MINI PROJECT PRESENTATION

2023-2024

PRESENTATION ON LIBRARY MANAGEMENT SYSTEM

Under The Guidance Of

Proff. Abhishek Tiwari (Mentor)

Submitted By:-

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Declaration

I hereby declare that the work which is being presented in the B.Tech Cs Mini Project "Library Project Management", in partial fulfillment of the requirements for the award of the Bachelor of Technology in Computer Science and Engineering and submitted to the Department of Computer Engineering and Applications of GLA University, Mathura, is an authentic record of our own work carried under the supervision of Proff. Abhishek Tiwari(Mentor). The contents of this project report, in full or in parts, have not been submitted to any other Institute or University for the award of any degree.

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Acknowledgement

It gives us a great sense of pleasure to present the synopsis of the B.Tech Mini project undertaken during the B.Tech III Year. This project is going to be an acknowledgment of the inspiration, drive, and technical assistance that will be contributed to it by many individuals. We owe a special debt of gratitude to Proff. Abhishek Tiwari (Mentor), for providing us with an encouraging platform to develop this project, which thus helped us in shaping our abilities towards a constructive goal, and for his constant support and guidance to our work. His sincerity, thoroughness, and perseverance have been a constant source of inspiration for us. We believe that he will shower us with all his extensively experienced ideas and insightful comments at different stages of the project & also teach us about the latest industry-oriented technologies. We also do not like miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and cooperation.

GROUP MEMBERS NAMES:

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Library Management System

A library management system is software that is designed to manage all the functions of a library. It helps librarian to maintain the database of new books and the books that are borrowed by members along with their due dates.

This system completely automates all your library's activities. The best way to maintain, organize, and handle countless books systematically is to implement a library management system software.

A library management system is used to maintain library records. It tracks the records of the number of books in the library, how many books are issued, or how many books have been returned or renewed or late fine charges, etc.

You can find books in an instant, issue/reissue books quickly, and manage all the data efficiently and orderly using this system. The purpose of a library management system is to provide instant and accurate data regarding any type of book, thereby saving a lot of time and effort.

This websites can be accessed from anywhere with an internet connection, making them a convenient option for individuals who prefer to study or read at home or on the go. Additionally, some websites offer wearable technology integration. In this report, we will explore the features and benefits of a library website built using a popular JavaScript library for building user interfaces. We will examine how html,css and java script components can be used to create reusable and modular code, making it easier to maintain and update the website over time. We will also discuss how the website was optimized for performance, using techniques such as lazy loading and code splitting to improve loading times. The report aims to provide insight into the benefits and limitations of using full stackto build a library management system website and how it can provide a better user experience those who love reading.

TECHNOLOGY STACK USED IN LIBRARY MANAGEMENT SYSTEM

The technology stack used in website are:-

1. Front-end technologies:

- **HTML(HyperText Markup Language): HTML is the most basic building block of the Web. It defines the meaning and structure of web content. Other technologies besides HTML are generally used to describe a web page's appearance/presentation or functionality/behavior . If refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web. By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web.**

- **CSS(Cascading Style Sheets): CSS is a style language used to describe the presentation of a document written in HTML or XML (including XML dialects such as SVG, MathML or XHTML). CSS describes how elements should be rendered on screen, on paper, in speech, or on other media.CSS is among the core languages of the open web and is standardized across Web browsers according to W3C specifications. Previously, the development of various parts of CSS specification was done synchronously, which allowed the versioning of the latest recommendations. You might have heard about CSS1, CSS2.1, or even CSS3. There will never be a CSS3 or a CSS4; rather, everything is now CSS without a version number.**

- **JS(Java Script): Java Script is a lightweight interpreted programming language with first-class functions. While it is most well-known as the scripting language for Web pages, many non-browser environments also use it, such as Node.js, Apache CouchDB and Adobe Acrobat. JavaScript is a prototype-based, multi-paradigm, single-threaded, dynamic language, supporting object-oriented, imperative, and declarative styles.JavaScript's dynamic capabilities include runtime object construction, variable parameter lists, function variables, dynamic script creation , object introspection.**

MOTIVATION

1. Catalog Creation and Management: This is perhaps the toughest part of library management and requires the most amount of time and effort from librarians. Librarians spend a lot of their time cataloging each book and creating physical library cards to keep a track of lending and borrower details.Online library software solutions can generate book IDs and virtual library cards, perform article indexing, and barcoding to catalog every book, magazine, portable data storage devices such as CDs and USB drives, presentations, project reports, PDF files, etc. with a few clicks. Librarians can print out the library cards, if necessary, as they issue the books and other reading material.

2. Easy Maintenance: With an online catalog maintained by an online library management solution, it is easier to keep track of –

- **which books are available in the library;**
- **which ones are borrowed;**
- **what is the date of issue, reissue;**
- **the due date of return;**
- **user history, and other such details**

Users can obtain the status of the number of books and resources he or she has borrowed and when they are due to return.This saves lots of time and manual effort for the librarian. Also, the user doesn't have to be physically present at the library to get any information from the librarian.

