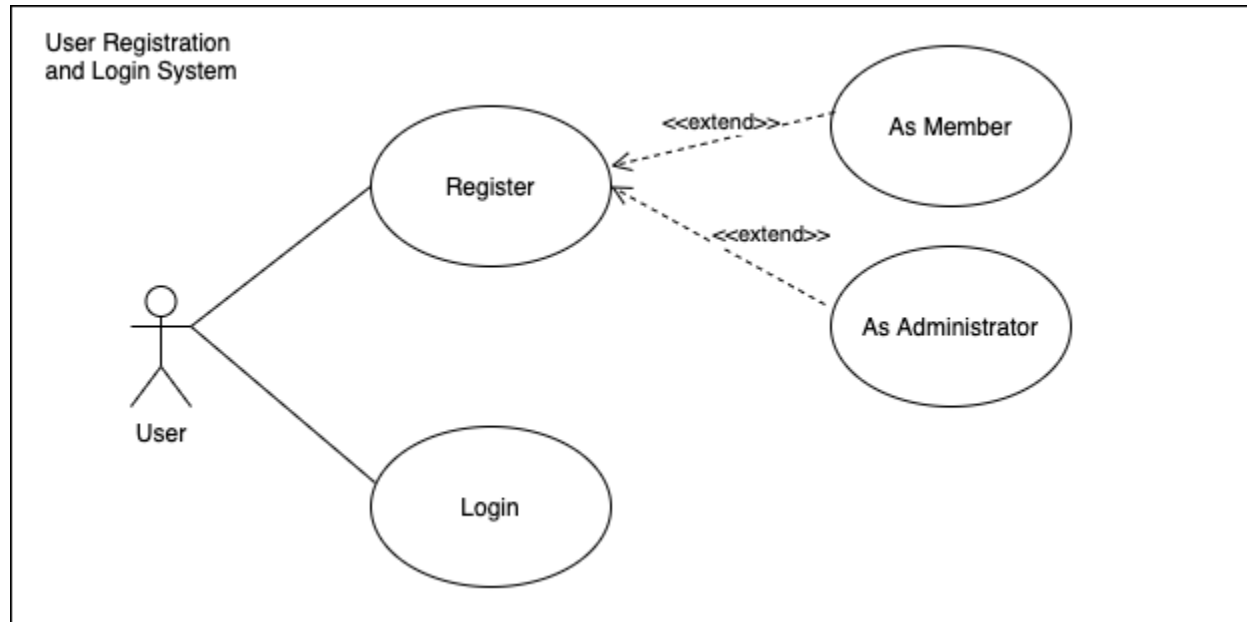
2. Browse books from the library (Nguyen Gia Bao)

2.1   Description of the requirement (Use case description)

Name	Browse books from the library
ID	2
Description	A function of the system. Users can search for books from the library
Trigger	After home page loaded successfully
Actors	All users
Pre-conditions	No pre-condition
Post-conditions	- For "General Search": The System displays a list of books that match what user entered in the search bar. - For "Most Popular": The System displays a list of books that have been borrowed the most.
Basic Flow Description	This is the main scenario when the user user browses books in

		the library
Actions		
	1	The user views "Most Popular" section displayed in the Home Page
	2	The user clicks on the search bar on the Home Page
	3	The user enters the book title they want to search for
	4	The System display a list of books that has that names or similar names
Alternative Flow		
Description		The user provides unexist book title
Actions		
	1	The platform requires the user to re-enter the book title until it matches

