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ONLINE LIBRARY MANAGEMENT SYSTEM

A Project report

CSE2004-Database Management Systems Project
J Component Review 1

Final Review

By-

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SUBMITTED TO-

Kathiravan S

ABSTRACT

Library management system is a project which aims in developing a computerized system to maintain all the daily work of library. This project has many features which are generally not available in normal library management systems like facility of user login. Manual process of keeping student records, book records, account details, managing employee is very difficult. There are various problems also faced by the student in library such as finding any particular book, information whether book is available or not, searching of books using ISBN number etc. To eliminate this manual system, library management system has been developed. Library Management System will handle all the current issues faced by the students and by its admin personnel.

It has a facility of admin login through which the admin can monitor the whole system. It has a facility where student after logging in their accounts can see list of books issued and its issue date and return date .

Overall, this project of ours is being developed to help the staff of library to maintain the library in the best way possible and also reduce the human efforts.

INTRODUCTION

Module 1 – Member Module

In this module , we are displaying information from the database regarding all the members that are registered. In this module the librarian can add or delete the members registered in the library and only the members who are registered can view the information.

The first part is Adding of members. The initial page displays all the registers members present in our database. In this file the librarian can add a member by filling up all the details such as its address, name, phone number etc.

The second part is Updation of the member. If the member wants to update his/her phone number this could be done with the help of the update option available, after filling up all the new details the database will be updated using the appropriate query.

The third part is Deletion of the member. We have provided an option for the librarian to permanently delete a member from the database. When the librarian click on delete option button present in-front of the member than that particular member will be deleted from the database and the list will be updated.

Module 2 – Books Module

In this module we are displaying information from the database regarding all the books that are available in the library. This option is divided into various categories like books which are lost,damaged, that are subject to replacement etc.

The first file that is books.php displays the books that are not archive. Second tab that is of new_books.php displays information of new books available in library. Then, it includes option of old_books.php containing information regarding the old books. Similarly, there is option for lost books and then for damage books. It includes another option for books that are subject to replacement.

This module provides admin a systematic view of all the books divided into various categories, making the task easier for the admin.

In every file of books module, there is an option provided Add Books, which enables the admin to add books in various categories defined above.

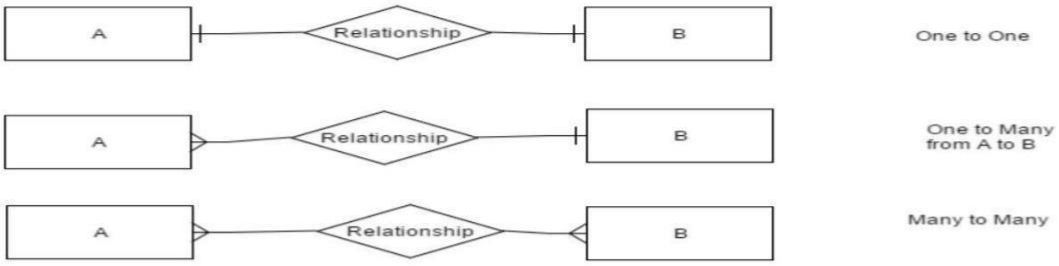
Module 3 – Search Module

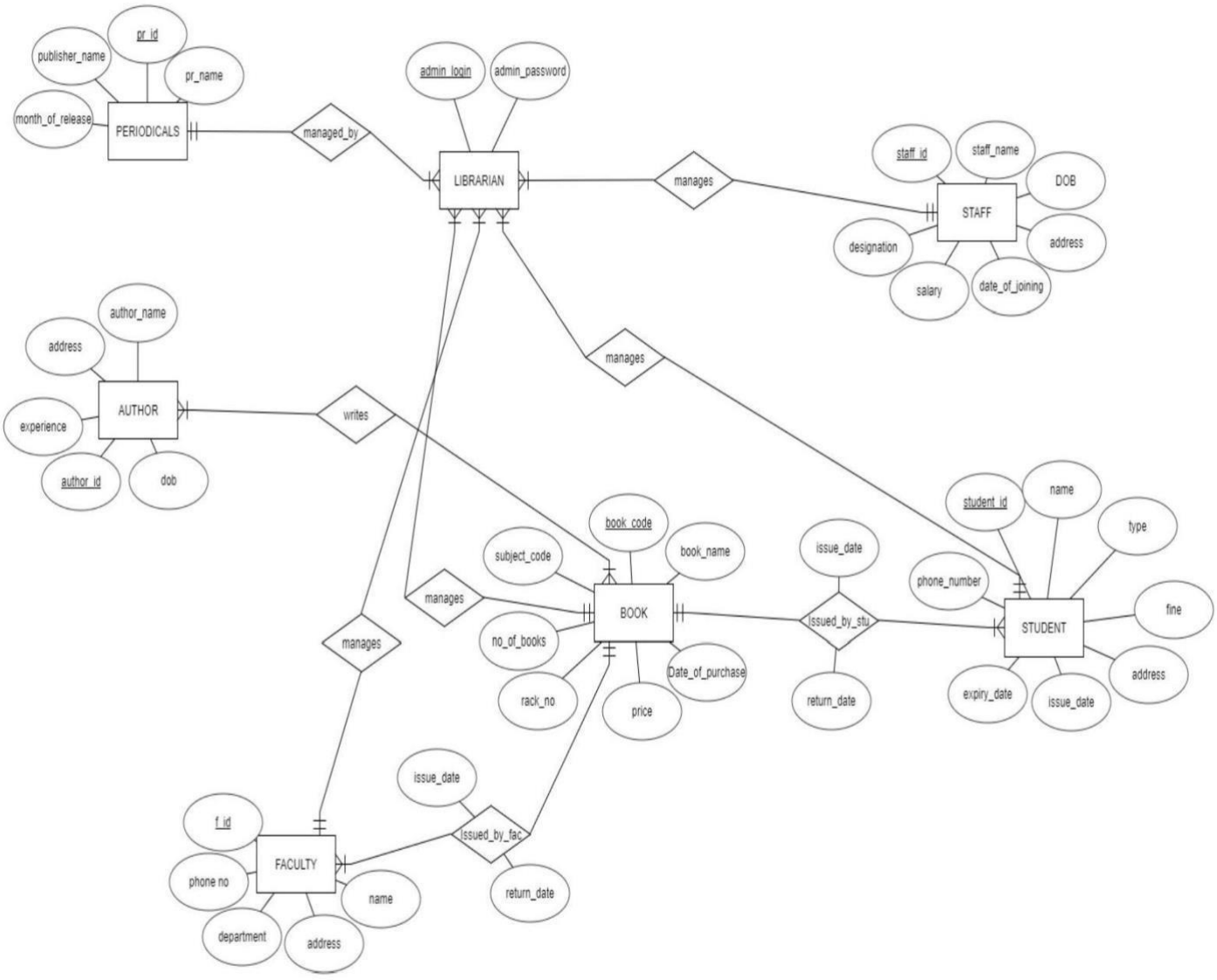
The search module lets users search for specific book on the site. You can search both for author and for particular book. When you are on the search tab of website, you will be able to search for authors and book available on the library management system.

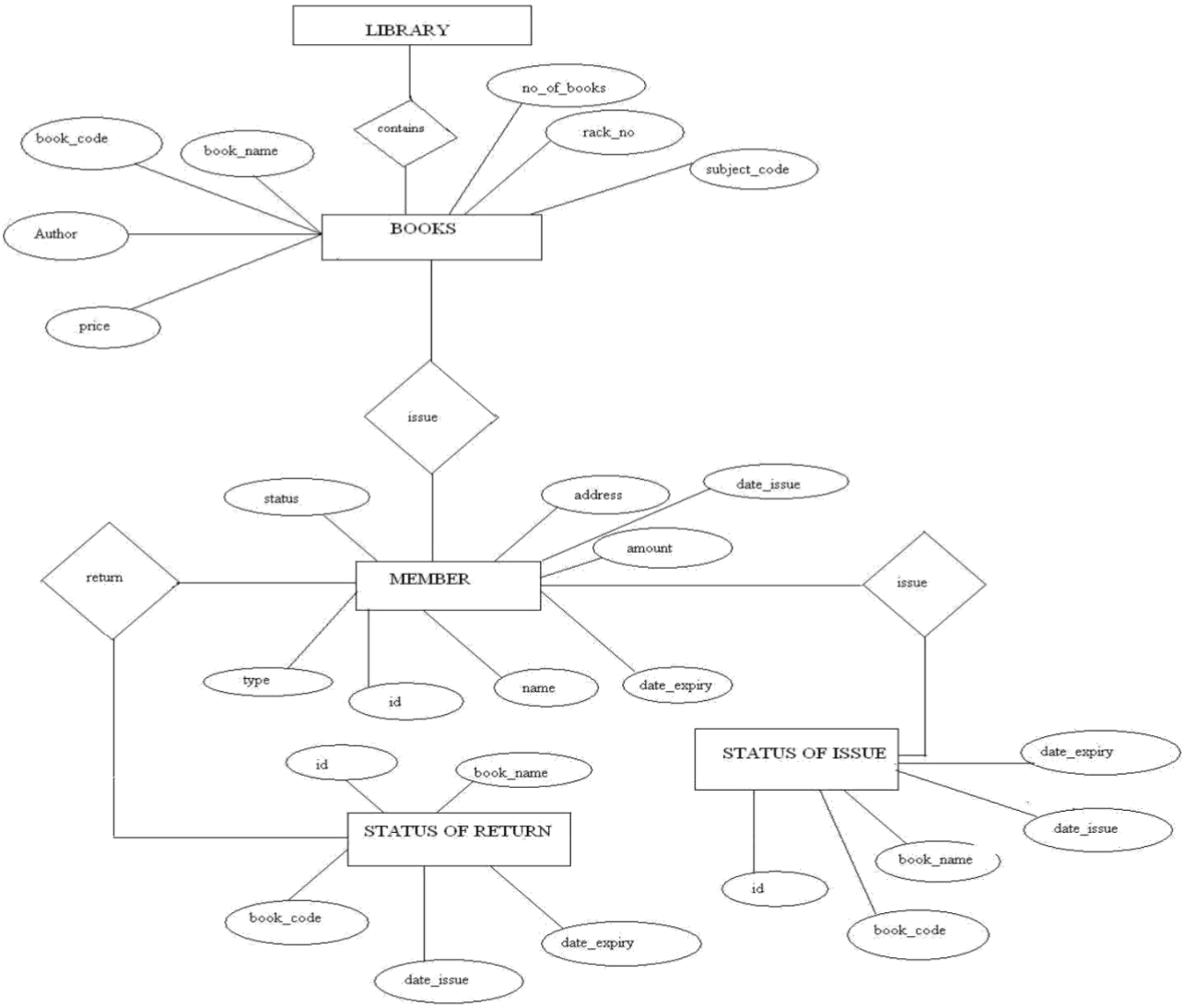
Module 4 – Login and Logout

The default user for our project is admin. Our project provides the facility for the admin to login and then review all the books and members in the library database. Admin also has an option of adding another person as admin to the system.