3. Automation: Online library management software systems can automate everything to a large extent – be it maintaining catalog, library cards for the issue and reissue of books and materials, monitoring the return due dates, or issuing automatic alerts to users.Users can browse through the list of available books online, submit a request for them, check the status of the books he or she has already borrowed, and their return due dates to avoid any late fee penalties.

4. Error-free Information Retrieval: In the absence of an online library management solution, librarians must spend hours maintaining and updating manual records of books, its user history, and contact information of library members. Not only can this be time-consuming and tedious, but it can be prone to many errors.An automated library management solution collects and stores this information in a centralized location on a real-time basis. Moreover, it retrieves this information in the form of reports with a few clicks.Some of the best library management software solutions for schools and colleges, also come with a smart card feature. Librarians can issue smart cards to students. Inserting these smart cards into a device displays all the information about the user, his or her contact details, and library usage history on the screen.

5. Quick and Efficient Circulation of Books and Library Materials:Online library management systems automate makes it possible for users to obtain the most updated information on the available books at any given time and borrow them accordingly. Librarians can issue them quickly.Since the online library system keeps a track of all the lending and borrowing details, books are returned on time. This ensures that the library is well-stocked at all times. As a result of these features, books and library materials circulate quickly and efficiently.Some library management solutions also allow users to submit their suggestions to librarians.

ALGORITHM DEFINITION

We will discuss the approach to create an Library Management System where the user has the following options:

- **Add book information.**
- **Display book information.**
- **To list all books of a given author.**
- **To list the count of books in the library.**

Functionalities Required

If the user tries to add a book then the user must have to provide the below specific Information about the book as:

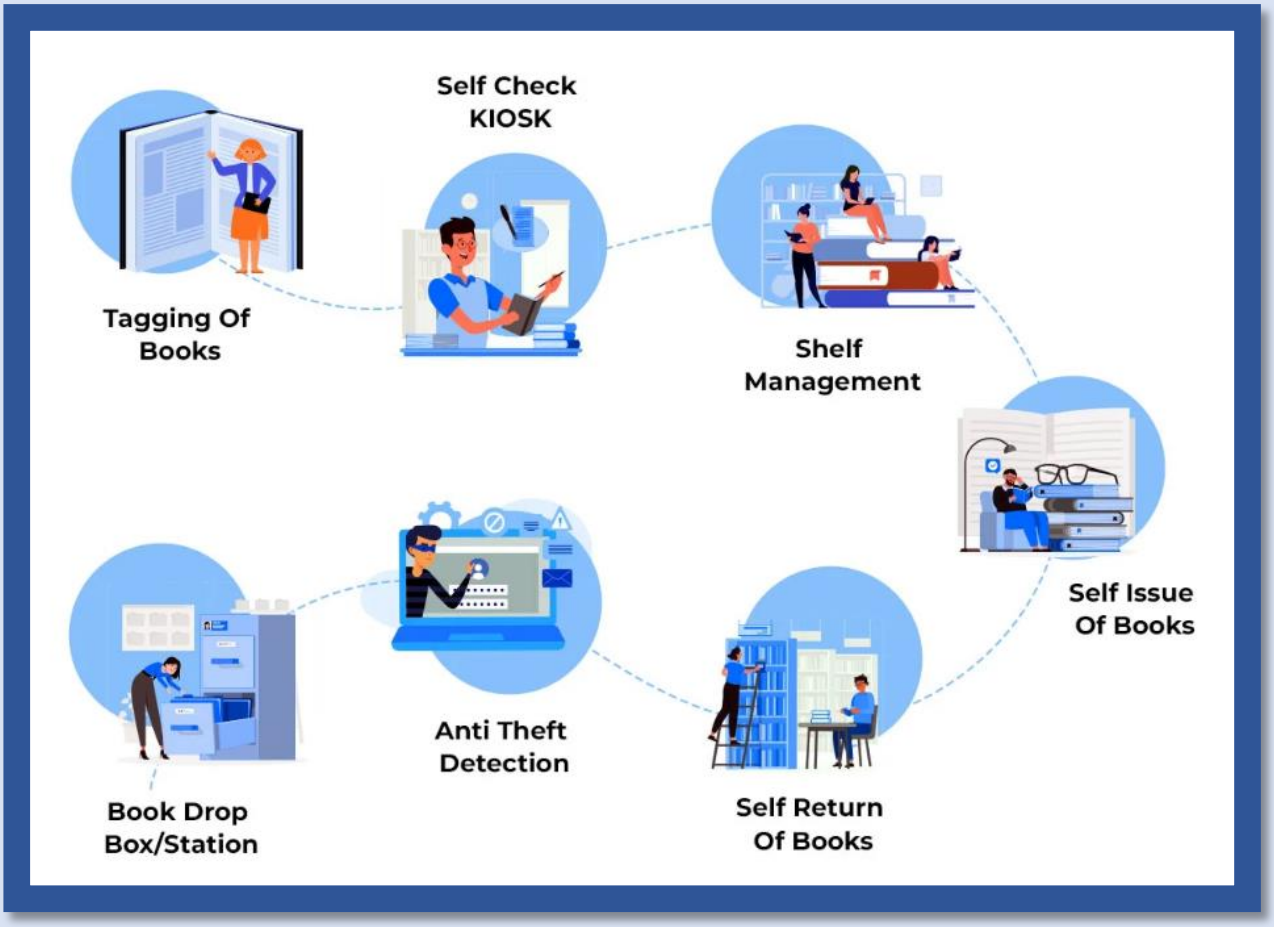
- **Enter Book Name:**
- **Enter Author Name:**
- **Enter Pages:**
- **Enter Price:**