2.2 Use case diagram
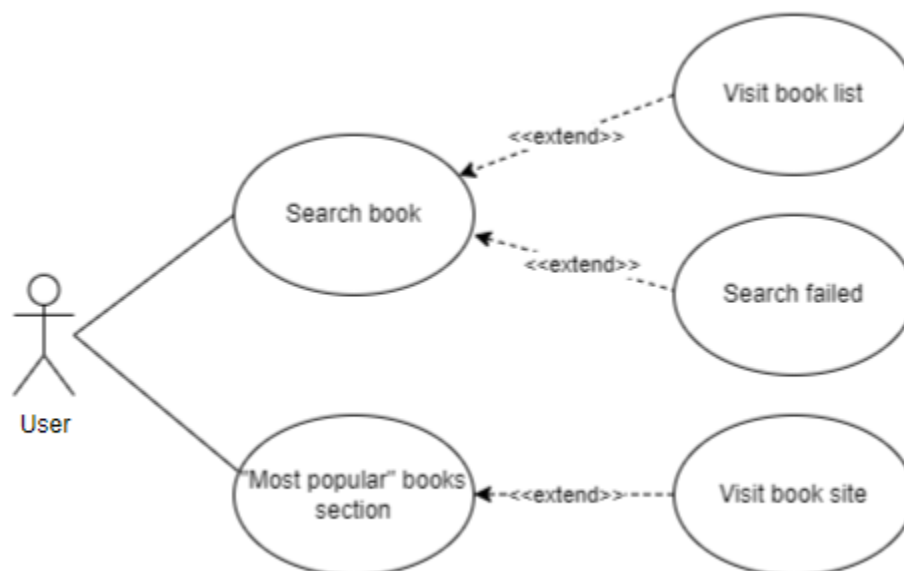
3. Book Filter (Hoang Duc Hung)

Name	Book Filter
ID	3
Description	A function of the system. Users can search and find books by filtering them out based on categories, authors,

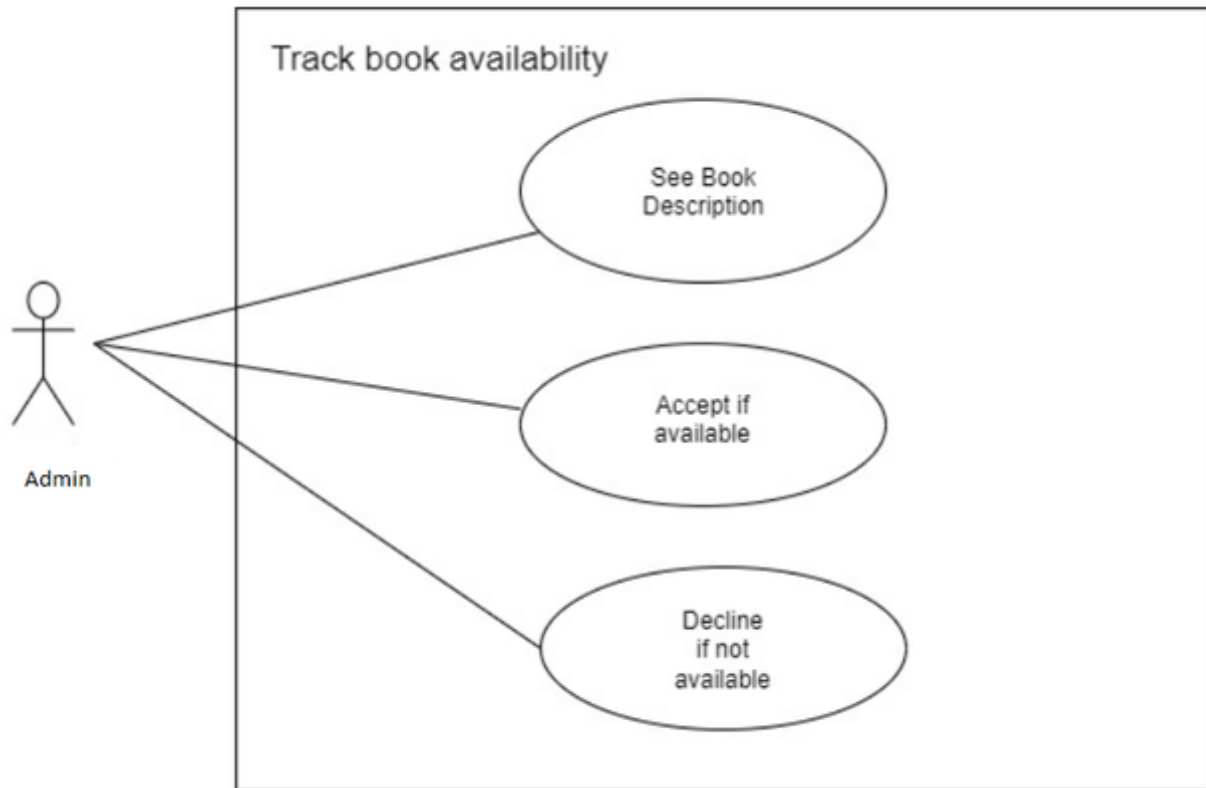|	
	publication, etc.
Trigger	The user clicks on the Filter button near the search bar.
Actors	All users
Pre-conditions	No pre-conditions
Post-conditions	Books with correct tags that correspond to the user's filter requirement will be displayed to the user
Basic Flow	
Description	This is the main scenario when the user uses the filter function.
Action 1	The user selects filtering tags
2	The platform will search and display books with corresponding tags to the user

