

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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A Mini Project Report on

## ONLINE LIBRARY WEBSITE

*Submitted in partial fulfillment of the requirements as a part of the WEB TECHNOLOGY LABORATORY WITH MINI PROJECT for the VII Semester of degree of **Bachelor of Engineering in Information Science and Engineering** of Visvesvaraya Technological University, Belagavi*

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**2020 – 2021**

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## **CERTIFICATE**

This is to certify that the Mini project report entitled ***ONLINE LIBRARY WEBSITE*** has been successfully completed by **V HARSHITHA** bearing USN **1RN17IS111** and **VIBHA S NVALE** bearing USN **1RN17IS115**, presently VII semester students of **RNS Institute of Technology** in partial fulfillment of the requirements as a part of the WEB TECHNOLOGY Laboratory for the award of the degree ***Bachelor of Engineering in Information Science and Engineering*** under **Visvesvaraya Technological University, Belagavi** during academic year 2020 – 2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements as a part of WEB TECHNOLOGY LABORATORY WITH MINI PROJECT for the said degree.

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# **ABSTRACT**

Online Library website is a web application where the books can be read online for free. The website provides online real time information about the books available in the Library and the user information.

The Online Library (Bookworm) has been designed to computerise and automate the operations performed over the information about books. This computerisation of library helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced.

The user can easily sign up using a username and password and log in to the website using the same credentials. The aim of this website is to provide good user experience to users who love reading books. The user can view the details of the book they wish to read and also check the number of views that particular book has.

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## **LIST OF ABBREVIATIONS**

CSS	Cascading Style Sheets
DFD	Data Flow Diagram
HTML5	HyperText Markup Language version 5
HTTP	HyperText Transfer Protocol
OS	Operating System
PHP	Hypertext Preprocessor
SRS	Software Requirements Specification
SQL	Structured Query Language
UCD	Use Case Diagram
WAMP	Windows, Apache, MySQL and PHP

# Chapter 1

## INTRODUCTION

Online Library Website Portal is a web-based application. The web page allows users to perform various operations online regarding reading books/novels online. It provides a user friendly, interactive interface based on PHP, CSS, JavaScript, HTML5, Bootstrap elements. All data is stored in a MySQL database. The application uses WAMP Server to communicate with the database.

### 1.1 Background

An e-library or Online library is a physical site and/ or website that provide around the clock online access to various books i.e. it provides free copies of books available to the users. Normally these materials are classics which have no copyright digital formats (as opposed to print, microform, or other media) and accessible by computers.

The digital content may be stored locally, or accessed remotely via computer networks. A digital library is a type of information retrieval system. Online Libraries are an increasingly popular research area that encompasses more than traditional information retrieval or database methods and techniques. There are many numbers of definitions.

### 1.2 About the mini project

A Digital Library or Online Library is a special library with a focused collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, microform, or other media), along with means for organizing, storing, and retrieving the files and media contained in the library collection.

Digital libraries can vary immensely in size and scope, and can be maintained by individuals, organizations, or affiliated with established physical library buildings or institutions, or with academic institutions.

Online libraries have numerous books that can be accessed and read by users any number of times from anywhere, at any time. The electronic content may be stored locally, or accessed remotely via computer networks. An electronic library is a type of information retrieval system.

Online Libraries are being created today for diverse communities and in different fields e.g. education, science, culture, development, health, governance and so on. With the availability of several free digital library software packages at the recent time, the creation and sharing of information through the digital library collections has become an attractive and feasible proposition for library and information professionals around the world.

Online Libraries have been variously defined and many such definitions seek to find the role of the library in relation to the digital content. From its original etymological meaning of a 'collection of books', a library could be redefined in modern terms to mean a collection of almost anything: software routines or digital images, for instance. Many libraries are different with unique features, every digital library is equally different, and different players are advancing many definitions for the digital library.

Library automation has helped to provide easy access to collections through the use of computerized library catalogue such as On-line Public Access Catalog (OPAC). Online libraries differ significantly from the traditional libraries because they allow users to gain an on-line access to and work with the electronic versions of full text documents and their associated images. Many digital libraries also provide an access to other multi-media content like audio and video.