When the user tries to display all books of a particular author then the user must have to enter the name of the author:

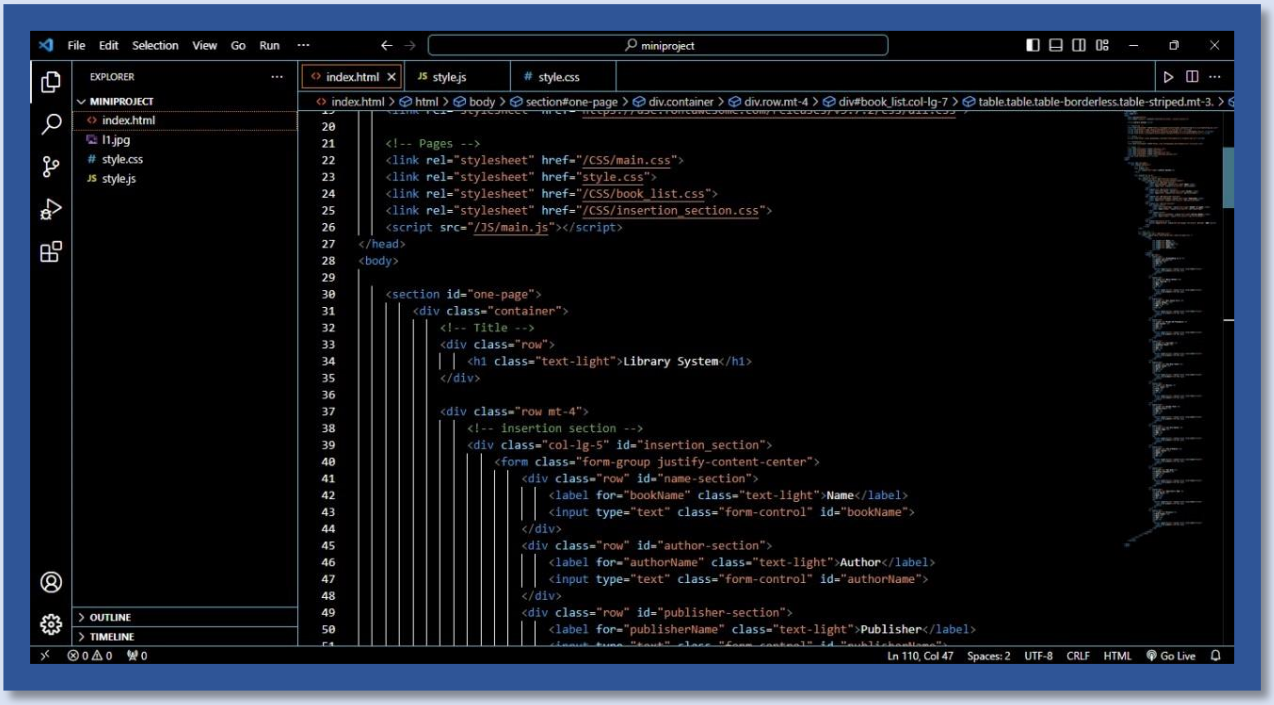
- **Enter the author name:**

The E-Library management System must be also capable of counting all the books available in the library.