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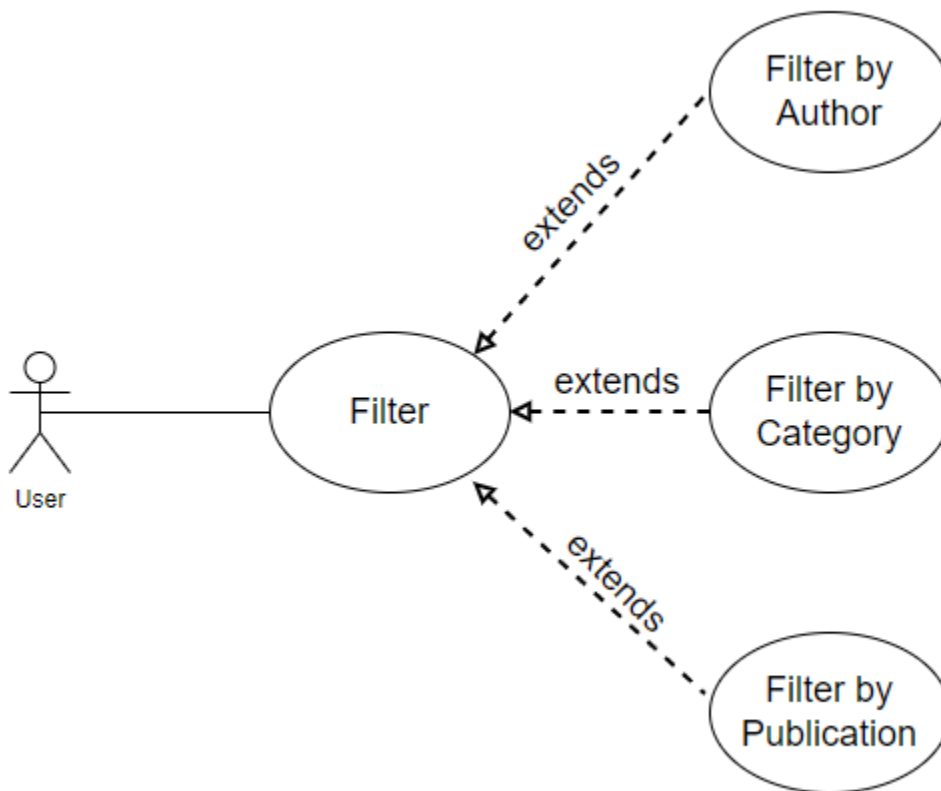
6. Book Renting Availability Tracking (Vo Nguyen Duy Bach)

6.1 Description of the requirement (Use case description)

Name	Book Rent Availability Tracking by admin
ID	6
Description	The admin receives book renting information from users. If the book is available then the admin will accept the renting request from user. Otherwise, the admin will decline and request user to select other books.
Trigger	The admin is notified about new renting request from the system
Actors	Admin
Pre-conditions	The admin needed to be logged in with complete profile setup
Post-conditions	The admin accepts or declines requests
Basic Flow	
Description	This is the main scenario where the admin accepts the order
Actions	
1	The admin receives book renting description

2	The admin accepts request	
3	The admin completes order.	
Alternative Flow		
Description	The admin declines the order	
Actions		
1	The admin receives book renting description	
2	The admin declines the order	

Use case diagram

Track book availability

- See Book Description
- Accept if available
- Decline if not available

Admin

7. Review System (Hoang Ngoc Anh Khoi)

7.1   Description of the requirement (Use case description)

Name	Review system
ID	7
Description	The member can review the book by rating star from 1 to 5 and write a comment.
Actor	Member
Trigger	After click on a book
Pre-conditions	Member need to already borrow the book before review it
Post-conditions	The website receive and add the review from member

| Basic flow		
Description		This is the main scenario where the member gives a review of the book
Actions		
	1	The member clicks on an already borrowed book
	2	The member gives a rating star and comments on the book
	3	The website receive the review

