



Welcome



TO

LIBRARY MANAGEMENT SYSTEM

CREATED BY:

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UNDER THE GUIDANCE OF

PROF.C.N. REDDY

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INRODUCTION

A Library Management System (LMS) is a comprehensive software solution designed to facilitate the efficient and effective management of a library's resources, services, and users. In today's digital age, traditional library management, which involves manually tracking inventory, lending, and member records, can be labor-intensive and prone to errors. An LMS automates these tasks, enhancing library operations, improving user experience, and enabling libraries to serve their patrons more effectively. This introduction explores the purpose, benefits, features, and development considerations for implementing a Library Management System.

SCOPE OF SYSTEM

The scope of the Library Management System (LMS) encompasses a wide range of functionalities that improve library operations, support user needs, and integrate with modern technologies to create a seamless library experience. This system is designed to cater to both library staff and patrons, automating day-to-day operations while offering easy access to resources and account management for users.

Key Areas of Scope:

- 1) Resource Management
- 2) User Management
- 3) Borrowing and Lending Operations
- 4) Digital Resource Integration
- 5) Inventory Management

PURPOSE OF SYSTEM

The primary purpose of a Library Management System (LMS) is to streamline, organize, and automate various library operations to improve efficiency, accuracy, and accessibility. Libraries, whether academic, public, or private, have evolved from being just physical spaces for books into dynamic learning and resource hubs. A Library Management System is designed to support this evolution by addressing the many administrative and operational challenges libraries face. Here's a detailed look at the purpose of an LMS:

The main purpose of an LMS include:

- 1) Efficient Resource Management
- 2) Enhanced User Experience
- 3) Automating Routine Tasks
- 4) Data-Driven Decision-Making
- 5) Security and Accountability

OBJECTIVE OF SYSTEM

The objectives of the Library Management System (LMS) are to optimize library operations, improve user experience, and enable efficient resource management. Designed as a centralized and automated solution, the LMS aims to address the challenges of traditional library systems while meeting the needs of a modern, digital library environment. The following key objectives outline the purpose and functionality of the LMS:

- ▶ Automate Library Operations
- ▶ Enhance User Accessibility and Engagement
- ▶ Ensure Real-Time Resource Tracking and Inventory Management
- ▶ Enable Data-Driven Decision Making
- ▶ Integrate Digital and Physical Resources
- ▶ Improve Communication with Users

Modules and Functionalities

- ▶ User Management Module:
- ▶ Catalog Management Module:
- ▶ Circulation Management Module:
- ▶ Search and Discovery Module:
- ▶ Reservation and Renewal Module:
- ▶ Notifications and Alerts Module:
- ▶ Fines and Payments Module:
- ▶ Reports and Analytics Module:
- ▶ Inventory Management Module:
- ▶ Administration and Configuration Module:

Modules and Functionalities

- ▶ Barcode/RFID Integration Module (Optional) :
- ▶ Digital Resource Management Module (Optional) :
- ▶ Backup and Recovery Module:
- ▶ Security and Access Control Module:
- ▶ Multi-Library or Branch Management Module (Optional for large systems) :

Feasibility Study

The feasibility study for a Library Management System (LMS) assesses whether implementing this system is practical, cost-effective, and beneficial for a library. It evaluates the technical, economic, operational, and time feasibility to ensure the project aligns with organizational goals, resources, and constraints.

► **Technical Feasibility:**

- System Requirements:
- Integration with Existing Systems:
- Hardware Requirements:

► **Economic Feasibility :**

- Initial Costs:
- Operational Costs
- Return on Investment (ROI)

