

**ALIGARH COLLEGE OF ENGINEERING & TECHNOLOGY
ALIGARH (INDIA)**



**(APPROVED BY A.I.C.T.E & AFFILIATED TO AKTU, LUCKNOW)
(2024-2025)**

A PROJECT REPORT

ON

"E-Commerce Website"

**SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE OF**

Master OF COMPUTER APPLICATION

SUBMITTED BY

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**(ROLL NO-2301090140008 &
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UNDER SUPERVISION OF

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H.O.D. (M.C.A)

PROJECT COORDINATOR

MR. VINAY TANDON

MRS. RICHA VARSHNEY



Aligarh College of Engineering & Technology
Department of Computer Science and Engineering

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without mentioning the names of people who made it possible, whose constant guidance and encouragement crowns all efforts with our success.

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Finally, I also wish to thanks to *GOD* for supporting me during my whole project work.



**Aligarh College of Engineering & Technology
Department of Computer Science and Engineering**

CERTIFICATE

This is to certify that the project called "**E-COM WEBSITE**" submitted by **DILEEP KUMAR BARDHAN & CHARU SHARMA** is duly accepted as a partial fulfillment of the requirement of MCA as per the specification of the board of Technical Education, Dr. APJ Abdul Kalam Technical University for the session 2024-2025.

This project is an original work of the student carried out under my supervision and guidance. This work has not been submitted previously at my level for the award of any other course.

MR. VINAY TANDON
H.O.D. (MCA DEPT)

MRS.RICHA VARSHNEY
PROJECT GUIDE



CERTIFICATE OF COMPLETION

Dileep Kumar Bardhan

has successfully completed the online course:

Web Development for Beginners

This professional has demonstrated initiative and a commitment to deepening their skills and advancing their career. Well done!

15th December 2024



A handwritten signature in black ink.

Krishna Kumar
CEO, Simplilearn



CERTIFICATE OF ***COMPLETION***

5/12/2024

This certificate is proudly presented to

Charu Sharma

for successful completion of **1 month internship** in

Web Development and Designing

with wonderful remarks at **OASIS INFOBYTE**



**OASIS
INFOBYTE**



✉ contact@oasisinfobyte.in

OIB/M1/IP560

🌐 www.oasisinfobyte.com



ABSTRACT

The existing process of selling coding courses is manual, with much paperwork and long processes involved. This makes it challenging to manage the courses, students, and smooth transactions. Thus, there is a need for a more efficient, computerized, and ideally web-based platform for the operations.

The proposed e-commerce website for selling coding courses will be a web-based application designed to manage wide ranges of coding courses and handle various customer interactions. This platform will offer an easy-to-use experience that allows students to browse, purchase, and enroll in courses online. It will also allow for smooth integration of payments and tracking of orders, which is very important for both customers and administrators.

The primary focus of this project is providing students with the best available coding education resources, covering from beginners to advanced students. The e-commerce site will have a wide selection of coding courses, starting from web development, to data science, machine learning, and more. It will make the process of purchasing and enrolling for coding courses simple, efficient, and secure.

Tools & Technology Used:

- Language - HTML, CSS, AND JAVASCRIPT
- Operating System - Window 10

Name of Student/Trainee:

- Name of Student - DILEEP KUMAR BARDHAN &
CHARU SHARMA

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1. Introduction

In today's fast-paced digital world, online learning has become an essential avenue for individuals seeking to enhance their skills and knowledge. E-commerce platforms dedicated to education provide a convenient way for learners to access a wide range of courses from the comfort of their homes. However, many existing systems face challenges such as high costs, variable quality of content, and limited interactivity. This project aims to develop a user-friendly e-commerce web application that addresses these challenges, offering an engaging and affordable platform for online learning.

Problem Statement

Despite the proliferation of online learning platforms, users often encounter several issues:

- **High Costs:** Many platforms charge significant fees for course access and certification, making education less accessible.
- **Quality Variability:** The quality of courses can vary widely, leading to inconsistent learning experiences.
- **Limited Interactivity:** Existing systems often lack interactive features that enhance engagement, such as live sessions and community discussions.
- **User Experience:** Navigation and usability can be cumbersome, resulting in a frustrating experience for learners.
- **Lack of Personalization:** Many platforms do not offer personalized learning paths or recommendations, making it difficult for users to find courses that suit their needs.

Objective of the Project

The primary objectives of this project are:

1. **Develop a User-Friendly Platform:** Create an intuitive interface that simplifies navigation and enhances the user experience.
2. **Provide Affordable Learning Options:** Implement a pricing model that makes courses accessible to a wider audience.
3. **Ensure Quality Content:** Establish a vetting process for course creators to maintain high standards of course quality.
4. **Enhance Interactivity:** Incorporate features such as live sessions, discussion forums, and peer feedback to foster engagement.
5. **Implement Personalization:** Utilize algorithms to recommend courses based on user preferences and learning history, creating tailored learning experiences.

Scope of the Project

The scope of this project includes:

- **Development of an E-Commerce Web Application:** The application will allow users to browse, enroll in, and manage online courses.
- **Course Management:** The system will support the addition, modification, and removal of courses by administrators.
- **User Authentication:** Users will be able to create accounts, log in, and manage their profiles.
- **Shopping Cart Functionality:** Users can add courses to their cart, view total prices, and proceed to checkout.
- **Responsive Design:** The application will be designed to work seamlessly on various devices, including desktops, tablets, and smartphones.
- **Future Enhancements:** The project will lay the groundwork for potential future features, such as backend integration for user management and data persistence.

Technology/Platform Used

The project will utilize the following technologies and platforms:

- **Frontend:**
 - **HTML:** For structuring the web pages.
 - **CSS:** For styling the application and ensuring a responsive design.
 - **JavaScript:** For implementing interactive features and managing user interactions.
- **Backend (Future Integration):**
 - **Node.js:** For server-side development (if backend integration is implemented).
 - **Express.js:** For building the web server and handling API requests (if backend integration is implemented).
 - **MongoDB:** For database management to store user accounts, course information, and order history (if backend integration is implemented).
- **Development Tools:**
 - **Visual Studio Code:** As the code editor for development.
 - **Git:** For version control and collaboration.
 - **Browser Developer Tools:** For testing and debugging the application.

2. Literature Survey

A literature survey involves reviewing existing research, systems, and technologies related to the e-commerce domain, particularly focusing on online learning platforms. This survey helps identify gaps in current solutions and informs the development of a new system.

Study of Existing Systems

1. Coursera

- **Overview:** An online learning platform offering courses from universities and organizations worldwide.
- **Features:**
 - Wide range of courses across various disciplines.
 - User-friendly interface with course recommendations.
 - Certification upon course completion.
- **Drawbacks:**
 - Limited interactivity in some courses.
 - High course fees for certification.

2. Udemy

- **Overview:** A marketplace for online courses created by individual instructors.
- **Features:**
 - Extensive library of courses on diverse topics.
 - Flexible pricing and frequent discounts.
 - User reviews and ratings for courses.
- **Drawbacks:**
 - Quality of courses can vary significantly.
 - Lack of structured learning paths.

3. edX

- **Overview:** A platform offering online courses from top universities and institutions.
- **Features:**
 - Access to high-quality courses and materials.
 - Option to audit courses for free.

- Professional certificates available.
- **Drawbacks:**
 - Some courses require payment for full access.
 - Limited engagement with instructors.

4. Skillshare

- **Overview:** A subscription-based platform focused on creative skills and professional development.
- **Features:**
 - Project-based learning with community feedback.
 - Access to a wide range of creative courses.
- **Drawbacks:**
 - Subscription model may not be cost-effective for occasional learners.
 - Limited course offerings in technical subjects.

Drawbacks of Existing Systems

- **High Costs:** Many platforms charge significant fees for course access or certification, making it less accessible for some users.
- **Quality Variability:** The quality of courses can vary widely, especially on platforms that allow individual instructors to create content.
- **Limited Interactivity:** Some existing systems lack interactive features, such as live sessions or community engagement, which can enhance the learning experience.
- **User Experience:** Navigation and user interface can be cumbersome on some platforms, leading to a frustrating user experience.
- **Lack of Personalization:** Existing systems often do not provide personalized learning paths or recommendations based on user preferences and learning history.

Proposed System

The proposed system aims to address the drawbacks identified in existing e-commerce learning platforms by creating a user-friendly, interactive, and cost-effective online learning environment.

Key Features of the Proposed System

1. Affordable Pricing Model:

- Offer competitive pricing for courses, with options for free access to certain materials and affordable certification fees.

2. Quality Control:

- Implement a vetting process for course creators to ensure high-quality content and consistent learning experiences.

3. Interactive Learning Environment:

- Incorporate features such as live sessions, discussion forums, and peer feedback to enhance engagement and interactivity.

4. User -Friendly Interface:

- Design a clean and intuitive user interface that simplifies navigation and improves the overall user experience.

5. Personalized Learning Paths:

- Utilize algorithms to recommend courses based on user interests, previous courses taken, and learning goals, creating a tailored learning experience.

6. Community Engagement:

- Foster a community of learners through forums, group projects, and social features that encourage collaboration and networking.

7. Mobile Responsiveness:

- Ensure the platform is fully responsive, allowing users to access courses and materials on various devices, including smartphones and tablets.

