

## DESENVOLUPAMENT D'APLICACIONS WEB

Segon Curs



# AMLibrary

---

*Autor: Abubakar Tariq  
Mohammed Fariat*

Data d'entrega:  
Curs acadèmic 2022 /2023

## Summary

We are going to develop a website for an online library where users can access e-books for free or rent physical books for their reading.

## Keywords

Web, ebooks, elearning , renting books, elibrary.

Web, llibres electrònics, e-learning, llibres de lloguer, biblioteca.

Web, ebooks, elearning, alquiler de libros, elibrary.

## Index

1 Introduction	4
2 Context and motivation of the project.	4
2.1 Objectives of the project	4
2.1.1 General production objectives	4
2.1.2 Learning objectives.	4
3 Description	5
3.1 Expected results	5
3.2 Benefits	5
4 Analysis	6
4.1 Functional requirements	6
4.2 Non-functional requirements	6
4.3 Data requirements	7
5 Design	8
5.1 Interface design	8
5.2 Application Flow	18
5.3 System design	19
6 Final Result	21
7 Conclusions	21
8 Referències	22

## 1 Introduction

an online library that allows free access to books and also offers the option of renting physical books.

## 2 Context and motivation of the project.

### 2.1 Objectives of the project

#### 2.1.1 General production objectives

The objective of this project is to develop a user-friendly and responsive online library platform using Laravel framework, which will allow individuals to easily access and read a wide variety of books. With this platform, users will also have the option to rent books, giving them the flexibility to rent books for a limited time period, without the need to purchase them.

#### 2.1.2 Learning objectives.

Creating a project using the Laravel framework can provide a number of valuable learning opportunities, including:

- **PHP Programming:** Laravel is a PHP-based framework that we'll help us gain valuable experience in programming in PHP. This includes learning how to work with PHP's syntax and data types, as well as understanding how to use various PHP libraries and functions.
- **Laravel Framework:** By creating our project using Laravel, we can gain experience working with this popular PHP framework. and learn about Laravel's architecture, routing, middleware, controllers, and other key features.
- **Role-Based Access Control:** Laravel includes built-in support for role-based access control (RBAC), which allows developers to manage user permissions based on their role in the system. By using Laravel's RBAC features, we can learn how to create different user roles and permissions, and how to restrict access to certain parts of the system based on those roles.
- **Database Design:** Laravel provides a number of tools for working with databases, including its own Object Relational Mapping (ORM) system called Eloquent. By using Eloquent and other Laravel database features, we can learn about database design and management, including how to create tables, define relationships, and query data.
- **Web Development Best Practices:** Laravel is built with modern web development best practices in mind, including test-driven development, dependency injection, and the use of third-party libraries and packages. By using Laravel, we can learn about these best practices and how to apply them to their own projects.

Overall, creating a project using the Laravel framework can provide us with valuable experience in PHP programming, Laravel framework features, database design and management, and modern web development best practices. This can help us to become better developers and prepare us for future projects.

## 3 Description

### 3.1 Expected results

The expected results of our website:

**Homepage:** The homepage will serve as the main entry point for the website. It will feature various categories of books, and possibly some featured books and a search bar.

**Library:** This page will include a list of all the available books on the website, sorted by category or genre. Each book will have a brief description and a thumbnail image.

**Book Details:** When a user clicks on a specific book, they will be taken to a page with more details about that book, including its synopsis, author, publisher, and publication date. This page may also include user reviews and ratings.

**Reading Interface:** When a user decides to read a book online, they will be taken to a page with a reading interface. This interface will allow users to flip through pages, adjust the font size, and perform other reading-related functions.

**Cart:** If a user decides they want to rent a physical copy of a book, they will be taken to a renting interface. This interface will allow users to select the book they want to rent, choose a rental period, and enter their shipping information.

**Admin pages: users management and All Books rented , edit Books** pages to allow library staff to manage the online library, including adding new books, updating book information, and managing user accounts.

**User Profile:** Users will need to create an account to access the online library. This page will allow users to manage their account information, view their rental history, and manage their rentals.

**Contact Us:** This page will include contact information for the website's support team, such as email, phone number, or a contact form.

**About Us:** This page will provide background information about the online library, including its mission, history, and team members.

### 3.2 Benefits

Creating an online library using Laravel can provide a number of benefits, both for the library itself and for its users. Here are some of the main benefits:

- **Increased Access:** An online library can provide users with access to a wide range of books and other resources from anywhere in the world, at any time of day or night. This can be particularly beneficial for users who may not have easy access to a physical library or who have busy schedules.
- **Cost Savings:** Creating an online library can be a cost-effective way to provide library services, as it eliminates the need for expensive physical infrastructure, such as buildings, shelves, and furniture. It also reduces the need for staff to manage the

physical library, as many tasks can be automated in the online environment.

- **Improved User Experience:** An online library can provide users with a more streamlined and intuitive experience, with easy-to-use search tools, personalized recommendations, and instant access to books and other resources. This can lead to higher levels of user satisfaction and engagement.
- **Better Data Management:** By creating an online library, library staff can better manage and track their collections, users, and rentals. This can lead to better decision-making, improved planning, and more efficient operations.
- **Increased Reach:** An online library can reach a wider audience than a physical library, as users from all over the world can access its resources. This can help to promote the library and its services, and can lead to increased use and awareness.

Overall, creating an online library using Laravel can provide a range of benefits, including increased access, cost savings, improved user experience, better data management, and increased reach. These benefits can help to promote the library and its services, and can lead to increased use and engagement from users.

## 4 Analysis

The following section will present the analysis carried out for the development of the project. It includes the system requirements, data requirements, and non-functional requirements.

### 4.1 Functional requirements

- RF01: All the button will have hand cursor when you hover on them.
- RF02: when you click on Register Button, popup window will be open up and from there you can register, and same with login.
- RF03: logo will take you to home page
- RF04: contact button will take you to another page to contact.
- RF05: library button will take you to another page where you can see all the book and you can list them by category

### 4.2 Non-functional requirements

Non-functional requirements are a type of requirement that describe the qualities or characteristics of a system or application, rather than its specific features or functions. In the context of an online library application, some examples of non-functional requirements might include:

- **RNF01: Performance:** The application should be able to handle a large number of users and book rentals without experiencing significant slowdowns or outages.
- **RNF02: Reliability:** The application should be reliable and available at all times, with minimal downtime or system failures.

- RNF03: Security: The application should be secure, with appropriate measures in place to protect user data and prevent unauthorized access.
- RNF04: Scalability: The application should be designed to scale up or down as needed, to accommodate changes in user demand or business growth.
- RNF05: Usability: The application should be user-friendly and easy to use, with intuitive navigation and clear instructions for users.
- RNF06: Accessibility: The application should be accessible to users with disabilities, including support for assistive technologies and compliance with accessibility standards.
- RNF07: Maintenance: The application should be easy to maintain and update, with a clear and well-documented codebase, and efficient debugging tools.