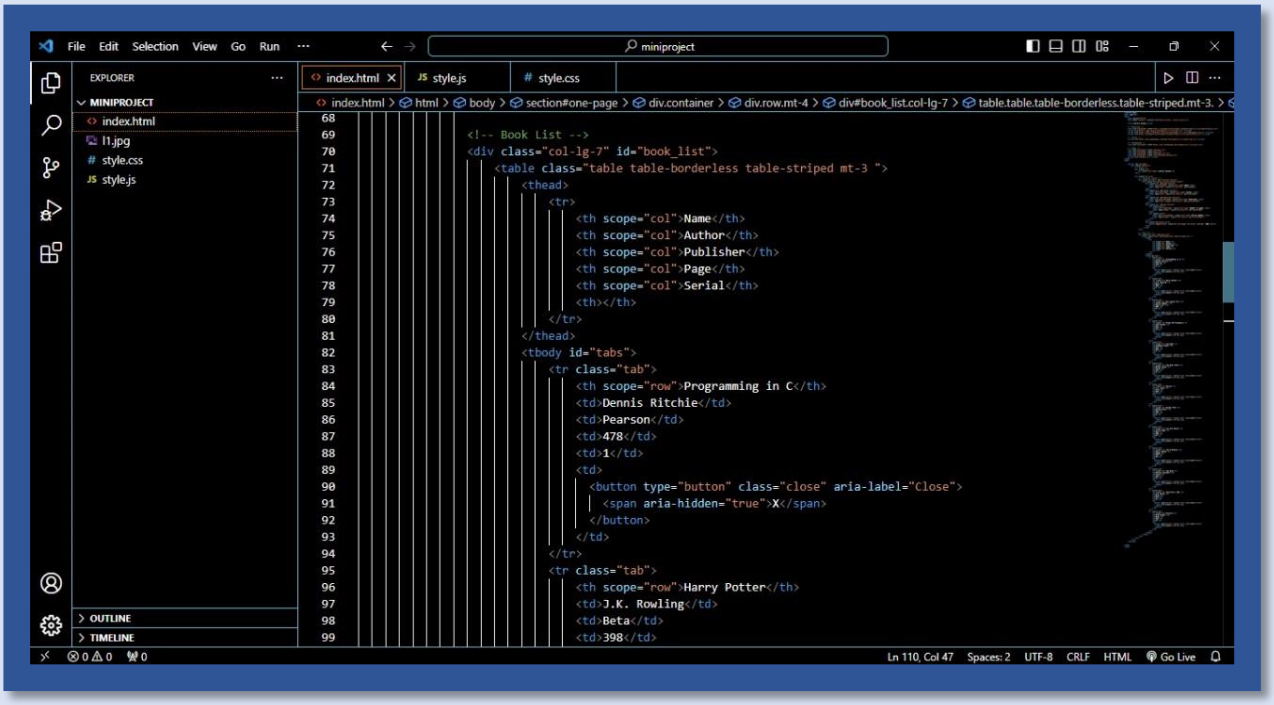
WORKING OF LIBRARY MANAGEMENT SYSTEM



Index.html

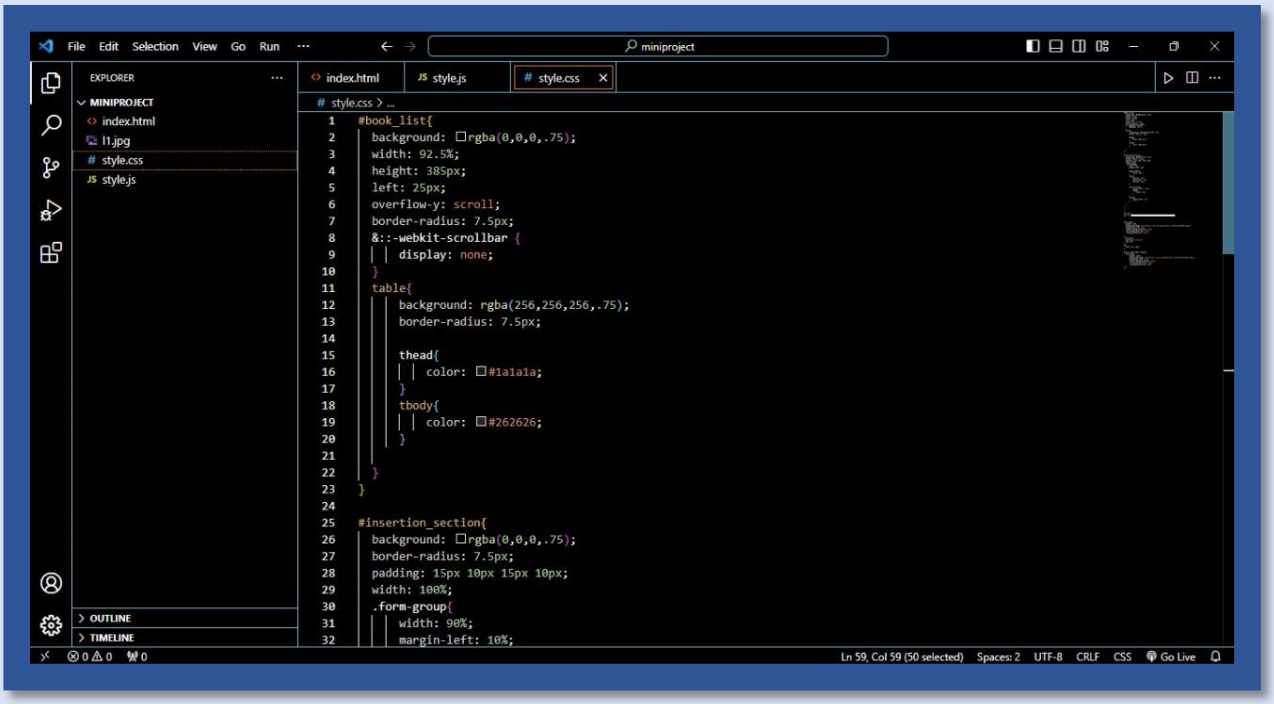


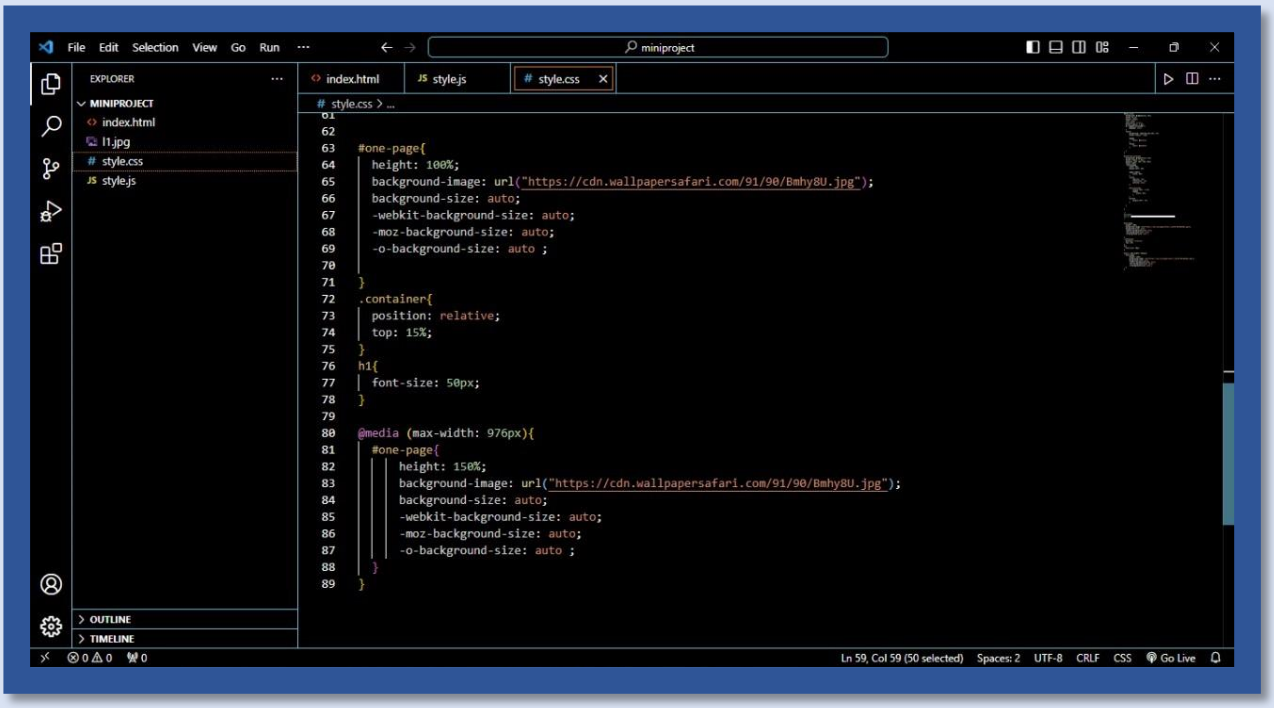

```
<!-- Pages -->
<link rel="stylesheet" href="/CSS/main.css">
<link rel="stylesheet" href="style.css">
<link rel="stylesheet" href="/CSS/book_list.css">
<link rel="stylesheet" href="/CSS/insertion_section.css">
<script src="/JS/main.js"></script>
</head>
<body>

<section id="one-page">
    <div class="container">
        <!-- Title -->
        <div class="row">
            <h1 class="text-light">Library System</h1>
        </div>

        <div class="row mt-4">
            <!-- insertion section -->
            <div class="col-lg-5" id="insertion_section">
                <form class="form-group justify-content-center">
                    <div class="row" id="name-section">
                        <label for="bookName" class="text-light">Name</label>
                        <input type="text" class="form-control" id="bookName">
                    </div>
                    <div class="row" id="author-section">
                        <label for="authorName" class="text-light">Author</label>
                        <input type="text" class="form-control" id="authorName">
                    </div>
                    <div class="row" id="publisher-section">
                        <label for="publisherName" class="text-light">Publisher</label>
```