3. SYSTEM SPECIFICATION

3.1 Requirement Analysis:

Requirement Analysis is a crucial step in any project, helping to understand the necessary resources, functionalities, and constraints. It generally includes the following steps:

1. Gathering Requirements.
2. Categorizing Requirements.
3. Analyzing Requirements.
4. Documenting Requirements.

3.1.1 Hardware Requirements

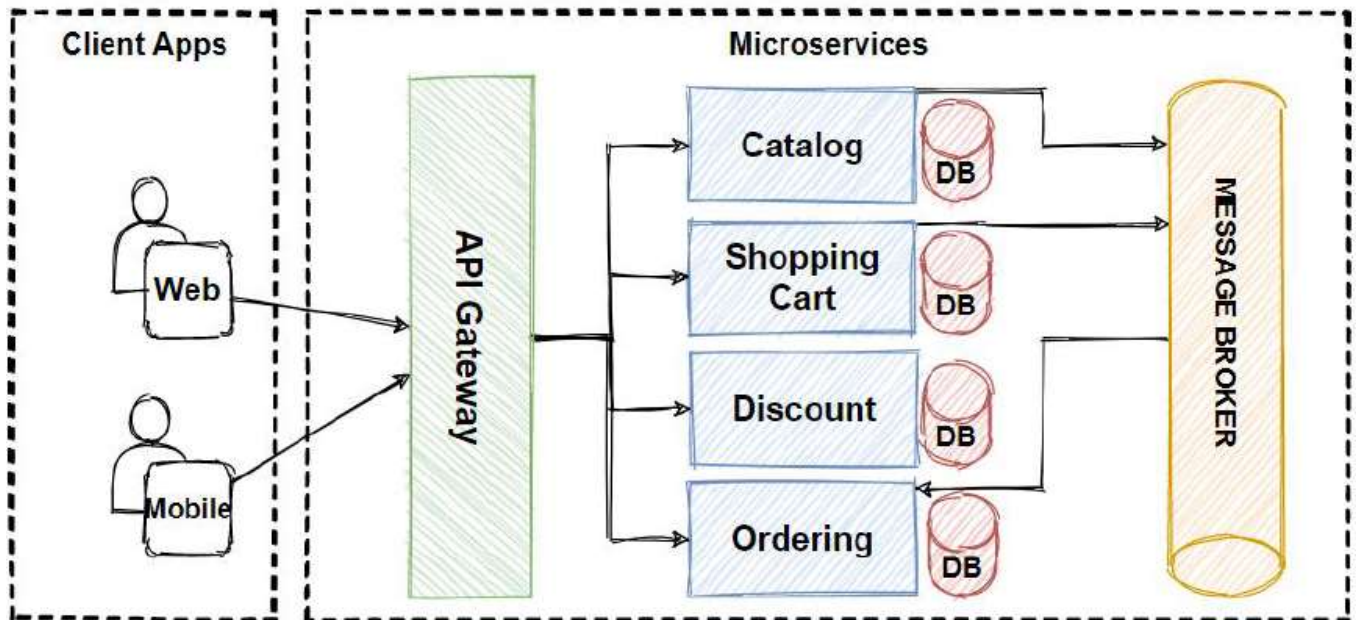
CPU	:	PENTIUM IV
SPEED	:	2.10 GHz
COPROCESSOR	:	BUILT IN
TOTAL RAM	:	4 GB
HARD DISK	:	500 GB
KEYBOARD	:	105 KEYS
MOUSE	:	Zebronics MOUSE
DISPLAY	:	SGVA COLOR
PRINTER	:	HP DESK JET

3.1.2. Software Requirements

FRONT END	:	HTML, CSS, AND JAVASCRIPT
OPERATING SYSTEM	:	WINDOWS 10
Testing	:	Google Chrome, Mozilla Firefox

4. SYSTEM DESIGN

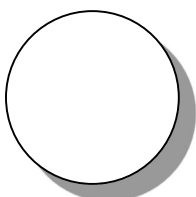
4.1 System Architecture Diagram:



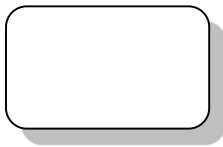
4.2 DATA FLOW DIAGRAM

Data flow oriented techniques advocate that the major data items handled by a system must be first identified and then the processing required on these data items to produce the desired outputs should be determined. The DFD (also called as bubble chart) is a simple graphical formalism that can be used to represent a system in terms of input data to the system, various processing carried out on these data, and the output generated by the system. It was introduced by De Macro (1978), Gene and Samson (1979). The primitive symbols used for constructing DFD's are:

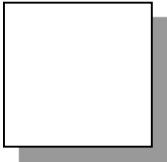
4.2 Symbols used in DFD



A *circle* represents a process.



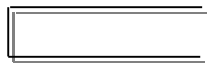
A *rectangle* represents external entity



A *square* defines a source or destination of the system data.



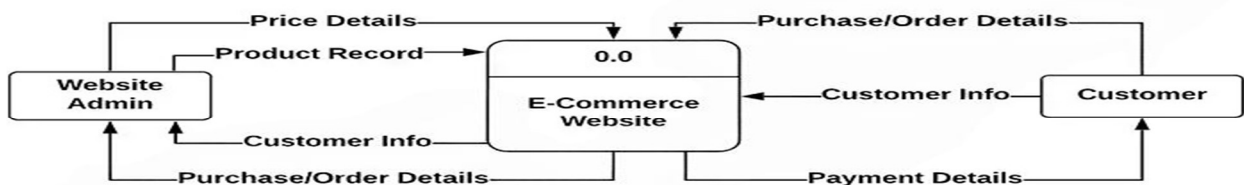
An *arrow* identifies dataflow.



Double line with one end closed indicates data store

4.2.1 DFD Module for Zero Level

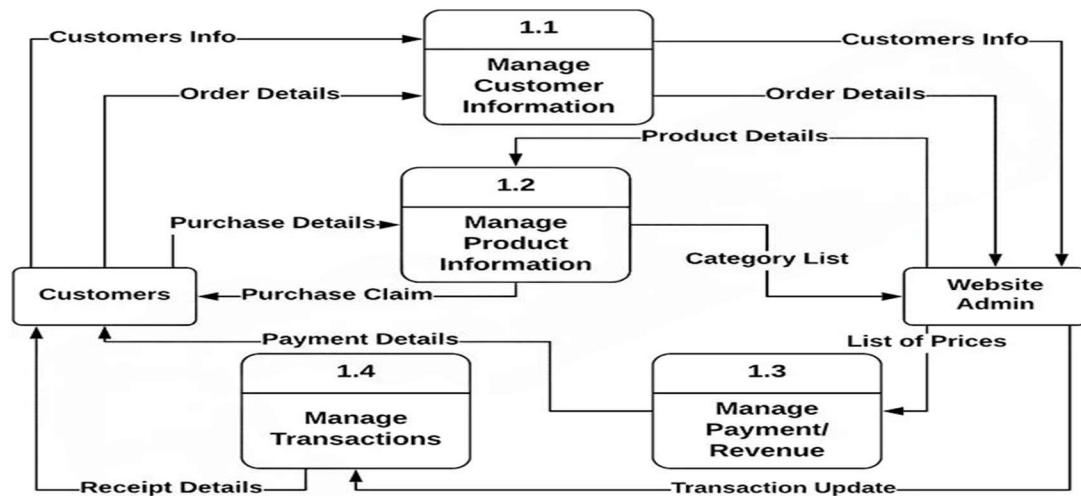
E-COMMERCE WEBSITE SYSTEM



DATA FLOW DIAGRAM LEVEL 0

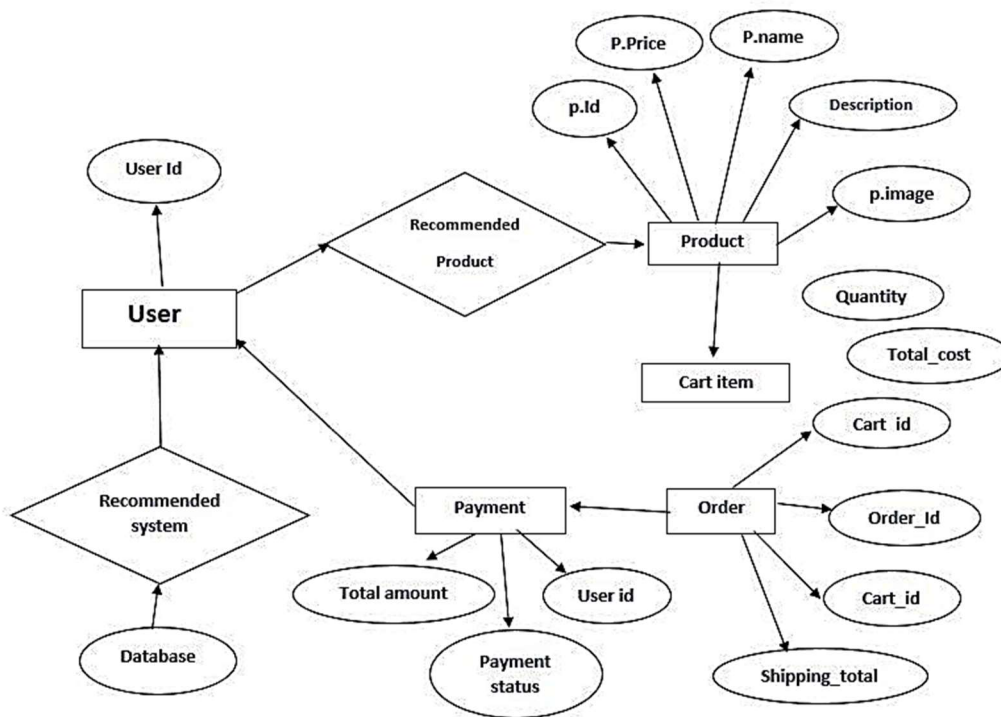
4.2.2 DFD Module for First Level:

E-COMMERCE WEBSITE SYSTEM



DATA FLOW DIAGRAM LEVEL 1

3. ER Diagram:



4. Testing Methodology

Unit Testing: All modules are to be tested individually. This includes shopping cart, product listings testing to check how these components work.

Integration Testing: After testing individual modules, the interaction between the frontend and backend will be tested. This will ensure smooth data flow and proper display of course details.

Test Cases:

Test Case ID: TC001

Input: Add a course to cart

Expected Output: Course is added to the cart, cart count increases by 1.

Actual Output: To be verified during testing.