Feasibility Study

- ▶ **Operational Feasibility:**

- Ease of Use
- Staff Training and Adaptability

- ▶ **Schedule Feasibility:**

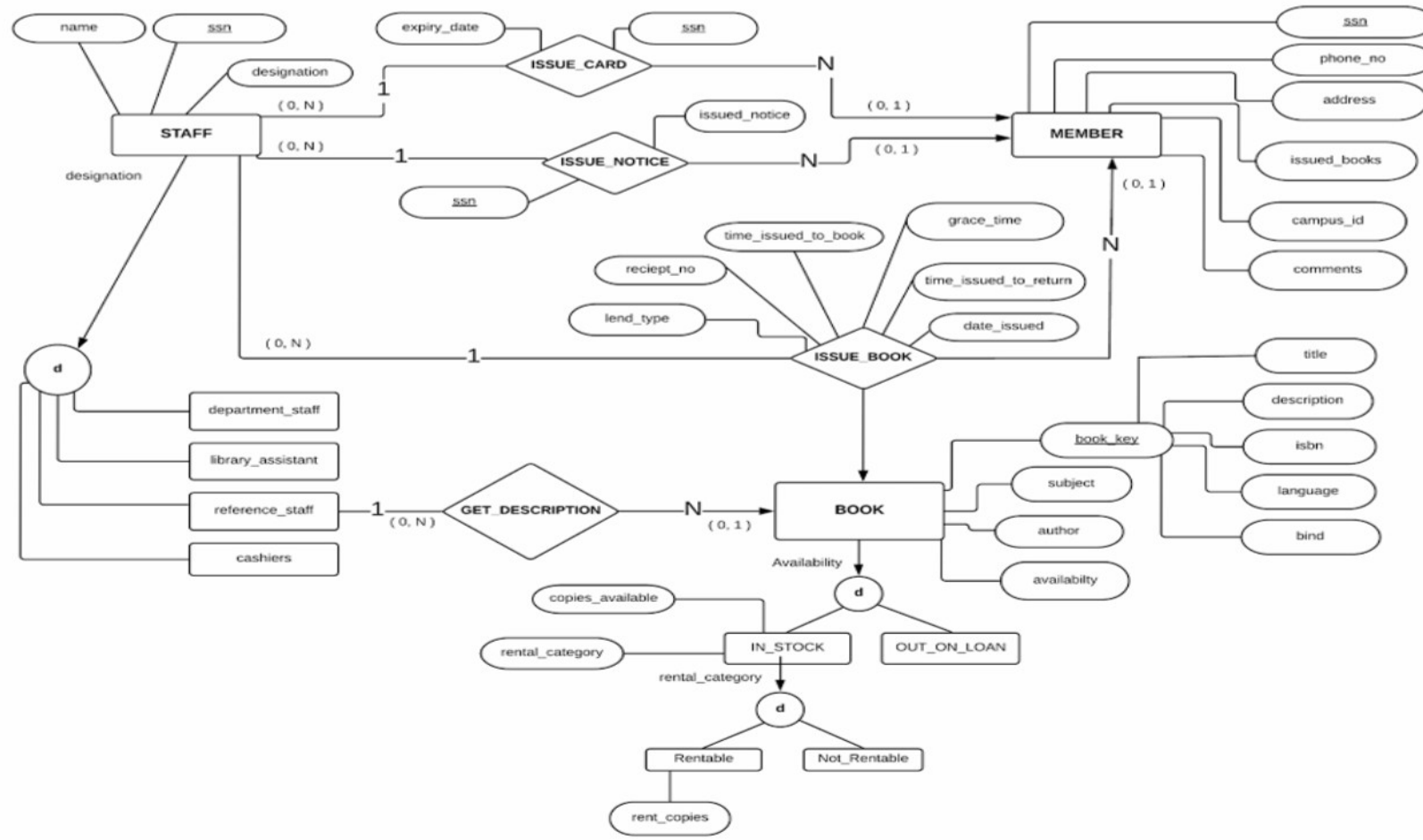
- Implementation Timeline
- Milestones
- Potential Delays