Though the focus of this definition is on the document collection, it stresses the fact that the digital libraries or online libraries are much more than a random assembly of digital objects. They retain the several qualities of traditional libraries such as a defined community of users, focused collections, long-term availability, and the possibility of selecting, organizing, preserving and sharing resources.

The digital or online libraries are sometimes perceived as institutions, though this is not as dominant as the previous definition.

## Chapter 2

# REQUIREMENTS SPECIFICATION

A Requirement Specification of a system includes Software Requirements Specification (SRS) and Hardware Requirements Specification. It lays out functional and non-functional requirements and may include a set of use cases that describe user interactions that the software must provide.

### 2.1 Hardware Requirements

- 32-bit CPU
- 500MB Memory
- 3GB RAM

### 2.2 Software Requirements

- OS (e.g. Windows 10/MacOS)
- PHP
- CSS3
- HTML5
- Bootstrap
- Apache Web server
- MySQL Database
- JavaScript

### 2.3 Functional and Non-Functional Requirements

A Functional Requirement defines a function of a system or its component, where a function is described as a specification of behavior between outputs and inputs.

A Non-Functional Requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. The plan for implementing nonfunctional requirements is detailed in the system architecture, because they are usually architecturally significant requirements.

## 2.4 Functional requirements - User

Each user has his separate account, to perform his own functionalities, identified by a user name and password. Every user is made to create an account by registering through admin before using the application.

### 2.4.1 Security Requirements

It is of utmost importance to ensure that there is protection against unauthorized access to the blog posts. Users must be provided with a login ID and password which grant access only to their respective account. Every user can only view their own results. The Admin on the other hand has privileged access in order to view all data and ensure seem less and efficient experience to all of its users.

### 2.4.2 Performance requirements

The PCs used must be at least be INTEL CORE i3 machines so that they can give optimum performance of the product. In addition to these requirements, the system should also embrace the following requirements:

- **Reliability:** The system should have little or no downtime.
- **Ease of Use:** The general and administrative views should be easy to use and intuitive.

### 2.4.3 Design and Interface requirements

The designers must design the database is such a way that any change in the information of a client should be updated and saved effectively in the database. The interface which is provided in this software allows users to view the books and read books for free. The database designed should be very easy to use and user friendly.

Communication between the MySQL database and front-end is through a XAMPP server. It is connected with front-end with a connection established through PHP.

## Chapter 3

# SYSTEM ANALYSIS AND DESIGN

System analysis is a problem-solving technique that breaks down a system into its component pieces for the purpose of the studying how well those component parts work and interact to accomplish their purpose.

### 3.1 Analysis of the system

The Online Library Website has a scope of two levels of users:

- At the first level, the Admin maintains data about books of various categories like adventure books, fiction books, details etc. and user authentication, relevant and critical, for the application to run.
- At the second level, the users can read the books they wish online for free.

### 3.2 Design of the system

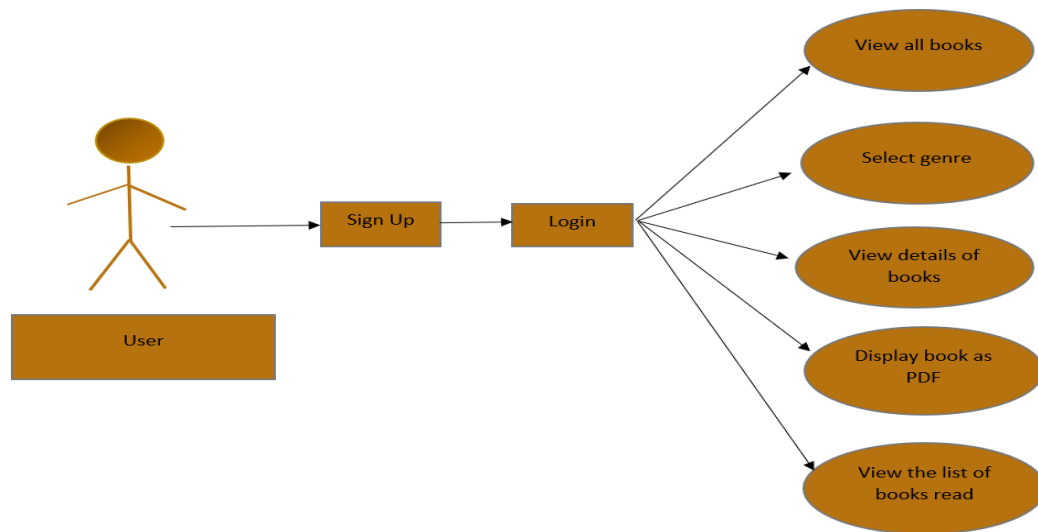
Systems design is the process of defining the architecture, modules, interfaces, and data for a system to satisfy specified requirements. It is the application of systems theory to product development. There is some overlap with system analysis, system architecture and system engineering.