Status: Pass

5. IMPLEMENTATION

5.1 Modules Description:

1. User Interface Module:

Objective: To enhance the visual and usability features of the platform so that it may be used easily by the users.

Components:

- **Navigation Bar:** Links to other section of the website (Home, Courses, Contact Us, Login, About Us).
- **Product Display:** Pulls out each available course with its representative image together with pricing and other details.
- **Cart Sidebar:** Lists items in the cart together with prices and provides options to clear the cart or checkout.
- **Authentication Modal:** A modal will have text fields asking the users to login or register for a new account.

2. Product Management Module

Objective: To administer the display and management of product data within the application.

Components:

- **Product Data Array:** An array of objects such that each object holds all the course details such as ID, title, price, and image.
- **Display Products Function:** A JavaScript function for showing each product on the page with appropriate formatting by iterating through the product data array.

3. Cart Management Module

Objective: To manage the shopping cart so that users can add, remove, or adjust items in the cart.

Components:

- **Cart Array:** An object array storing cart items together with their quantities.
- **Add to Cart Function:** A function to add selected products to the cart and modify the UI accordingly.
- **Remove Item Function:** A function to remove items from the cart and update the total price and item count.
- **Clear Cart Function:** A function to clear everything from the cart and reset the UI.

4. Business Logic Module

Objective: The module which executes the main logic of the application involving user interaction and data manipulation.

Components:

- **Event Listeners:** JavaScript event listeners that are invoked on certain user actions like pressing a button, submitting a form, etc.
- **Function that Sets Cart Value:** A function that calculates the appropriate total price and updates the number of items in the cart.
- **Add Cart Item Function:** A function that modifies the UI to alert users about the items added to the cart.

5. Authentication Module

Description: The user management module is responsible for handling user authentication, including user login and registration.

Components:

- **Login Form:** A form which collects user credentials (username/email and password) for logging in.
- **Registration Form:** A form which collects the necessary user credentials (username, email, password, confirm password) for registration and new user account creation.
- **Modal Functions:** The modal opens and closes, switching between the login and registration forms.

6. Responsive Design Module

Description: This module ensures that the application is accessible and functional across various devices and screen sizes.

Components:

- **Media Queries:** CSS media queries that use media features in adjusting styles based on the particular screen size to achieve a responsive layout that caters to different devices.
- **Flexible Layouts:** Application of CSS grid and flexbox in the layout created for the product listings and navigation that is responsive-adding special experience to mobile and desktop users.

7. Future Backend Integration Module (Optional)

Description: This module contains proposed enhancements for user management and data persistence.

Components:

- **Server:** A backend service that can be used for user authentication, product management, and order processing.
- **Database:** A database that could store user accounts, product details, and order history, providing a persistent way of dealing with data and retrievals.

• **INDEX.html**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>E-Commerce Website</title>
  <link rel="stylesheet" href="style.css">
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
</head>
<body>
<!-- Navigation Bar with Burger Menu for mobile view, Logo, and Cart
Icon -->
  <nav class="navbar">
```

```

<div class="burger">
  <!-- Hamburger icon for mobile menu -->
  <div class="layer1"></div>
  <div class="layer2"></div>
  <div class="layer3"></div>
</div>
<!-- Logo and Brand Name -->
<div class="logo">
  <span class="logo-text"><i class="fa fa-book" style="margin-right:
0.1em;"></i>Comfort <span style="color: #f09d51; font-size:
1.1em;">Learning</span></span>
</div>
<!-- Main Menu items -->
<div class="menubar">
  <ul class="list">
    <li class="list-items"><a href="./index.html">HOME</a></li>
    <li class="list-items"><a href="#products">COURSES</a></li>
    <li class="list-items"><a href="#contact">CONTACT US</a></li>
    <li class="list-items"><a href="#login">LOGIN</a></li>
    <li class="list-items"><a href="#about">ABOUT US</a></li>
  </ul>
</div>
<!-- Shopping Cart Icon and Item Count -->
<div class="cart">
  <i class="fa fa-shopping-cart fa-1x"></i>
  <div class="number-of-items"><span class="noi">0</span></div>
</div>
</nav>
<!-- Banner Section with Shop Now Button -->
<section class="section1">

```

```

<div class="banner">
  <h1>Find Your Favourite <br>Courses Here!</h1>
  <a href="#products">SHOP NOW</a>
</div>
</section>
<!-- Products Section -->
<section class="section2" id="products">
  <div class="title">
    <hr>
    <h1>Courses We Offer!!</h1>
    <hr>
  </div>
  <div class="product" id="product-list">
    <!-- Product listing will be dynamically generated here -->
  </div>
</section>
<!-- Cart Sidebar (Appears when the cart is clicked) -->
<div class="cart-sidebar">
  <div class="cart">
    <span class="close-cart">
      <i class="fa fa-times"></i>
    </span>
    <h2>Your Cart</h2>
    <div class="cart-content"></div>
  </div>
  <!-- Total Sum of Cart Items -->
  <div class="total-sum">
    <h1>Your Total: ₹ <span class="total-amount">0</span></h1>
  </div>
  <div class="clear-cart">

```



```

        <button class="btn clear-cart btn" onclick="alert('Your Course
Proceed')">Proceed</button>
    </div>
    <div class="clear-cart">
        <button class="btn clear-cart-btn" onclick="alert('Your Cart will
cleared')">Clear Cart</button>
    </div>
</div>
<!-- Mobile Menu Sidebar -->
<div class="menu-sidebar">
    <div class="close-menu">
        <i class="fa fa-times"></i>
    </div>
    <div class="menu-menubar">
        <ul class="menu-list">
            <li class="menu-list-items"><a href="./index.html">Home</a></li>
            <li class="menu-list-items"><a href="#products">Categories</a></li>
            <li class="menu-list-items"><a href="#login">Login</a></li>
            <li class="menu-list-items"><a href="#about">About Us</a></li>
        </ul>
    </div>
</div>
<!-- Modal for Login and Register -->
<div class="modal" id="authModal" style="display: none;">
    <div class="modal-content">
        <span class="close-modal" onclick="closeModal()"
style="cursor:pointer;">&times;</span>

        <!-- Login Form -->
        <div class="form-section" id="login-form">

```

```

<h2>Login</h2>
<form action="/login" method="POST">
  <div class="form-group">
    <label for="username">Username or Email:</label>
    <input type="text" id="username" name="username" required>
  </div>
  <div class="form-group">
    <label for="password">Password:</label>
    <input type="password" id="password" name="password"
required>
  </div>
  <div class="form-group">
    <button type="submit" class="btn">Login</button>
  </div>
  <div class="form-group">
    <p>Don't have an account? <a href="#"
onclick="showRegisterForm()">Register here</a></p>
  </div>
</form>
</div>

```

```

<!-- Register Form -->
<div class="form-section" id="register-form" style="display: none;">
  <h2>Register</h2>
  <form action="/register" method="POST">
    <div class="form-group">
      <label for="reg-username">Username:</label>
      <input type="text" id="reg-username" name="username"
required>
    </div>

```

```

    <div class="form-group">
        <label for="reg-email">Email:</label>
        <input type="email" id="reg-email" name="email" required>
    </div>
    <div class="form-group">
        <label for="reg-password">Password:</label>
        <input type="password" id="reg-password" name="password"
required>
    </div>
    <div class="form-group">
        <label for="confirm-password">Confirm Password:</label>
        <input type="password" id="confirm-password" name="confirm-
password" required>
    </div>
    <div class="form-group">
        <button type="submit" class="btn">Register</button>
    </div>
    <div class="form-group">
        <p>Already have an account? <a href="#"
onclick="showLoginForm()">Login here</a></p>
    </div>
</form>
</div>
</div>
<!-- Footer Section with Contact Info and Quick Links -->
<footer class="footer">
    <div class="container">
        <div class="footer-sections">
            <!-- About Us Section -->

```