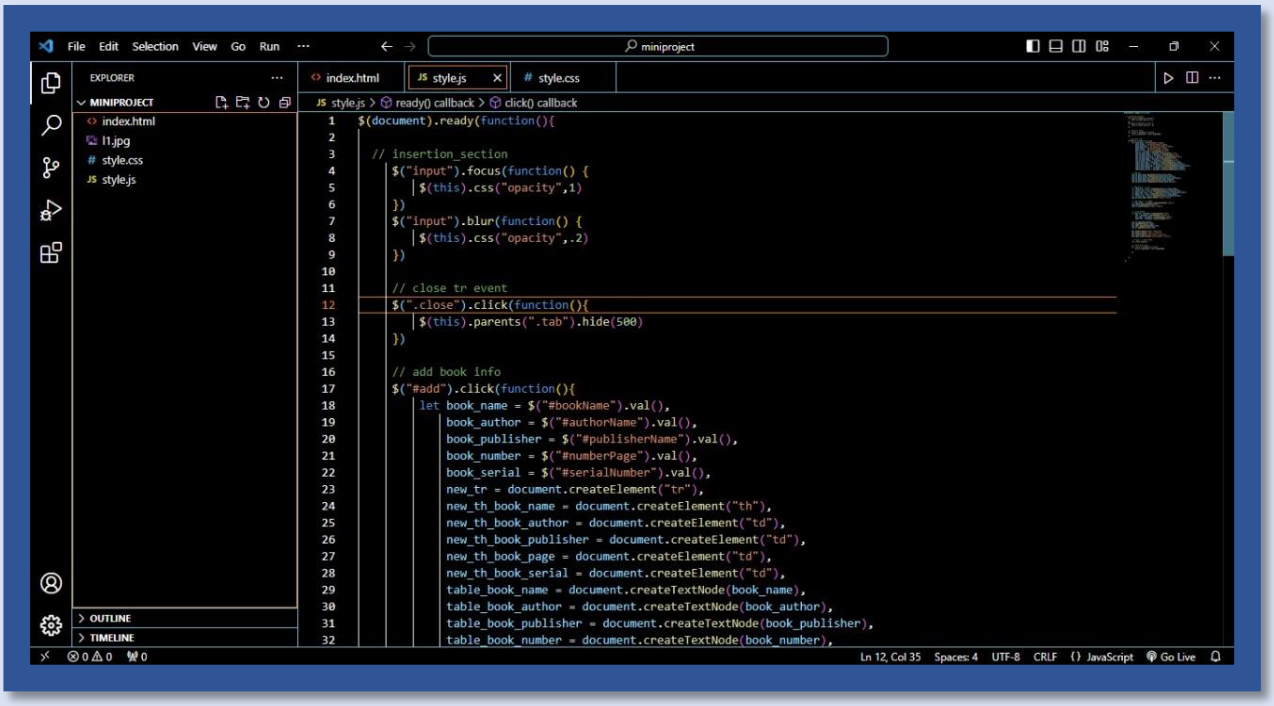

```
<!-- Book List -->
<div class="col-lg-7" id="book_list">
    <table class="table table-borderless table-striped mt-3 ">
        <thead>
            <tr>
                <th scope="col">Name</th>
                <th scope="col">Author</th>
                <th scope="col">Publisher</th>
                <th scope="col">Page</th>
                <th scope="col">Serial</th>
                <th></th>
            </tr>
        </thead>
        <tbody id="tabs">
            <tr class="tab">
                <th scope="row">Programming in C</th>
                <td>Dennis Ritchie</td>
                <td>Pearson</td>
                <td>478</td>
                <td>1</td>
                <td>
                    <button type="button" class="close" aria-label="Close">
                        <span aria-hidden="true">X</span>
                    </button>
                </td>
            </tr>
            <tr class="tab">
                <th scope="row">Harry Potter</th>
                <td>J.K. Rowling</td>
                <td>Beta</td>
                <td>398</td>
```