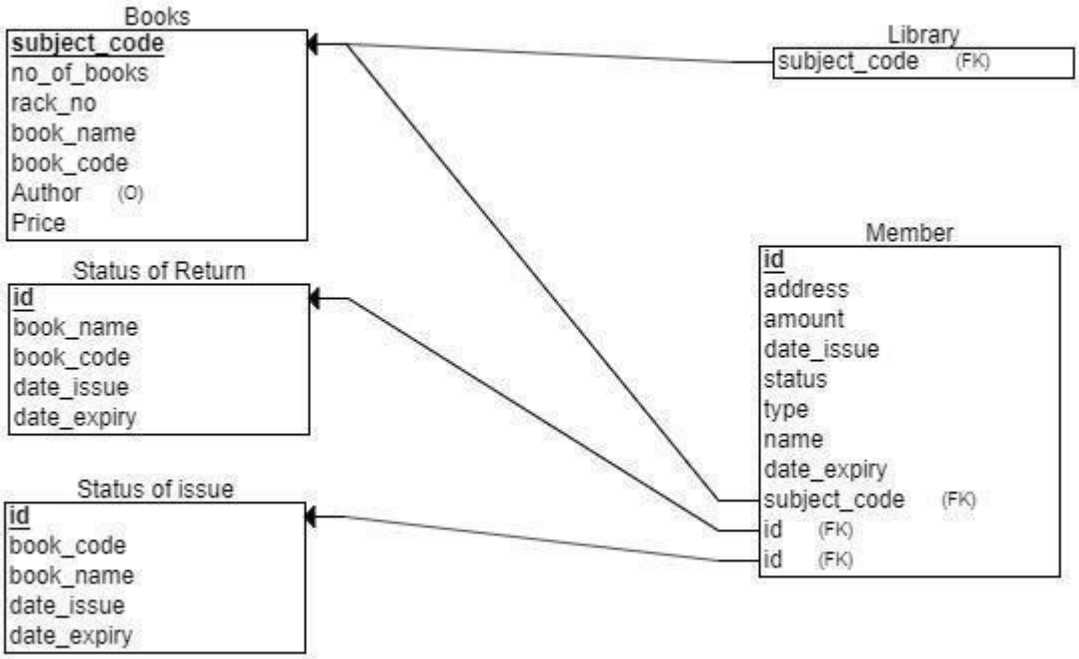
Architecture Diagram:-






LIBRARY
contains
no_of_books
rack_no
book_code
book_name
subject_code
Author
BOOKS
price
issue
status
address
date_issue
amount
return
MEMBER
issue
type
id
name
date_expiry
id
book_name
STATUS OF RETURN
STATUS OF ISSUE
date_expiry
date_issue
book_name
id
book_code
book_code
date_expiry
date_issue

Relationship Schema

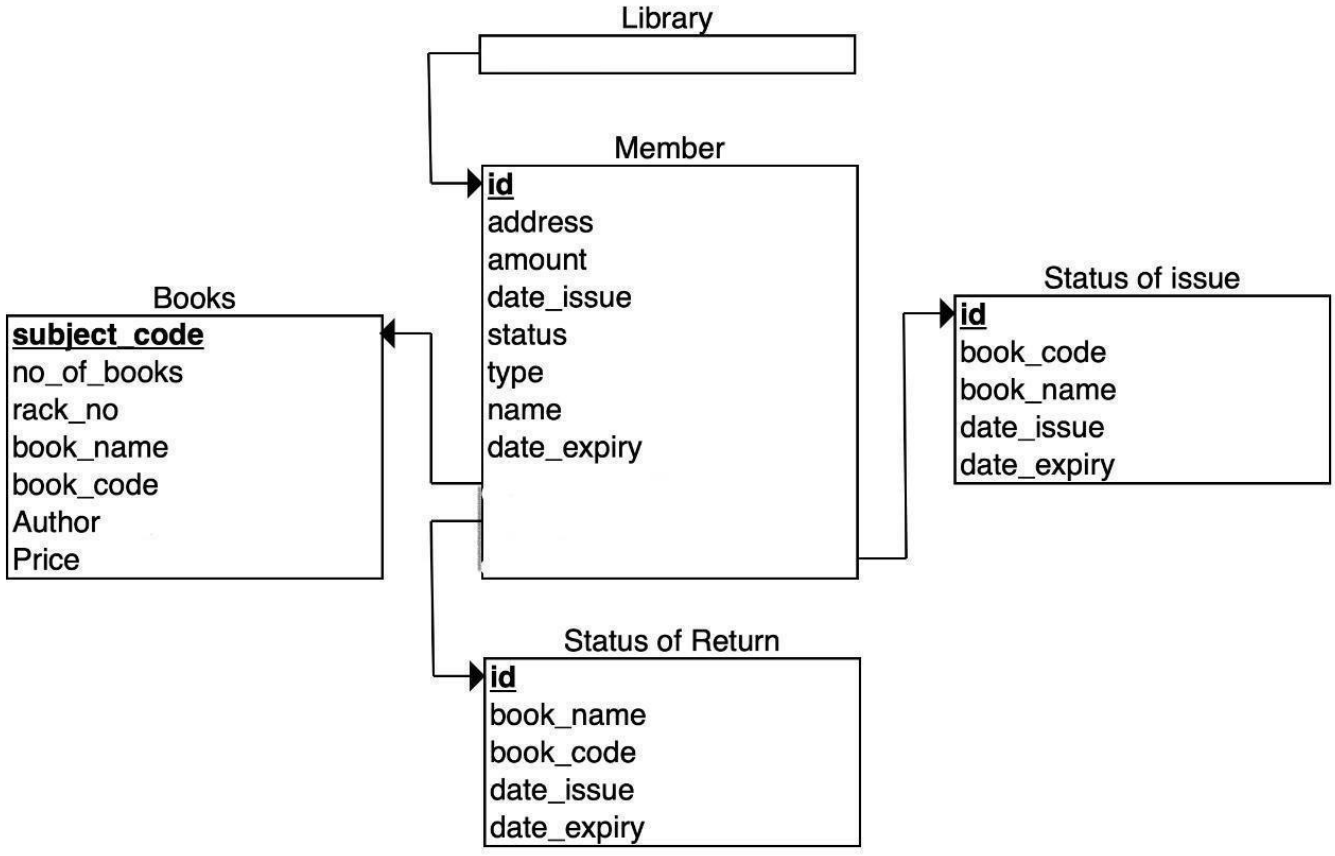


1NF:

The table is in 1NF since there are no multivalued attributes.

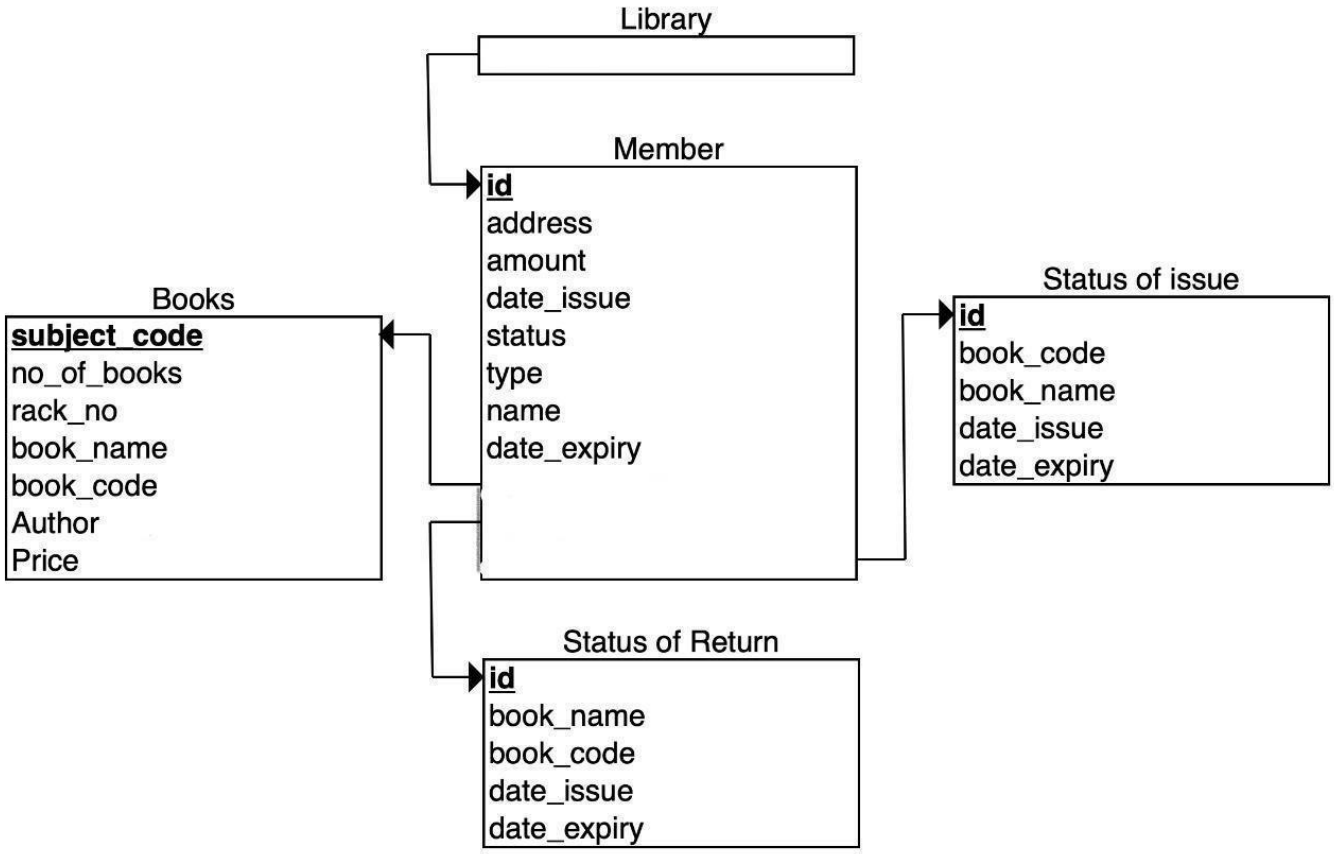
2NF:

Here every non-primary-key attribute is fully functionally dependent on the primary key, thus this relation is in Second Normal Form (2NF).



