

OnLiBI - Online Library system Bharathidasan Institute of Technology

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Abstract: *The world is evolving very fast every decade. Internet is helping everybody's day to make things easier, hence internet is the first thing and the last thing in everybody lifestyle. As of December 2017, more than 4 billion people that is 54% of the world's population has internet access and the growth rate from 2000-2018 is 1,052% [1]. Internet has made its impression in every field not only for entertainment but also in various fields like educational institutions and medicine. Most of the colleges and schools have already taken step towards smart class rooms and it is being advised to implement these in every schools. Many educational institutes and company recruiters are moving towards only examination.*

Internet usage cannot be neglected hence it is a necessity to move our library that is maintainable digitally. Every hand written records have become computer data, that helps us not only to easily maintain the data but also to mine the data and improvise ourselves and users experience. The main aim of this application is atomization of works in the library. This application will help to maintain the records digitally. It is accessible for both administrators and users especially students. Most of the information related to the library can be obtained by using the internet anywhere. It make the work easier both for users and administrators.

Key Words: *Internet, educational institutions, library, digital, automization*

1. INTRODUCTION:

An online library management is much needed because it increases efficiency, Reduces the cost of managing a library, Saves time, Increases the productivity of workers, Enhances the presentation of library [2].

OnLiBIT (Online Library Bharathidasan Institute of Technology) is an online application that will maintain the library digitally. It has added facilities like viewing the book if it is available currently. Send automatic sms alert to students who have not returned the books. It is useful for both users and administrators.

1.1 Purpose

1.1.1 Admins

To maintain the log system. To get details of each book. To know the details of book borrower list of books borrowed by each user Request to increase books count. Send alerts to users

1.1.2 Users

To get the availability of book. To check if the book is available for issue or reference only. To know the details of books. To verify the availability date of book if not. To request for unavailable books. Details of various books with similar title.

1.2 Scope

Users can use to refer the details of books like author, title, and content of the book. Modifications of the data can be made easy. Access from anywhere is possible with an internet connection. To convert

manual work to automated work. Centralized database. Authenticate users

1.3 Technology used

1.3.1 Front End

- Html, css, JavaScript

1.3.2 Back End

- PHP, mysql, wamp server

1.4 Data base designing

The crucial part of a management application is designing the database. It keeps track of all information of the book in the library like author, publisher, ID, cost, Students details [3]. Database is created using mysql in wamp server.

1.5 Functionality

- Online membership
- Tracking of the book issue and return
- Automatic alert for book return
- Checking the availability of books
- Online books and notes[4]

2. LITERATURE REVIEW

Online Library System
BIJESH NAIR [5]

It is a college project by a student who has developed an online application to maintain the library digitally, which was handled manually earlier. The application is developed using .NET. The feasibility

study have clearly explained about the drawback of existing system and the importance of online library system and its use. The database uses ISBN number to create unique id for books.

Online Library Management System

Bhupendra Shraddha Panwar Vijay Vaishnav [6]

The paper titled Library Management System is Library management software for monitoring and controlling the transactions in a library. The applications is developed in java which mainly focuses on basic operations in a library like adding new member, new books, and updating new information, searching books and members and facility to borrow and return books. It is a windows application written for 32-bit Windows operating systems, designed to help users maintain and organize library.

Online Library Management System

Bhupendra, Shraddha Panwar, Vijay Vaishnav [7]

Any education institute can make use of it for providing information about author, content of the available books. It can be used in offices and modifications can be easily done according to requirements. Technologies Used: Front End: Servlets, HTML, Java script. Back End: MS Access, Apache Tomcat server.

2.1 Existing System

The existing system is a hand written system where the records of borrowers is maintained in hand written records. The details of every book is maintained in the database and it is accessible only to the administrators. There are two separate libraries where we can borrow book from one library and can only refer from other. All the transactions are done manually that consumes longer time for processing.

2.2 Proposed System

The proposed System is an automated library system that automatically schedules the due date for the borrowers and calculates the fine amount if the book is not returned or lost. The administrator can automatically add, edit or remove a book details. The details of book or the user can be viewed in the webpage. The application automatically sends message to all users who have not returned their books

Advantages:

- Fast operations
- Easy access to all books
- Checking the availability of books
- Automatized operations
- User friendly

3. SYSTEM IMPLEMENTATION:

Module 1: Main page

The main page is the gateway to login page it also have hyperlinks to college website. The page uses

various font styles from google fonts like Dancing Script, Arbutus Slab, Courgette. [8] The Navigation is simple - Common top navigation items include: Search, Services, About Us, my Account.



Fig 5.1 Main page module

Module 2: Login

Login page has 2 inputs register number and password, Application will check if the registration number is a valid 12 digit number and password is more than 6 characters in JavaScript client side validation.