Style.css

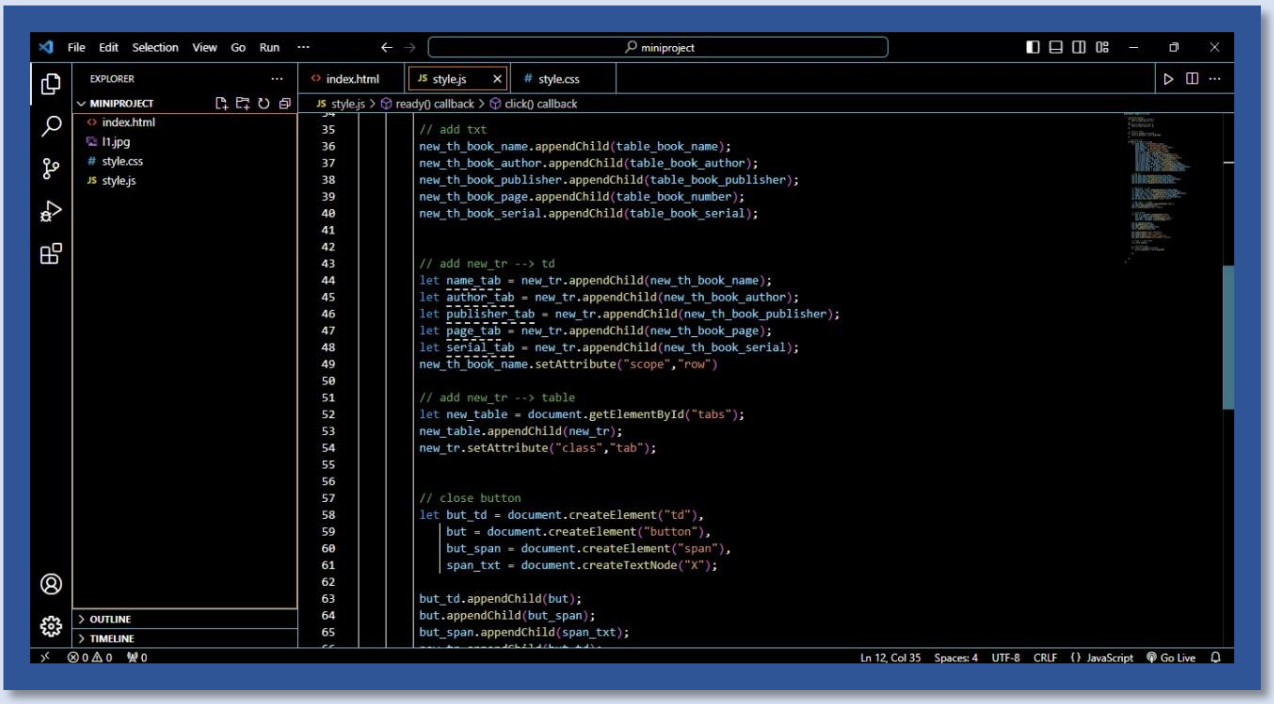

File Edit Selection View Go Run
miniproject
EXPLORER
MINIPROJECT
index.html
l1.jpg
style.css
style.js
index.html
style.js
style.css
style.css > ...
#book_list{
background: rgba(0,0,0,.75);
width: 92.5%;
height: 385px;
left: 25px;
overflow-y: scroll;
border-radius: 7.5px;
&::-webkit-scrollbar {
display: none;
}
table{
background: rgba(256,256,256,.75);
border-radius: 7.5px;
thead{
color: #1a1a1a;
}
tbody{
color: #262626;
}
}
}
#insertion_section{
background: rgba(0,0,0,.75);
border-radius: 7.5px;
padding: 15px 10px 15px 10px;
width: 100%;
.form-group{
width: 90%;
margin-left: 10%;
OUTLINE
TIMELINE
Ln 59, Col 59 (50 selected) Spaces: 2 UTF-8 CRLF CSS Go Live


File Edit Selection View Go Run
miniproject
EXPLORER
MINIPROJECT
index.html
l1.jpg
style.css
style.js
index.html
style.js
style.css
style.css > ...
#one-page{
height: 100%;
background-image: url("https://cdn.wallpapersafari.com/91/90/Bmhy8U.jpg");
background-size: auto;
-webkit-background-size: auto;
-moz-background-size: auto;
-o-background-size: auto ;
}
.container{
position: relative;
top: 15%;
}
h1{
font-size: 50px;
}
@media (max-width: 976px){
#one-page{
height: 150%;
background-image: url("https://cdn.wallpapersafari.com/91/90/Bmhy8U.jpg");
background-size: auto;
-webkit-background-size: auto;
-moz-background-size: auto;
-o-background-size: auto ;
}
}
OUTLINE
TIMELINE
Ln 59, Col 59 (50 selected) Spaces: 2 UTF-8 CRLF CSS Go Live

