FITCHK

Mini Project submitted in partial fulfillment of the requirement for the award of the degree of

BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE AND ENGINEERING

Under the esteemed guidance of

Dr. B.V Swathi
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ABSTRACT

The trend of online shopping has been surging in recent years at an astonishing pace. According to Statista, the retail e-commerce industry amassed approximately 4.28 trillion USD in sales in the year 2020. Moreover, the upward trajectory of online shopping shows no signs of slowing down. Statista's projections indicate that e-commerce sales are expected to reach a remarkable 6.3 trillion USD by 2024.

Online shopping applications are digital platforms that allow consumers to purchase products and services directly from sellers over the internet using web browsers or mobile applications. These applications aim to provide a convenient and time-saving shopping experience for users, enabling them to browse and buy products from the comfort of their own homes. FitChk aims to be able to give users the comfort of being able to browse through our wide range of products and read their description to know what the product offers; the review and rating system helps the customer to make an improved decision. The development of user-friendly interface and interactive features in FitChk aims to increase consumer enjoyment and satisfaction with the online shopping process. Filtered into categories such as Men, Women and Unisex, the users can browse through the apparels being offered on the website for all their needs, whether it is for causal, homely or formal wear.

With Web Development features and using HTML/CSS, JavaScript, PHP and MYSQL we are able to create “FITCHK” that has:

- Easy Login/Sign-Up Process.
- Rating and Review Section.
- Multiple Payment Options.
- Diverse range of products.
- Choose from categories such as Men, Women and Unisex apparels.
- Wishlist/Cart.

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LIST OF ABBREVIATIONS

S.no	Acronym	Abbreviation
1	XAMPP	Cross platform, Apache,MySQL,PHP,Pearl
2	PHP	Hypertext Preprocessor
3	HTML	Hypertext Markup Language
4	CSS	Cascading Style Sheet
5	JS	JavaScript
6	UML	Unified Modeling Language

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1. INTRODUCTION

1.1 ABOUT THE PROJECT

FitChk is a cutting-edge e-commerce platform that focuses on delivering a smooth shopping experience for customers in search of high-quality apparel. The website is developed using a combination of HTML, CSS, JavaScript, PHP, and MYSQL, making it a robust and modern web application. HTML lays the foundation for the site's structure, ensuring that crucial components like product listings, navigation menus, and search functions are well-organized and easy to use. CSS is employed to enhance the visual design, providing a sleek and contemporary look that aligns with the latest trends in e-commerce, making the user experience both attractive and intuitive.

On the backend, PHP and MYSQL handles server-side operations such as user authentication, database management, and order processing. This ensures that FitChk operates efficiently and securely, providing a dependable platform for users to shop for their favorite clothing items.

FitChk is equipped with a range of features designed to enhance the shopping journey. When a user discovers an item they're interested in, they can easily add it to their cart with a single click. The cart is user-friendly, allowing for simple modifications like updating quantities or removing items. When the customer is ready to complete their purchase, they are guided through a secure and straightforward checkout process that ensures all necessary details are captured and the transaction is finalized safely.

Specializing in apparel, FitChk offers a diverse selection of clothing to cater to different tastes and preferences. The product catalog is organized in a way that makes browsing easy, with categories and filters to help users find what they're looking for quickly. Whether customers are shopping for casual wear, chic outfits, FitChk presents a carefully curated range of high-quality products. The website's design and functionality are optimized to provide a superior shopping experience, allowing users to navigate the product offerings, select their desired items, and complete their purchases with ease.

1.2 OBJECTIVES

- Implement a user-friendly interface using HTML and CSS.
- Allow users to add items to the shopping cart.
- Provide a secure and efficient checkout process.
- Integrate PHP for server-side processing and data management.
- Utilize JavaScript for dynamic interactions and enhanced user experience.
- Display and manage apparel products effectively.
- MYSQL is used for database creation and effective management of the products.

2. SYSTEM ANALYSIS

2.1 EXISTING SYSTEM

E-commerce websites have become integral to modern retail, offering a convenient platform for consumers to browse and purchase products online. These platforms typically include features such as product catalogues, search functionality, shopping carts, and secure payment gateways. Most e-commerce sites are built using a combination of HTML, CSS, JavaScript, and server-side technologies like PHP, Python, or Ruby. HTML and CSS are used for structuring and styling web pages, while JavaScript enhances interactivity and user experience. Server-side languages handle data processing, user authentication, and database interactions.

Modern e-commerce systems often include additional features such as user reviews, wishlists, personalized recommendations, and responsive design to cater to various devices. These systems are usually integrated with third-party services for payment processing, shipping, and customer support.