Overall, non-functional requirements are important for ensuring that an online library application is reliable, secure, and easy to use, and can support the needs of its users and stakeholders over the long term.

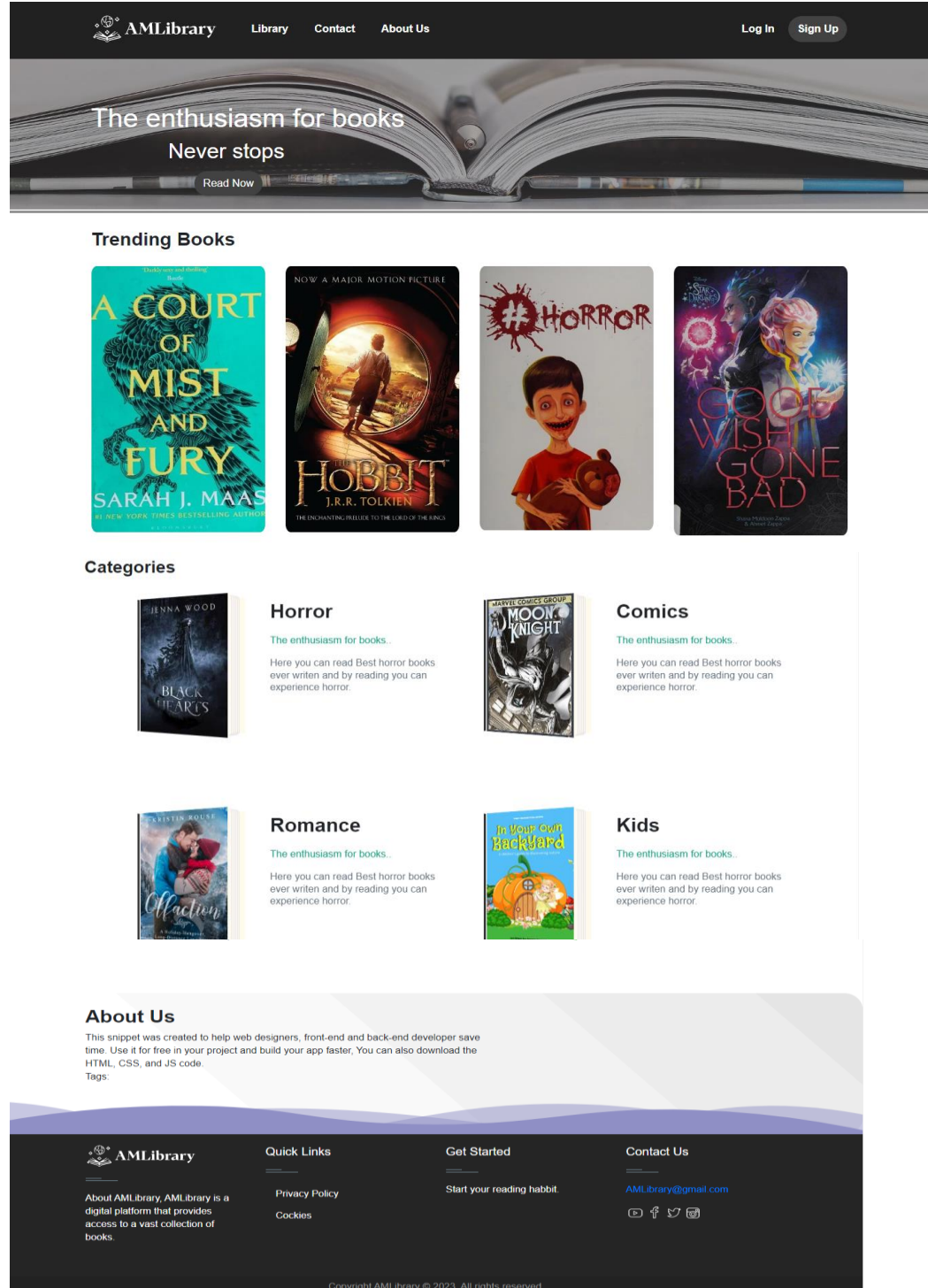
### 4.3 Data requirements

User	Book	Rental	Category	Role
+\$id; +\$name; +\$email; +\$created_at; +\$updated_at; +login(); +register(); +logout(); +getProfile(); +updateProfile(); +deleteProfile();	+\$id; +\$title; +\$author; +\$description; +\$cover_image; +\$category_id; +\$created_at; +\$updated_at; +createBook(); +getBookById(); +getBooksByCategory(); +updateBook(); +deleteBook(); + searchBooks();	+\$id; +\$user_id; +\$book_id; +\$start_date; +\$end_date; +\$fee; +\$created_at; +\$updated_at; +rentBook(); +getRentalById(); +getRentalsByUser(); +getRentalsByBook(); +updateRental(); +deleteRental(); +calculateRentalFee();	+\$id; +\$name; +\$created_at; +\$updated_at; +createCategory(); +getCategoryById(); +getCategories(); +updateCategory(); +deleteCategory();	+\$id; +\$name; +\$created_at; +\$updated_at; +createRole(); +getRoleById(); +getRoles(); +updateRole(); +deleteRole(); +deleteRole();

## 5 Design

### 5.1 Interface design

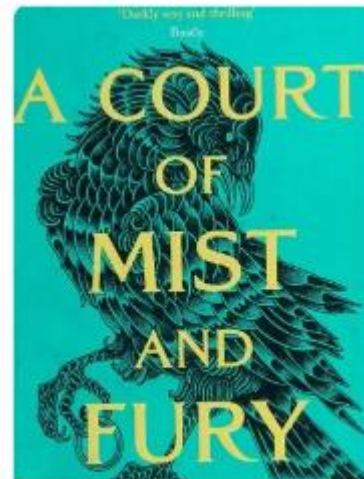
#### Home Page:








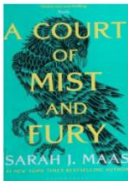
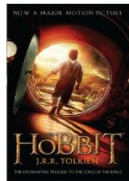


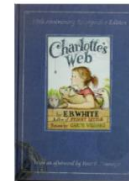

### Trending Books









## library page:

 AMLibrary
 [Library](#)
[Contact](#)
[About Us](#)
[Log In](#)
[Sign Up](#)

Categories:

 AMLibrary
 

About AMLibrary, AMLibrary is a digital platform that provides access to a vast collection of books.


Quick Links

[Privacy Policy](#)
[Cookies](#)

Get Started



Start your reading habit.