```

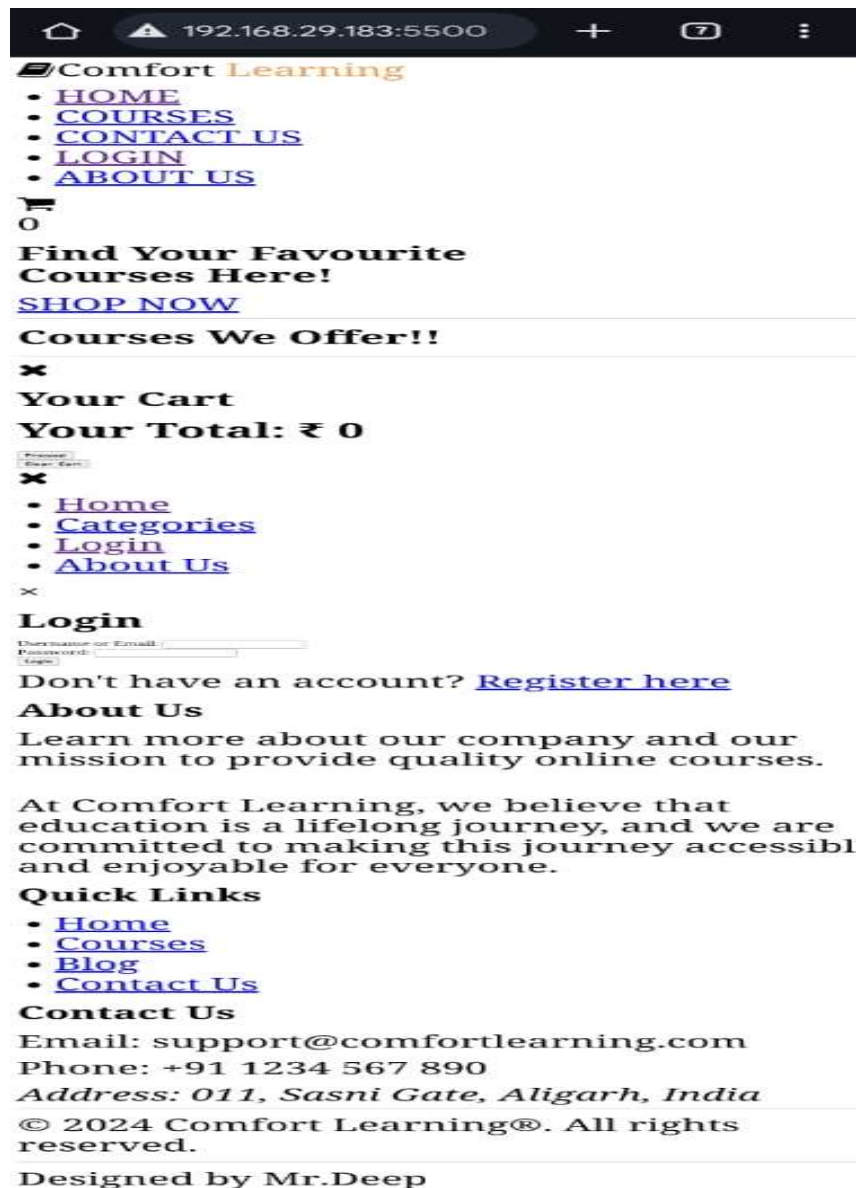
<div class="footer-section">
  <h4 id="about">About Us</h4>
  <p>Learn more about our company and our mission to provide
quality online courses. <br><br>
      At Comfort Learning, we believe that education is a lifelong
journey, and we are committed to making this journey accessible and
enjoyable for everyone.</p>
</div>
<!-- Quick Links Section -->
<div class="footer-section">
  <h4>Quick Links</h4>
  <ul>
    <li><a href="#">Home</a></li>
    <li><a href="#products">Courses</a></li>
    <li><a href="#">Blog</a></li>
    <li><a href="#contact">Contact Us</a></li>
  </ul>
</div>
<!-- Contact Info Section -->
<div class="footer-section">
  <h4 id="contact">Contact Us</h4>
  <p>Email: support@comfortlearning.com</p>
  <p>Phone: +91 1234 567 890</p>
  <address>Address: 011, Sasni Gate, Aligarh, India</address>
</div>
</div>
<hr>
<p class="footer-copy">&copy; 2024 Comfort Learning&reg;. All rights
reserved.</p>
<hr>

```

```

    <p class="footer-copy">Designed by Mr.Deep</p>
  </div>
</footer>
<script src="app.js"></script>
</body>
</html>

```



Without CSS and JavaScript

2. CSS

- style.css

```
*{
  margin: 0;
  padding: 0;
  box-sizing: border-box;
  font-size: 20px;
  font-family: cursive;
}
/* Scroll behavior for smooth scrolling between sections */
html{
  scroll-behavior: smooth;
}
a{
  text-decoration: none;
}
ul{
  list-style: none;
}
/* Navbar styles */
.navbar{
  display: flex;
  justify-content: space-between;
  align-items: center;
  height: 10vh;
  background-color: #ececec;
}
/* Logo section */
```

```
.logo{
  padding-left: 2em;
}
.logo-text{
  font-size: 2em;
}
/* Menubar styles */
.menubar{
  width: 45%;
  margin-left: 8.5em;
  background-color: #ececec;
  border-radius: 8px;
}
.list{
  display: flex;
  justify-content: space-between;
}
.list-items a{
  color: #333;
  font-size: 0.8em;
  padding: 10px 20px;
  display: block;
  transition: 0.4s;
}
/* Hover effects for menu items */
.list-items a:hover{
  color: white;
  background-color: #784bf5;
  text-decoration: none;
}
```

```

.list-items a.active {
    color: white;
    background-color: #132e80;
}
/* Shopping cart styles */
.cart{
    padding-right: 2em;
    position: relative;
}
.cart .number-of-items{
    display: flex;
    cursor: pointer;
    justify-content: center;
    align-items: center;
    color: white;
    position: absolute;
    left: 18px;
    top: -7px;
    background: #f09d51;
    height: 20px;
    width: 20px;
    border-radius: 7px;
}
.number-of-items .noi{
    font-size: 0.7em;
}
.fa-shopping-cart{
    font-size: 1.5em;
    cursor: pointer;
}

```



```

/* Hamburger menu (hidden by default on desktop) */
.burger{
    height: 28px;
    width: 32px;
    display: none;
}
.layer1,.layer2,.layer3{
    background: black;
    height: 4px;
    margin-top: 4px;
    width: 100%;
    border-radius: 10px;
}
/* Banner section styling */
.section1{
    height: calc(100vh - 10vh);
    width: 100%;
    background: url("../Assets/digitization-1599552_1920.jpg") center
center/cover;
    top: 0;
    left: 0;
    z-index: -1;
}
/* Banner text and button */
.section1 .banner{
    height: 170px;
    width: 600px;
    background: rgba(255, 255, 255, 0.7);
    position: relative;
    top: 50%;

```

```

    left: 50%;
    transform: translate(-50%, -50%);
    display: flex;
    justify-content: space-around;
    flex-direction: column;
    text-align: center;
    align-items: center;
    font-family: sans-serif;
    z-index: 8;
}

.banner h1{
    font-size: 2em;
}

.banner a{
    display: flex;
    justify-content: center;
    padding: 1em 2.5;
    font-size: 0.8em;
    color: white;
    background: #6082f3;
    transition: all 0.3s;
}

/* Hover effect for banner button */
.banner a:hover{
    background: #05be33;
}

.section2.title{

```

```

    text-align: center;
}
.section2.title h1{
    font-size: 1.8em;
    margin: 1.3em;
}
/* Products section title styling */
#products .title hr{
    height: 10px;
    border-width: 2px;
    color: black;
    background-color: red;
    margin: 10px 0;
}

#products .title h1{
    font-size: 5em;
    color: #070606;
    text-align: center;
}
/* Product grid layout */
.product{
    margin: 0 5em auto;
    max-width: 1300px;
    display: grid;
    grid-column-gap: 2em;
    grid-row-gap: 2em;
    grid-template-columns: repeat(auto-fit,minmax(350px,1fr));
}
/* Product card styles */

```

```
.product-card{
    text-align: center;
    position: relative;
    max-width: 350px;
    overflow: hidden;
}
/* Product image and hover effect */
.product-card img{
    height: 300px;
    width: 300px;
    transition: 0.3s linear;
}
/* Product name and pricing styles */
.product-name,.product-pricing{
    margin: 0.3em;
}
.product-pricing{
    color: #f09d51;
}
/* Add to cart button style */
.add-to-cart{
    align-items: center;
    justify-content: center;
    color: white;
    padding: 0.2em 1em;
    height: 30px;
    background: #f09d51;
    position: absolute;
    right: 0;
    transform: translate(100%);
}
```

```

    bottom: 80px;
    transition: 0.3s linear;
    cursor: pointer;
}
/* Hover effect for add-to-cart button */
.product-card:hover .add-to-cart{
    transform: translate(0%);
}
.product-card:hover img{
    opacity: 0.7;
}
.add-to-cart:hover{
    color: black;
}
/* Sidebar menu (hidden by default) */
.menu-sidebar{
    display: none;
}
/* Cart sidebar (hidden by default) */
.cart-sidebar{
    background: #ecec;
    position: fixed;
    right: 0;
    top: 0;
    width: 450px;
    height: 100vh;
    z-index: 10;
    transition: all 0.3s linear;
    transform: translateX(100%);
    overflow: scroll;

```

```

}
.cart-sidebar .cart{
    padding: 0;
}
/* Close cart button */
.cart .close-cart{
    font-size: 1.3em;
    padding: 1em;
    cursor: pointer;
}
.fa-times{
    margin-top: 0.5em;
}
/* Cart content styles */
.cart h2{
    text-align: center;
    width: 100%;
    margin-bottom: 1em;
    font-size: 1.1em;
    font-family: Verdana;
}
.cart-product {
    display: flex;
    justify-content: space-between;
    align-items: center;
    padding: 10px;
    border-bottom: 1px solid #ddd;
    margin-bottom: 10px;
}
/* Cart product name styling */

```

```
.cart-product-name {
    font-size: 1.1em;
    font-weight: bold;
    color: #333;
    margin-bottom: 5px;
}

/* Cart product image styling */
.cart-product .product-image img{
    width: 100px;
    height: 80px;
    object-fit: cover;
    margin-right: 15px;
    border-radius: 5px;
}

/* Cart product content layout */
.cart-product-content{
    display: flex;
    flex-direction: column;
    justify-content: center;
    margin-left: 10px;
    flex-grow: 1;
}

/* Plus-minus quantity control */
.plus-minus{
    display: flex;
    justify-content: center;
    align-items: center;
    color: #f09d51;
    font-size: 1.5em;
    cursor: pointer;
```

```

    gap: 5px;
}
.plus-minus i {
    cursor: pointer;
    font-size: 1.3em;
}
.no-of-items {
    font-size: 1.1em;
    padding: 0 10px;
    font-weight: bold;
}
/* Hover effect for plus-minus icons */
.plus-minus:hover i {
    color: #132e80;
}
/* Total sum display in cart */
.total-sum{
    text-align: center;
    margin: 1em 0 0.5em 0;
}
/* Clear cart button */
.clear-cart{
    text-align: center;
}
.clear-cart .btn{
    background-color: #f09d51;
    color: white;
    border: 1px solid white;
    padding: 0.5em 1.7em;
    cursor: pointer;

```



```

    transition: 0.3s linear;
}
/* Hover effect for clear cart button */
.clear-cart .btn:hover{
    border: 1px solid #f09d51;
    background: transparent;
    color: black;
}
/* Overlay for modals */
.overlay{
    height: 100vh;
    position: fixed;
    top: 0;
    left: 0;
    z-index: 9;
    width: 100%;
    background-color: #f09d51;
    opacity: 0.3;
    transition: all 0.3s linear;
}