3NF:-

Here relation is in third normal form, if there is no transitive dependency for nonprime attributes as well as it is in second normal form.



DATA BASE DESIGN

Table: Members

S.no.	Coloum Name	Data Type	Length	Description
1	Id_no	Text	50	Unique identification of the members
2	Name	Text	70	Name of members
3	Address	Text	100	Location of Members
4	Date of Issue	Date/Time		Date of Registration
5	Date of Expiry	Date/Time		Registration expiry date
6	Status	Text	50	Permanent/Temporary

Table : Add Books

s.no.	Column Name	Date-Type	Description
1	Book_name	Text	Title of the book
2	Book_code	Text	Book identification number
3	Author	Text	Author of books
4	Date of arrival	Date/time	Date on which book was received
5	Price	Text	Cost of books
6	Rack_no	Text	Almirah no
7	No_of_books	Text	Quantity of books
8	Subject_code	Text	Unique identification no of particular subject

Table : Issue

s.no.	Column Type	Date Type	Description
1	Id_no	Text	User identification number
2	Book_name	Text	Title of books
3	Issue_date	Date/time	Date on which book is issued
4	Due_date	Date/time	Due date on which book is to be returned

SQL CODE

Table structure for table `book`

```
CREATE TABLE IF NOT EXISTS `book` (
`book_id` int(11) NOT NULL AUTO_INCREMENT, `book_title` varchar(100) NOT NULL, `category_id`
int(50) NOT NULL,
`author` varchar(50) NOT NULL,
`book_copies` int(11) NOT NULL,
`book_pub` varchar(100) NOT NULL, `publisher_name` varchar(100) NOT NULL,
`isbn` varchar(50) NOT NULL,
`copyright_year` int(11) NOT NULL,
`date_receive` varchar(20) NOT NULL,
`date_added` datetime NOT NULL,
`status` varchar(30) NOT NULL,
PRIMARY KEY (`book_id`)

) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=33 ;
```

-- Dumping data for table `book` --

```
INSERT INTO `book` (`book_id`, `book_title`, `category_id`, `author`, `book_copies`, `book_pub`, `publisher_name`, `isbn`,
`copyright_year`, `date_receive`, `date_added`, `status`) VALUES
(15, 'Natural Resources', 8, 'Robin Kerrod', 15, 'Marshall Cavendish Corporation', 'Marshall', '1-85435-628-3', 1997, '', '2013-
12-11 06:34:27', 'New'),
(16, 'Encyclopedia Americana', 5, 'Grolier', 20, 'Connecticut', 'Grolier Incorporation', '0-7172-0119-8', 1988, '', '2013-12-11
06:36:23', 'Archive'),
(17, 'Algebra 1', 3, 'Carolyn Bradshaw, Michael Seals', 35, 'Pearson Education, Inc', 'Prentice Hall, New Jersey', '0- 13125087-
6', 2004, '', '2013-12-11 06:39:17', 'Damage'),
(18, 'The Philippine Daily Inquirer', 7, '..', 3, 'Pasay City', '..', '..', 2013, '', '2013-12-11 06:41:53', 'New'),
(19, 'Science in our World', 4, 'Brian Knapp', 25, 'Regency Publishing Group', 'Prentice Hall, Inc', '0-13-050841-1', 1996, '',
'2013-12-11 06:44:44', 'Lost'),
(20, 'Literature', 9, 'Greg Glowka', 20, 'Regency Publishing Group', 'Prentice Hall, Inc', '0-13-050841-1', 2001, '', '2013-12-11
06:47:44', 'Old'),
(21, 'Lexicon Universal Encyclopedia', 5, 'Lexicon', 10, 'Lexicon Publication', 'Pulication Inc., Lexicon', '0-7172- 2043-5', 1993,
'', '2013-12-11 06:49:53', 'Old'),
(22, 'Science and Invention Encyclopedia', 5, 'Clarke Donald, Dartford Mark', 16, 'H.S. Stuttman inc. Publishing', 'Publisher ,
Westport Connecticut', '0-87475-450-x', 1992, '', '2013-12-11 06:52:58', 'New'),
(23, 'Integrated Science Textbook ', 4, 'Merde C. Tan', 15, 'Vibal Publishing House Inc.', '12536. Araneta Avenue Corner Ma.
Clara St., Quezon City', '971-570-124-8', 2009, '', '2013-12-11 06:55:27', 'New'),
(24, 'Algebra 2', 3, 'Glencoe McGraw Hill', 15, 'The McGrawHill Companies Inc.', 'McGrawhill', '978-0-07- 873830-2', 2008,
'', '2013-12-11 06:57:35', 'New'),
(25, 'Wiki at Panitikan ', 7, 'Lorenza P. Avera', 28, 'JGM & S Corporation', 'JGM & S Corporation', '971-07-1574-7', 2000, '',
'2013-12-11 06:59:24', 'Damage'),
(26, 'English Expressways TextBook for 4th year', 9, 'Virginia Bermudez Ed. O. et al', 23, 'SD Publications, Inc.', 'Gregorio
Araneta Avenue, Quezon City', '978-971-0315-33-8', 2007, '', '2013-12-11 07:01:25', 'New'),
(27, 'Asya Pag-usbong Ng Kabihasnan ', 8, 'Ricardo T. Jose, Ph . D.', 21, 'Vibal Publishing House Inc.', 'Araneta Avenue . Cor.
Maria Clara St., Quezon City', '971-07-2324-3', 2008, '', '2013-12-11 07:02:56', 'New'),
(28, 'Literature (the readers choice)', 9, 'Glencoe McGraw Hill', 20, '..', 'the McGrawHill Companies Inc', '0-02- 817934-x',
2001, '', '2013-12-11 07:05:25', 'Damage'),
(29, 'Beloved a Novel', 9, 'Toni Morrison', 13, '..', 'Alfred A. Knoff, Inc', '0-394-53597-9', 1987, '', '2013-12-11 07:07:02',
'Old'),
(30, 'Silver Burdett Engish', 2, 'Judy Brim', 12, 'Silver Burdett Company', 'Silver', '0-382-03575-5', 1985, '', '2013- 12-11
09:22:50', 'Old'),
```

(31, 'The Corporate Warriors (Six Classic Cases in American Business)', 8, 'Douglas K. Ramsey', 8, 'Houghton Miffin Company', '..', '0-395-35487-0', 1987, '', '2013-12-11 09:25:32', 'Old'),
(32, 'Introduction to Information System', 9, 'Cristine Redoblo', 10, 'CHMSC', 'Brian INC', '123-132', 2013, '', '2014-01-17 19:00:10', 'New');

-- --

-- Table structure for table `borrow` --

CREATE TABLE IF NOT EXISTS `borrow` (`borrow_id` int(11) NOT NULL AUTO_INCREMENT, `member_id` bigint(50) NOT NULL,
`date_borrow` varchar(100) NOT NULL,
`due_date` varchar(100) DEFAULT NULL,
PRIMARY KEY (`borrow_id`),
KEY `borrowerid` (`member_id`),
KEY `borrowid` (`borrow_id`)

) ENGINE=MyISAM DEFAULT CHARSET=utf8 AUTO_INCREMENT=485 ;

--

-- Dumping data for table `borrow` --

INSERT INTO `borrow` (`borrow_id`, `member_id`, `date_borrow`, `due_date`) VALUES (484, 55, '2014-03-20 23:50:27', '21/03/2014'),
(483, 55, '2014-03-20 23:49:34', '21/03/2014'),
(482, 52, '2014-03-20 23:38:22', '03/01/2014');

-- --

--

-- Table structure for table `borrowdetails` --

CREATE TABLE IF NOT EXISTS `borrowdetails` (`borrow_details_id` int(11) NOT NULL AUTO_INCREMENT,
`book_id` int(11) NOT NULL,
`borrow_id` int(11) NOT NULL,
`borrow_status` varchar(50) NOT NULL,
`date_return` varchar(100) NOT NULL,
PRIMARY KEY (`borrow_details_id`)

) ENGINE=MyISAM DEFAULT CHARSET=latin1 AUTO_INCREMENT=165 ;

-- Dumping data for table `borrowdetails` --

INSERT INTO `borrowdetails` (`borrow_details_id`, `book_id`, `borrow_id`, `borrow_status`, `date_return`) V ALUES (164, 16, 484, 'pending', ''),
(162, 15, 482, 'pending', ''),

(163, 15, 483, 'returned', '2014-03-21 00:30:51'); -- ---------- --

-- Table structure for table `category` --

CREATE TABLE IF NOT EXISTS `category` (`category_id` int(11) NOT NULL AUTO_INCREMENT, `classname` varchar(50) DEFAULT NULL, PRIMARY KEY (`category_id`),
UNIQUE KEY `category_id` (`category_id`),
KEY `classid` (`category_id`)

) ENGINE=MyISAM DEFAULT CHARSET=utf8 AUTO_INCREMENT=801 ;

--

-- Dumping data for table `category` --

INSERT INTO `category` (`category_id`, `classname`) VALUES (1, 'Periodical'),
(2, 'English'), (3, 'Math'),

(4, 'Science'),
(5, 'Encyclopedia'), (6, 'Filipiniana'), (7, 'Newspaper'), (8, 'General'), (9, 'References');

-- ----------

Table structure for table `lost_book` --

CREATE TABLE IF NOT EXISTS `lost_book` (`Book_ID` int(11) NOT NULL AUTO_INCREMENT, `ISBN` int(11) NOT NULL,
`Member_No` varchar(50) NOT NULL,
`Date Lost` date NOT NULL,
PRIMARY KEY (`Book_ID`)

) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;

- -- ----------

--

-- Table structure for table `member` --

```
CREATE TABLE IF NOT EXISTS `member` ( `member_id` int(11) NOT NULL AUTO_INCREMENT, `firstname` varchar(100) NOT NULL,
`lastname` varchar(100) NOT NULL,
`gender` varchar(10) NOT NULL,
`address` varchar(100) NOT NULL,
`contact` varchar(100) NOT NULL,
`type` varchar(100) NOT NULL,
`year_level` varchar(100) NOT NULL,
`status` varchar(100) NOT NULL,
PRIMARY KEY (`member_id`)

) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=66 ;
```