Drawbacks of Existing System

- **Performance Issues:** High traffic or poorly optimized code can lead to slow loading times and decreased user satisfaction.
- **Security Concerns:** Vulnerabilities in payment systems or data handling can expose sensitive customer information to potential breaches.
- **Complexity in Management:** Managing inventory, processing orders, and handling customer queries can be challenging, particularly for smaller businesses.
- **User Experience Problems:** Inconsistent design, difficult navigation, or lack of mobile optimization can lead to a frustrating shopping experience.
- **High Competition:** With numerous e-commerce platforms available, standing out and attracting customers can be difficult without effective marketing and unique value proposition.

2.2 PROPOSED SYSTEM

FitChk is designed to enhance your online shopping experience with a focus on simplicity and efficiency. The website features an intuitive layout, making it easy for users to navigate through a variety of apparel products. Using a blend of HTML, CSS, JavaScript, PHP and MYSQL, FitChk ensures that your shopping journey is smooth and enjoyable.

The core functionality of FitChk includes a powerful UI that helps users experience a seamless shopping journey and find their desired choice of apparel. Users can also browse clothing with the Categories/Brands section where they can choose based on categories such as Men, Women or Unisex and from the various Brands available on the website. Once they've found their desired items, they can easily add them to their shopping cart. The checkout process is straightforward and secure, allowing for a hassle-free transaction. FitChk's design is not only visually appealing but also functional, with a user-friendly interface that aims to fulfil the shopping needs of the users.

Benefits of Proposed System

- **Curated Apparel Collection:** FitChk offers a carefully selected range of apparel, ensuring that customers have access to trendy and high-quality products.
- **Support for Local Businesses:** FitChk collaborates with local retailers, giving them a platform to reach a broader audience and helping to boost the local economy.
- **User-Friendly Interface:** The website's clean and intuitive design makes it easy for customers to navigate, search for products, and complete purchases.
- **Enhanced Search Functionality:** With advanced search options, customers can quickly find exactly what they are looking for, whether by category or brand.
- **Efficient Checkout Process:** FitChk streamlines the checkout process, making it quick and easy for customers to complete their purchases with minimal steps.

2.3 FEASIBILITY STUDY

2.3.1 Details

FitChk is a specialized e-commerce platform focused on providing a seamless and personalized shopping experience for apparel. The website leverages modern web technologies to deliver an intuitive interface, advanced search capabilities, and a secure checkout process. FitChk also supports local businesses by showcasing their products, helping them reach a wider audience. The entire project is built using web-based programming languages like HTML, PHP, CSS. The text editor used is VisualStudio Code.

2.3.2 Impact On Environment

The environmental impact of the FitChk project, while indirect, is an important consideration. By offering a digital platform for purchasing apparel, FitChk reduces the need for physical stores, potentially lowering the carbon footprint associated with running brick-and-mortar retail locations. However, like all e-commerce platforms, there are environmental concerns related to the increased demand for packaging materials and the logistics of shipping products to customers. The project can mitigate these impacts by encouraging sustainable practices, such as using eco-friendly packaging and optimizing delivery routes to reduce emissions. Additionally, by supporting local businesses, FitChk promotes shorter supply chains, which can further reduce the environmental footprint by minimizing long-distance transportation of goods.

2.3.3 Safety

The safety of the FitChk project is built on solid technical foundations to protect both user data and the platform itself. We use secure user authentication methods to ensure that only authorized individuals can access accounts. All transactions are processed through encrypted payment gateways, safeguarding sensitive information like credit card details. Regular updates and security patches are applied to keep the system resilient against emerging threats. By prioritizing these safety measures, FitChk ensures a secure shopping experience for all users.

2.3.4 Ethics

The ethics of the FitChk project are centred on creating a fair, transparent, and inclusive platform for both customers and local businesses. The project is committed to promoting ethical business practices by supporting local retailers, which helps strengthen community economies and provides customers with access to diverse, high-quality products. FitChk prioritizes user privacy by implementing robust data protection measures, ensuring that personal information is handled responsibly and securely.

2.3.5 Cost

The cost of the FitChk project encompasses several key components essential for its development, launch, and ongoing operation. The initial costs include website development, which covers frontend design (HTML, CSS, JavaScript) and backend development (PHP, database setup). Additionally, there are costs associated with maintaining the platform, such as ongoing server fees, security updates, and customer support.

2.3.6 Type

The FitChk project is an e-commerce website. It falls under the category of online retail platforms specifically designed for selling apparel. As an e-commerce site, FitChk enables users to browse, search for, and purchase clothing items through a digital interface. This type of project involves Front-End development , Back-End development and integration.