#### 3.2.1 Use-Case Diagram

A Use-Case Diagram (UCD) at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use-cases in which the user is involved. A use-case diagram can identify the different types of users of a system and the different use-cases and will often be accompanied by other types of diagrams as well.

The Figure 3.1 below shows the use-case diagram for Online Library Website. It illustrates the different actions that can be performed by users to interact with the application. Users need to sign up first then user can login to the website. After successful login, the user is directed to Home page.

The activities that the user can perform on the website is they can view all books, select genre, view details of books, display books as PDF and view the list of books read.



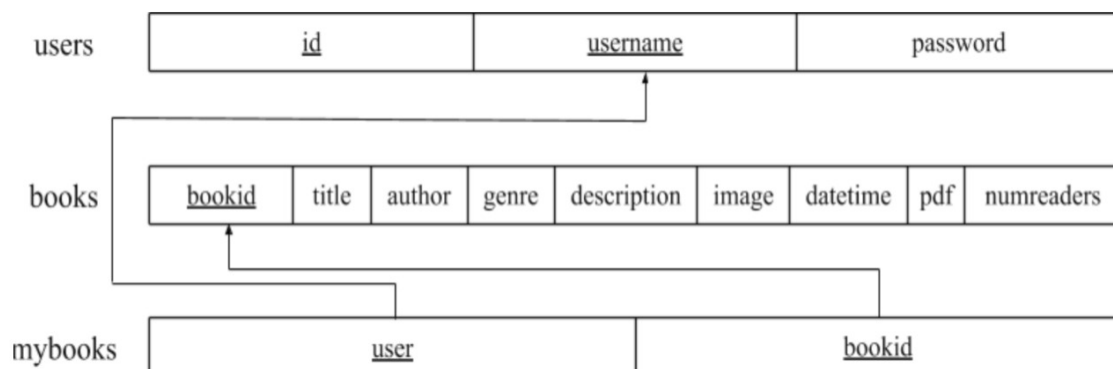
**Figure 3.1 Use case diagram**

### 3.2.2 Schema Diagram

A database schema represents the logical configuration of all or part of a relational database. It can exist both as a visual representation and as a set of formulas known as integrity constraints that govern a database. These formulas are expressed in a data definition language, such as SQL.

Our project consists of a database called BookWorm with 3 tables. They are, Users, Books and MyBooks table.

Figure 3.2 represents a schema diagram of the 3 relations in the database. The users table stores the credentials of the users. When users first signup, their credentials are stored in this table. The books table has all the details of the book which is retrieved and displayed to the user whenever they wish to view these details.



**Figure 3.2 Schema Diagram**

The MyBooks table has the information about the books read by the user. It has foreign keys that refer to the other tables in order to retrieve and display the details.

The table 'users' consists of user id, user name and password. Table 'books' consists of book id, title of the book, author of the book, genre, description of the book, image, date time, book in the format of PDF and number of readers. Table 'mybooks' consists of username and book id.



## Chapter 4

# IMPLEMENTATION

**Implementation** is the process of defining how the system should be built, ensuring that it is operational and meets quality standards. It is a systematic and structured approach for effectively integrating a software-based service or component into the requirements of end users.

### 4.1 Front-end and back-end used

The front-end is everything involved with what the user sees. The back-end, or the "server-side", is basically how the site works, updates and changes. This refers to everything the user can't see in the browser, like databases and servers.

#### 4.1.1 Features of front-end

HTML5 code along with Bootstrap which is a framework of CSS is used for styling while JavaScript, is used for validation at frontend. PHP is a server-side scripting language designed for Web development, but also used as a general-purpose programming language. PHP code is embedded into HTML5.