Use case diagram
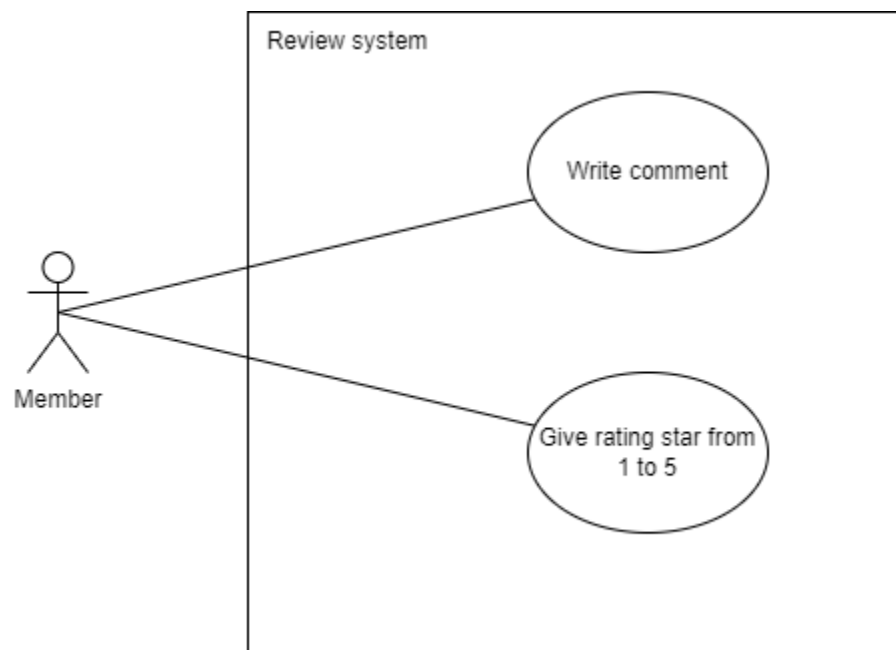
8. List & Book management (Khoa Pham Phuc)

8.1   Description of the requirement (Use case description)

Name	List books
ID	8.1
Description	The platform list all the books (name, author, availability)
Actors	admin

| Name	Manage books
ID	8.2
Actors	Admin
Basic flow	
Action	The admin clicks on the boxes to use the option (add, edit, delete)

Use case diagram
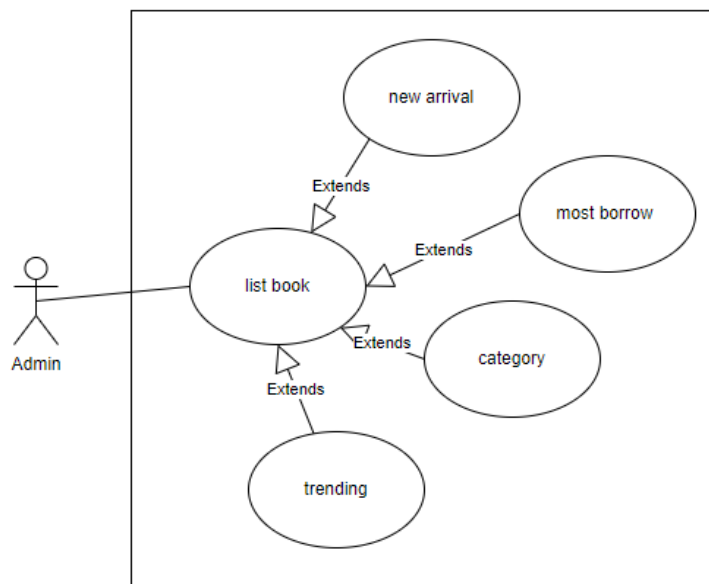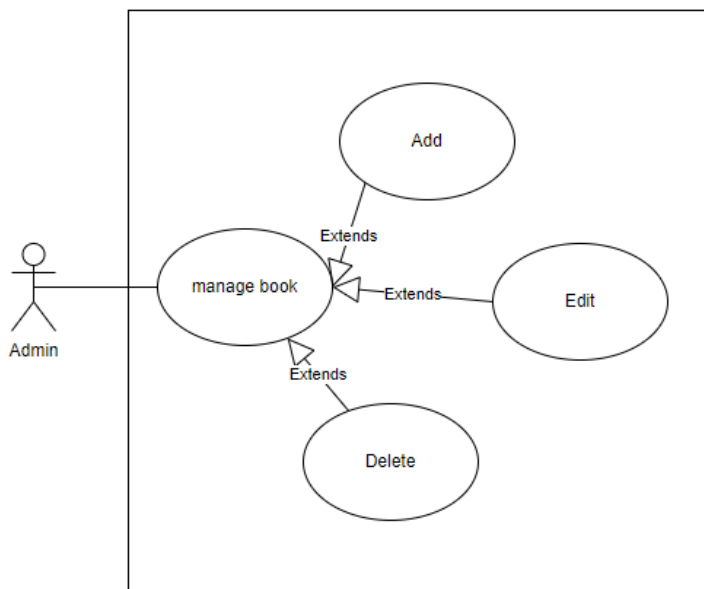
9. Receive notifications via email to users once lease expires & (Nguyen Quang Duy)