-- Dumping data for table `member` --

```
INSERT INTO `member` (`member_id`, `firstname`, `lastname`, `gender`, `address`, `contact`, `type`, `year_level`, `status`) VALUES
(52, 'Mark', 'Sanchez', 'Male', 'Talisay', '212010', 'Teacher', 'Faculty', 'Active'),
(53, 'April Joy', 'Aguilar', 'Female', 'E.B. Magalona', '00', 'Student', 'Second Year', 'Banned'),

(54, 'Alfonso', 'Pancho', 'Male', 'E.B. Magalona', '009', 'Student', 'First Year', 'Active'),
(55, 'Jonathan ', 'Antanilla', 'Male', 'E.B. Magalona', '0032', 'Student', 'Fourth Year', 'Active'),
(56, 'Renzo Bryan', 'Pedroso', 'Male', 'Silay City', '03030', 'Student', 'Third Year', 'Active'),
(57, 'Eleazar', 'Duterte', 'Male', 'E.B. Magalona', '90902', 'Student', 'Second Year', 'Active'),
(58, 'Ellen Mae', 'Espino', 'Female', 'E.B. Magalona', '123', 'Student', 'First Year', 'Active'),
(59, 'Ruth', 'Magbanua', 'Female', 'E.B. Magalona', '9340', 'Student', 'Second Year', 'Active'),
(60, 'Shaina Marie', 'Gabino', 'Female', 'Silay City', '132134', 'Student', 'Second Year', 'Active'),
(62, 'Chairty Joy', 'Punzalan', 'Female', 'E.B. Magalona', '12423', 'Teacher', 'Faculty', 'Active'),
(63, 'Kristine May', 'Dela Rosa', 'Female', 'Silay City', '1321', 'Student', 'Second Year', 'Active'),
(64, 'Chinie marie', 'Laborosa', 'Female', 'E.B. Magalona', '902101', 'Student', 'Second Year', 'Active'), (65, 'Ruby', 'Morante', 'Female', 'E.B. Magalona', '', 'Teacher', 'Faculty', 'Active');

-- --------------------------------------------------------
```

-- Table structure for table `type` --

```
CREATE TABLE IF NOT EXISTS `type` (
`id` int(11) NOT NULL AUTO_INCREMENT, `borrowertype` varchar(50) DEFAULT NULL, PRIMARY KEY
(`id`),
KEY `borrowertype` (`borrowertype`),
KEY `id` (`id`)

) ENGINE=MyISAM DEFAULT CHARSET=utf8 AUTO_INCREMENT=42 ;

--

-- Dumping data for table `type` --

INSERT INTO `type` (`id`, `borrowertype`) VALUES (2, 'Teacher'), (20,
'Employee'),
(21, 'Non-Teaching'),

(22, 'Student'), (32, 'Contruction');
```

-- Table structure for table `users` --

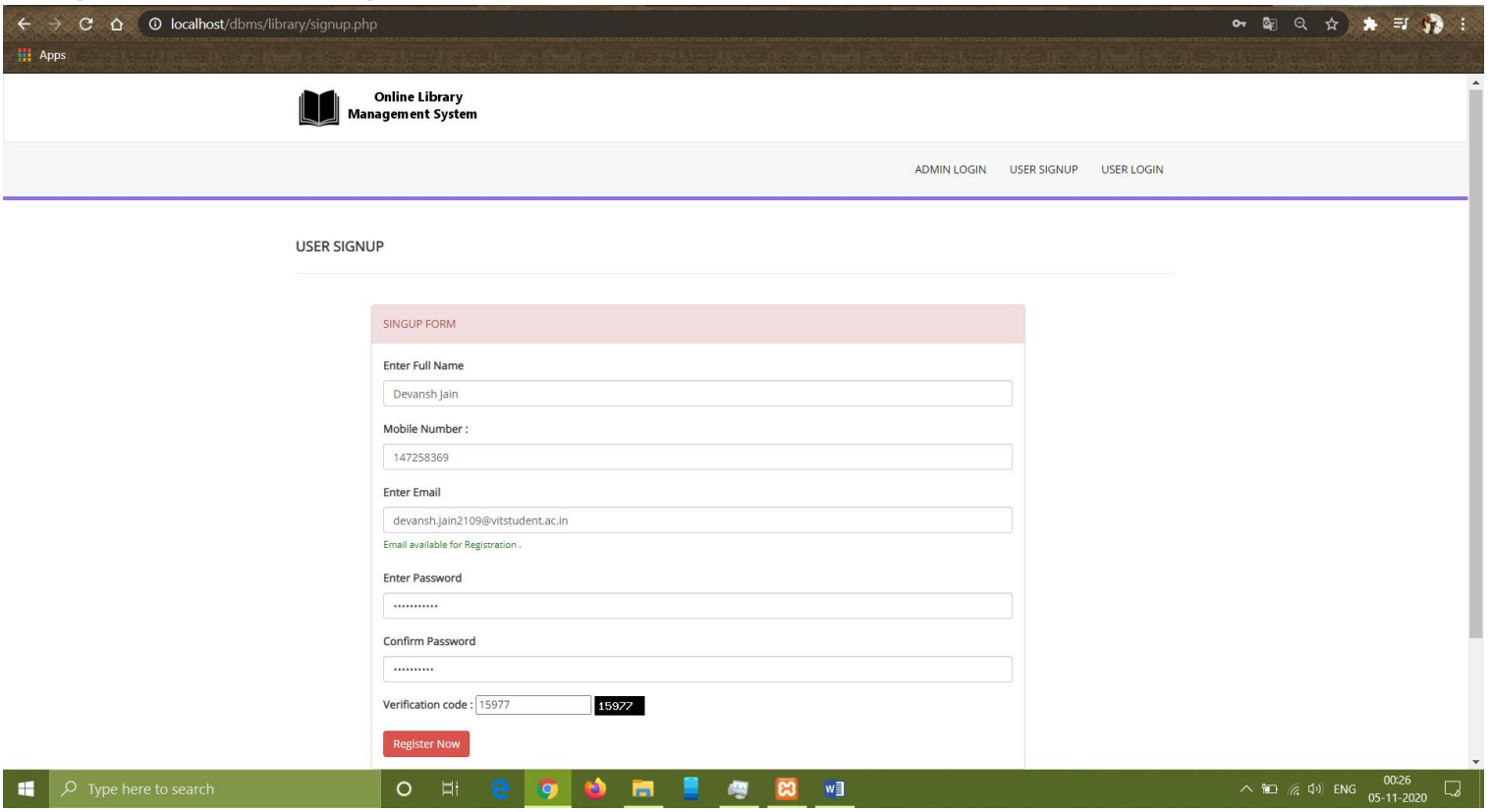
```
CREATE TABLE IF NOT EXISTS `users` (
`user_id` int(11) NOT NULL AUTO_INCREMENT, `username` varchar(100) NOT NULL,
`password` varchar(100) NOT NULL,
`firstname` varchar(100) NOT NULL,
`lastname` varchar(100) NOT NULL,
PRIMARY KEY (`user_id`)

) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=3 ;
```

-- Dumping data for table `users` --

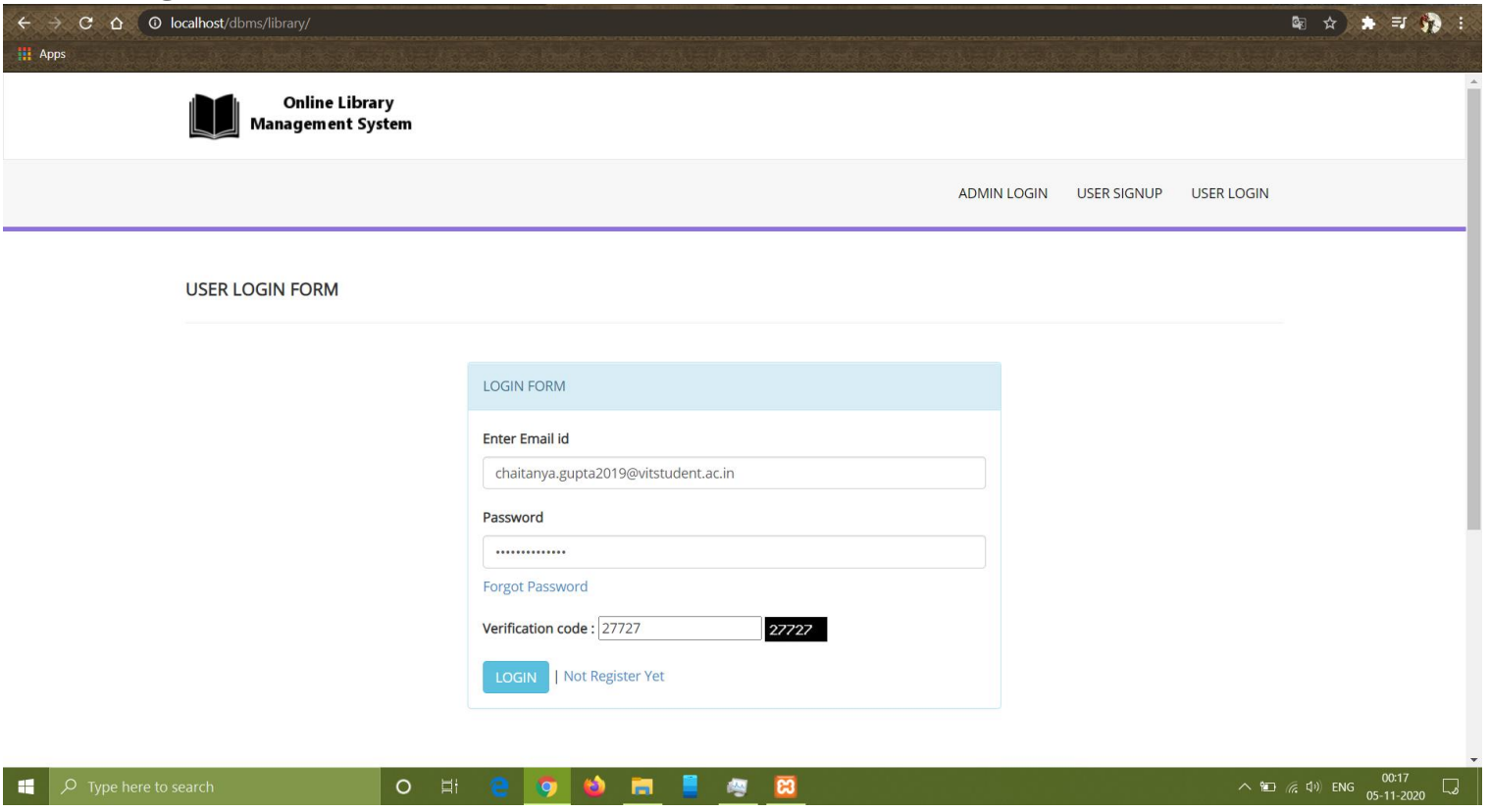
```
INSERT INTO `users` (`user_id`, `username`, `password`, `firstname`, `lastname`) VALUES (2, 'admin', 'admin', 'john',
'smith');
```