Style.js

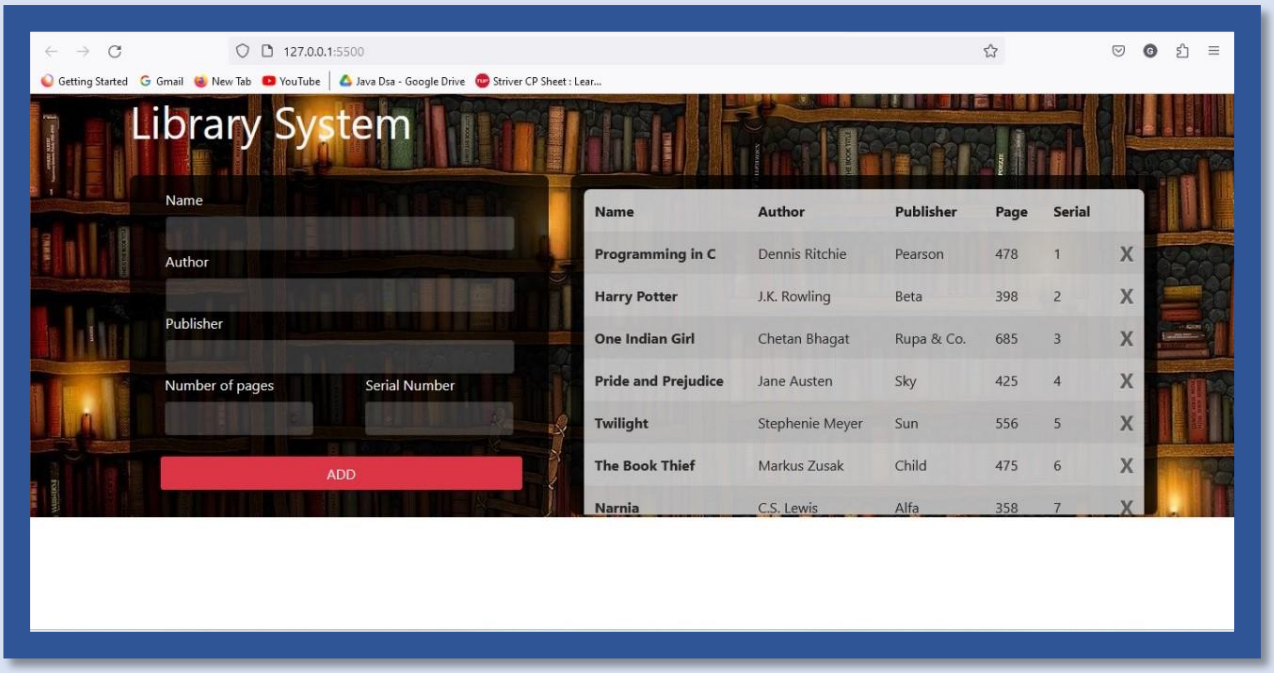


```
$(document).ready(function(){

  // insertion_section
    $("input").focus(function() {
        $(this).css("opacity",1)
    })
    $("input").blur(function() {
        $(this).css("opacity",.2)
    })

    // close tr event
    $(".close").click(function(){
        $(this).parents(".tab").hide(500)
    })

    // add book info
    $("#add").click(function(){
        let book_name = $("#bookName").val(),
            book_author = $("#authorName").val(),
            book_publisher = $("#publisherName").val(),
            book_number = $("#numberPage").val(),
            book_serial = $("#serialNumber").val(),
            new_tr = document.createElement("tr"),
            new_th_book_name = document.createElement("th"),
            new_th_book_author = document.createElement("td"),
            new_th_book_publisher = document.createElement("td"),
            new_th_book_page = document.createElement("td"),
            new_th_book_serial = document.createElement("td"),
            table_book_name = document.createTextNode(book_name),
            table_book_author = document.createTextNode(book_author),
            table_book_publisher = document.createTextNode(book_publisher),
            table_book_number = document.createTextNode(book_number),
```



```
        // add txt
        new_th_book_name.appendChild(table_book_name);
        new_th_book_author.appendChild(table_book_author);
        new_th_book_publisher.appendChild(table_book_publisher);
        new_th_book_page.appendChild(table_book_number);
        new_th_book_serial.appendChild(table_book_serial);


        // add new_tr --> td
        let name_tab = new_tr.appendChild(new_th_book_name);
        let author_tab = new_tr.appendChild(new_th_book_author);
        let publisher_tab = new_tr.appendChild(new_th_book_publisher);
        let page_tab = new_tr.appendChild(new_th_book_page);
        let serial_tab = new_tr.appendChild(new_th_book_serial);
        new_th_book_name.setAttribute("scope","row")

        // add new_tr --> table
        let new_table = document.getElementById("tabs");
        new_table.appendChild(new_tr);
        new_tr.setAttribute("class","tab");


        // close button
        let but_td = document.createElement("td"),
            but = document.createElement("button"),
            but_span = document.createElement("span"),
            span_txt = document.createTextNode("X");

        but_td.appendChild(but);
        but.appendChild(but_span);
        but_span.appendChild(span_txt);
```

Website Overview



RELATED WORK

The work done in a Library Management System includes:

• Design and Development: The website is designed and developed using technologies such as HTML, CSS, JavaScript and front-end technologies. The website is designed to be user-friendly, visually appealing, and responsive to different screen sizes and devices. • Content Creation: The website provides users with a library of Novels, Friction Story, Story Books and School or College Study Books that can be accessed online. Content creation involves researching and creating new content, updating existing content, and ensuring that all content is accurate, relevant, and up-to-date.

• Tracking and Feedback: The website provides users with receiving feedback and encouragement. The work done in a Library Management website is similar to that of a real library, but there are some differences that make a website stand out from real libraries.

• Firstly, website is accessible through a web browser, making it easy to access from any device with an internet connection, without the need to search. This makes it more convenient for users who may not want to download a separate books for their needs.

• Secondly, a website can offer more comprehensive content , as it can include articles, blogs, and other forms of educational content. This can help users to better

understand as there is no rush of returing books in the library.

• Cost: A website can differentiate itself by offering free or low-cost services such access of books anywhere like travelling and it is convenient to carry. This can make books more accessible to a wider range of users who may not have the budget.

• Using API fetching to show thousands of books is a unique feature that sets website apart from other websites. By leveraging API technology, a website can provide users with a vast library of books without having to manually create and update. This makes it possible to offer a more diverse and extensive range of books, which can be beneficial for users looking to switch up their reading experience.

• Additionally, API technology can allow a website to pull in data from other sources, which can provide users with a more holistic view of their knowledge and communication. By integrating data from multiple sources, website can create a more personalized and tailored experience for users.

• Another key benefit of using API technology is that it can allow a website to stay up-to-date with the latest developments in the industry. This is because APIs can be updated in real-time, meaning that a fitness website can quickly adapt and incorporate new books and novels trends as they emerge.

CONCLUSION

To conclude, a website can provide an extensive range of resources for individuals seeking to improve their knowledge. Through the use of advanced technologies like API fetching, data analytics, and reading plans, websites can offer a more personalized experience that meets the individualized needs and goals of their users. Furthermore, websites have the potential to create a strong sense of community, motivating individuals to stay engaged and supported throughout their reading journey. In summary, a website can be an effective platform for empowering people to achieve their more study material and connect with others who share their passion.