LSP CERTIFICATION

My Library

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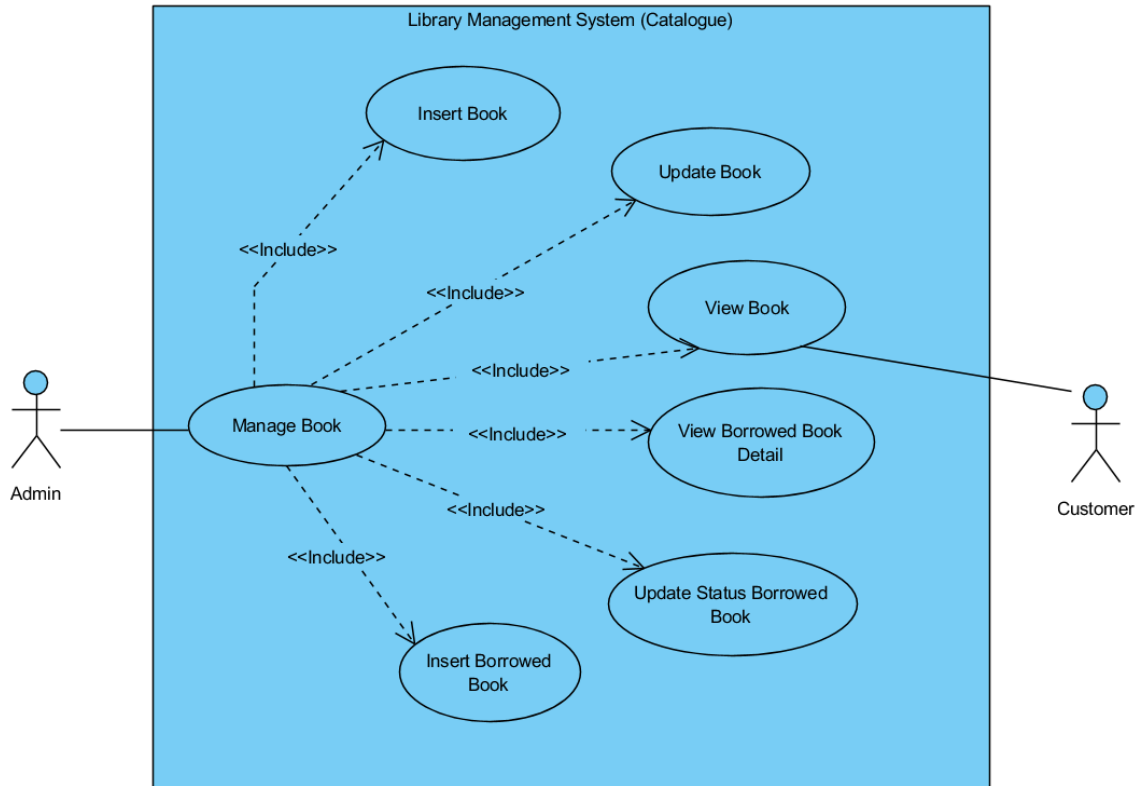*Information System for Business*

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Chapter I
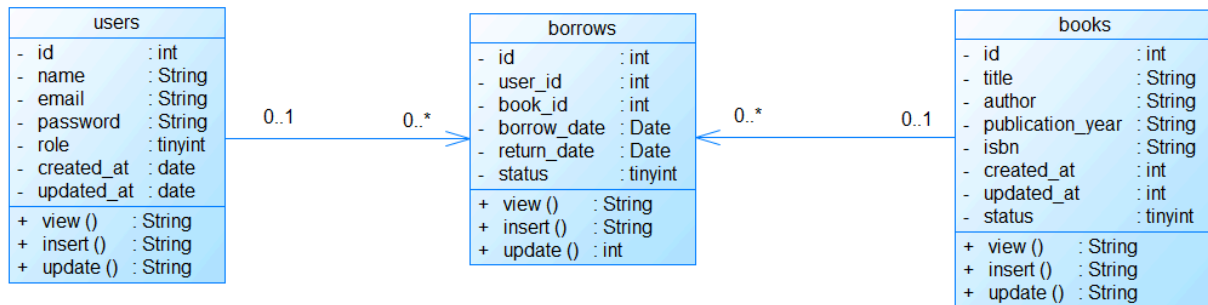## Unified Modelling Language (UML) Diagram

1.1.   Use Case Diagram

Use Case Explanation:
1. View Book: to see list of available and not available books in library
2. Insert Book: to input new book catalogue into library
3. Update Book: to update information of the book
4. View Borrowed Book Detail: to see borrowed book by borrower and theirs return date
5. Update Status Borrowed Book: to update status of borrowed book to finish
6. Insert Borrowed Book: to input book that will be borrowed by borrower

1.2. Class Diagram

Class Diagram Explanation:

Cardinality: Many to Many

1. **Class User**
   a. Attribute: id, name, email, password, role, created_at, update_at,
   b. Method: view(), insert(), update()
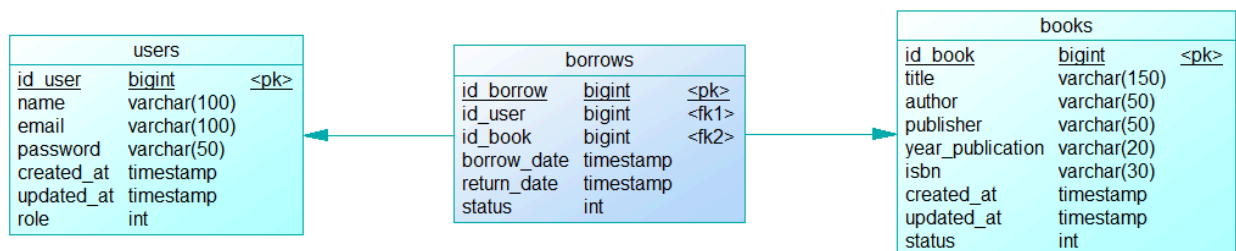2. **Class Books**
   a. Attribute: id, title, author, publisher, publication_year, isbn, created_at, updated_at, status
   b. Method: view(), insert(), update()
3. **Class Borrows**
   c. Attribute: id, user_id, book_id, created_at, updated_at, status
   d. Method: view(), insert(), update()

Chapter II
Database

2.1. Database Design

Database Design Explanation:

1. Users

Key	Data Type	Length
id	bigint	
name	varchar	100
email	varchar	100
password	varchar	50
created_at	timestamp	
updated_at	timestamp	
role	int	

2. Books

Key	Data Type	Length
id	bigint	
title	varchar	150
author	varchar	50
publisher	varchar	50
publication_year	varchar	20
isbn	varchar	30
created_at	timestamp	
updated_at	timestamp	
status	int	

3. Users

Key	Data Type	Length
id	bigint	
user_id	bigint	
book_id	bigint	
created_at	timestamp	

updated_at	timestamp	
status	int	

Chapter III
User Testing Scenario

3.1. Testing Design

No.	Scenario	Steps	Expected Result	Actual Result
1.	Register account	1. User register account by clicking register button on the header page 2. Register page pop-up on the top of page 3. Fill name, email, password, confirm password 4. Click submit button	Register successful	Register successful as expected
2.	Login account	1. User and Admin login account by clicking login button on the header page 2. Login page pop-up on the top of page 3. Fill email & password 4. Click login button	Login successful	Login successful as expected
3.	Forgot password	1. User and Admin login account by clicking login button on the header page	Password reset successfully	Password reset successfully as expected

		2. Login page pop-up on the top of page 3. Click forgot your password hyperlink 4. Reset password via email pop-up on the top of page 5. Open mailhog (localhost:8025) and click reset password link via mailhog 6. Fill new password and password confirmation 7. Click submit for reset password		
4.	Remember me	1. User and Admin login account by clicking login button on the header page 2. Login page pop-up on the top of page 3. Click remember me checkbox 4. Open new browser 5. Textbox email and password filled automatically on the other browser because of remember token	Textbox filled automatically	Textbox filled automatically as expected
5.	View list book for admin and user	1. After login, list book appear on	List book appeared successfully	List book appeared

		the top of page and it shows all information of book in library		successfully
6.	Add new book catalogue	1. After login, click home icon on the top left corner of header 2. Click add new book catalogue 3. Fill all the blank textbox or requirement 4. Click save and it'll redirect to admin view page and it'll show new added book on list book	New book inserted successfully and showed on list book	New book inserted successfully and showed on list book as expected
7.	Edit book catalogue	1. After login, click home icon on the top left corner of header 2. Click edit button on the specified book that you want to update on actions column 3. All of the textbox will be filled automatically based on the data that the user chooses 4. Update the information that you want 5. Lastly, click edit for saving it	Information updated successfully	Information updated successfully as expected
8.	Add borrower's book	1. After login, click home icon on the top left corner of header 2. Click borrower's book input button 3. Choose the book and the user that	1. Borrower's data inserted successfully 2. Borrow date filled automatically	1. Borrower's data inserted successfully 2. Borrow date filled automatic

			3. Return date filled/calculated 7 days from borrows date	ally 3. Return date filled/calculated 7 days from borrows date
9.	View borrower's book data	1. After login, click home icon on the top left corner of header 2. Click view borrower's book data button 3. List of borrower's book data page will be shown on the top of page	List borrower's book data shown all of the information	List borrower's book data shown all of the information as expected
10.	Edit borrower's book data	1. After login, click home icon on the top left corner of header 2. Click view borrower's book data button 3. Choose specified borrower's book data and click finish button on the actions column 4. After click finish button, the column status of the user chooses will be updated	Status of specified data changed successfully to reservation done from reservation on going status	Status of specified data changed successfully to reservation done from reservation on going as expected

		from reservation on going to reservation done		