

---

## DESCRIPTION OF THE PROBLEM

---

This project is created using relational database. The project was developed using MYSQL, Wamp Server, CSS, HTML and PHP.

The database was developed with following concepts :

Users can be identified by their username and password.

Other information stored for a user includes First Name, Last Name, Email-Id. and Balance.

Each user can take a book based on the balance he/she has in his/her account and availability of the book.

The user may choose book from any of the available categories as fiction , non-fiction and education.

There are various functionalities of the librarian section, namely pending registration, pending book request ,adding a new book , update copies of the book , update balance of a member etc.

Each book has a name(title), author ,category ,price and number of copies.

Each user can issue multiple books of various or same author.

Books to be returned are recorded and updated accordingly.

---

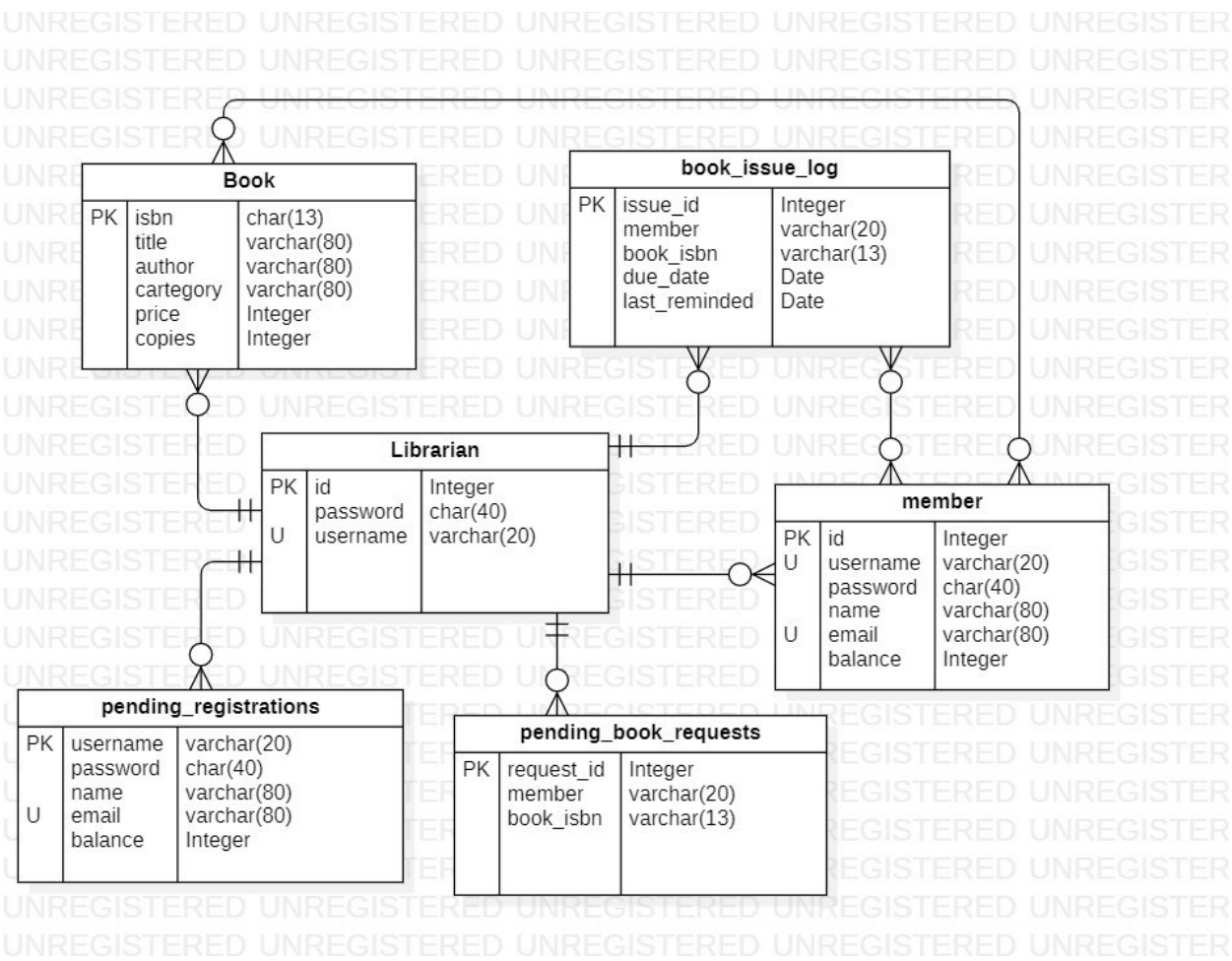
## E-R MODEL

---

### Brief on Selection of Entities, Attributes and Relationships:

No.	Table Name	Attributes	Relationships	Description
1	Librarian	<ul style="list-style-type: none"><li>id</li><li>password</li><li>username</li></ul>	<ul style="list-style-type: none"><li>book:One to Many Relationship</li><li>book_issue_log: One to Many Relationship</li><li>member: One to Many Relationship</li><li>pending_book_requests: One to Many Relationship</li><li>pending_registrations: One to Many Relationship</li></ul>	id is the PRIMARY KEY. username is UNIQUE attribute.
2	book	<ul style="list-style-type: none"><li>isbn</li><li>title</li><li>author</li><li>category</li><li>price</li><li>copies</li></ul>	<ul style="list-style-type: none"><li>member: Many to Many Relationship</li><li>librarian:Many to one Relationship</li></ul>	isbn is the PK.
3	book_issue_log	<ul style="list-style-type: none"><li>Issue_id</li><li>member</li><li>book_isbn</li><li>due_date</li><li>last_reminded</li></ul>	<ul style="list-style-type: none"><li>Member: Many to Many Relationship</li><li>Librarian: Many to One Relationship</li></ul>	Issue_id is PK.
4	member	<ul style="list-style-type: none"><li>id</li><li>username</li><li>password</li><li>name</li><li>email</li><li>balance</li></ul>	<ul style="list-style-type: none"><li>Book: Many to Many Relationship.</li><li>Book_issue_log: Many to Many Relationship.</li><li>Librarian:Many to One Relationship.</li></ul>	id is PRIMARY KEY. Username and email are UNIQUE.