- ▶ **Legal and Compliance Feasibility :**

- Data Privacy and Security
- Licensing and Copyright

DIAGRAMS

ER DIAGRAM



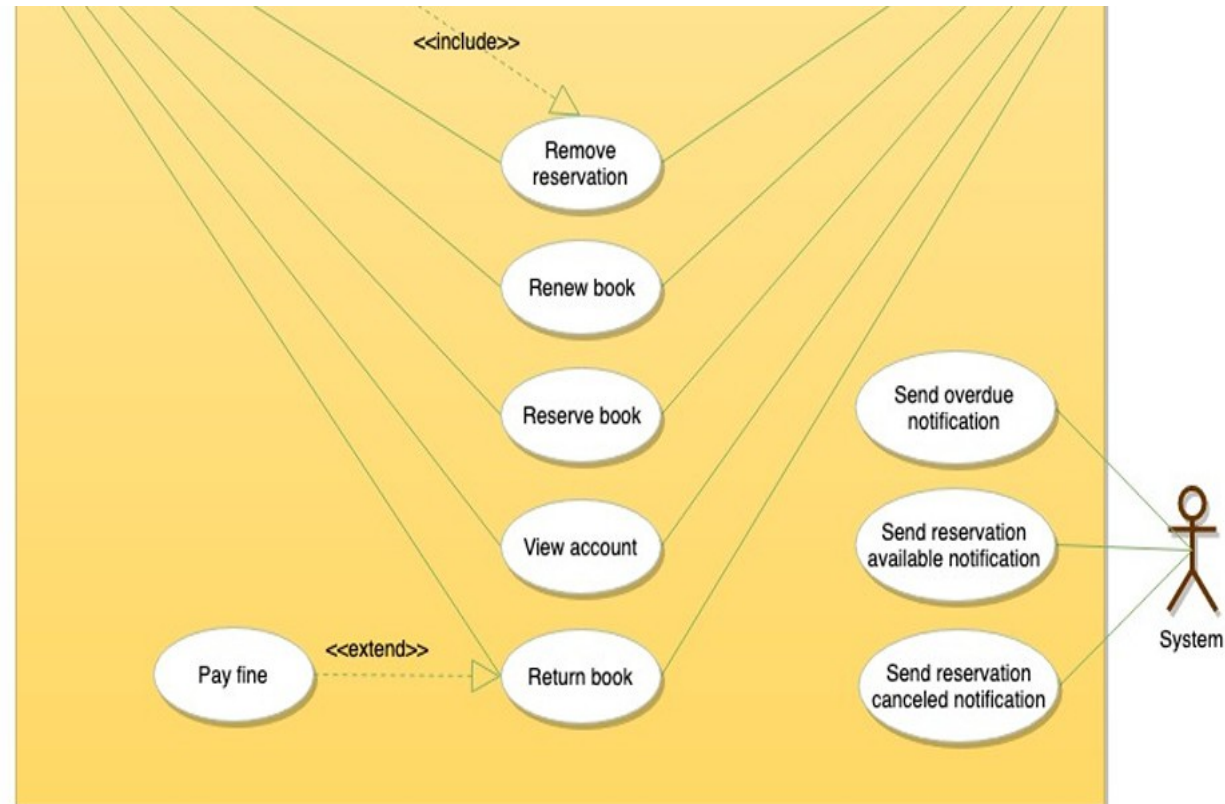
DIAGRAMS

USE CASE DIAGRAM



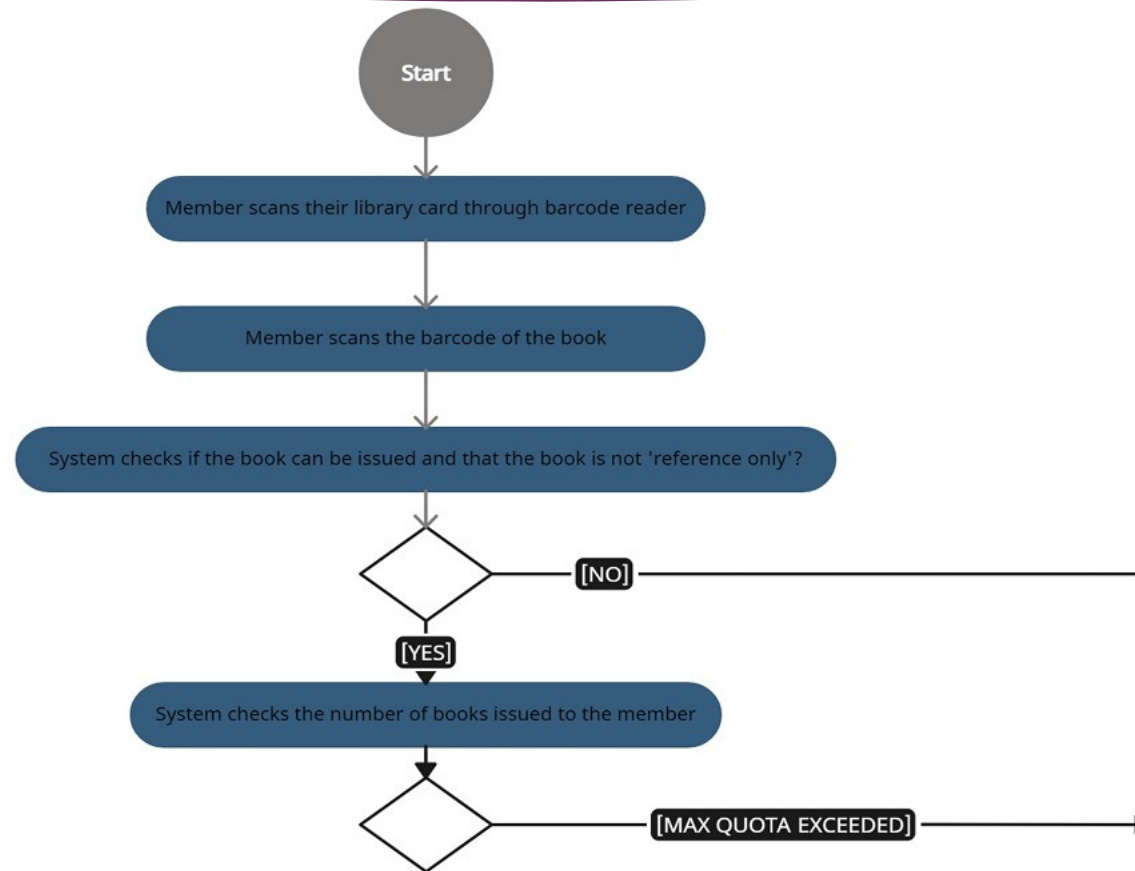
DIAGRAMS

USE CASE DIAGRAM



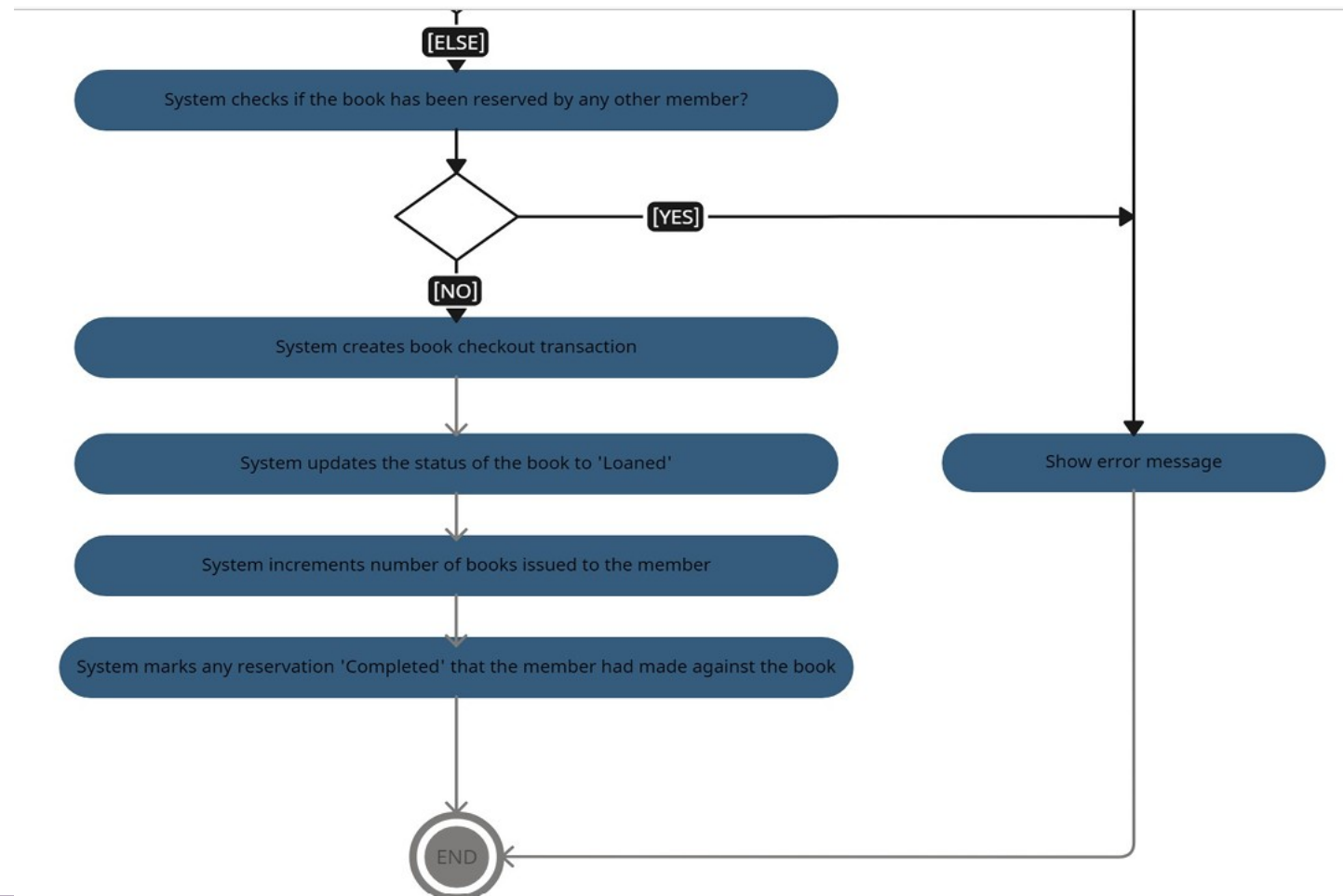
DIAGRAMS

USE CASE DIAGRAM



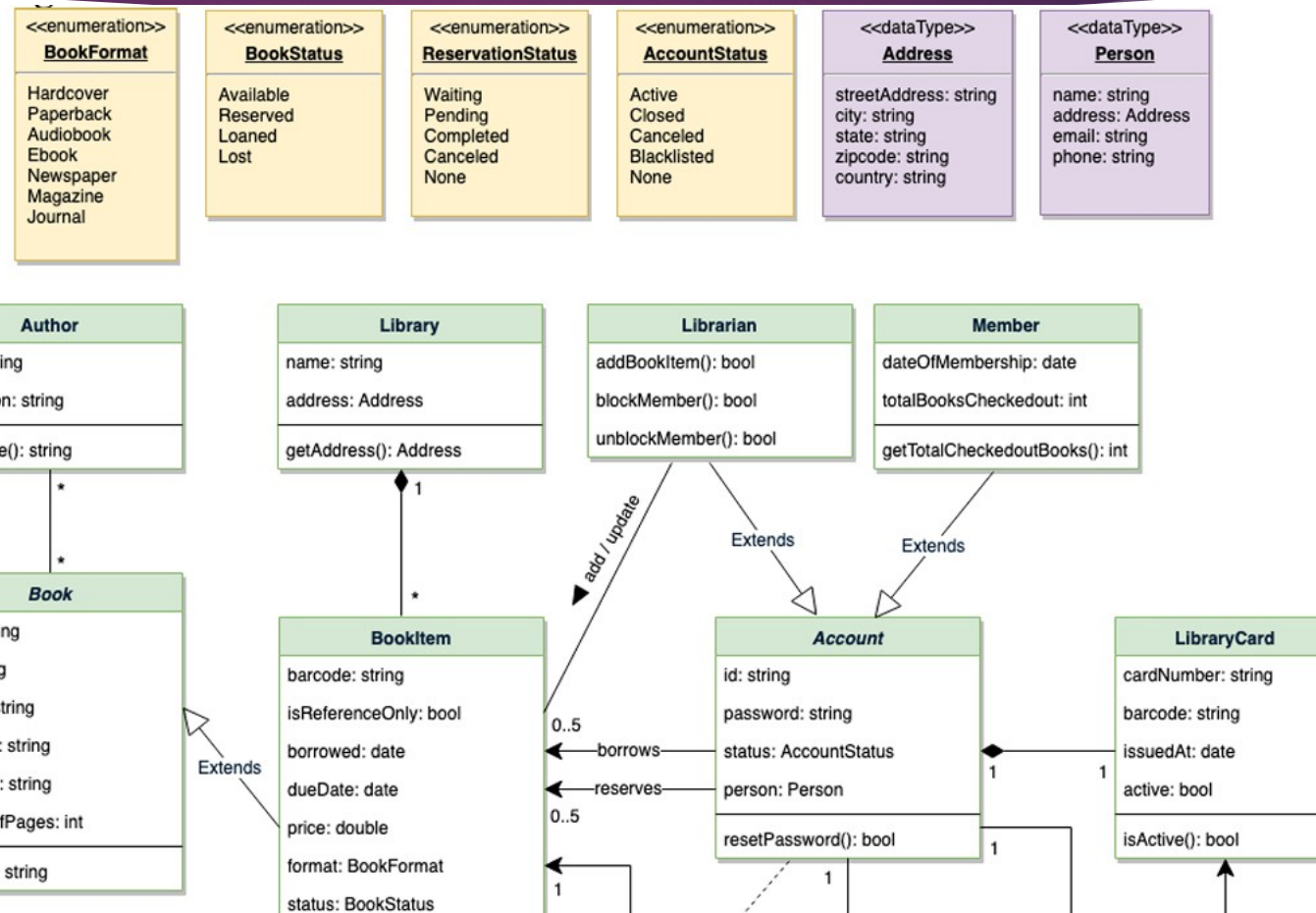