Contact Us

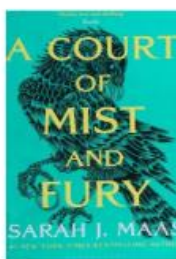
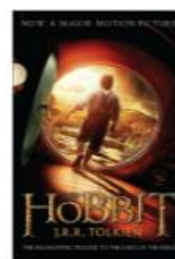
[AMLibrary@gmail.com](mailto:AMLibrary@gmail.com)




127.0.0.1:8000/bookdetail?book=10

Copyright AMLibrary © 2023. All rights reserved.

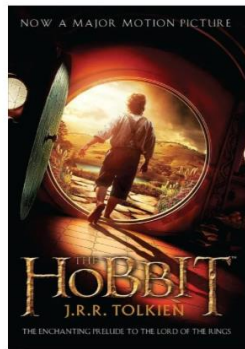
 AMLibrary
 

Categories:

## Book Detail Page:



### Lorem Ipsum

Lorem Ipsum es simplemente el texto de relleno de las imprentas y archivos de texto. Lorem Ips

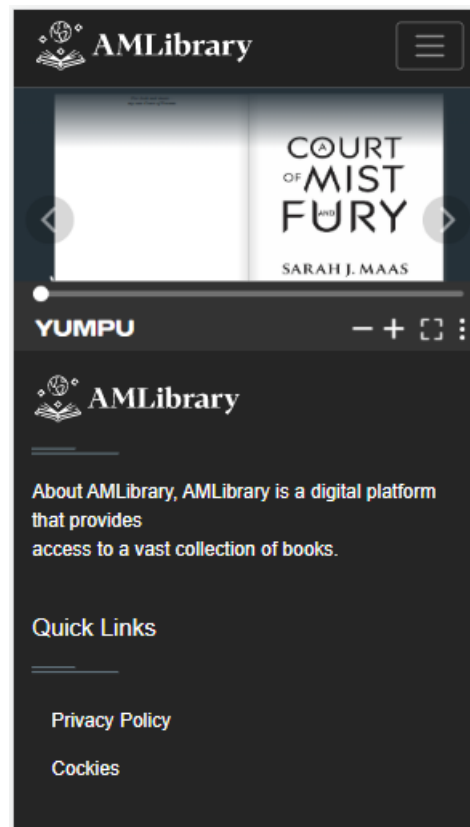
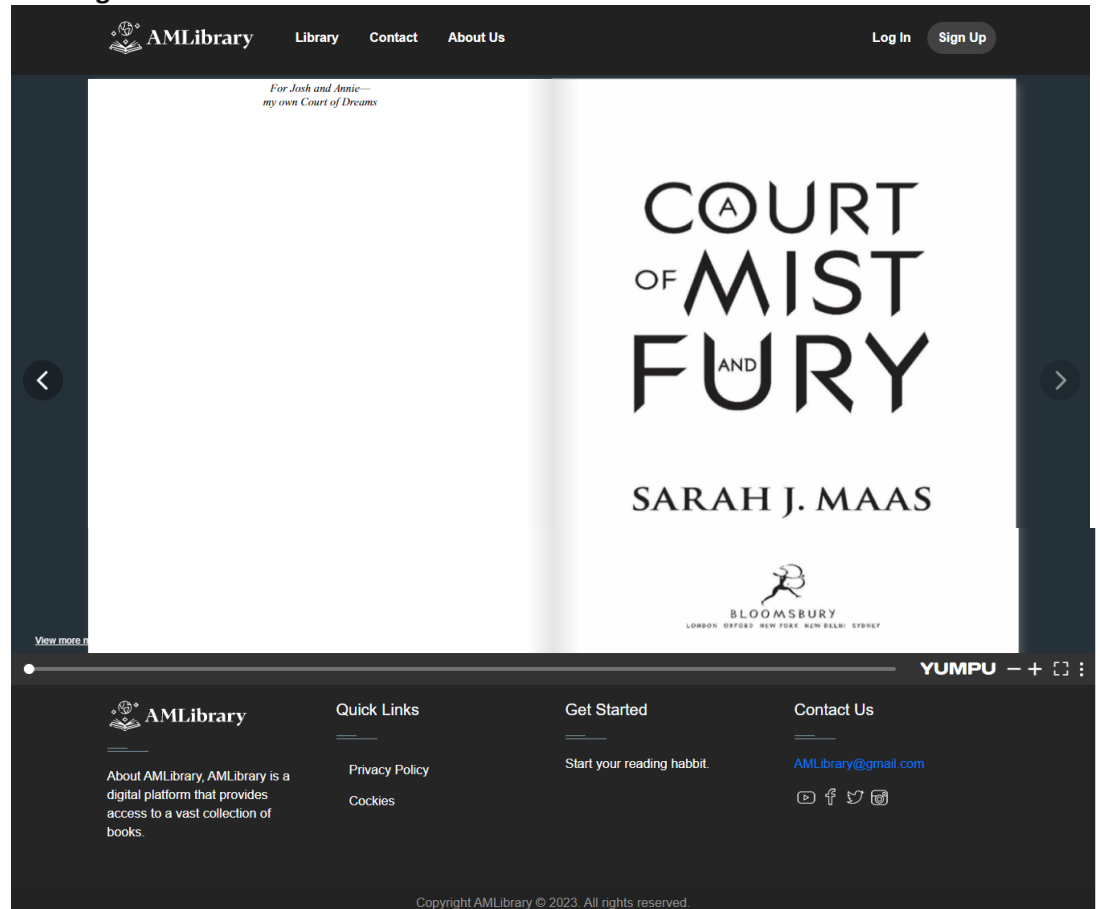
Category: 1, Price: 2.00

[Read Now](#)
[Borrow](#)


Copyright AMLibrary © 2023. All rights reserved.





## Reading Interface:



## Cart:


 AMLibrary
 [Library](#)
[Contact](#)
[About Us](#)


[← Continue shopping](#)


### Shopping Cart

You have 2 items in your cart.




book1  
 #AMLibrary

1    2.00€
 



asd  
 #AMLibrary

1    6.00€
 

#### Card details


Your Card

#### Address details

Your Address

Subtotal	8€
Shipping	5€
Total	13€

13€

 AMLibrary
 

About AMLibrary. AMLibrary is a digital platform that provides access to a vast collection of books.





#### Quick Links

[Privacy Policy](#)  
[Cookies](#)



#### Get Started

Start your reading habitbit.

#### Contact Us

[AMLibrary@gmail.com](mailto:AMLibrary@gmail.com)  






Copyright AMLibrary © 2023. All rights reserved.