FINAL WEB SITE LOOK

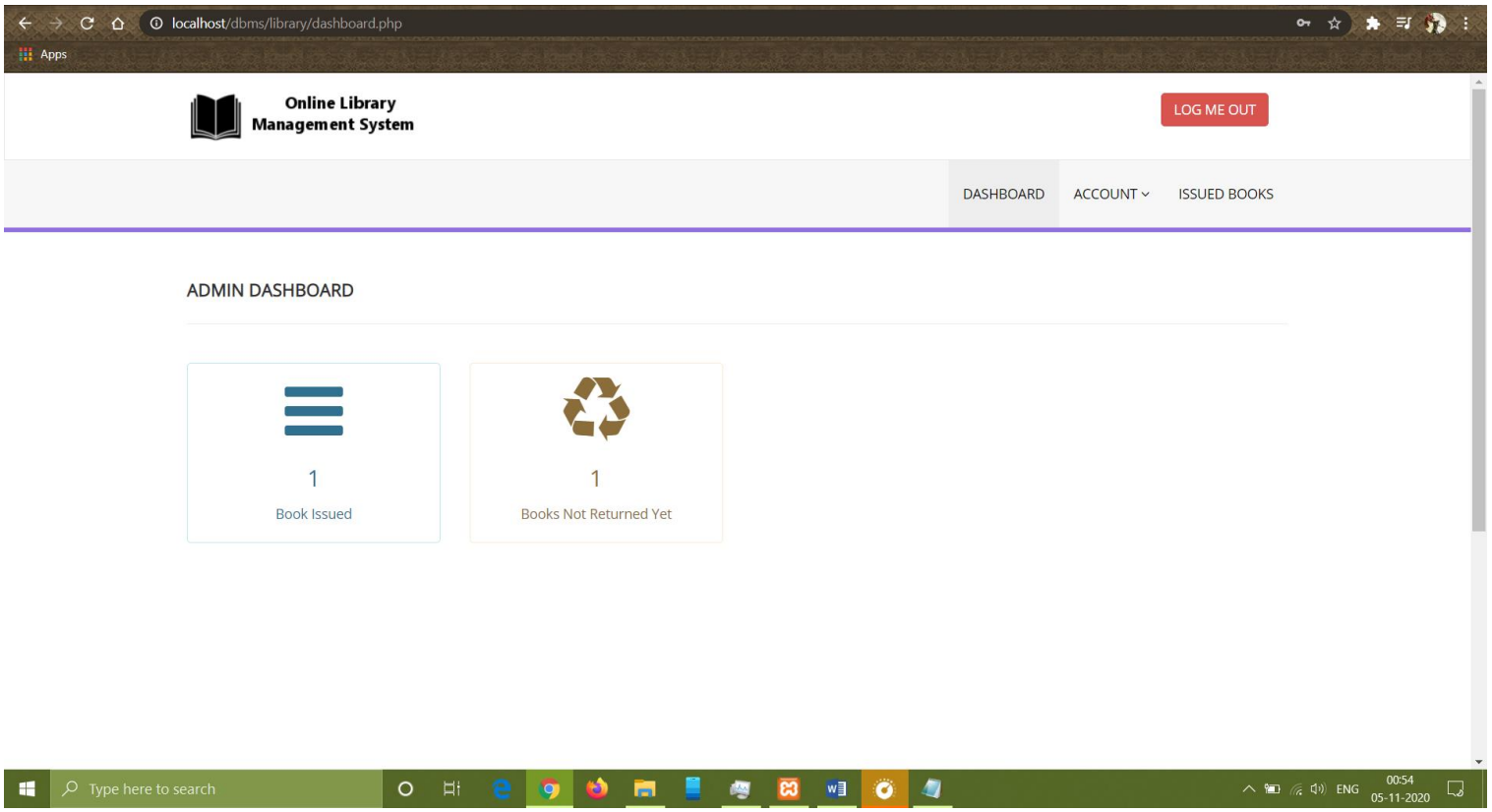
Registration Page

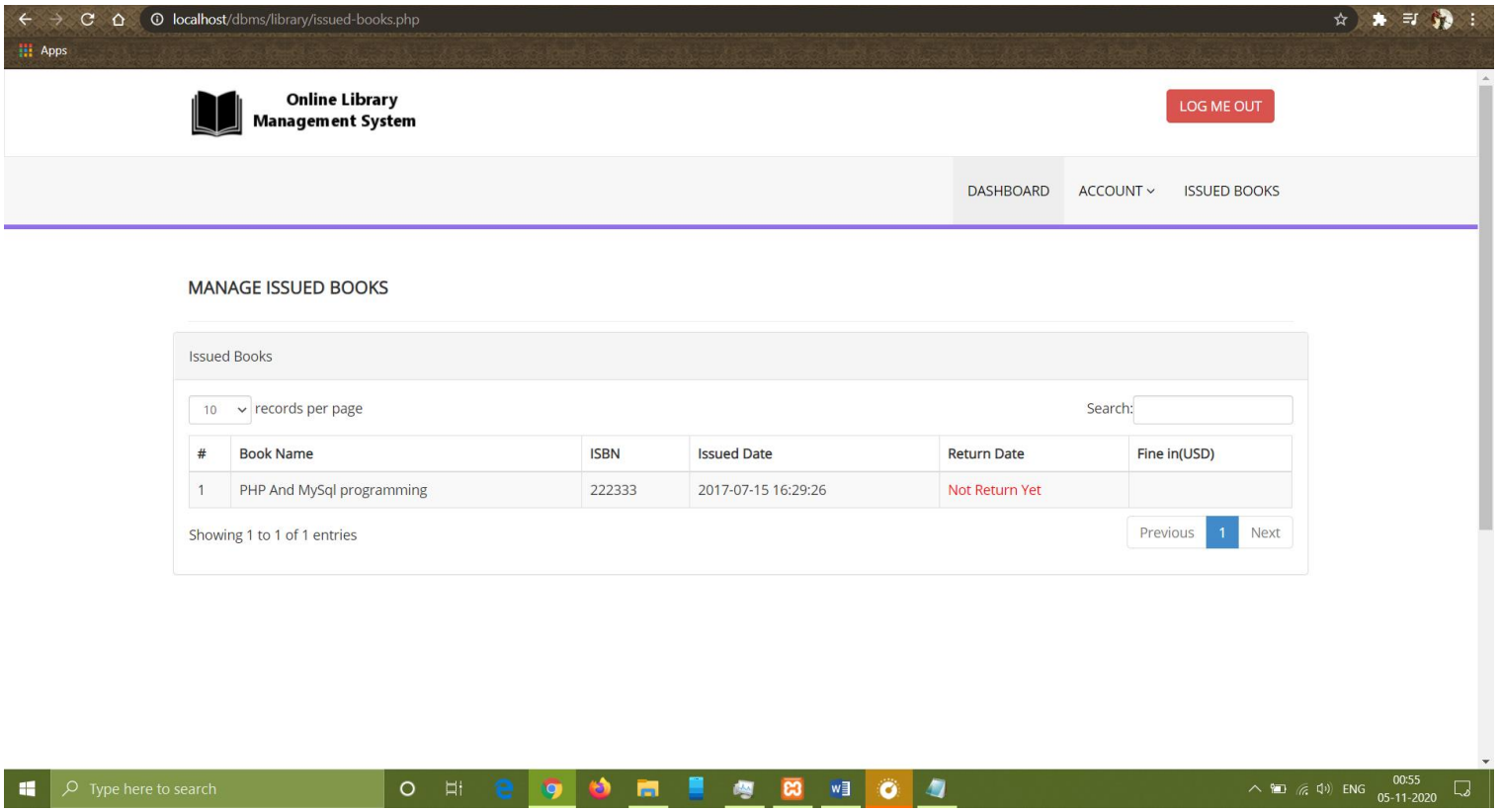


User Login

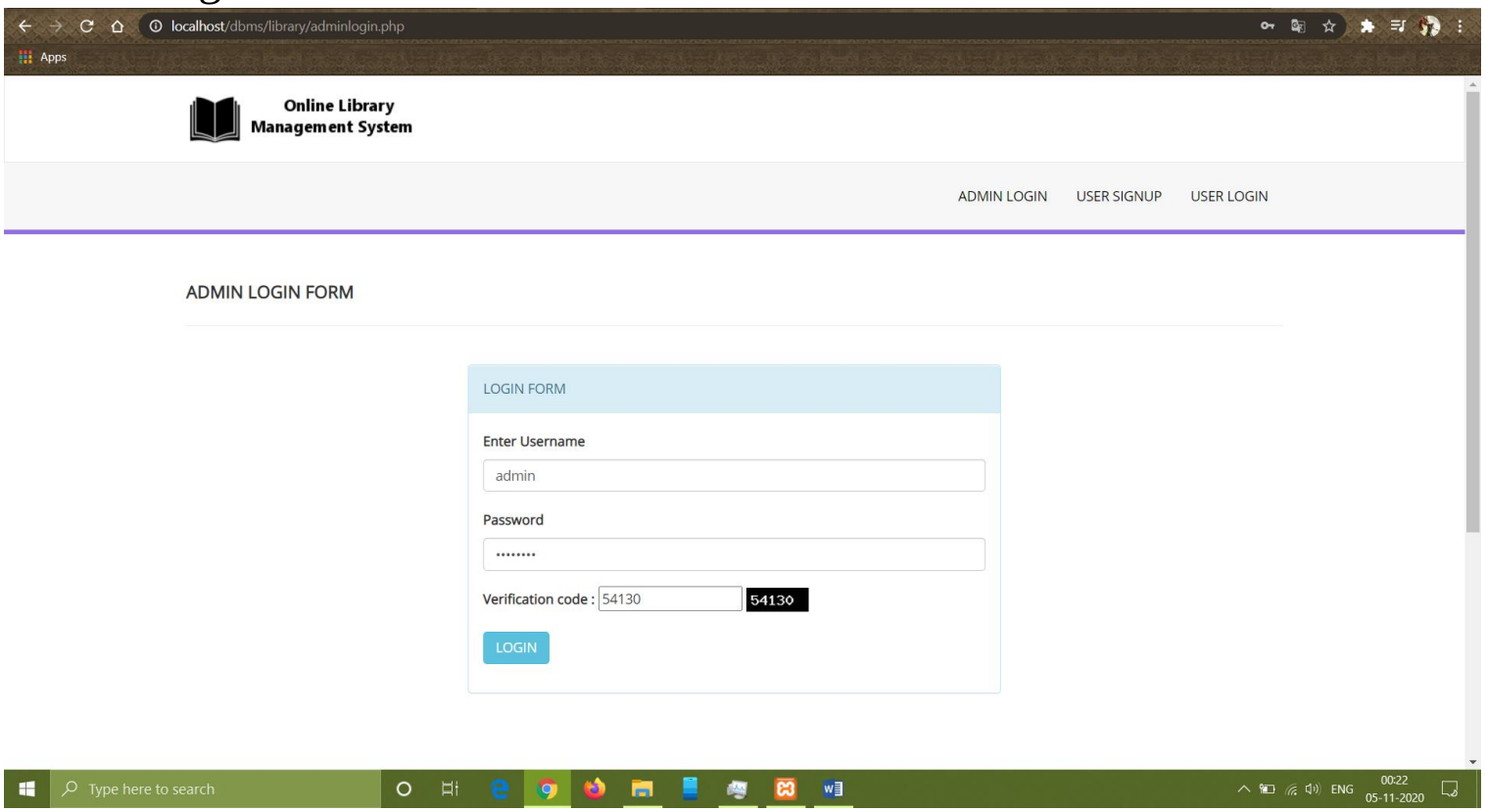


User Dashboard

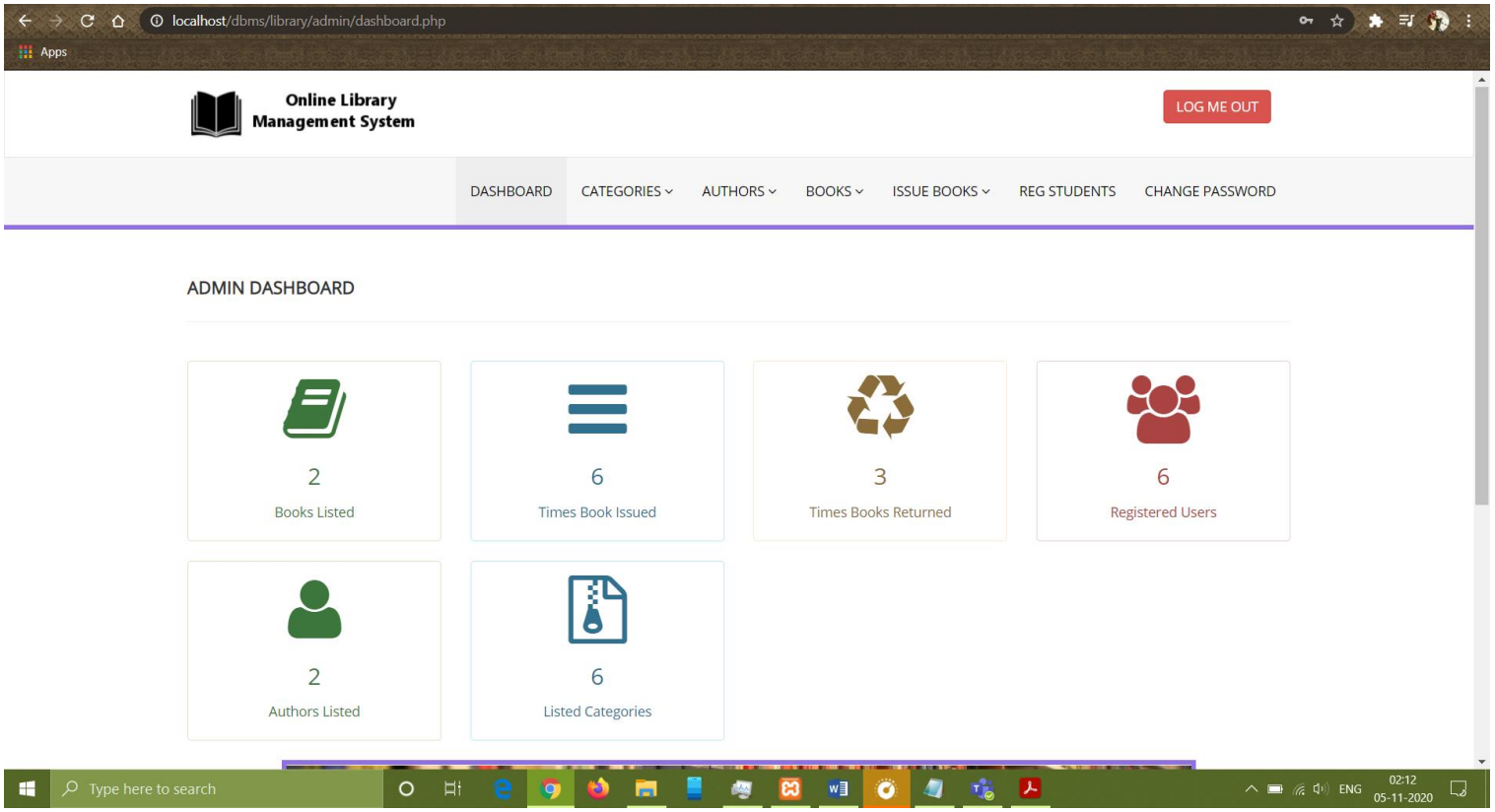


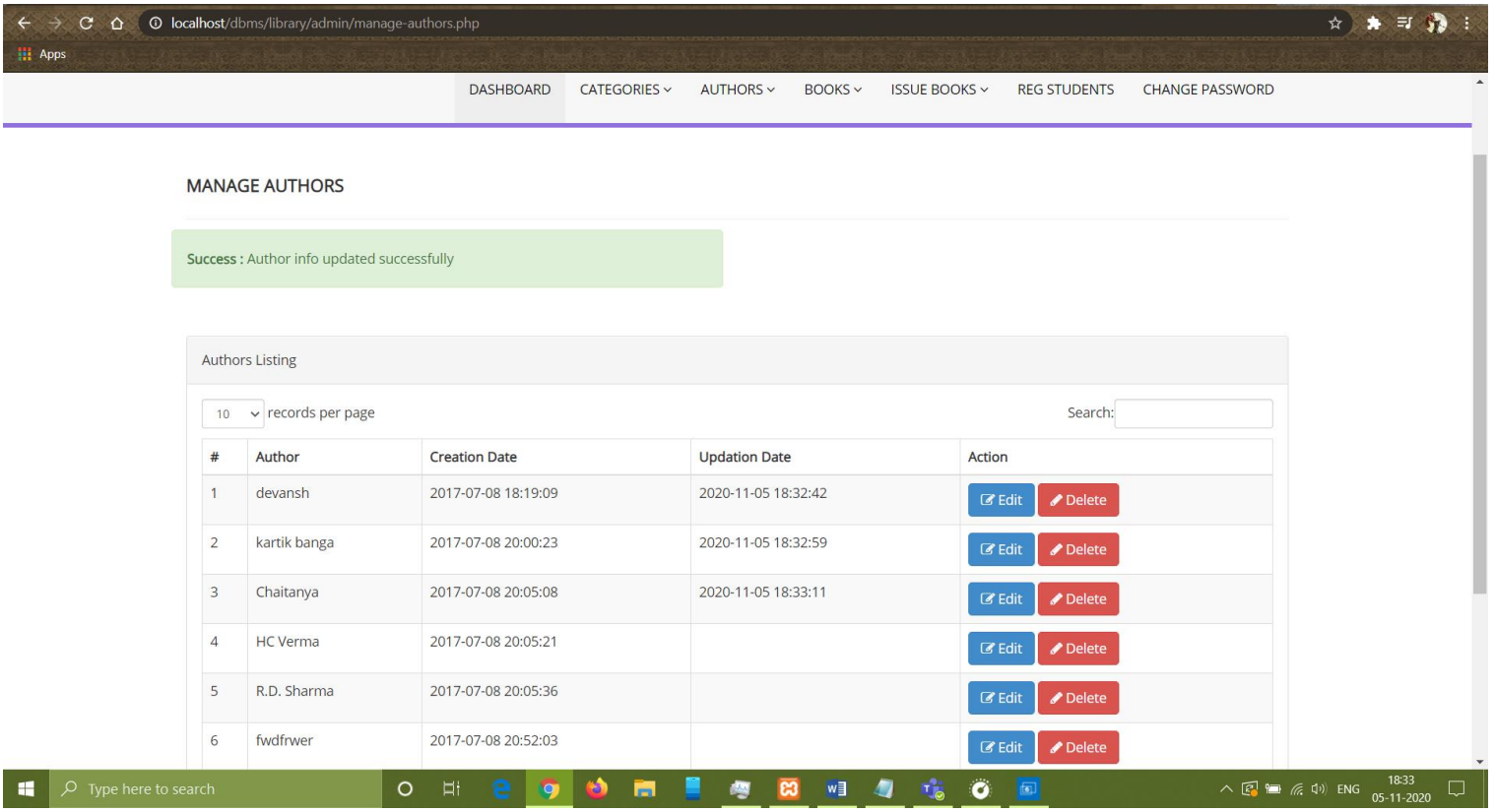


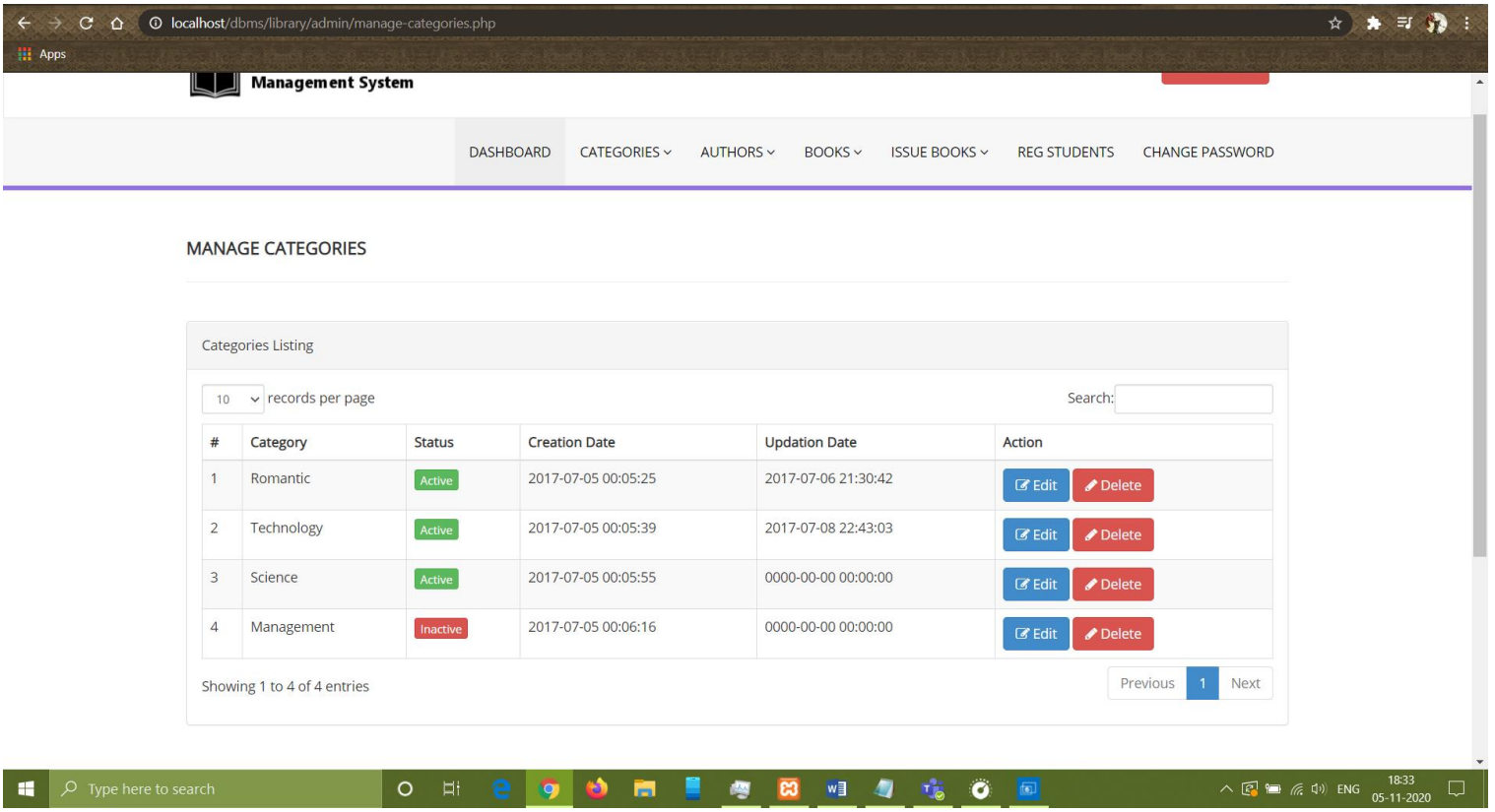
Admin Login

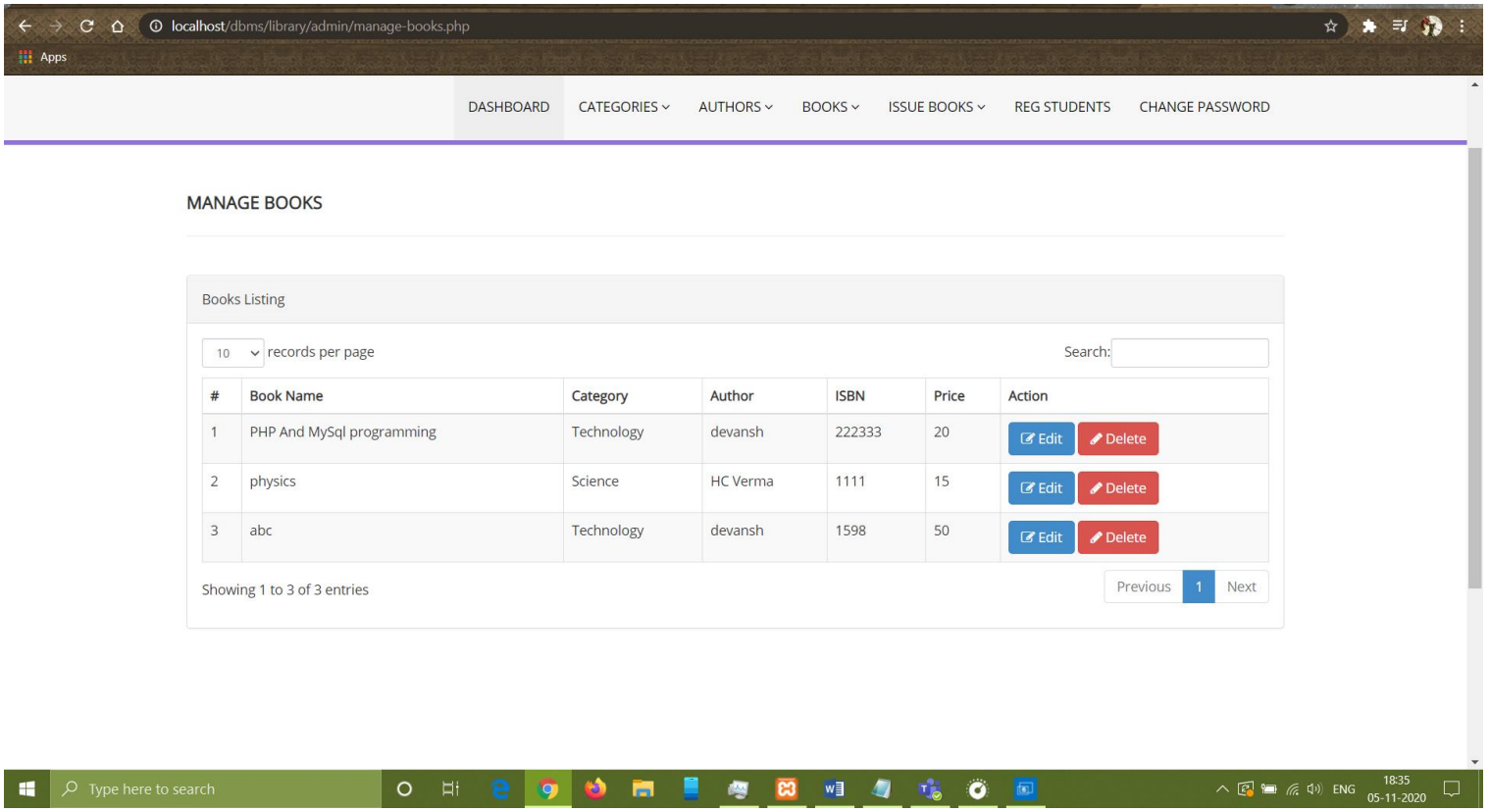


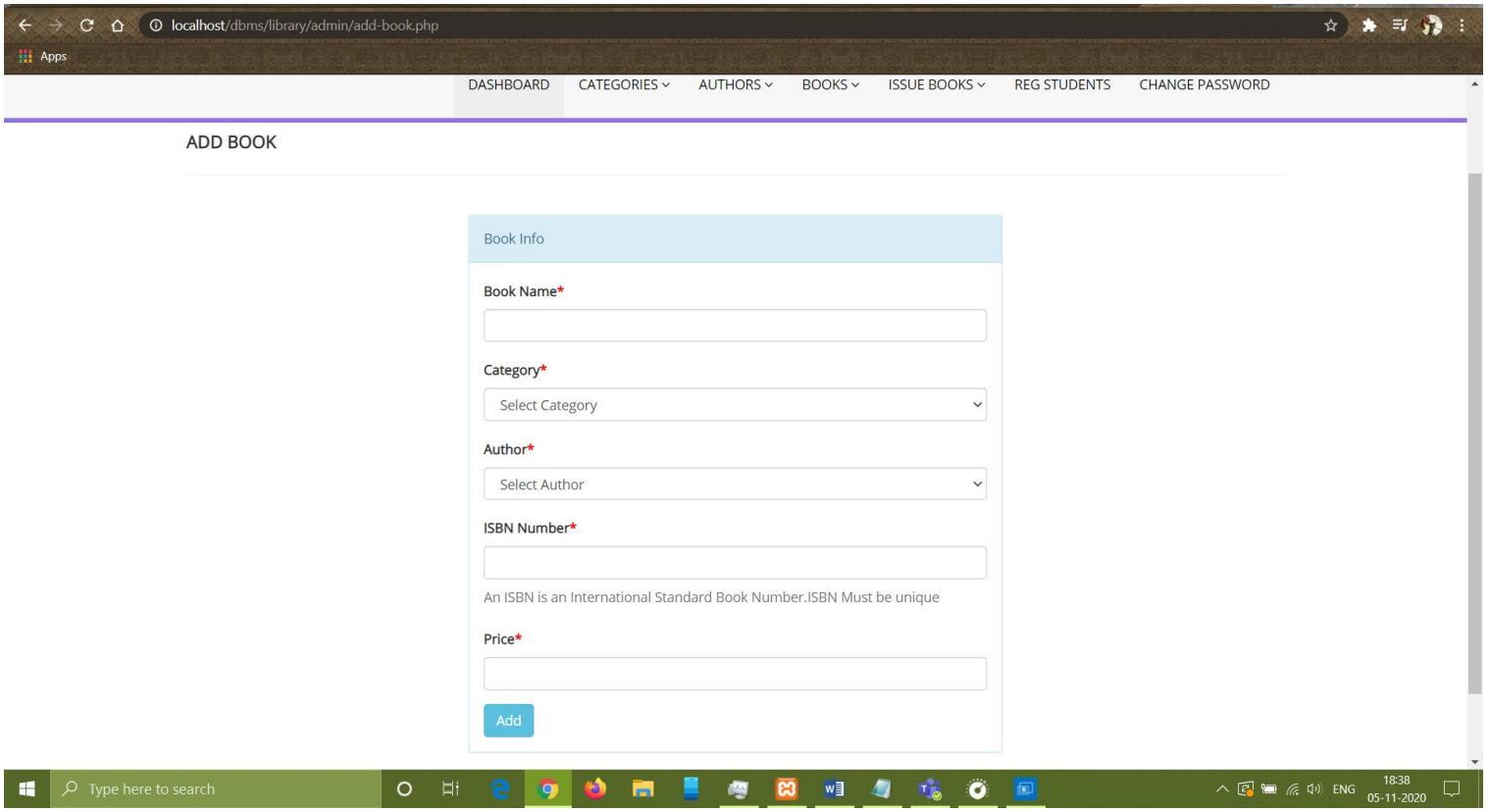
ADMIN DASHBOARD



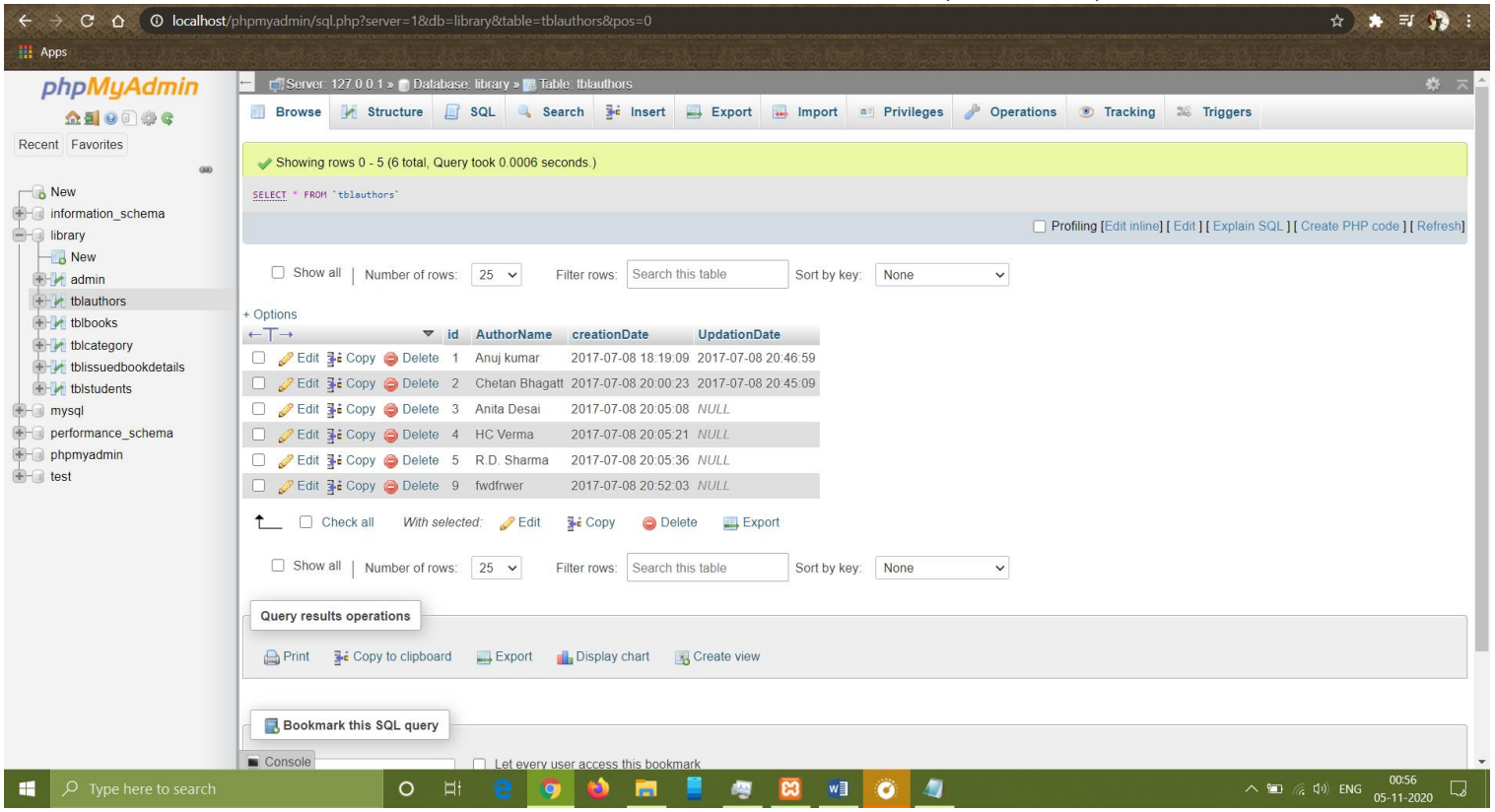

localhost/dbms/library/admin/manage-authors.php
Apps
DASHBOARD
CATEGORIES
AUTHORS
BOOKS
ISSUE BOOKS
REG STUDENTS
CHANGE PASSWORD
MANAGE AUTHORS
Success : Author info updated successfully
Authors Listing
10 records per page
Search:
Author Creation Date Updation Date Action
1 devansh 2017-07-08 18:19:09 2020-11-05 18:32:42 Edit Delete
2 kartik banga 2017-07-08 20:00:23 2020-11-05 18:32:59 Edit Delete
3 Chaitanya 2017-07-08 20:05:08 2020-11-05 18:33:11 Edit Delete