What distinguishes PHP from something like client-side JavaScript is that the code is executed on the server, generating HTML which is then sent to the client. The client would receive the results of running that script, but would not know what the underlying code was. You can even configure your web server to process all your HTML files with PHP, and then there's really no way that users can tell what you have up your sleeve.

#### 4.1.2 Features of back-end

WAMP Server is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. The term WAMP is an apparent acronym. Their homepage header reads "WAMP Apache + MariaDB + PHP + Perl", indicating that this abbreviation is a recursive acronym.

The Apache HTTP Server, colloquially called Apache, is a free and open-source cross-platform web server, released under the terms of Apache License 2.0. Apache is developed and maintained by an open community of developers under the auspices of the Apache

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Software Foundation. The Apache HTTP Server is cross-platform with Version 2.0 improved support for non-Unix operating systems such as Windows.

MySQL is an open-source relational database management system (RDBMS). MySQL is a central component of the WAMP open-source web application software stack. MySQL is written in C and C++. MySQL works on many system platforms, including Linux, MacOS, Microsoft Windows, etc.

MySQL performs extremely well in the average case, the developer interfaces are there, and the documentation is very, very good. It has also been tested to be a fast, stable and true multi- user, multi-threaded SQL database server.

## 4.2 Discussion of code segments

This section includes the segments of code used to provide various user functionalities.

### 4.2.1 Code segment to establish connection with the database

The below code is the code segment to establish the connection with the database. Here, the database name is 'BookWorm'.

```
<?php
    // used to connect to the database
    $host = "localhost";
    $db_name = "BookWorm";
    $username = "root";
    $password = "";
    try {
        $con = new PDO("mysql:host={$host};dbname={$db_name}",
    $username, $password);
    }
    // show error
    catch(PDOException $exception){
        echo "Connection error: " . $exception->getMessage();
    }
?>
```

### 4.2.2 Code segment to view details of the book

It displays the details of a book and user can click on 'Read Now' to read a book.

```
<?php

include 'config/database.php';

$bookid=isset($_GET['bookid']) ? $_GET['bookid'] : die('ERROR: Record ID not
found.');
```

\$uname = \$\_GET['user'];

// read current record's data

```
try {

    $query = "SELECT * FROM books WHERE bookid = ? LIMIT 0,1";

    $stmt = $con->prepare( $query );

    $stmt->bindParam(1, $bookid);

    // execute our query and store retrieved row to a variable

    $stmt->execute();

    $row = $stmt->fetch(PDO::FETCH_ASSOC);

    $bookid = $row['bookid'];

    $title = $row['title'];

    $genre = $row['genre'];

    $author = $row['author'];

    $description = $row['description'];

    $numreaders = $row['numreaders'];

    $image = $row['image'];

    $pdf = $row['pdf'];

}

// show error

catch(PDOException $exception){

    die('ERROR: ' . $exception->getMessage());

}

?>
```

### 4.2.3 Code segment to display a book

It opens a book as a PDF file in the webpage when user clicks on 'Read Now'.

```
<?php

//include database connection

include 'config/database.php';

$username = $_GET['user'];

$bookid = $_GET['bookid'];

try {

    // prepare query

    $query = "SELECT pdf FROM books WHERE bookid = ? LIMIT 0,1";

    $query2 = "UPDATE books SET numreaders = numreaders + 1 WHERE bookid = ?";

    $query3 = "INSERT INTO mybooks(user, bookid) VALUES (:uname, :bookid)";

    $stmt = $con->prepare($query);

    $stmt2 = $con->prepare($query2);

    $stmt3 = $con->prepare($query3);

    $stmt->bindParam(1, $bookid);

    $stmt2->bindParam(1, $bookid);

    $stmt3->bindParam(':uname', $username);

    $stmt3->bindParam(':bookid', $bookid);

    // execute our query

    $stmt->execute();

    $stmt2->execute();

    $stmt3->execute();

    // store retrieved row to a variable

    $row = $stmt->fetch(PDO::FETCH_ASSOC);

    $bookid = $row['bookid'];

    $pdf = $row['pdf'];
```

```
$file = 'pdfs/'.$pdf;
$filename = 'pdfs/'.$pdf;
$fp = fopen($file, "r") ;
header('Content-type: application/pdf');
    header('Content-Disposition: inline; filename="' . $filename . '"');
header('Content-Transfer-Encoding: binary');
    header('Accept-Ranges: bytes');
ob_clean();
flush();
    while (!feof($fp)) {
        $buff = fread($fp, 1024);
        print $buff;
    }
    exit;
}
// show error
catch(PDOException $exception){
    die('ERROR: ' . $exception->getMessage());
}
?>
```