 AMLibrary
 

[← Continue shopping](#)


### Shopping Cart

You have 2 items in your cart.



book1  
 #AMLibrary

1    2.00€



asd  
 #AMLibrary

1    6.00€

#### Card details

Your Card

#### Address details

Your Address

Subtotal	8€
Shipping	5€
Total	13€









13€

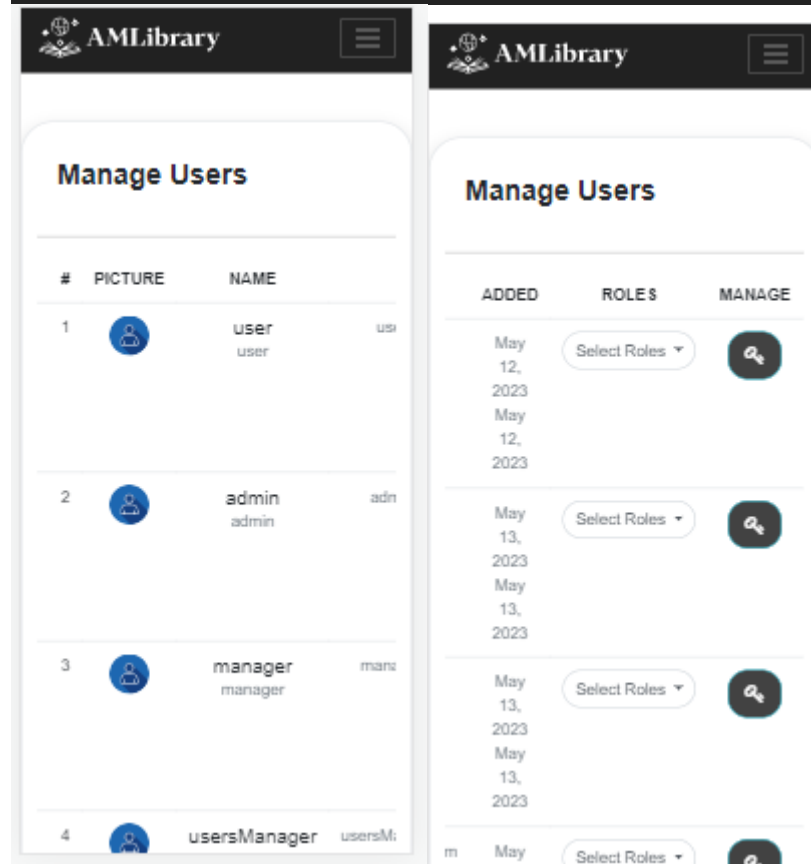
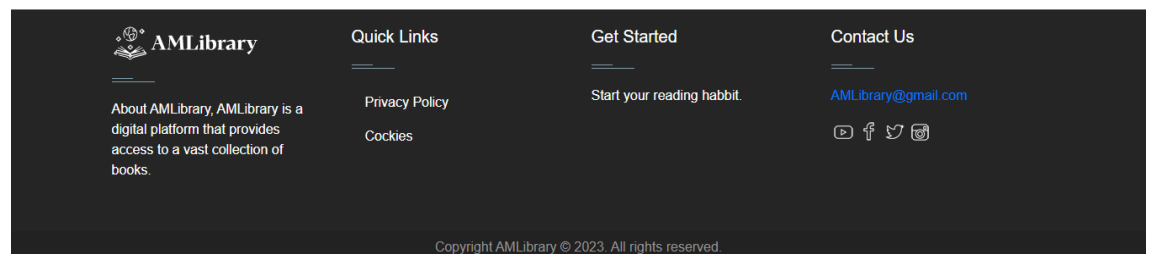
## Admin Pages:

### Users Management:




#### Manage Users



#	PICTURE	NAME	EMAIL	ADDED	ROLES	MANAGE
1		user user	user@gmail.com 213421	May 12, 2023 May 12, 2023	Select Roles ▾	
2		admin admin	admin@gmail.com 14324	May 13, 2023 May 13, 2023	Select Roles ▾	
3		manager manager	manager@gmail.com 4324	May 13, 2023 May 13, 2023	Select Roles ▾	
4		usersManager usersManager	usersManager@gmail.com 3235	May 13, 2023 May 13, 2023	Select Roles ▾	



## Admin Pages:


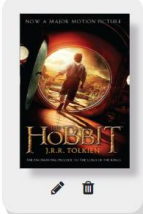



### Books Management:






 **AMLibrary**
[Library](#)
[Contact](#)
[About Us](#)






Categories:

All Books



 **AMLibrary**

About AMLibrary, AMLibrary is a digital platform that provides access to a vast collection of books.

**Quick Links**

[Privacy Policy](#)


**Get Started**

Start your reading habit.

**Contact Us**



[AMLibrary@gmail.com](mailto:AMLibrary@gmail.com)



Copyright AMLibrary © 2023. All rights reserved.

 **AMLibrary**

Categories:


All Books












## Admin Pages:


### all books rented:

 AMLibrary
 [Library](#)
[Contact](#)
[About Us](#)

### Rented Books

CLIENT	BOOK	NAME	ADDRESS	RENTING DATE	RETURN DATE	PRIZE	STATE
 name extralargehgghggh		Moon Knightdfsfds	Renting Address	14/05/2023 14:56	dd/mm/aaaa --:--	12 \$	Return Now
 name extralargehgghggh		Moon Knightdfsfds	Renting Address	14/05/2023 14:56	dd/mm/aaaa --:--	12 \$	Return Now
 name extralargehgghggh		Moon Knightdfsfds	Renting Address	14/05/2023 14:56	dd/mm/aaaa --:--	12 \$	Returned

 AMLibrary
 

About AMLibrary, AMLibrary is a digital platform that provides access to a vast collection of books.





#### Quick Links

[Privacy Policy](#)  
[Cookies](#)

#### Get Started

Start your reading habbit.

#### Contact Us




[AMLibrary@gmail.com](mailto:AMLibrary@gmail.com)  






Copyright AMLibrary © 2023. All rights reserved



## User Pages:


### profile:

 AMLibrary
 Library
 Contact
 About Us
 





**Information:**


Profile Info

First name\*: 


admin

Last name\*: 


admin


Email\*: 

admin@gmail.com

Phone number\*: 

14324


Password\*: 

Upload Image\*: 

Seleccionar archivo

Ninguno archivo selec.

Save

 AMLibrary
 About AMLibrary. AMLibrary is a digital platform that provides access to a vast collection of books.





**Quick Links**

[Privacy Policy](#)
[Cookies](#)



**Get Started**


[Start your reading habit.](#)

**Contact Us**

[AMLibrary@gmail.com](mailto:AMLibrary@gmail.com)






Copyright AMLibrary © 2023. All rights reserved.