.none{
    display: none;
}
/* Responsive styles for smaller screens */
@media screen and (max-width: 768px){
    .logo{
        padding-left: 0;
    }
    .cart{

```

```
padding-right: 2em;
}
.menubar{
  display: none;
}
.burger{
  margin-left: 2em;
  display: block;
}
.section1 .banner h1{
  font-size: 1.5em;
}
.banner a{
  font-size: 0.6em;
  padding: 1em 2em;
}
.section2 .title h1{
  font-size: 1.5em;
}
.menu-sidebar{
  display: block;
  position: fixed;
  left: 0;
  top: 0;
  width: 100%;
  height: 100vh;
  z-index: 11;
  background: #ecec;
  overflow: hidden;
  transform: translate(-100%);
```

```

    transition: 0.3s linear;
}
.menu-menubar{
    display: flex;
    height: 80%;
    justify-content: center;
}
.menu-list{
    height: 100%;
    display: flex;
    flex-direction: column;
    align-items: center;
    justify-content: space-around;
}
.menu-sidebar .close-menu{
    position: absolute;
    right: 30px;
    font-size: 1.4em;
}
.menu-list-items a{
    color: #f09d51;
}
.menu-list-items a:hover{
    color: #f09d51;
}
}
/* Media query for screens smaller than 480px (e.g., mobile devices) */
@media screen and (max-width: 480px) {
    *{
        font-size: 16px;
    }
}

```

```

}
.section1 .banner{
    width: 280px;
    height: 100px;
}
.section1 .banner h1{
    font-size: 1.2em;
}
/* Hamburger menu styling for mobile */
.burger{
    margin-left: 1em;
    display: block;
    width: 30px;
}
.cart-sidebar{
    width: 100%;
}

.product {
    display: flex;
    justify-content: center;
    align-items: center;
    flex-direction: column;
}
}

/* Footer Styling */
.footer {
    background-color: #333;
    color: #fff;

```

```

padding: 20px 0;
text-align: center;
}
/* Footer sections layout */
.footer-sections {
display: flex;
flex-wrap: wrap;
justify-content: space-around;
gap: 20px;
}
.footer-section {
flex: 1 1 200px;
margin: 10px;
}
.footer-section h4 {
font-size: 1.2em;
margin-bottom: 10px;
}
.footer-section p, .footer-section ul {
font-size: 0.9em;
}
.footer-section ul {
list-style: none;
padding: 0;
}
.footer-section ul li {
margin: 5px 0;
}
.footer-section ul li a {
color: #fff;

```

```

    text-decoration: none;
}
.footer-section ul li a:hover {
    text-decoration: underline;
}
.footer hr {
    margin: 20px 0;
    border-color: #444;
}
.footer-copy {
    font-size: 0.8em;
}
/* Register form */
.modal {
    display: none;
    position: fixed;
    z-index: 1000;
    left: 0;
    top: 0;
    width: 100%;
    height: 100%;
    overflow: auto;
    background-color: rgba(0, 0, 0, 0.5);
}
/* Modal content styling */
.modal-content {
    background-color: #fefefe;
    margin: 15% auto;
    padding: 20px;
    border: 1px solid #888;

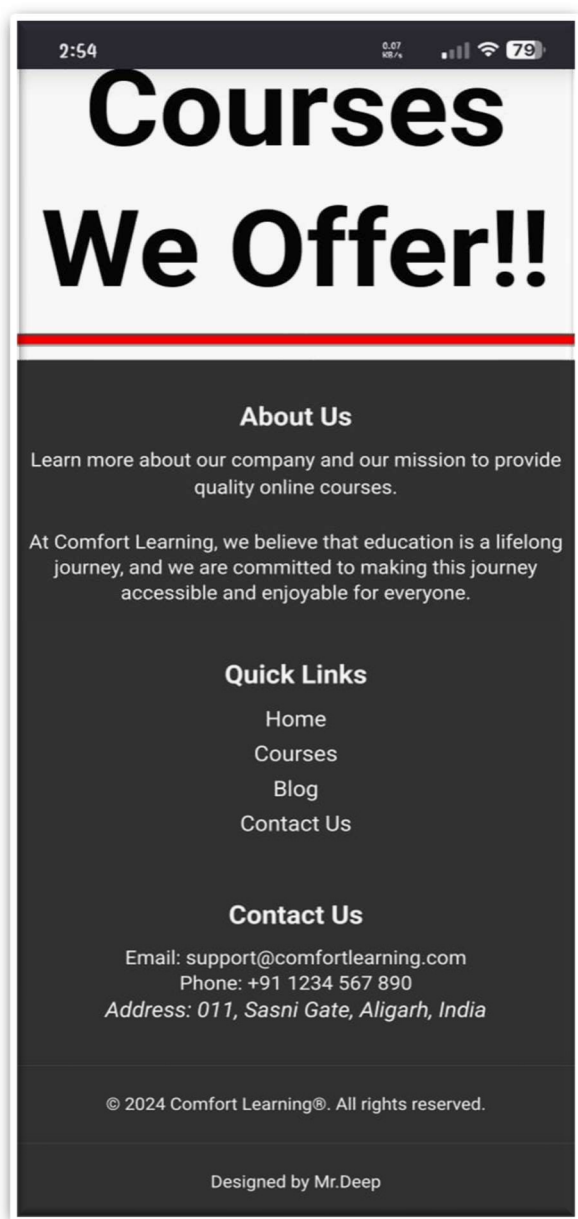
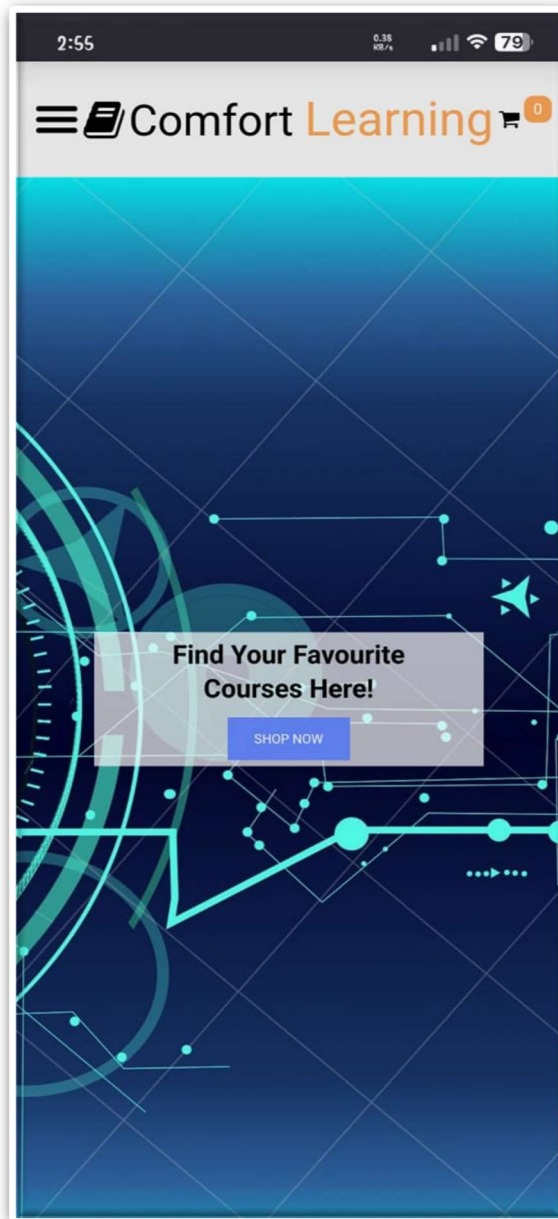
```

```

    width: 80%;
    max-width: 500px;
    border-radius: 5px;
}
/* Close modal button styling */
.close-modal {
    color: #aaa;
    float: right;
    font-size: 28px;
    font-weight: bold;
}
.close-modal:hover, .close-modal:focus {
    color: black;
    text-decoration: none;
    cursor: pointer;
}
.form-section {
    margin-bottom: 20px;
}
.form-group {
    margin-bottom: 15px;
}
.form-group label {
    display: block;
    margin-bottom: 5px;
}
.form-group input {
    width: 100%;
    padding: 10px;
    border: 1px solid #ccc;

```

```
    border-radius: 4px;
}
.btn {
    background-color: #f09d51;
    color: white;
    padding: 10px 15px;
    border: none;
    border-radius: 4px;
    cursor: pointer;
}
.btn:hover {
    background-color: #e08b3c;
}
```

With HTML and CSS

3. JavaScript

- app.js

// DOM Elements

```
const cart = document.querySelector("nav .cart");
const cartSideBar = document.querySelector(".cart-sidebar");
const closeCart = document.querySelector(".close-cart");
const productList = document.getElementById("product-list");
const cartItemsTotal = document.querySelector(".noi");
const cartPriceTotal = document.querySelector(".total-amount");
const cartContent = document.querySelector(".cart-content");
const clearBtn = document.querySelector(".clear-cart-btn");
const menuButton = document.querySelector(".burger");
const menuSidebar = document.querySelector(".menu-sidebar");
const closeMenu = document.querySelector(".close-menu");
```

// Empty cart array to hold the items added to the cart

```
let Cart = [];
let buttonsDOM = [];
```

// Event listener to open the menu sidebar when the burger menu is clicked

```
menuButton.addEventListener("click", function () {
  menuSidebar.style.transform = "translate(0%)";
  document.querySelector(".overlay").style.display = "block";
});
```

// Event listener to close the menu sidebar when the close button is clicked

```
closeMenu.addEventListener("click", function () {  
    menuSidebar.style.transform = "translate(-100%)";  
    document.querySelector(".overlay").style.display = "none";  
});
```

// Product data: Each product has an id, title, price, and image