4 HC Verma 2017-07-08 20:05:21 Edit Delete
5 R.D. Sharma 2017-07-08 20:05:36 Edit Delete
6 fwdfrwer 2017-07-08 20:52:03 Edit Delete
Type here to search
ENG
18:33
05-11-2020

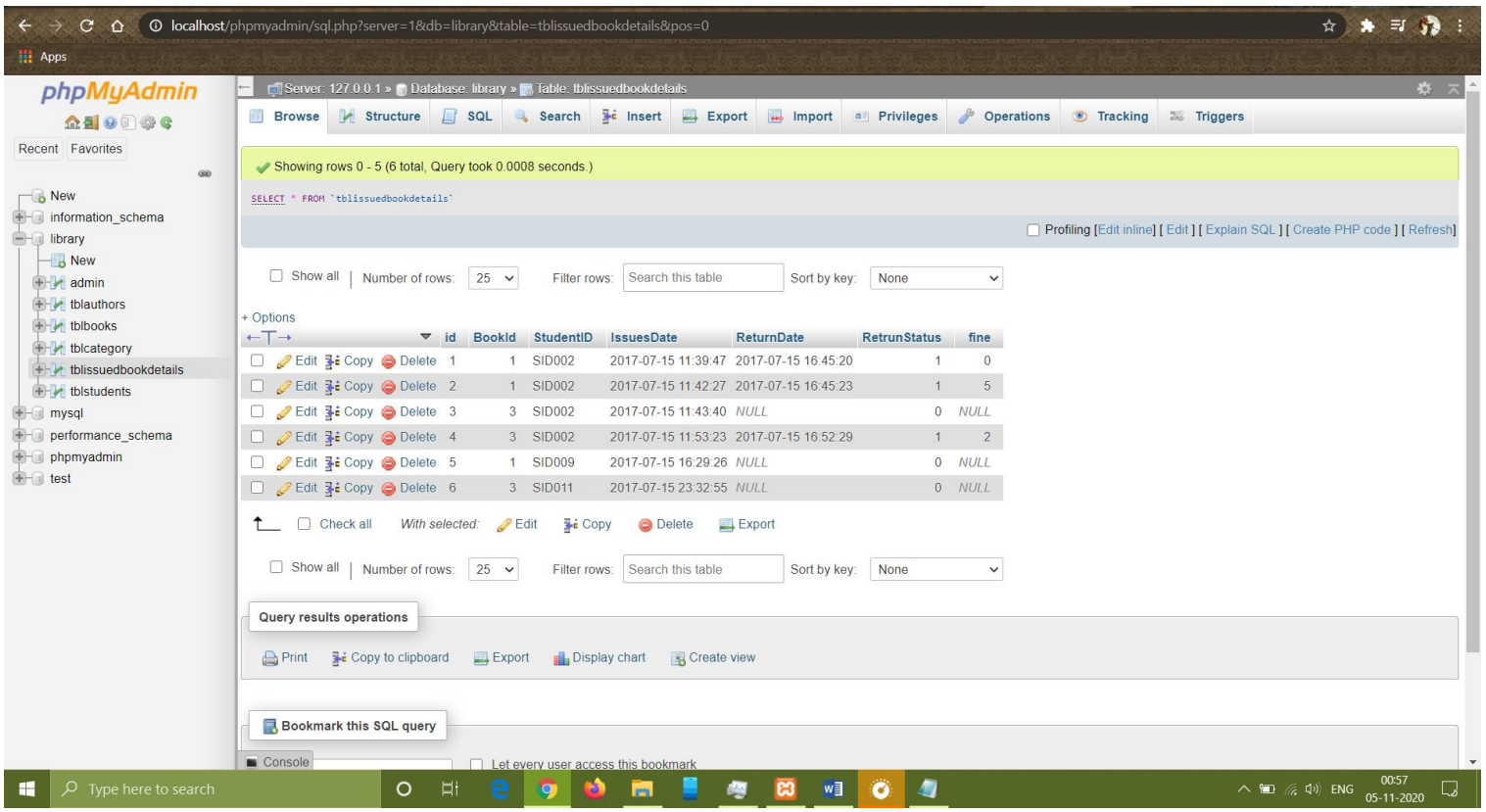

localhost/dbms/library/admin/manage-categories.php
Apps
Management System
DASHBOARD
CATEGORIES
AUTHORS
BOOKS
ISSUE BOOKS
REG STUDENTS
CHANGE PASSWORD
MANAGE CATEGORIES
Categories Listing
10 records per page
Search:
Category Status Creation Date Updation Date Action
1 Romantic Active 2017-07-05 00:05:25 2017-07-06 21:30:42 Edit Delete
2 Technology Active 2017-07-05 00:05:39 2017-07-08 22:43:03 Edit Delete
3 Science Active 2017-07-05 00:05:55 0000-00-00 00:00:00 Edit Delete
4 Management Inactive 2017-07-05 00:06:16 0000-00-00 00:00:00 Edit Delete
Showing 1 to 4 of 4 entries
Previous 1 Next
Type here to search
ENG
18:33
05-11-2020


localhost/dbms/library/admin/manage-books.php
Apps
DASHBOARD
CATEGORIES
AUTHORS
BOOKS