 AMLibrary
 




**Information:**


Profile Info

First name\*: 


admin

Last name\*: 

admin

Email\*: 

admin@gmail.com

Phone number\*: 

14324

## User Pages:

### my books:



AMLibrary




Library

Contact

About Us



### Rented Books

BOOK	NAME	ADDRESS	RENTING DATE	RETURN DATE	PRIZE	STATE
	Moon Knightdfsdfs	Renting Address	14/05/2023 14:56	dd/mm/aaaa --:--	12 \$	<button>Return Now</button>
	Moon Knightdfsdfs	Renting Address	14/05/2023 14:56	dd/mm/aaaa --:--	12 \$	<button>Return Now</button>
	Moon Knightdfsdfs	calle mercadal 12 martorell españa	14/05/2023 14:56	dd/mm/aaaa --:--	12\$	<button>Return Now</button>



AMLibrary

About AMLibrary, AMLibrary is a digital platform that provides access to a vast collection of books.

#### Quick Links

[Privacy Policy](#)  
[Cockies](#)

#### Get Started


Start your reading habbit.

#### Contact Us



[AMLibrary@gmail.com](mailto:AMLibrary@gmail.com)



## Contact Us:

 AMLibrary

[Library](#)
[Contact](#)
[About Us](#)


### Barcelona Spain

9757 Aspen Lane South  
Richmond Hill, NY 11419

### Contact Info

T: +1 (291) 939 9321  
E: AMLibrary@gmail.com

### Message Us

 AMLibrary

#### Quick Links





- [Privacy Policy](#)
- [Cookies](#)

#### Get Started


[Start your reading habit.](#)

#### Contact Us

[AMLibrary@gmail.com](mailto:AMLibrary@gmail.com)

Copyright AMLibrary © 2023. All rights reserved.

 AMLibrary

### Barcelona Spain

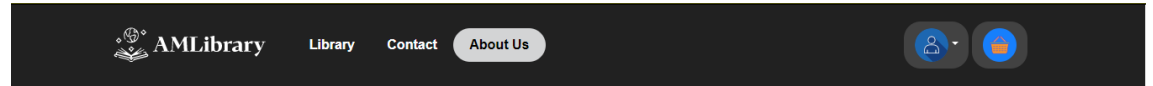
9757 Aspen Lane  
South Richmond Hill,  
NY 11419

### Contact Info

T: +1 (291) 939 9321  
E: AMLibrary@gmail.com

### Message Us

## About Us:



# AMLibrary

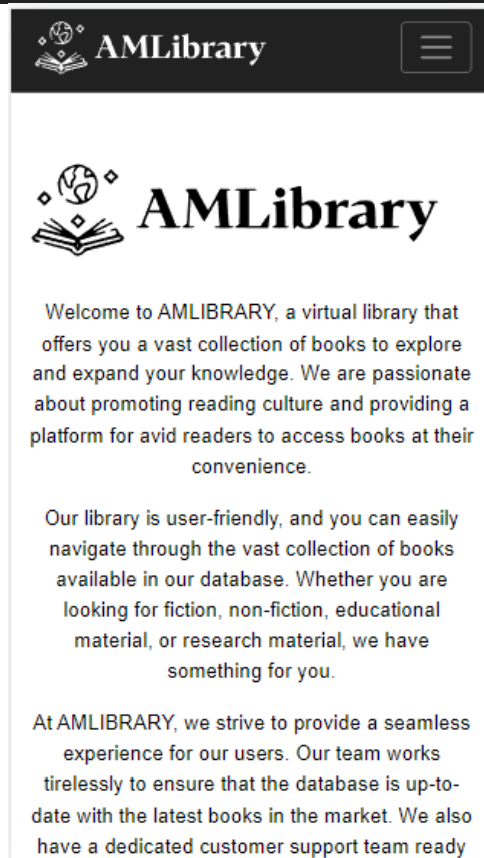
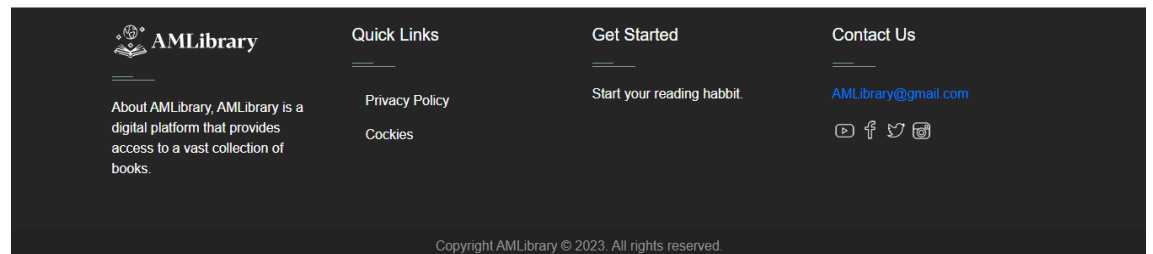
Welcome to AMLIBRARY, a virtual library that offers you a vast collection of books to explore and expand your knowledge. We are passionate about promoting reading culture and providing a platform for avid readers to access books at their convenience.

Our library is user-friendly, and you can easily navigate through the vast collection of books available in our database. Whether you are looking for fiction, non-fiction, educational material, or research material, we have something for you.

At AMLIBRARY, we strive to provide a seamless experience for our users. Our team works tirelessly to ensure that the database is up-to-date with the latest books in the market. We also have a dedicated customer support team ready to assist you with any queries you may have.

We value our users' privacy and have put in place robust security measures to ensure that all personal information and transactions are secure. You can rest assured that your data is safe with us.

Thank you for choosing AMLIBRARY as your go-to virtual library. We look forward to being part of your reading journey.



## Privacy Policy:



# AMLibrary

### AMLibrary.COM Privacy Policy

Your privacy and safety of your data is important to us. This Privacy Policy document describes types of information that is or may be collected, used or shared by AMLibrary.COM when you visit, use or make a purchase. If you have any additional questions or require more information about our Privacy Policy or about how we handle user data and personal information, or wish to withdraw your consent for the continued collection, use or disclosure of your Personal Information, please feel free to, to withdraw your Cookie Consent.

#### Definitions

AMLibrary.COM is operated by AMLibrary, San Francisco, CA 94107, (referred to as "I", "Me", "Our", "Us" or "We"). As a customer of this service you're a "User", "Visitor" or "You" according to this agreement. The Website or any services offered by us will be referred to as "Website" or "Service". External services or integrations like will be referred to as Applications "External Provider" or "External Service".

#### Data we collect

Following standard procedures of using log files, these files automatically log visits when you visit the Website, it may include information about your web browser, it may log some of the cookies that are installed on your device, IP address, ISP, time zone and time stamp, referring text pages, number of clicks. The purpose of this information is for analyzing trends, administering this website, tracking users' movement on this website, and gathering demographic information, and it's not linked to any information that is personally identifiable. Additionally, as you browse the Website, we may collect information about subpages you view.