The page will be redirected to PHP page to check for database validation. If valid user the page will be redirected to main page of library, else will redirect to same login page with error message

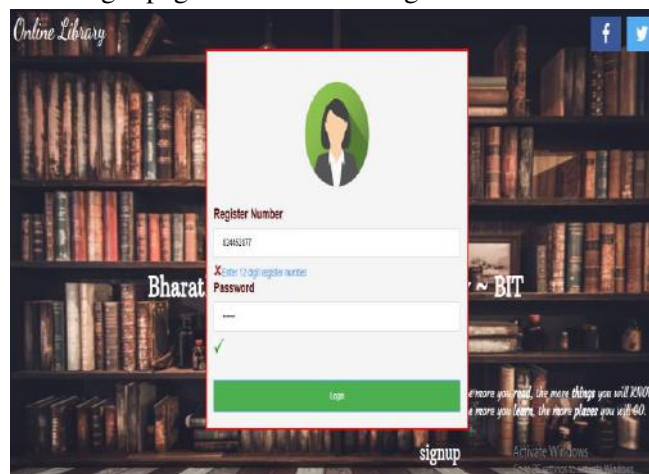


Fig 5.2 Login page module

Module 3: Registration Page

New users have to register themselves in order to use the application. Client side validation is done through JavaScript, it will check if the registration number is valid 12 digit number. If name is more than 2 characters, valid email format and Password more than 6 characters etc. If the form is valid it will pass the values to PHP page to perform server side validation.

Server side validation will check if the date of birth and registration match with the data feed in the database. If the email is already registered it will return error. If all conditions are satisfied it will register the user to the application by inserting the row to the database, and redirect to main page to view books. User will now be able to access the application.

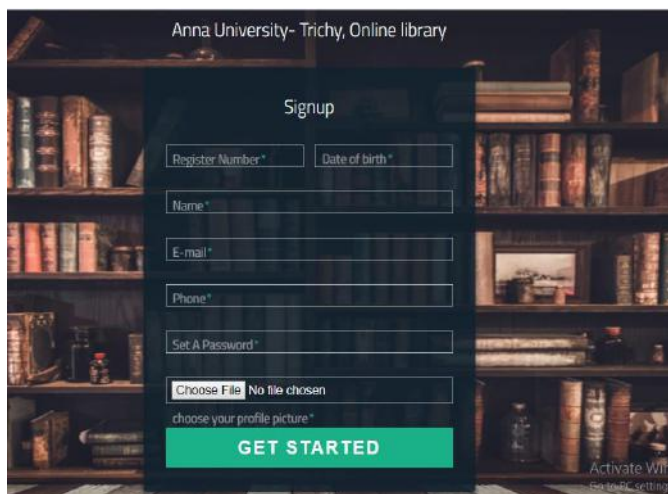


Fig 5.3 Registration page module

Module 4: Welcome Page

Gives details of books that are available with its title, author name, version number and publication. The JavaScript The page has a side navigation bar that displays books department wise and a tab for e-books. The page has a hyperlink to profile of the users.

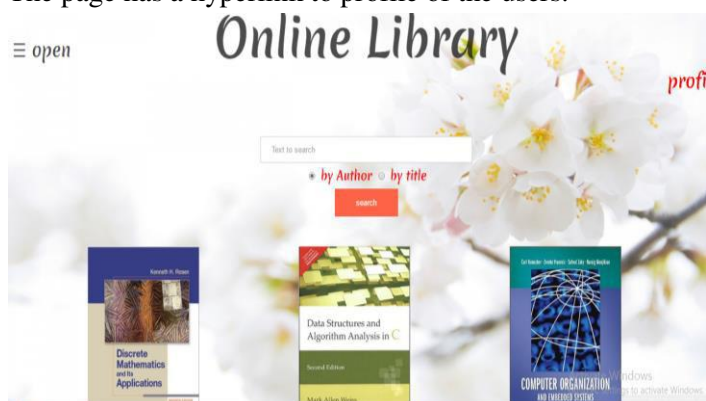


Fig 5.4 Main page module

Module 5: details of books

Details of every book is provided in this page when a book is clicked from the main menu. It also provides the details like author name, publisher and version number. The page also gives details of other books with its small abstract. If the selected book is in any reference book it will also be displayed.