#### 4.2.4 Code segment to view books read

It displays a list of books which was read previously.

```
<?php
    $query="SELECT * FROM my books, books WHERE mybooks.bookid=
books.bookid AND mybooks.user= :uname";
    $stmt = $con->prepare($query);
    $stmt->bindParam(":uname", $uname);
    $stmt->execute();
    $num = $stmt->rowCount();
```

```

if($num > 0) {
    echo "<table class='table table-hover table-responsive table-
bordered' style='font-size: 16px; margin:0 auto; width: 72%; margin-bottom:
20px; height:75vh; overflow:auto;>"; echo "<tr>";
    echo "<th class='text-center'>Image</th>";
    echo "<th>Book Title</th>";
    echo "<th>Genre</th>";
    echo "<th>Author Name</th>";
    echo "<th>No. of user views</th>";
    echo "<th>Action</th>";
    echo "</tr>";
    while($row = $stmt->fetch(PDO::FETCH_ASSOC)) { // extract row
        extract($row);
        echo "<tr>";
        echo"<td align='center'><img style='width:140px; height:180px' src=
'imgs/$image'/> </td>";
        echo "<td>{$title}</td>";
        echo "<td>{$genre}</td>";
        echo "<td>{$author}</td>";
        echo "<td>{$numreaders}</td>";
        echo "<td>";
        // read one record
        echo "<a href='display.php?bookid={$bookid}&user=$uname' class='btn
btn-info m-r-1em'>Read Again</a>";
        echo "</td>";
        echo "</tr>";
    }
    echo "</table>";
    echo "<a href='home.php?user=$uname' class='btn-custom m-r 1em'>Home</a>";
}
else {
    echo "<div class='alert alert-danger'>No books found.</div>";
}
?>

```

#### 4.2.5 Code segment to display all the books in Home page

It displays a list of books in Home Page where user can find and read a book.

```
<?php
    $query = "SELECT image FROM books WHERE bookid=1";
    $stmt = $con->prepare($query);
    $stmt->execute();
    $row = $stmt->fetch(PDO::FETCH_ASSOC);
    extract($row);
    echo "<img style='width:180px; height:225px;' src='imgs/$image'/>";
    echo "<a href='readbook.php?bookid=1&user=$uname'>Read More...</a>";
?>
```

## Chapter 5

# TESTING

Software testing is conducted to provide stakeholders with information about the quality of the software product or service under test. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation.

### 5.1 Unit testing

Unit testing is a software testing method by which individual units of source code, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures, are tested to determine whether they are fit for use.

The below Table 5.1 refers to unit test case for user sign up.

**Table 5.1 Unit test case for user sign up**

Sl. No. of test case	1
Name of test	Sign Up check
Item / Feature being tested	Sign Up
Sample Input	Enter username and password fields and click on Sign Up button.
Expected output	Message ‘Successfully signed up’ is displayed.
Actual output	Message ‘Successfully signed up’ is displayed.
Remarks	Test succeeded

The user is initially asked to sign up before they can log into the website. The users can view all books of any genre that are available and read them only after logging into the web application.



## 5.2 Integration testing

Integration testing is the phase in software testing in which individual software modules are combined and tested as a group. It occurs after unit testing and before validation testing.

The below tables, Table 5.2 and Table 5.3 refer to integration test cases for displaying a book and selection of genre from a dropdown, respectively.