ISSUE BOOKS
REG STUDENTS
CHANGE PASSWORD
MANAGE BOOKS
Books Listing
10 records per page
Search:
Book Name Category Author ISBN Price Action
1 PHP And MySql programming Technology devansh 222333 20 Edit Delete
2 physics Science HC Verma 1111 15 Edit Delete
3 abc Technology devansh 1598 50 Edit Delete
Showing 1 to 3 of 3 entries
Previous 1 Next
Type here to search
ENG
18:35
05-11-2020


localhost/dbms/library/admin/add-book.php
Apps
DASHBOARD
CATEGORIES
AUTHORS
BOOKS
ISSUE BOOKS
REG STUDENTS
CHANGE PASSWORD
ADD BOOK
Book Info
Book Name*
Category*
Select Category
Author*
Select Author
ISBN Number*
An ISBN is an International Standard Book Number.ISBN Must be unique
Price*
Add
Type here to search
ENG
18:38
05-11-2020

PHP MYADMIN DATABASE(Preview)





CONCLUSION

This website provides a computerized version of library management system which will benefits the staff of the library. It makes entire process online where librarian can search books. Through this project, librarian can digitally monitor the status of books.

It also helps in maintaining a systematic and structured database for newly issued, old as well as damaged books. It also provides an opportunity to the librarian to maintain a student database and manage it accordingly, reducing the paper work.

There is a future scope of this facility that many more features such as online lectures video tutorials can be added by teachers as well online assignments submissions facility. A feature of group chat where student can discuss various issues can be added to this project thus it making it more interactive.

REFERENCES

- http://www.w3schools.com/html/html_intro.asp
- http://www.w3schools.com/css/css_background.asp
- http://www.w3schools.com/js/js_datatypes.asp
- http://www.w3schools.com/sql/sql_insert.asp
- http://www.w3schools.com/sql/sql_update.asp
- http://www.w3schools.com/php/php_forms.asp