DIAGRAMS

ACTIVITY DIAGRAM



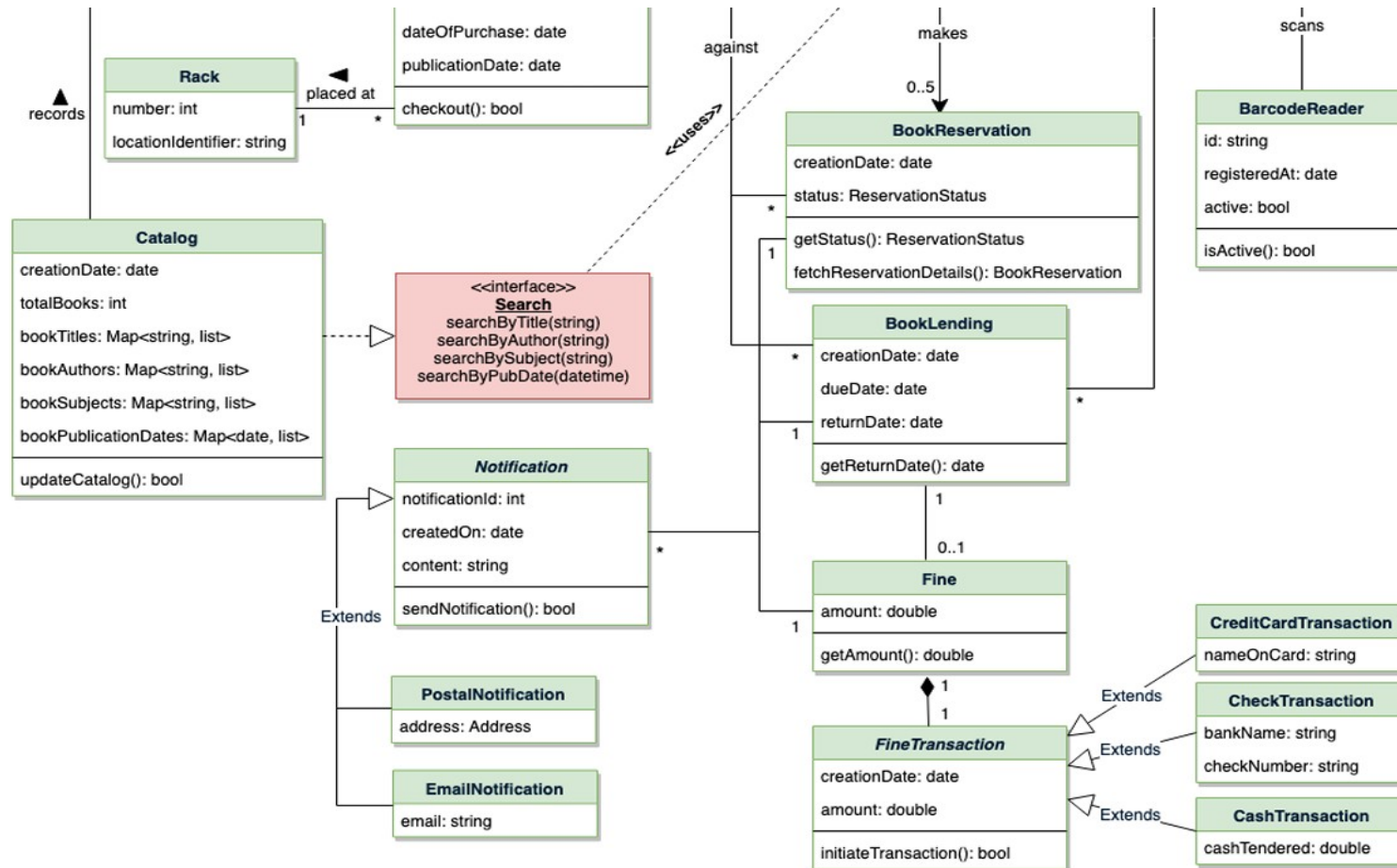
DIAGRAMS

CLASS DIAGRAM



DIAGRAMS

CLASS DIAGRAM



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User PRN No.

Course Name

Studying year

Admission year

Student Contact No.

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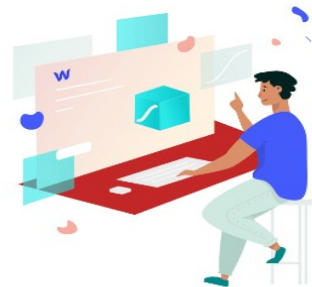
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USER INTERFACES: ADMIN DASHBOARD



DYPIMED Library System



Dashboard

Category

Author

Location Rack

Book

User

Issue Book

Logout

Dashboard



0

Total Book Issue



0

Total Book Returned



0

Total Book Not Return

₹

Total Fines Received



0

Total Book



0

Total Author



0


Total Category



0

Total Location Rack

USER INTERFACES: ADD/MANAGE CATEGORY

 DYPIMED Library System

Dashboard

Category

Author

Location Rack

Book

User

Issue Book

Logout

Category Management

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Category Management

Add

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 entries per page

Search...

Category Name	Status	Created On	Updated On	Action
No Data Found				

Showing 1 to 1 of 1 entries

USER INTERFACES: ADD/MANAGE CATEGORY

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Category

Author

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Book

User

Issue Book

Logout

Category Management

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Category Management

Add

10 ▾

 entries per page

Search...