**Table 5.2 Integration test case for add notification check**

Sl. No of test case	1
Name of test	Display book
Feature being tested	Displaying book to be read
Sample Input	Clicking on the 'Read Now' button after viewing the description of the book
Expected Output	PDF of the book should be displayed
Actual Output	PDF of the book is displayed in a webpage
Remarks	Test succeeded

**Table 5.3 Integration test case for selection of genre**

Sl. No of test case	2
Name of test	Selection of genre
Feature being tested	Genre in dropdown
Sample Input	Select a genre from the dropdown in navigation bar
Expected Output	Books under the selected genre should be displayed as a swiper slider
Actual Output	Books under the selected genre are displayed as a swiper slider
Remarks	Test succeeded

### 5.3 System Testing

System testing is testing conducted on a complete integrated system to evaluate the system's compliance with its specified requirements.

**Table 5.4 System test case for viewing list of books in My Books**

Sl. No. of test case	1
Name of test	List of books in My Books
Items / Features being tested	Addition of books read by user to a table in My Books
Sample Input	Reading books
Expected output	The list of books that the user has previously viewed or read
Actual output	The list of books that the user has previously viewed or read
Remarks	Test succeeded

The Table 5.4 shows system test case for viewing list of books read by the user. The books read by the user are added to the table in the My Books webpage.

## Chapter 6

# DISCUSSION OF RESULTS

The outcomes of test results for a variety of user interactions with the application are discussed in the following sections of the chapter.

### 6.1 Sign Up & Sign In page

Figure 6.1 shows the Sign up page for new users and Sign in page for existing users.

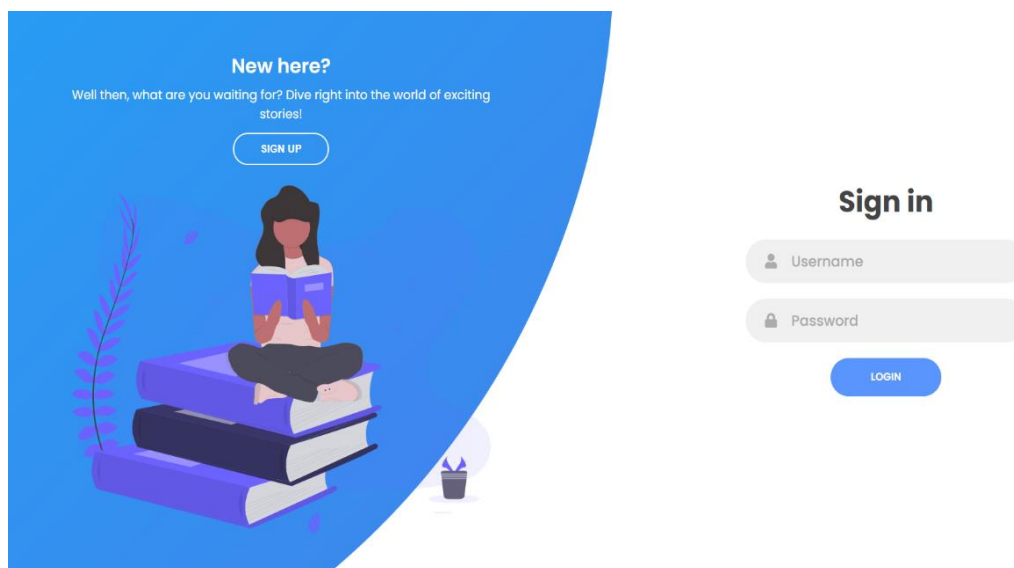


Figure 6.1 Sign up and Sign in page

### 6.2 Home page

Figure 6.2 shows the home page after successful Sign in.