5	Pending_book_requests	<ul style="list-style-type: none"><li>request_id</li><li>member</li><li>book_isbn</li></ul>	<ul style="list-style-type: none"><li>Librarian: Many to Many Relationship</li></ul>	request_id is PRIMARY KEY.
6	Pending_registrations	<ul style="list-style-type: none"><li>username</li><li>password</li><li>name</li><li>email</li><li>balance</li></ul>	<ul style="list-style-type: none"><li>Librarian: One to Many Relationship</li></ul>	Review_id is PK. User_id, Restaurant_id are FK.

ER Model:



---

## DATABASE DESIGN & REPORTS

---

### Table Book

```
CREATE TABLE `book` (  
  `isbn` char(13) NOT NULL,  
  `title` varchar(80) NOT NULL,  
  `author` varchar(80) NOT NULL,  
  `category` varchar(80) NOT NULL,  
  `price` int(4) UNSIGNED NOT NULL,  
  `copies` int(10) UNSIGNED NOT NULL  
);
```

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	isbn 🔑	char(13)	latin1_swedish_ci		No	None		
2	title	varchar(80)	latin1_swedish_ci		No	None		
3	author	varchar(80)	latin1_swedish_ci		No	None		
4	category	varchar(80)	latin1_swedish_ci		No	None		
5	price	int(4)		UNSIGNED	No	None		
6	copies	int(10)		UNSIGNED	No	None		

### Table book\_issue\_log

```
CREATE TABLE `book_issue_log` (  
  `issue_id` int(11) NOT NULL,  
  `member` varchar(20) NOT NULL,  
  `book_isbn` varchar(13) NOT NULL,  
  `due_date` date NOT NULL,  
  `last_reminded` date DEFAULT NULL  
);
```

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	issue_id 🔑	int(11)			No	None		AUTO_INCREMENT
2	member	varchar(20)	latin1_swedish_ci		No	None		
3	book_isbn	varchar(13)	latin1_swedish_ci		No	None		
4	due_date	date			No	None		
5	last_reminded	date			Yes	NULL		

### Table librarian

```
CREATE TABLE `librarian` (  
  `id` int(11) NOT NULL,  
  `username` varchar(20) NOT NULL,  
  `password` char(40) NOT NULL  
);
```

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id 🔑	int(11)			No	None		AUTO_INCREMENT
2	username 🔑	varchar(20)	latin1_swedish_ci		No	None		
3	password	char(40)	latin1_swedish_ci		No	None		

### Table Member

```
CREATE TABLE `member` (  
  `id` int(11) NOT NULL,  
  `username` varchar(20) NOT NULL,  
  `password` char(40) NOT NULL,  
  `name` varchar(80) NOT NULL,  
  `email` varchar(80) NOT NULL,  
  `balance` int(4) NOT NULL  
);
```