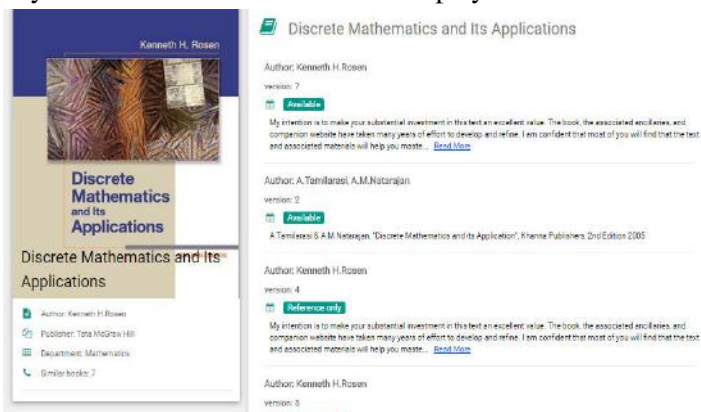


Fig 5.5 Details of book page

Module 6: Admin to add a book

Admins can add or remove or edit the details of the book by logging in from admin panel. The details will be updated immediately and visible for students.



Fig 5.6 Add a book

Module 7: Viewing details of a book or person

Admins can view the details of a book or a person by using the user id or book id and all transactions will be listed.



Fig 5.7.1 enter details of user

connected successfully
6

book id	issued on	return date	returned on	status
500013	2018-03-19	2018-03-29	2018-03-20	1
1001501	2018-03-19	2018-03-29	-	0
1001201	2018-03-19	2018-03-27	2018-03-19	1
1002101	2018-03-19	2018-03-30	-	0
1001103	2018-03-19	2018-03-29	2018-03-17	1
1234567	2018-03-19	2018-03-29	-	0

Fig 5.7.2 view transaction details of user

Module 8: Sending sms notification

Admin can send sms to the users to inform any information and the application will automatically send sms to users who have not returned their books.