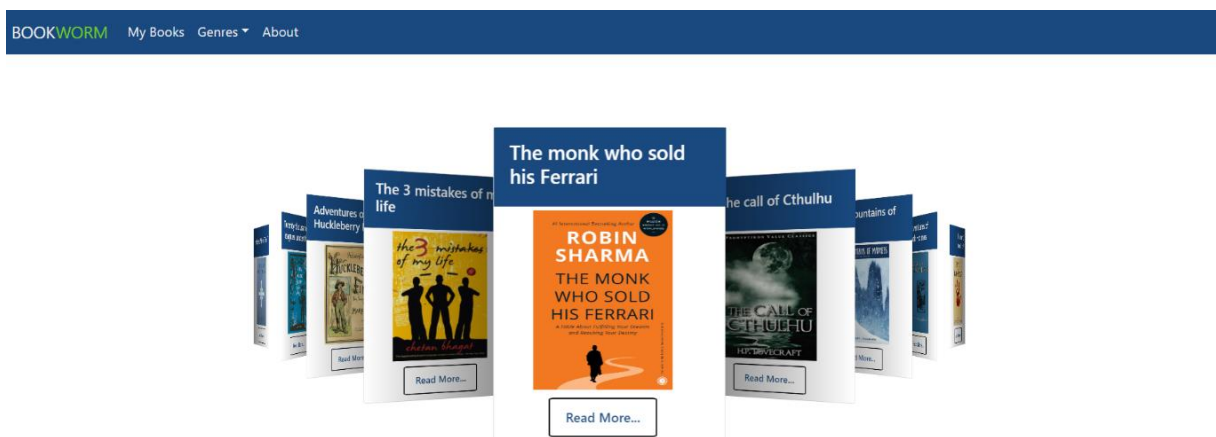
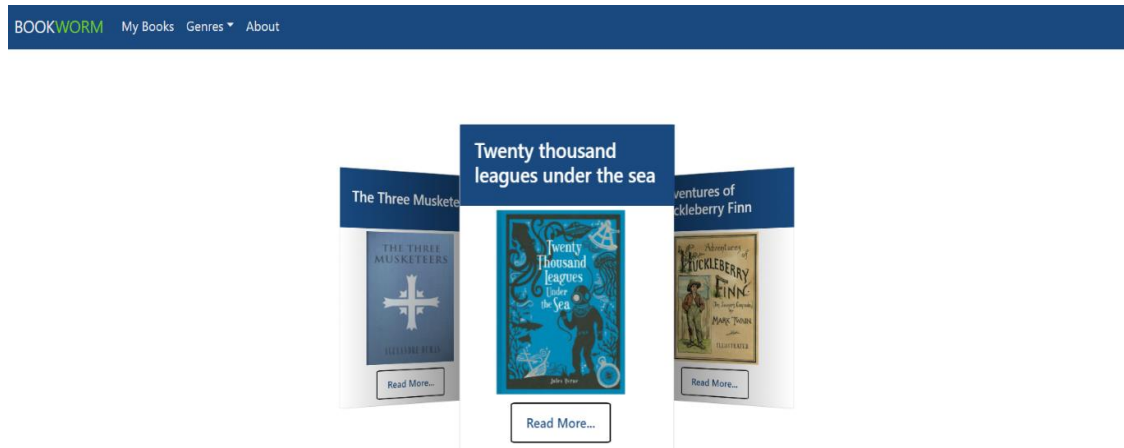


Figure 6.2 Home page

## 6.3 Select Genre Page

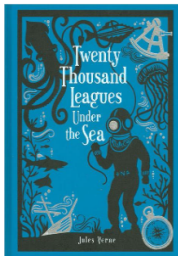
Figure 6.3 shows the list of books of Action/Adventure which is selected from Genres.



**Figure 6.3 Action/Adventure Genre page**

## 6.4 Read Book Page

Figure 6.4 shows the details of a book. A Book can be read in the form of pdf when we select Read Now option.

Image	
Book Title	20,000 Leagues Under the Sea
Author	Jules Verne
Genre	Action/Adventure
Description	Sent to investigate mysterious encounters that are disrupting international shipping, Professor Aronnax, his servant Conseil, and disgruntled harpooner Ned Land are captured when their frigate is sunk during an encounter with the "monster." The submarine Nautilus and its eccentric Captain Nemo afford the professor and his companion's endless fascination and danger as they're swept along on a yearlong undersea voyage. Published: 1870 No. of Pages: 296 ISBN: 140272599X
Number of views	7
	<a href="#">Read Now</a> <a href="#">Back</a>

**Figure 6.4 Read book page**

## 6.5 My Books Page

Figure 6.5 shows My Books page. It displays the list of books which was previously read.


Image	Book Title	Genre	Author Name	No. of user views	Action
	The Call of Cthulhu	Horror	H. P. Lovecraft	9	<a href="#">Read Again</a>

Figure 6.5 My books page

## 6.6 About Us Page

Figure 6.6 shows the About Us page which displays brief information about the website/mini project and the details of developers.