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	<b>id</b> 🔑	int(11)			No	None		AUTO_INCREMENT
2	<b>username</b> 🔑	varchar(20)	latin1_swedish_ci		No	None		
3	<b>password</b>	char(40)	latin1_swedish_ci		No	None		
4	<b>name</b>	varchar(80)	latin1_swedish_ci		No	None		
5	<b>email</b> 🔑	varchar(80)	latin1_swedish_ci		No	None		
6	<b>balance</b>	int(4)			No	None		

**Table pending\_book\_requests**

```
CREATE TABLE `pending_book_requests` (
  `request_id` int(11) NOT NULL,
  `member` varchar(20) NOT NULL,
  `book_isbn` varchar(13) NOT NULL
);
```

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	<b>request_id</b> 🔑	int(11)			No	None		AUTO_INCREMENT
2	<b>member</b>	varchar(20)	latin1_swedish_ci		No	None		
3	<b>book_isbn</b>	varchar(13)	latin1_swedish_ci		No	None		

**Table pending\_registrations**

```
CREATE TABLE `pending_registrations` (
  `username` varchar(20) NOT NULL,
  `password` char(40) NOT NULL,
  `name` varchar(80) NOT NULL,
  `email` varchar(80) NOT NULL,
  `balance` int(4) NOT NULL
);
```

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	<b>username</b> 🔑	varchar(20)	latin1_swedish_ci		No	None		
2	<b>password</b>	char(40)	latin1_swedish_ci		No	None		
3	<b>name</b>	varchar(80)	latin1_swedish_ci		No	None		
4	<b>email</b> 🔑	varchar(80)	latin1_swedish_ci		No	None		
5	<b>balance</b>	int(4)			No	None		

# Desc queries and Select queries:

mysql> desc book;

Field	Type	Null	Key	Default	Extra
isbn	char(13)	NO	PRI	NULL	
title	varchar(80)	NO		NULL	
author	varchar(80)	NO		NULL	
category	varchar(80)	NO		NULL	
price	int(4) unsigned	NO		NULL	
copies	int(10) unsigned	NO		NULL	

6 rows in set (0.00 sec)

mysql> desc book\_issue\_log;

Field	Type	Null	Key	Default	Extra
issue_id	int(11)	NO	PRI	NULL	auto_increment
member	varchar(20)	NO		NULL	
book_isbn	varchar(13)	NO		NULL	
due_date	date	NO		NULL	
last_reminded	date	YES		NULL	

5 rows in set (0.00 sec)

mysql> desc librarian;

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
username	varchar(20)	NO	UNI	NULL	
password	char(40)	NO		NULL	

3 rows in set (0.00 sec)

mysql> desc member;

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
username	varchar(20)	NO	UNI	NULL	
password	char(40)	NO		NULL	
name	varchar(80)	NO		NULL	
email	varchar(80)	NO	UNI	NULL	
balance	int(4)	NO		NULL	

6 rows in set (0.00 sec)

```
mysql> desc pending_book_requests;
```

Field	Type	Null	Key	Default	Extra
request_id	int(11)	NO	PRI	NULL	auto_increment
member	varchar(20)	NO		NULL	
book_isbn	varchar(13)	NO		NULL	

```
3 rows in set (0.00 sec)
```

```
mysql> desc pending_registrations;
```

Field	Type	Null	Key	Default	Extra
username	varchar(20)	NO	PRI	NULL	
password	char(40)	NO		NULL	
name	varchar(80)	NO		NULL	
email	varchar(80)	NO	UNI	NULL	
balance	int(4)	NO		NULL	

```
5 rows in set (0.00 sec)
```

```
mysql> select * from book;
```

isbn	title	author	category	price	copies
0000545010225	Let Us C	Yashavant Kanetkar	Education	200	30
0000553103547	Computer Graphics	David F. Rogers	Education	500	10
0000553106635	Operating System	AbRaham Silberschatz	Education	300	15
0000553108034	SQL: The Ultimate Beginners Guide	Steve Tale	Education	500	10
0000553801503	Advanced Data Structures	Peter Brass	Education	260	20
9780066620992	Good to Great	Jim Collins	Non-fiction	300	10
9780241257555	The Pigeon Tunnel	John le CarrÃ©	Non-fiction	200	25
9780439023511	Mockingjay	Suzanne Collins	Fiction	500	20
9780439023528	The Hunger Games	Suzanne Collins	Fiction	400	10
9780545227247	Catching Fire	Suzanne Collins	Fiction	400	14
9780553801477	A Dance with Dragons	George R. R. Martin	Fiction	600	30
9780967752808	Sandbox Wisdom	Tom Asacker	Non-fiction	250	5
9781501141515	Born to Run	Bruce Springsteen	Non-fiction	250	20

```
13 rows in set (0.00 sec)
```



```
mysql> select * from librarian;
```