```
const products = [  
    { id: "1", title: "Python Programming", price: 499, image:  
"Assets/python.jpg" },  
    { id: "2", title: "C Programming", price: 549, image: "Assets/c.jpeg" },  
    { id: "3", title: "C++ Programming", price: 549, image: "Assets/c++.png" },  
    { id: "4", title: "PHP Programming", price: 799, image: "Assets/phplogo.jpg"  
},  
    { id: "5", title: "JAVA Programming", price: 1099, image: "Assets/java.jpg"  
},  
    { id: "6", title: "Web Development for Beginners", price: 899, image:  
"Assets/web.jpg" },  
    { id: "7", title: "MySQL", price: 699, image: "Assets/mysql.jpg" },  
    { id: "8", title: "DSA", price: 1199, image: "Assets/dsa.png" },  
    { id: "9", title: "Artificial Intelligence(A.I.)", price: 999, image:  
"Assets/ai.jpeg" }  
];
```

// Event listener to open the cart sidebar when the cart button is clicked

```
cart.addEventListener("click", function () {  
    cartSideBar.style.transform = "translate(0%)";  
    document.querySelector(".overlay").style.display = "block";  
});
```

// Event listener to close the cart sidebar when the close button is clicked

```
closeCart.addEventListener("click", function () {  
    cartSideBar.style.transform = "translate(100%)";  
    document.querySelector(".overlay").style.display = "none";  
});
```

// UI class handles the UI interactions related to products, cart, and buttons

```
class UI {  
    // Display all products on the page  
    displayProducts(products) {  
        products.forEach(product => {  
            const productDiv = document.createElement("div");  
            productDiv.classList.add("product-card");  
            productDiv.innerHTML = `  
                  
                <h3 class="product-name">${product.title}</h3>  
                <div class="product-pricing">₹${product.price.toFixed(2)}</div>  
                <button class="add-to-cart" data-id="${product.id}">Add to  
Cart</button>`;   
            productList.append(productDiv);  
        });  
    }  
}
```

// Get references to all "Add to Cart" buttons and add event listeners to them

```
getButtons() {  
    const btns = document.querySelectorAll(".add-to-cart");  
    buttonsDOM = [...btns];
```

```

btns.forEach((btn) => {
  let id = btn.dataset.id;
  let inCart = Cart.find((item) => item.id === id);
  if (inCart) {
    btn.innerHTML = "In Cart";
    btn.disabled = true;
  }
}

```

// Add event listener to each "Add to Cart" button

```

btn.addEventListener("click", (e) => {
  e.currentTarget.innerHTML = "In Cart";
  e.currentTarget.style.color = "white";
  e.currentTarget.style.pointerEvents = "none";
  let cartItem = { ...this.getProductById(id), amount: 1 };
  Cart.push(cartItem);
  this.setCartValues(Cart);
  this.addCartItem(cartItem);
});
});
}

```

// Find a product by its ID

```

getProductById(id) {
  return products.find(product => product.id === id);
}

```

// Set and update cart values (total price and item count)

```

setCartValues(cart) {
  let tempTotal = 0;
  let itemsTotal = 0;

```

```

    cart.map((item) => {
      tempTotal += item.price * item.amount;
      itemsTotal += item.amount;
    });
    cartItemsTotal.innerHTML = itemsTotal;
    cartPriceTotal.innerHTML = parseFloat(tempTotal.toFixed(2));
  }

```

// Add a new cart item to the UI

```

addCartItem(cartItem) {
  let cartItemUi = document.createElement("div");
  cartItemUi.classList.add("cart-product");
  cartItemUi.innerHTML = `
    <div class="product-image">
      
    </div>
    <div class="cart-product-content">
      <div class="cart-product-name"><h3>${cartItem.title}</h3></div>
      <div class="cart-product-
price"><h3>₹${cartItem.price.toFixed(2)}</h3></div>
      <div class="cart-product-remove" data-id="${cartItem.id}"
style="color:red; cursor:pointer">Remove</div>
    </div>
    <div class="plus-minus">
      <i class="fa fa-plus add-amount" data-id="${cartItem.id}"></i>
      <span class="no-of-items">${cartItem.amount}</span>
      <i class="fa fa-minus reduce-amount" data-id="${cartItem.id}"></i>
    </div>`;
  cartContent.append(cartItemUi);
}

```

// Set up the app on page load

```
setupApp() {  
  this.setCartValues(Cart);  
  Cart.map((item) => {  
    this.addCartItem(item);  
  });  
}
```

// Cart-related logic: handling item removal, quantity adjustment, and cart clearing

```
cartLogic() {  
  clearBtn.addEventListener("click", () => {  
    this.clearCart();  
  });  
}
```

// Event listener to handle clicks on cart items (remove, plus, or minus)

```
cartContent.addEventListener("click", (event) => {  
  if (event.target.classList.contains("cart-product-remove")) {  
    let id = event.target.dataset.id;  
    this.removeItem(id);  
    let div = event.target.closest(".cart-product");  
    div.remove();  
  } else if (event.target.classList.contains("add-amount")) {  
    let id = event.target.dataset.id;  
    let item = Cart.find((item) => item.id === id);  
    item.amount++;  
    this.setCartValues(Cart);  
    event.target.nextElementSibling.innerHTML = item.amount;  
  } else if (event.target.classList.contains("reduce-amount")) {  
    let id = event.target.dataset.id;
```

```

    let item = Cart.find((item) => item.id === id);
    if (item.amount > 1) {
        item.amount--;
        this.setCartValues(Cart);
        event.target.previousElementSibling.innerHTML = item.amount;
    } else {
        this.removeItem(id);
        let div = event.target.closest(".cart-product");
        div.remove();
    }
}
});
}

```

// Clear the entire cart

```

clearCart() {
    let cartItems = Cart.map(item => item.id);
    cartItems.forEach((id) => this.removeItem(id));
    const cartProducts = document.querySelectorAll(".cart-product");
    cartProducts.forEach((item) => {
        if (item) {
            item.parentElement.removeChild(item);
        }
    });
}

```

// Remove the product from cart

```

removeItem(id) {
    Cart = Cart.filter((item) => item.id !== id);
    this.setCartValues(Cart);
}

```



```

        let button = this.getSingleButton(id);
        button.style.pointerEvents = "unset";
        button.innerHTML = `> Add To Cart` ;
        button.disabled = false;
    }

    // Add product to cart
    getSingleButton(id) {
        return document.querySelector(`.add-to-cart[data-id='${id}']`);
    }
}

// Initialize the application
document.addEventListener("DOMContentLoaded", () => {
    const ui = new UI();
    ui.setupApp();
    ui.displayProducts(products);
    ui.getButtons();
    ui.cartLogic();
});

// Function to open the modal
function openModal() {
    document.getElementById('authModal').style.display = 'block';
}

// Function to close the modal
function closeModal() {
    document.getElementById('authModal').style.display = 'none';
}

```

// Function to show the login form

```
function showLoginForm() {  
    document.getElementById('login-form').style.display = 'block';  
    document.getElementById('register-form').style.display = 'none';  
}
```

// Function to show the register form

```
function showRegisterForm() {  
    document.getElementById('login-form').style.display = 'none';  
    document.getElementById('register-form').style.display = 'block';  
}
```

// Add event listener to the login link