Category Name	Status	Created On	Updated On	Action
No Data Found				

Showing 1 to 1 of 1 entries

TABLES:

1.ADMIN

lms_admin:

Field	Type	Null	Key	Extra
admin_id	int(11)	NO	PRI	auto_increment
admin_email	Varchar(200)	NO		
admin_password	Varchar(100)	NO		

TABLES:

2.AUTHOR

lms_author:

Field	Type	Null	Key	Extra
author_id	int(11)	NO	PRI	auto_increment
author_name	varchar(200)	NO		
author_status	enum(0,1)	NO		
author_created_on	timestamp	NO		DEFAULT_GENERATED
author_updated_on	timestamp	NO		DEFAULT_GENERATED

TABLES:

3.BOOKS

lms_book :

Field	Type	Null	Key	Extra
book_ID	int	NO	PRI	auto_increment
book_category	varchar(200)	NO		
book_author	varchar(200)	NO		
book_location_rack	varchar(100)	NO		
book_name	text	NO		
book_isbn_number	varchar(30)	NO		DEFAULT_GENERATED
book_no_of_copy	int(5)	NO		
book_status	Enum(0,1)	NO		
book_added_on	timestamp	NO		
book_updated_on	timestamp	NO		DEFAULT_GENERATED

TABLES:

4.CATEGORIES

lms_category :

Field	Type	Null	Key	Extra
category_id	int	NO	PRI	auto_increment
category_name	varchar(200)	YES		
category_status	Enum(0,1)	YES		
category_created_on	timestamp	YES		DEFAULT_GENERATED
category_updated_on	timestamp	YES		DEFAULT_GENERATED

TABLES:

5.ISSUED BOOKS

lms_issue_book :

Field	Type	Null	Key	Extra
issue_book_id	int	NO	PRI	auto_increment
book_id	varchar(30)	NO	FK	
user_id	varchar(30)	NO	FK	
issue_date_time	varchar(30)	NO		
expected_return_date	varchar(30)	NO		
return_date_time	varchar(30)	NO		
book_fines	varchar(30)	NO		
book_issue_status	Enum(-1,0,1)	YES		

TABLES:

6.RACK LOCATION

lms_location Rack:

Field	Type	Null	Key	Extra
location_rack_id	int	NO	PRI	auto_increment
location_rack_name	varchar(200)	YES		
Location_rack_status	Enum(0,1)	NO		
location_rack_created_on	timestamp	YES		DEFAULT_GENERATED
location_rack_updated_on	timestamp	YES		DEFAULT_GENERATED

TABLES:

7.SETTING

lms_setting:

Field	Type	Null	Key	Extra
seeting_id	int	NO	PRI	auto_increment
library_name	varchar(200)	NO		
library_address	text	NO		
library_contact_number	varchar(30)	NO		
library_email_address	varchar(100)	NO		
library_total_book_issued_day	int(5)	NO		
library_one_day_fine	Decimal(4,2)	NO		
library_issue_total_book_per_user	int(3)	NO		
library_currency	varchar(30)	NO		
library_timezone	varchar(100)	NO		

ADVANTAGES & DISADVANTAGES

Advantages:

- ▶ Streamlined Process
- ▶ Improved Accessibility
- ▶ Enhanced Efficiency
- ▶ Improved Candidate Experience

Disadvantages:

- ▶ Initial investment
- ▶ User Adoption
- ▶ Maintenance and Updates
- ▶ Dependency on technology

FUTURE SCOPE

- ▶ Artificial Intelligence and Machine Learning:
- ▶ Predictive Analytics
- ▶ Blockchain Technology
- ▶ Virtual Reality (VR) and Augmented Reality (AR)
- ▶ Global Networking and Opportunities
- ▶ Data Visualization and Reporting
- ▶ Mobile Accessibility

CONCLUSION

In conclusion, implementing a Library Management System (LMS) offers a transformative solution for modernizing and streamlining library operations. This feasibility study shows that the LMS is a viable project across technical, economic, operational, and schedule aspects, providing a clear path for enhancing efficiency, accessibility, and resource management within the library. By automating processes such as cataloging, inventory tracking, user management, and notifications, the LMS significantly reduces manual workload, enabling library staff to focus more on serving patrons effectively.

THANK YOU