id	username	password
1	admin	93c768d0152f72bc8d5e782c0b585acc35fb0442

```
1 row in set (0.00 sec)
```

```
mysql> select * from member;
```

id	username	password	name	email	balance
1	Antara	b98fbe39588d5a282fe4ceec4c1404750d68cc2c	Antara Karankar	karankaram@rknc.edu	1000
2	Bhavana	1125ef0a292ec9a49356fd8461697eb4e9d9bbe4	Bhavana Komanduri	komanduribr@rknc.edu	1200
3	Maitrayee	00f7ea9d1983928888f2e966674c6611e6980996	Maithreyi Pagar	pagarmn@rknc.edu	1000

```
3 rows in set (0.00 sec)
```

```
mysql> select * from pending_book_requests;
```

request_id	member	book_isbn
1	Bhavana	9780553801477
2	Maitrayee	0000545010225

```
2 rows in set (0.00 sec)
```

```
mysql> select * from pending_registrations;
```

username	password	name	email	balance
madhu	d22477479bbf55ba62bd822f4112c80f292c780	Madhurima	madhu@gmail.com	500

```
1 row in set (0.00 sec)
```

```
mysql> select * from book_issue_log;
```

issue_id	member	book_isbn	due_date	last_reminded
1	Bhavana	9781501141515	2020-03-17	NULL
2	Anatra	9780545227247	2020-03-17	NULL

```
2 rows in set (0.00 sec)
```



## SCREENSHOTS

Member login:

JUST BOOKS

profile

Enter the details

cloud9

\$ 1200

Add Balance

Member Signup:

JUST BOOKS

Enter your details

pagar\_m

\*\*\*\*\*

ABC XYZ

abc

\$ 1000

Register

Activate Windows

Go to Settings to activate Windows.

Available Books:

JUST BOOKS

cloud9

Available books

Book successfully requested. You will be notified by email when the book is issued to your account

	ISBN	Title	Author	Category	Price	Copies available
	0000553108034	A Clash of Kings	George R. R. Martin	Fiction	\$500	10
	9780553801477	A Dance with Dragons	George R. R. Martin	Fiction	\$600	30
	0000553801503	A Feast for Crows	George R. R. Martin	Fiction	\$600	20
	0000553103547	A Game of Thrones	George R. R. Martin	Fiction	\$500	10
	0000553106635	A Storm of Swords	George R. R. Martin	Fiction	\$550	15
	9789350777077	Advanced Database Management Systems	Mahesh Mali	Education	\$60	29
	9781501141515	Born to Run	Bruce Springsteen	Non-fiction	\$250	20
	9780545227247	Catching Fire	Suzanne Collins	Fiction	\$400	14

Activate Windows

Go to Settings to activate Windows.

## Admin/Librarian Login:

### JUST BOOKS

Librarian Login

 genesis

 .....

Login

Activate Windows  
Go to Settings to activate Windows.

## Admin :

### JUST BOOKS

 genesis

Pending registrations

Pending book requests

Add a new book

Update copies of a book

Update balance of a member

## Pending book request

### JUST BOOKS

 genesis

Pending book requests

	Username	Book	Time
<input checked="" type="checkbox"/>	zack_ff7	9780553801477	2016-10-10 18:23:27
<input checked="" type="checkbox"/>	cloud9	0000545010225	2016-10-10 18:23:59
<input type="checkbox"/>	seph32	0000553103547	2016-10-10 18:29:45
<input checked="" type="checkbox"/>	cloud9	0000553108034	2020-05-06 19:15:03
<input type="checkbox"/>	cloud9	9780553801477	2020-05-06 20:06:13

Reject selected

Grant selected

## Member books:

### LIBRARY INFORMATION SYSTEM

 Bhavana

My books

Successfully returned 1 books

ISBN	Title	Author	Category	Due Date
 0000747538492	Harry Potter and the Chamber of Secrets	J. K. Rowling	Fiction	2020-03-29

Return selected books