We may also collect personal information about you such as your name, organization/company name, address, email address or other personal data if you provide it to us during registration, purchasing, contacting us or in other ways. We only ask for personal information when we truly need it to provide a desired service to you (for example if you make an order through the Website). We collect it by fair and lawful means, with your knowledge and consent. We also let you know why we're collecting it and how it will be used.

#### Sharing your Personal Information

We don't share, sell, trade or rent any personally identifying information publicly or with third-parties, except when required to by law, if you violate our Terms of Use or where it helps us facilitate our Service. For example online store modules may require third-party services like PayPal or other Payment Processors, we may also use data services like Google Analytics, Facebook Pixel and more. Each of these services have their own Privacy Policy, for example in order to provide certain features we may rely on other third party services like payment and accounting providers or services, support or communication providers and other services, we reserve right to not track how you interact with any of the provided services.

We may collect and use Non-Personal Information to help us improve the Service, customize your experience and analyze use of the Service. This Privacy Policy does not limit our use or disclosure of collected Non-Personal Information. We reserve the right to collect, use and disclose such Non-Personal Information to our partners, advertisers and other third parties at our sole discretion.

#### Cookies and Beacons

AMLibrary.COM uses "Cookies", which are small data files placed on your device only if your browser's settings allow it and may include information like unique ID, previously visited subpages on this Website and/or other information. Types of Cookies we may use: Session Cookies, Security Cookies or Preference Cookies. You can disable or erase cookies in your browser settings.



## AMLibrary



# AMLibrary

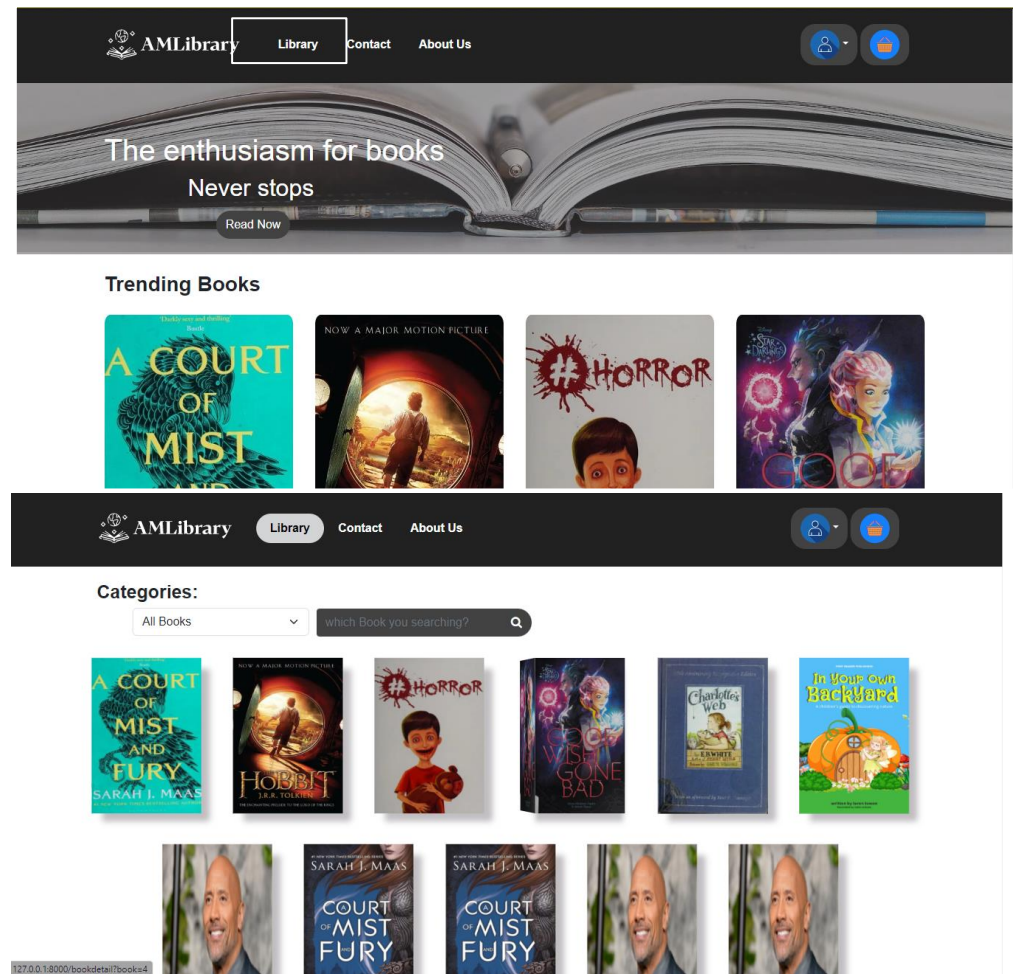
## AMLibrary.COM Privacy Policy

Your privacy and safety of your data is important to us. This Privacy Policy document describes types of information that is or may be collected, used or shared by AMLibrary.COM when you visit, use or make a purchases.

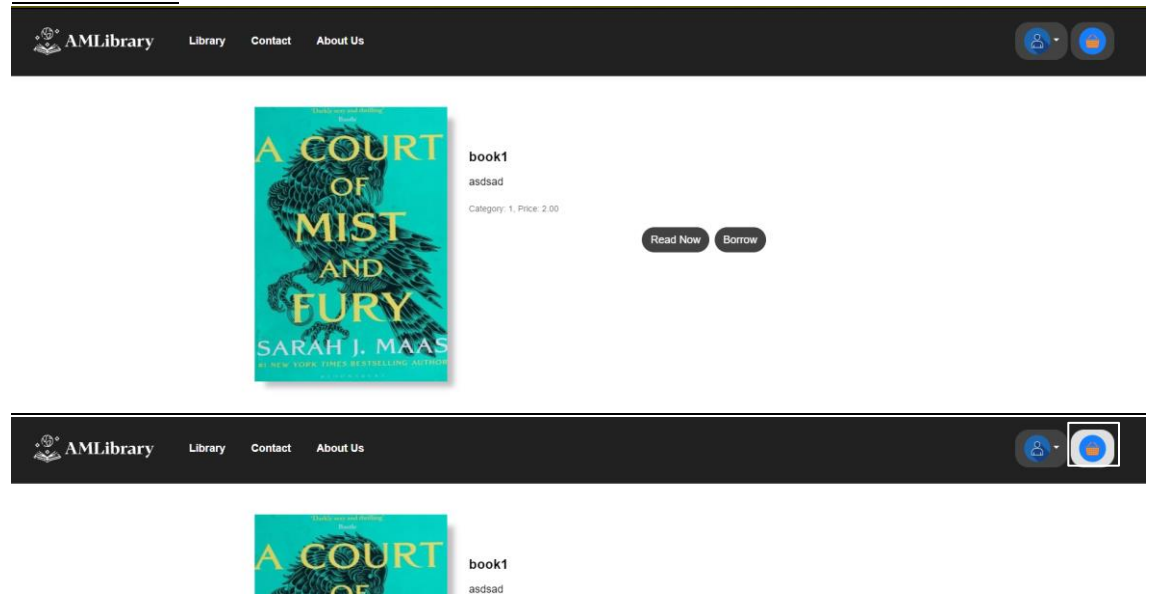
If you have any additional questions or require more information about our Privacy Policy or about how we handle user data and personal information, or wish to withdraw your consent for the continued collection, use or disclosure of your Personal Information,