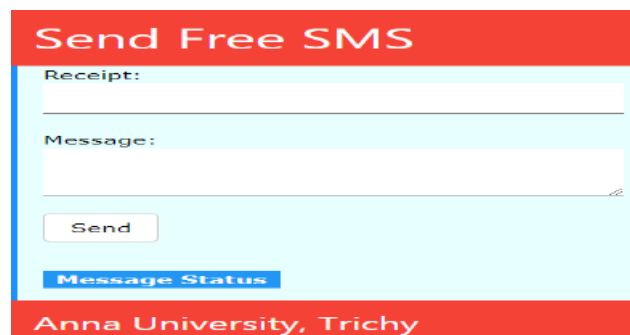


Fig 5.8 sms module

4. ARCHITECTURE:

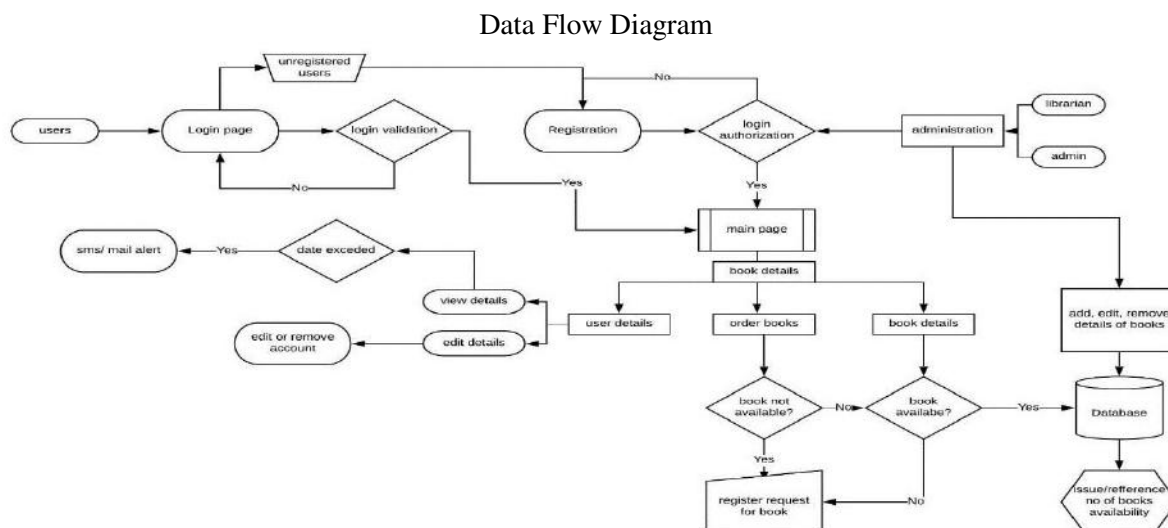


Fig 6.1 Data Flow Diagram

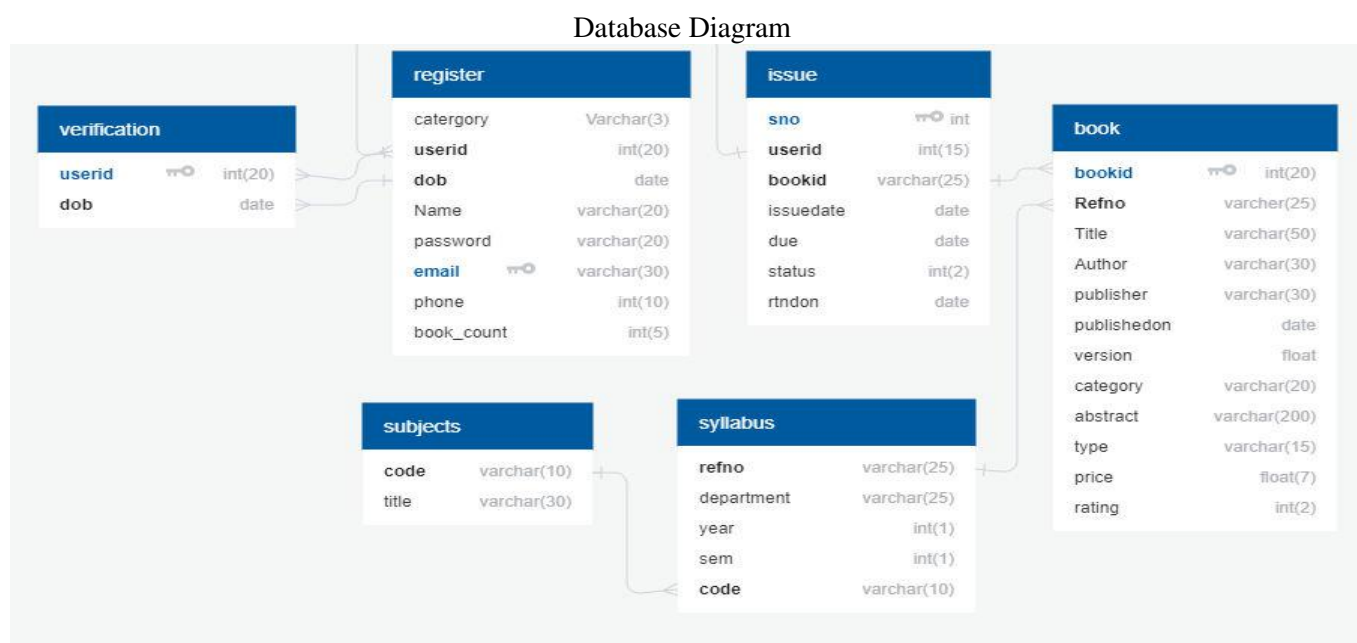


Fig 6.2 Database Diagram

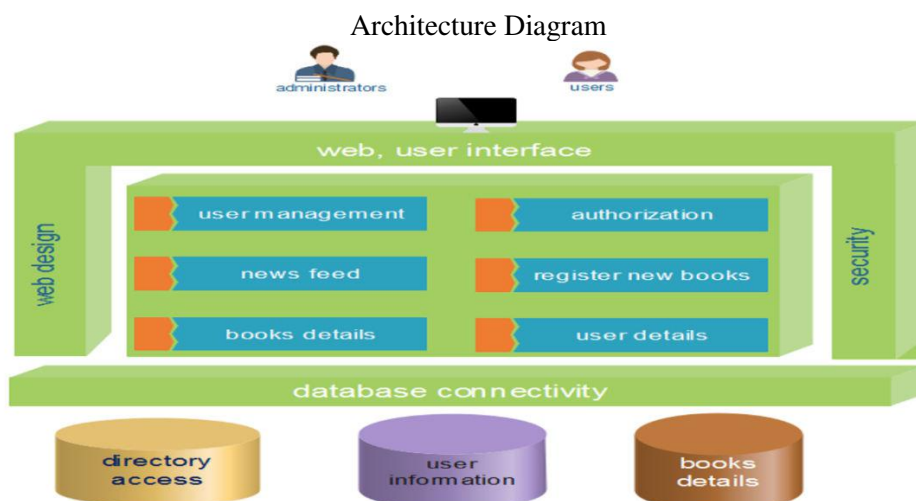


Fig 6.3 Architecture diagram

5. DESCRIPTION:

1. Fig 5.1 Main page module
2. Fig 5.2 Login page module
3. Fig 5.3 Registration page module
4. Fig 5.4 Main page module
5. Fig 5.5 Details of book page
6. Fig 5.6 Add a book
7. Fig 5.7.1 enter details of user
8. Fig 5.7.2 view transaction details of user
9. Fig 5.8 sms module
10. Fig 6.1 Data Flow Diagram
11. Fig 6.2 Database Diagram
12. Fig 6.3 Architecture diagram

6. CONCLUSION:

This application is a useful application that helps the students and administrators to easily access and to know more information about the library books available and to develop themselves. In future it can be enhanced to have immediate notifications if the book is available in library. Any other information regarding the library can be sent immediately. A discussion forum can be created.

7. ACKNOWLEDGEMENT:

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