We are the <DEVELOPERS/> of BookWorm website

This website was designed by:  
Vibha S Navale and V. Harshitha

**BookWorm** is an online library website. This WTA Mini Project was designed using <HTML>, CSS and Bootstrap. It also uses PHP.

You can reach out to us by sending us an email to:  
vibha.navale11@gmail.com or harshithav99@gmail.com

### BookWorm

BookWorm is a depiction of an online library website which allows users to read books of their choice. The website has various genres to pick from and the user can also view the books he/she has previously read.

987-654-3210

contact.us@bookworm.com

### Quick Links

- Home
- My Books
- Action/Adventure books
- Fiction books
- Horror books
- Mystery books

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Figure 6.6 About Us page

## Chapter 7

# INSTALLATION INSTRUCTIONS

This chapter provides step-by-step instructions to install the WAMP Server required to run PHP applications in a Windows environment.

### 7.1 Installing XAMPP Server

To start the installation process, you need to open the folder where you saved the file, and double-click the installer file. A security warning window will open, asking if you are sure you want to run this file. Click Run to start the installation process.

- Next you will see the Welcome to The WAMP Server Setup Wizard screen. Click Next to continue the installation.
- The next screen you are presented with is the License Agreement. Read the agreement, check the radio button next to I accept the agreement, then click Next to continue the installation.
- Next you will see the Select Destination Location screen. Unless you would like to install XAMPP Server on another drive, you should not need to change anything. Click Next to continue.
- The next screen you are presented with is the Select Additional Tasks screen. You will be able to select whether you would like a Quick Launch icon added to the taskbar or a Desktop icon created once installation is complete. Make your selections, then click Next to continue.
- Next you will see the Ready To Install screen. You can review your setup choices, and change any of them by clicking Back to the appropriate screen, if you choose to. Once you have reviewed your choices, click Install to continue.
- WampServer will begin extracting files to the location you selected.
- Once the files are extracted, you will be asked to select your default browser. WampServer defaults to Internet Explorer upon opening the local file browser

window. If your default browser isn't IE, then look in the following locations for the corresponding .exe file:

- Opera: C:\Program Files (x86)\Opera\opera.exe
  - Firefox: C:\Program Files (x86)\Mozilla Firefox\firefox.exe
  - Safari: C:\Program Files (x86)\Safari\safari.exe
  - Chrome:  
C:\Users\xxxxx\AppData\Local\Google\Chrome\Application\chrome.exe
- Select your default browser's .exe file, then click Open to continue.
  - A Windows Security Alert window will open, saying that Windows Firewall has blocked some features of the program. Check whether you want to allow Apache HTTP Server to communicate on a private or public network, & click Allow Access.
  - The Setup screen will appear next, showing you the status of the installation process.
  - Once the progress bar is completely green, the PHP Mail Parameters screen will appear. Leave the SMTP server as localhost, and change the email address to one of your choosing. Click Next to continue.
  - The Installation Complete screen will now appear. Check the Launch WAMP Server Now box, then click Finish to complete the installation.

You should see the Wamp Server icon appear in the system on the right side of your taskbar. If the icon is green, then everything is working properly. If the icon is orange, then there are issues with one of the services. If the icon is red, then both Apache and MySQL services aren't running. You will need to resolve those issues before continuing.

## Chapter 8

### CONCLUSION AND FUTURE ENHANCEMENTS

This Online Library System Website has been computed successfully and was tested successfully by taking “test cases”. It is user friendly, and has required options, which can be utilized by the user to perform the desired operations. The software is developed using HTML, Bootstrap, CSS and JavaScript as front end and PHP, MySQL as back end in Windows and MacOS environment.

The goals that are achieved by the software are:

- Optimum utilization of resources
- Efficient management of records
- Simplification of the operations
- Less processing time and getting required information
- User friendly
- Portable and flexible for further enhancement

It is not possible to develop a system that makes all the requirements of the user. User requirements keep changing as the system is being used. Some of the future enhancements that can be done to this system are:

- As the technology emerges, it is possible to upgrade the system and can be adaptable to desired environment.
- Based on the future security issues, security can be improved using emerging technologies.
- Admin and sub admin modules can be added.
- Requisition of books by user can be included.
- Additional genres and “favorites” options can also be added to the website.



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