9.1 Description of the requirement (Use case description)

| Name	Send notifications via email to users once lease expires.
ID	9
Description	The notification will be send via email when the lease expired.
Actor	Admin
Trigger	Click the box list of expired user and nearly expired user.
Pre-conditions	Have already logined to the sytem
Post-conditions	
Basic flow **Description** **Actions** **1** **2**	This is the main scenario when the lease expire Admin see the list of the nearly expired and expired member. Admin send the notification to the member

9.2 Use case diagram
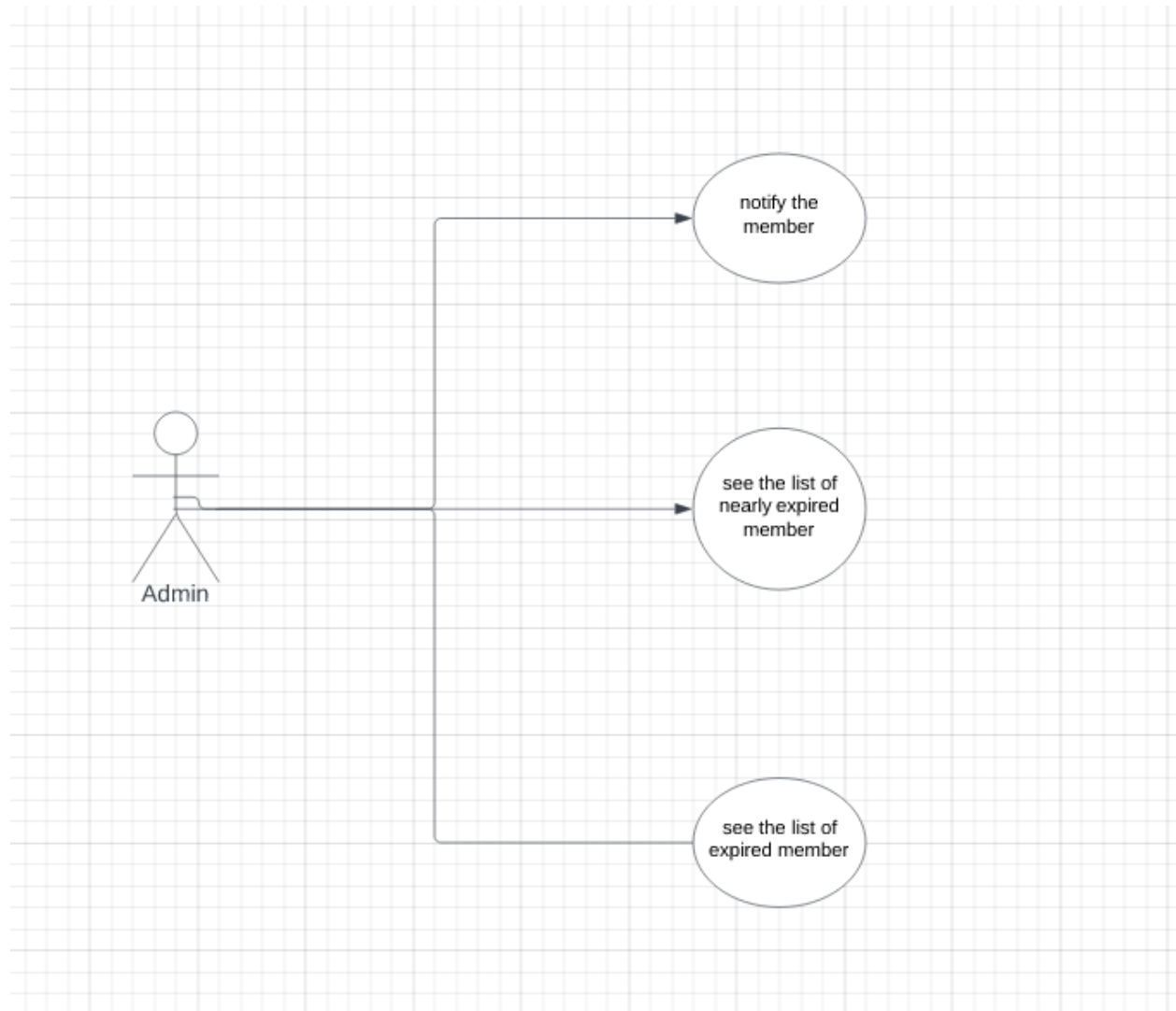
10. Renting a book for a specific duration. (Le Duc Minh)

10.1   Description of the requirement.

Name	Renting a book for a specific duration.
ID	10
Description	This function is for the member who wants to rent a book for a period of time.
Trigger	Members click on the "Rent book" button.
Actors	Member.
Pre-condition	Member chooses an available book.
Post-condition	No post-condition.