## 5.2 Application Flow

### Library Page:



### Borrow book:



[← Continue shopping](#)

### Shopping Cart 🛒

You have 1 items in your cart.



book1

#AMLlibrary

1

2.00€



### Card details

Your Card

[Add card](#)

### Address details

Your Address

[Add address](#)


Subtotal	2€
Shipping	5€
Total	7€

7€

[Checkout](#)

### My Books

Rented Books

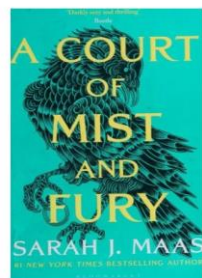
BOOK	NAME	ADDRESS	RENTING DATE	RETURN DATE	PRIZE	STATE
	book1	calle peresadsd puig 23 4-5	2023-05-16 11:21:20		2€	<a href="#">Return Now</a>

### My Books

Returned Books

BOOK	NAME	ADDRESS	RENTING DATE	RETURN DATE	PRIZE	STATE
	book1	calle peresadsd puig 23 4-5	2023-05-16 11:21:20	2023-05-16 11:21:49	2€	<a href="#">Returned</a>

### Read Book online:



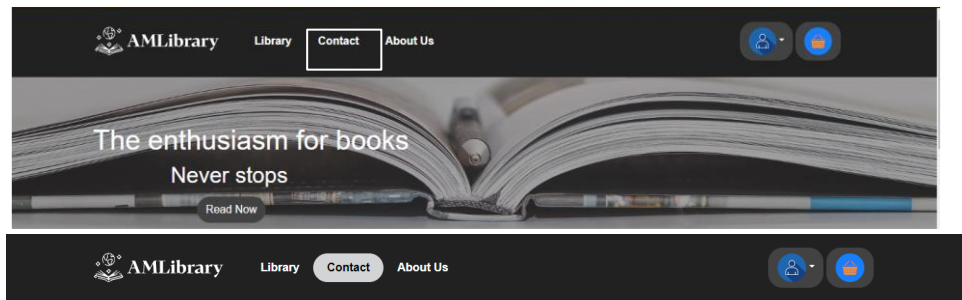
book1  
asdsad

Category: 1, Price: 2.00

[Read Now](#)
[Borrow](#)



### Contact Us:



Barcelona Spain

9757 Aspen Lane South  
Richmond Hill, NY 11419

Contact Info

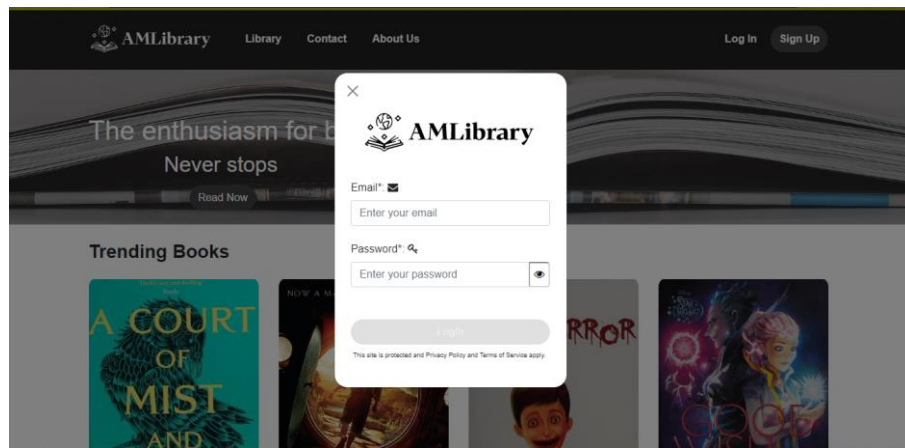
T: +1 (291) 939 9321  
E: AMLibrary@gmail.com