```
document.querySelector('.menubar .list-items  
a[href="#login"]').addEventListener('click', function(event) {  
    event.preventDefault();  
    openModal();  
    showLoginForm();  
});
```



Technologies Used:

- HTML: For the structure of the web pages.
- CSS: For styling and layout.
- JavaScript: For interactivity and dynamic content.
- Font Awesome: For icons.

Tools Used:

- VSCODE: VSCODE used for coding and implementation.
- Internet: Internet Used for Font Awesome icon download and implement to the Website.
- Web Browser: For Testing Website working or not browser (Google Chrome, Mozilla Firefox, MicroSoft Edge)

6. Results and Discussion

Course listings on the homepage.

Shopping cart page showing the chosen courses and total amount.

Final Outputs Obtained:

A workable course listing and shopping cart system.

Comparative Analysis:

Comfort Learning has the benefit of making the checkout process easier and providing an extremely flexible course catalog as compared to existing ones such as Udemy.

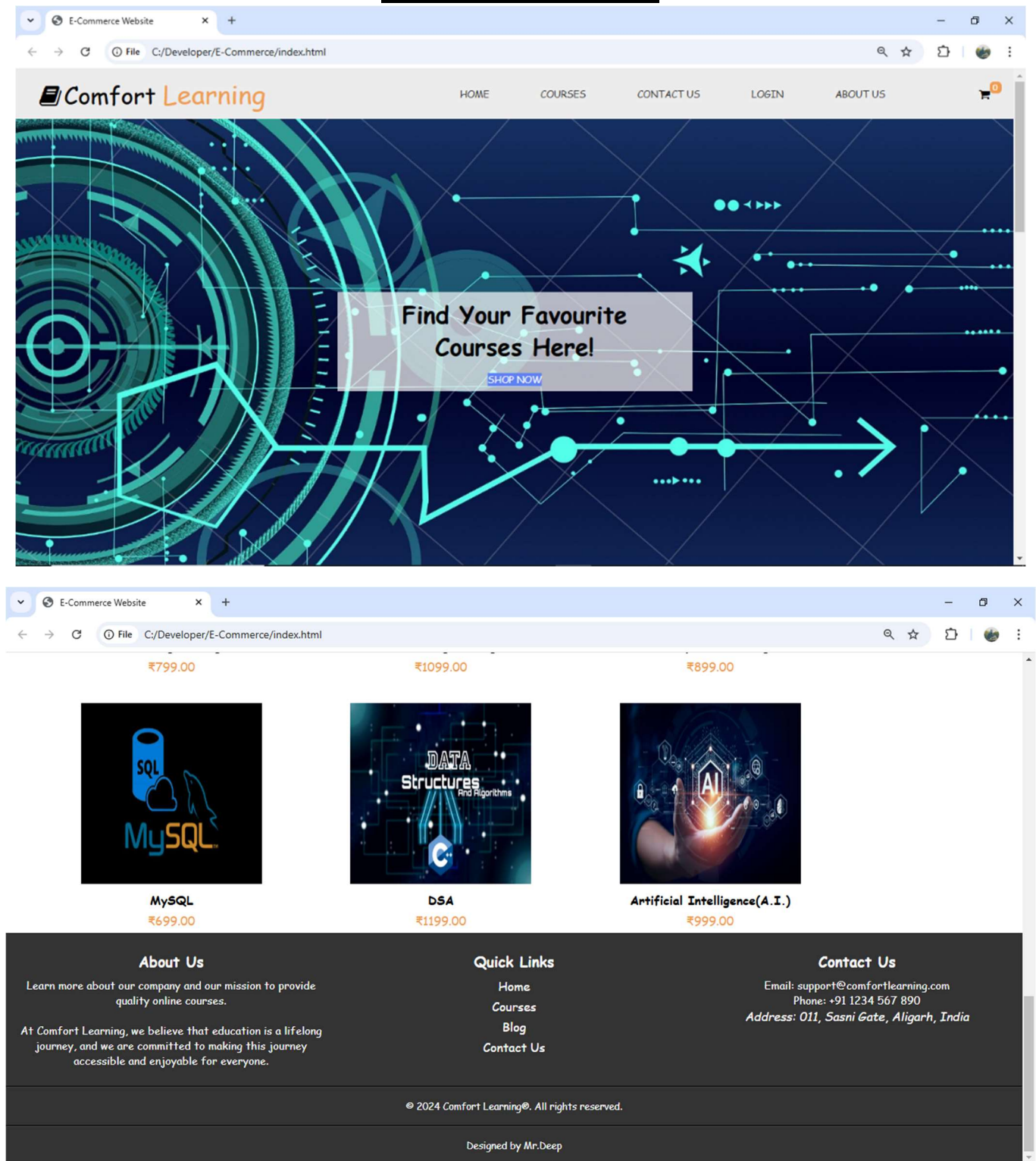
Conclusion: The project successfully meets the purpose of developing an e-commerce site for online courses. This has features like course discovery, cart management, and secure payment options. The website is responsive and user-friendly on various devices.

Brief Explanation:

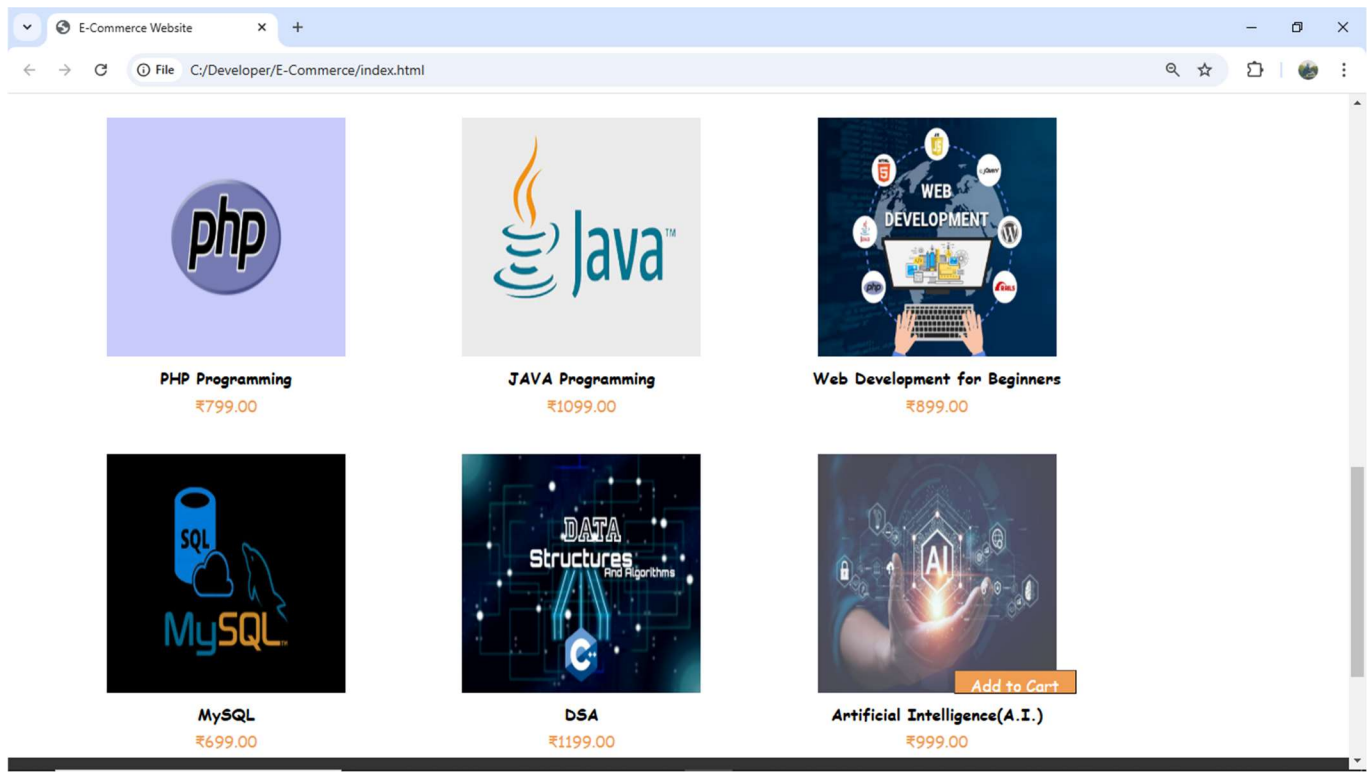
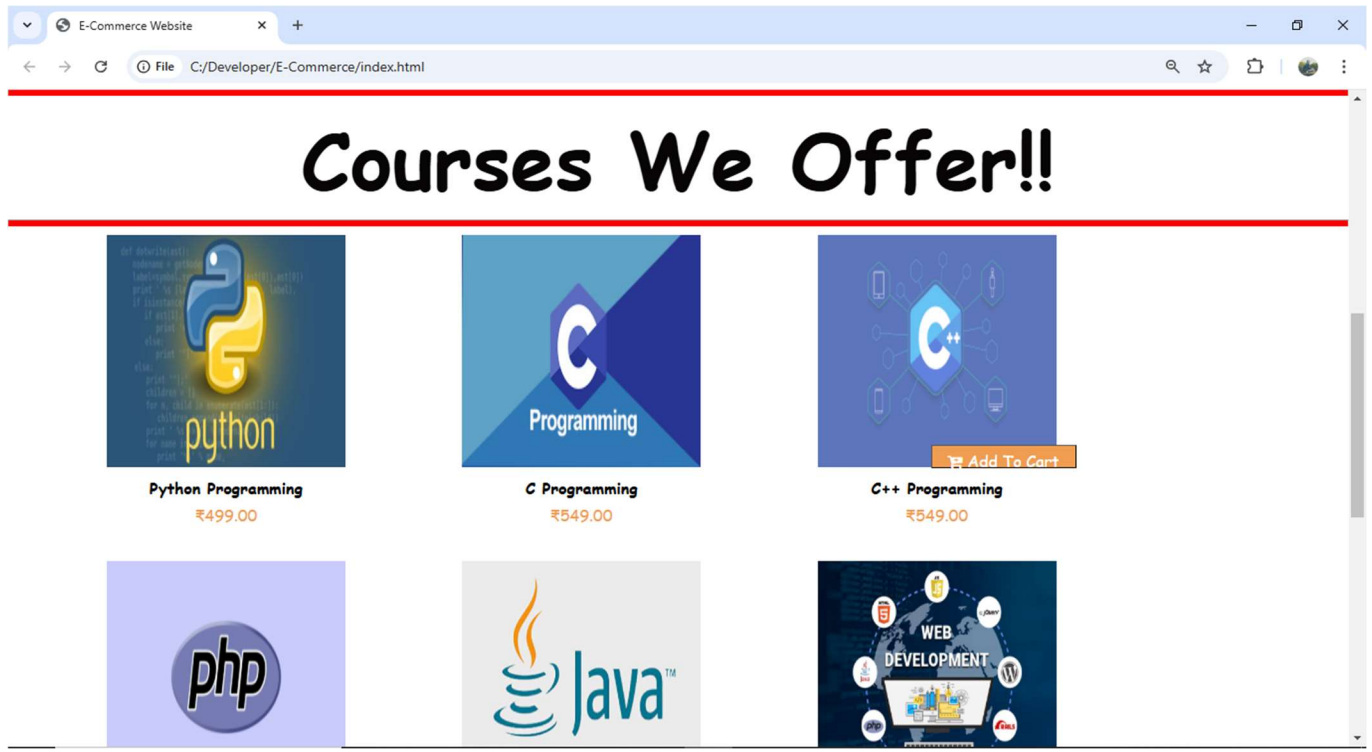
Welcome to the Comfort Learning E-Commerce Website. This project is an online platform designed to offer various programming courses. The website features a user-friendly interface, a shopping cart, dynamic product listings, and user authentication.

The Comfort Learning E-commerce website is a platform that offers a wide range of educational resources and courses for individuals of all ages. The website is designed to provide a comfortable and engaging learning experience for its users.

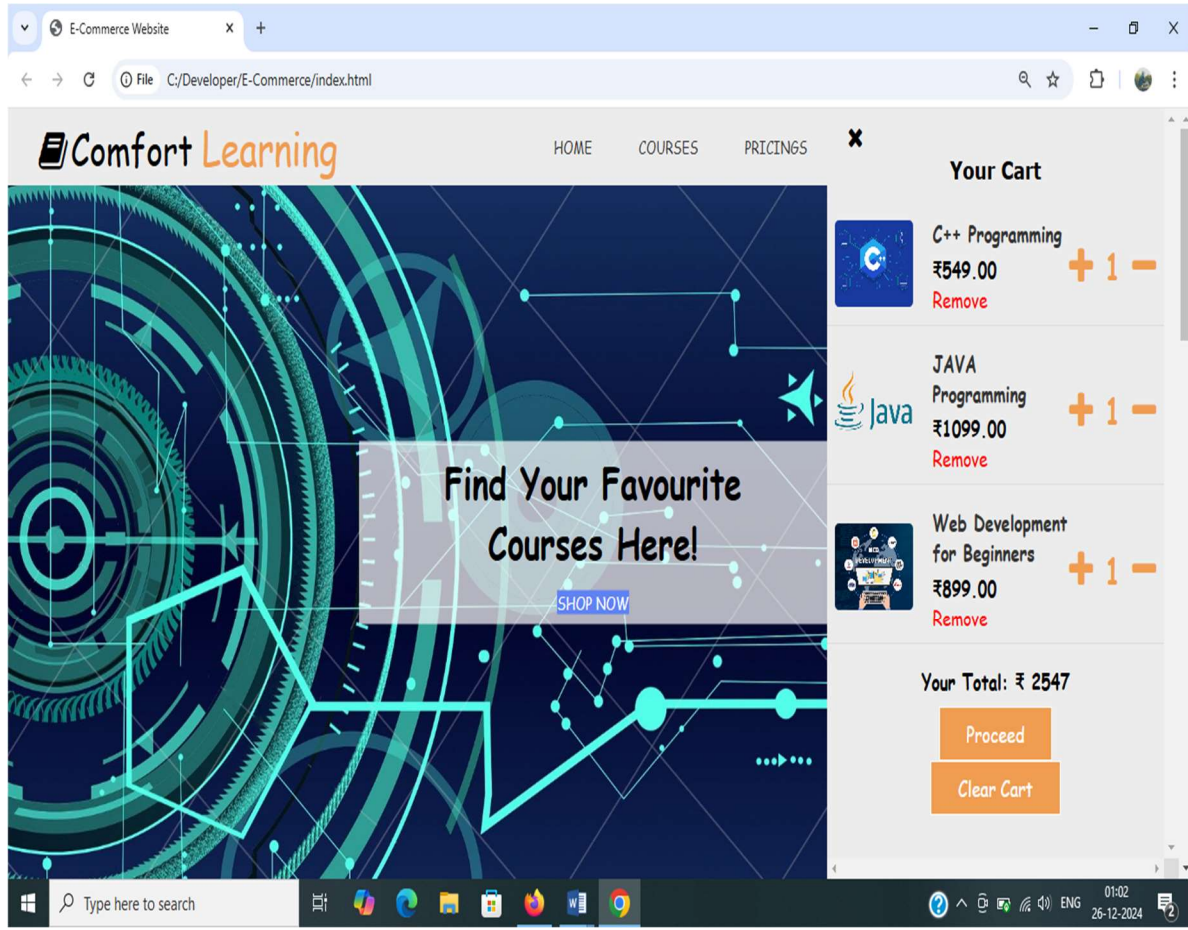
INDEX PAGE:



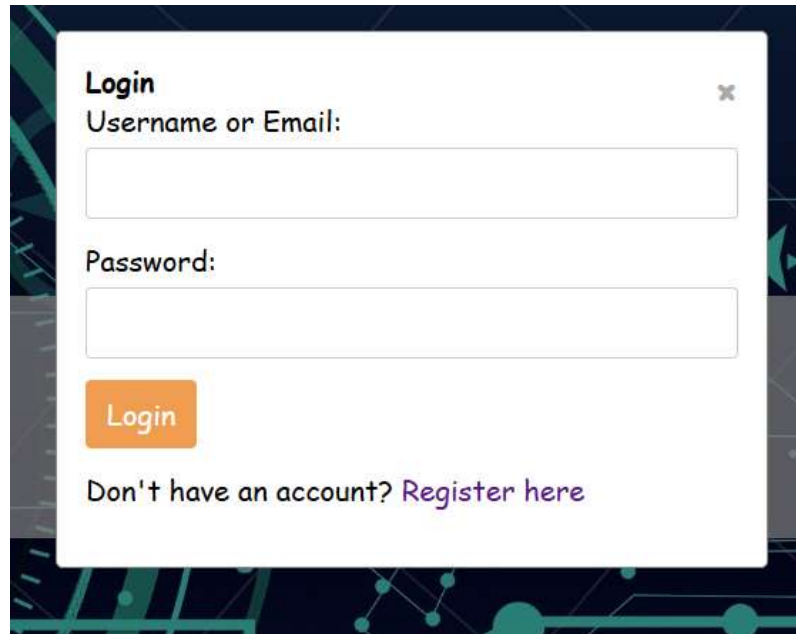
- Product Detail:



Cart:



Login Page:

A login form modal with a dark blue background and a white form area. The form has a title 'Login' and a close button 'x'. It contains two input fields: 'Username or Email:' and 'Password:'. Below the password field is an orange 'Login' button. At the bottom, there is a link 'Don't have an account? Register here' in purple text.

Login x

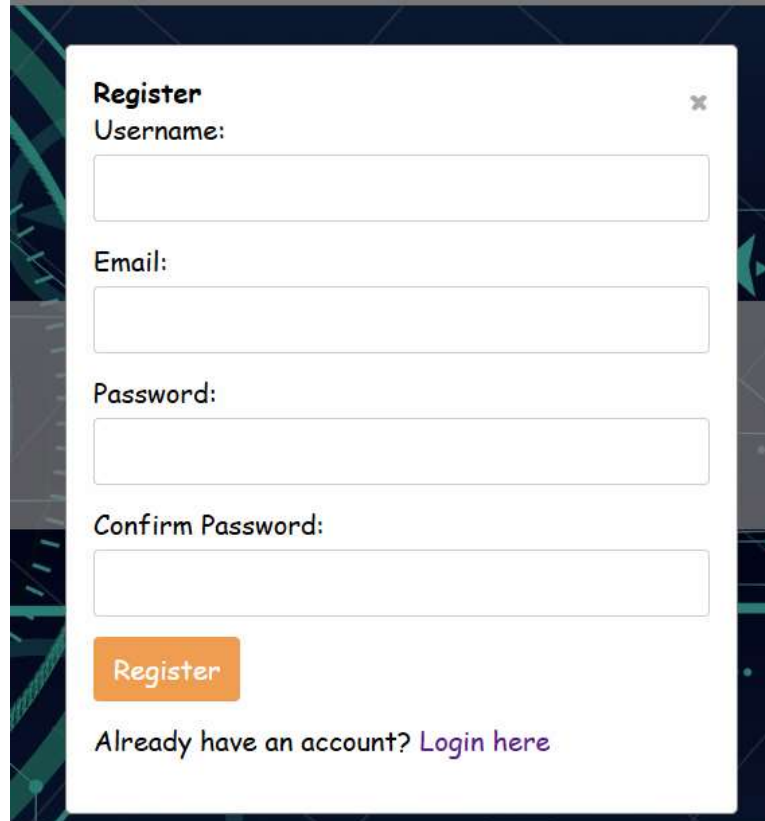
Username or Email:

Password:

Login

Don't have an account? [Register here](#)

Register Page:

A register form modal with a dark blue background and a white form area. The form has a title 'Register' and a close button 'x'. It contains four input fields: 'Username:', 'Email:', 'Password:', and 'Confirm Password:'. Below the confirm password field is an orange 'Register' button. At the bottom, there is a link 'Already have an account? Login here' in purple text.

Register x

Username:

Email:

Password:

Confirm Password:

Register

Already have an account? [Login here](#)

7. Conclusion and Future Scope