Basic flow **Description** **Action**	Member accepts the package and the permission of the book is confirmed. 1. The member confirms to rent the book. 2. The member waits for a reply based on the availability of the book. 3. The confirmation of renting is validated

10.2 Use case diagram.

RENTING BOOK

Choose a book.

Member

Choose a rental package.
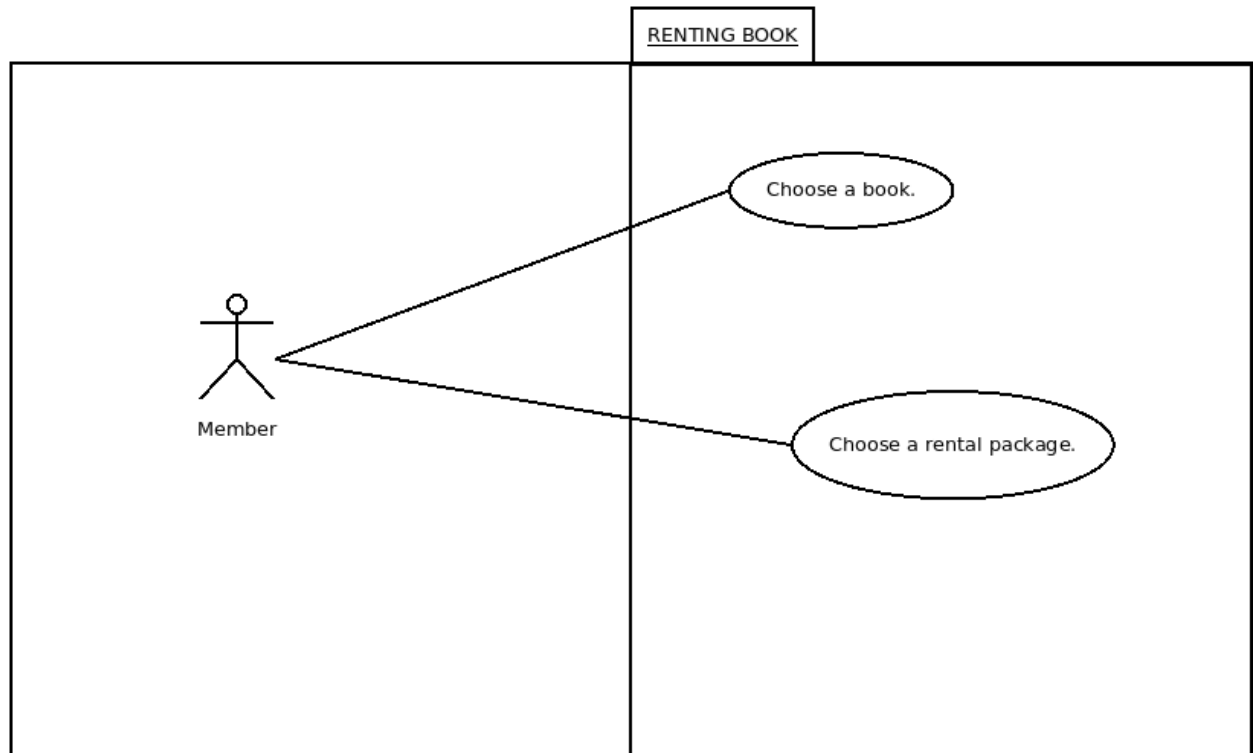
5. Like and comment on the book.

Name	Like and comment the book
Description	This function is for the customer who wants to like or comment on a book.

Trigger	Members click on the book
Actors	Member
Pre-condition	Has already logged into the library
Post-condition	The book is liked or commented on by members.
Basic flow description action	Customers choose the book they like: 1. Click on the like button. 2. Type comment on comment space.
Alternative flow description	Customer already like or comment the book: 1. Click on the like button again to unlike. 2. Fix or delete the comment.

Like and Comment

Member

Choose the book

Like

Include

Unlike

Include

Type comment

Include

Fix or delete comment

Include