Message Us

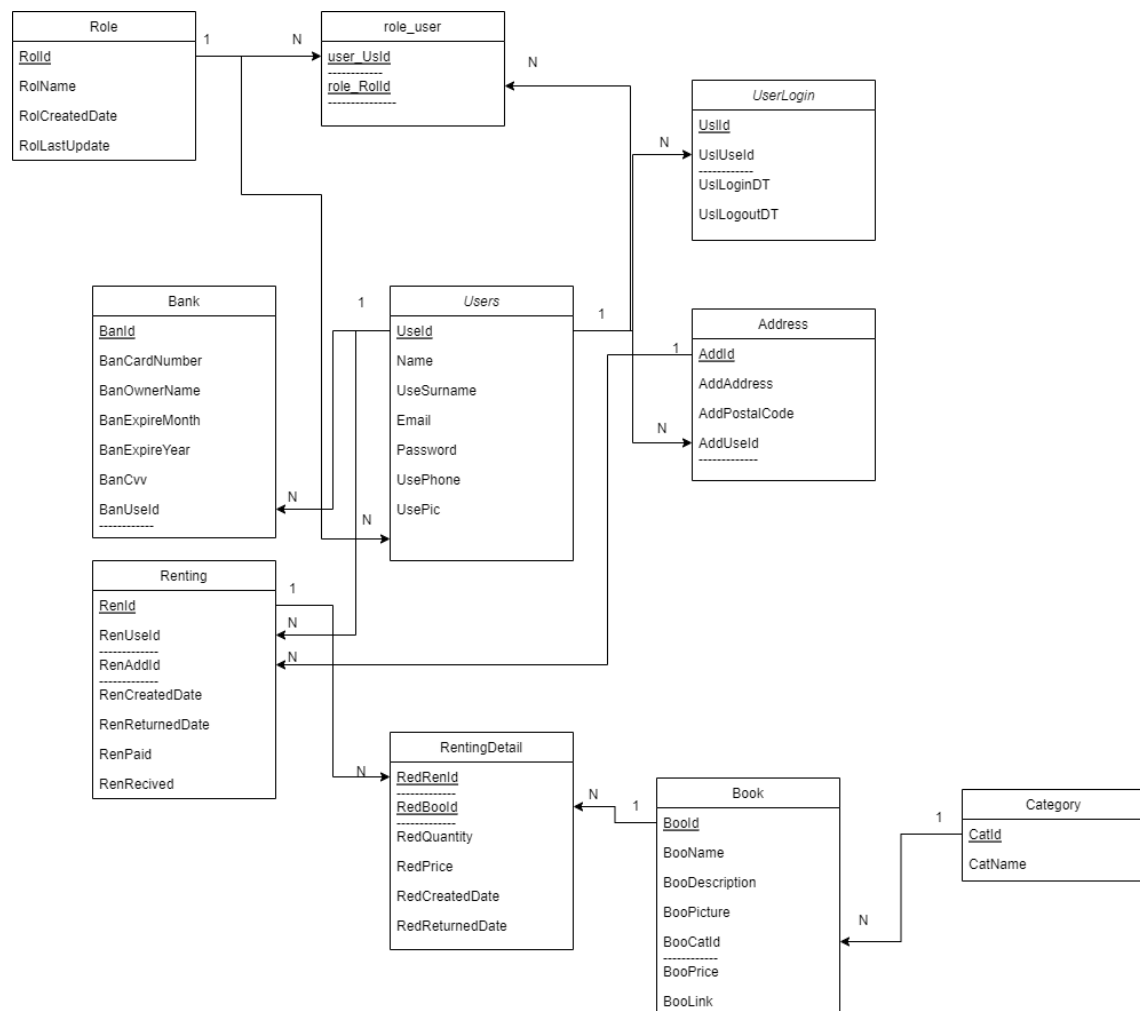
Send Message

### Login Register:





### 5.3 System design



```

Users(UseId, Name, UseSurname, Email, Password, UsePhone, UsePic)
-----

Bank(BanId, BanCardNumber, BanOwnerName, BanExpireMonth, BanExpireYear, BanCvv, BanUseId)
-----

Address(AddId, AddAddress, AddPostalCode, AddUseId)
-----

Category(CatId, CatName)

Book(BooId, BooName, BooPicture, BooDescription, BooCatId, BooPrice, BooLink)
-----

Renting(RenId, RenUseId, RenAddId, RenReturnedDate, RenCreatedDate, RenPaid, RenRecived)
-----

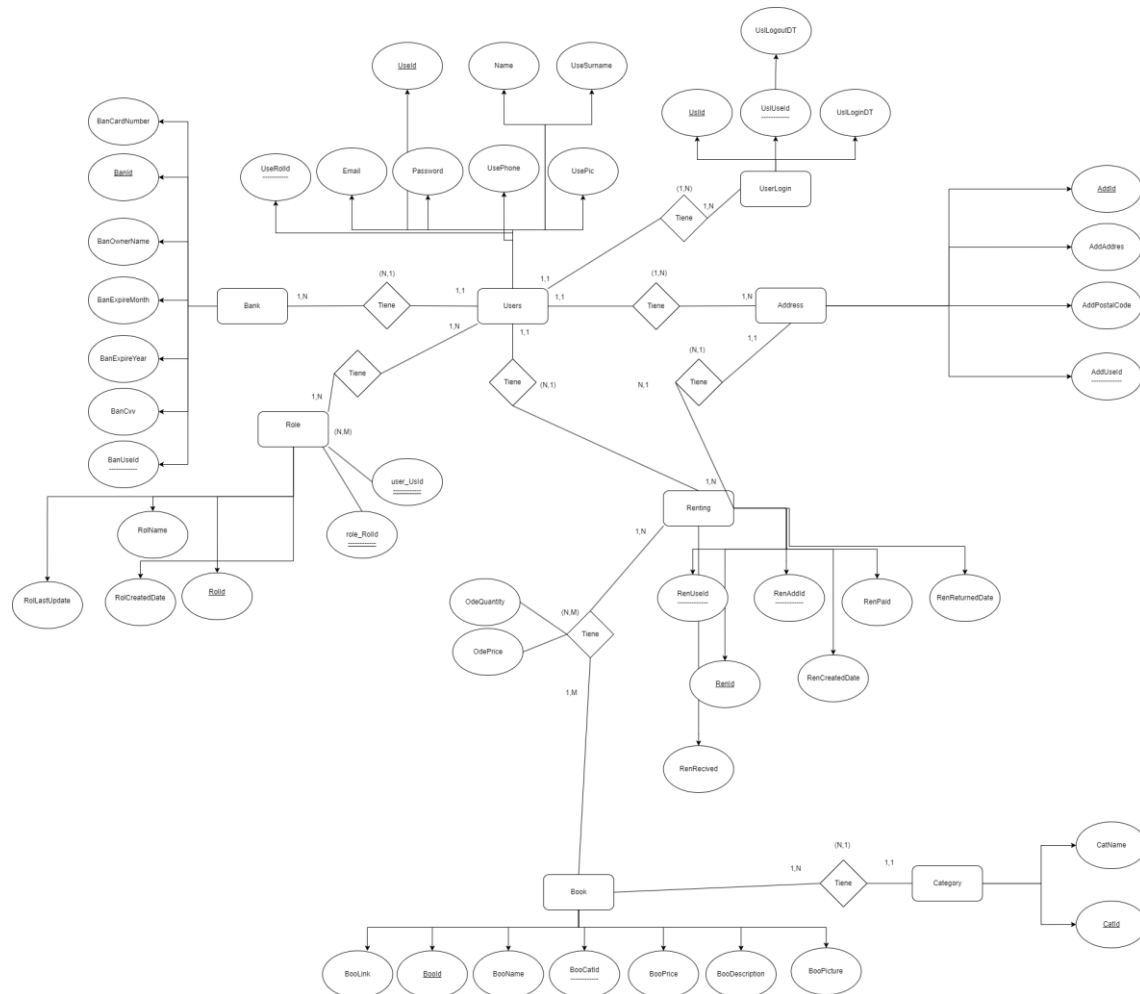
RentingDetail(RedRenId, RenBooId, OdeQuantity, OdePrice, RedCreatedDate, RedReturnedDate)
-----

UserLogin(UslId, UslUseId, UslLoginDT, UslLogoutDT,)
-----

Role(RolId, RolName, RolCreatedDate, RolLastUpdate)

Role_User(user UseId, role RolId)
-----

```



## 6 Final Result

Creating an online library using Laravel framework can be a challenging but rewarding project that provides many benefits for us and users alike. By carefully considering the design and implementation of our application, we managed to create a high-quality, scalable, and user-friendly library that meets the needs of our target audience.

## 7 Conclusions

In summary, creating an online library using Laravel framework was a great project. It helped us cement our programming skills and learn a few new tricks. We also learned and used more javascripts and some of its libraries in this project to create a user-friendly, scalable, and accessible application. To make a successful library.