Conclusion: "Comfort Learning" project successfully covers the challenges users face in the existing online course platforms. The website has a very streamlined experience for discovery and purchase of courses.

- The proposed system aims to fill the gaps identified in existing e-commerce learning platforms by providing a more affordable, interactive, and user-friendly online learning experience. By focusing on quality, engagement, and personalization, the new platform seeks to enhance the overall effectiveness of online education and make learning more accessible to a broader audience.

Future Scope:

Mobile Application Development: The mobile application version of the website may enhance accessibility and user engagement to a larger audience.

Personalized Learning Paths:

An algorithm-based approach for course suggestions based on user preferences and past behavior would help in improving user satisfaction and retention.

Enhanced Payment Options:

Integrating multiple payment gateways to provide a choice of payment methods that could be in digital wallets or cryptocurrencies.

Analytics Dashboard for Instructors:

This can provide analytics to course instructors on user engagement and performance, thus enabling them to improve their course offerings.

This structured approach provides a comprehensive overview of the project, detailing its objectives, methodologies, and expected outcomes, while also outlining the potential for future enhancements. Each section is designed to

guide the reader through the project's development and its significance in the context of online education.

Additional Courses:

Plan to add more courses covering different programming languages and technologies.

User Reviews:

Implement a feature for users to leave reviews and ratings for courses.

Summary

The project aims to develop a user-friendly e-commerce web application for online learning, addressing the challenges faced by existing platforms. Key issues include high costs, variable quality of content, limited interactivity, poor user experience, and lack of personalization.

Objectives of the Project:

- Create an intuitive interface for easy navigation.
- Implement an affordable pricing model to enhance accessibility.
- Ensure high-quality content through a vetting process for course creators.
- Incorporate interactive features like live sessions and discussion forums.
- Utilize algorithms for personalized course recommendations.

Scope of the Project:

- Develop an e-commerce platform for browsing, enrolling in, and managing online courses.
- Support course management, user authentication, and shopping cart functionality.
- Ensure responsive design for various devices.
- Lay the groundwork for future enhancements, including backend integration.

Technology/Platform Used:

- **Frontend:** HTML, CSS, and JavaScript for building the user interface.
- **Backend (Future Integration):** Node.js, Express.js, and MongoDB for server-side development and database management.
- **Development Tools:** Visual Studio Code, Git, and browser developer tools for coding and testing.

8. Annotated Bibliography

Book Name/Web portal Name

Writer Name/Link

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