2.4 SCOPE OF THE PROJECT

The scope of the FitChk project encompasses a comprehensive e-commerce platform designed to offer a wide array of options and brands, catering to diverse customer preferences in apparel. The project aims to provide an extensive catalog of clothing items from multiple brands, ensuring that users have access to the latest trends and high-quality products. The platform will feature advanced search and filtering options to help customers easily navigate through various categories and find exactly what they need. A significant aspect of FitChk is its commitment to security; it includes robust login and authentication mechanisms to protect

user accounts and sensitive information. By prioritizing a broad selection of products and a secure shopping environment, FitChk strives to enhance the overall user experience and build trust with its customers.

2.3 SYSTEM CONFIGURATION

Hardware requirements:

- **System:** Intel -3,5,7 or above processor
- **Hard Disk**: 4GB
- **RAM:** 2GB

Software requirement

- **Database server:** MySQL
- **Scripting Languages:** PHP
- **Frontend Technologies:** HTML,CSS, JavaScript
- **Development Environment:**
    - XAMPP
    - VisualStudio Code

3. LITERATURE OVERVIEW

3.1 LITERATURE REVIEW

1.Turban, E., King, D., Lee, J., & Viehland, D. - Electronic Commerce: A Managerial Perspective

This book offers an in-depth analysis of e-commerce platforms, emphasizing the importance of integrating both the front-end and back-end components to deliver a cohesive shopping experience. It highlights key design considerations like scalability, security, and usability. The authors also discuss the importance of business models in e-commerce, offering insights into revenue generation and customer retention. These concepts helped shape FitChk's architecture to ensure efficient operation as it scales. The book serves as a guide for ensuring seamless customer experiences in online retail platforms like FitChk.

2.Laudon, K. C., & Traver, C. G. - E-Commerce: Business, Technology, Society

This book provides a comprehensive look at the technological and societal impacts of e-commerce. It covers the importance of building secure and scalable systems to handle increasing traffic and transactions. The authors delve into the technical aspects of developing e-commerce sites, such as server management, data protection, and the need for responsive design. This text helped inform FitChk's approach to handling user traffic growth while maintaining robust security protocols. It also emphasizes the importance of integrating business strategies with technology.

3.Nielsen, J., & Norman, D. A. - Usability Engineering

Nielsen and Norman's book discusses the critical role of usability in web design, particularly for e-commerce platforms. It emphasizes creating intuitive, easy-to-navigate interfaces that enhance user satisfaction and reduce friction. The authors explain usability testing methods, such as heuristic evaluations and user testing, to ensure sites meet user needs. Their insights were applied to FitChk to create an accessible, streamlined interface that encourages customer engagement. By focusing on usability, FitChk ensures a smooth shopping experience, reducing bounce rates and improving conversion.

Hines, J. D., & Swinker, M. E. - The Categorization of Apparel Products: How Consumers View Assortments

This paper examines how apparel is categorized and how these categorizations affect consumer behavior in retail settings. The study highlights the importance of clear, intuitive product categorization to improve user experience and help consumers find desired products more easily. These findings informed FitChk's categorization strategy, where products are logically grouped, allowing users to filter and sort apparel based on preferences like size, style, and brand. The research helps ensure that FitChk offers a user-friendly shopping experience that caters to diverse consumer needs.

Sundararajan, A. - The Sharing Economy: The End of Employment and the Rise of Crowd-Based Capitalism

Sundararajan's book explores the role of digital platforms in supporting local and small businesses in the sharing economy. The author argues that online platforms can democratize access to markets for smaller players, allowing them to compete with larger businesses. This concept is integral to FitChk, which aims to promote local apparel brands by providing them a broader online reach. Sundararajan's insights emphasize the economic and social benefits of supporting local businesses through digital commerce, which aligns with FitChk's mission to empower small, local retailers.

Smith, A. - Mobile Commerce: The Importance of Mobile-Friendly Design

Smith's paper underscores the growing importance of mobile optimization for e-commerce platforms, as a significant number of users now shop via smartphones and tablets. The research suggests that mobile-friendly design is crucial for increasing user engagement and ensuring that customers can shop on the go. FitChk incorporates these findings by ensuring a fully responsive design that adapts to various screen sizes. By optimizing for mobile, FitChk provides a consistent and accessible user experience across all devices, improving overall customer satisfaction and conversion rates.

4.SYSTEM DESIGN

4.1SYSTEM ARCHITECTURE

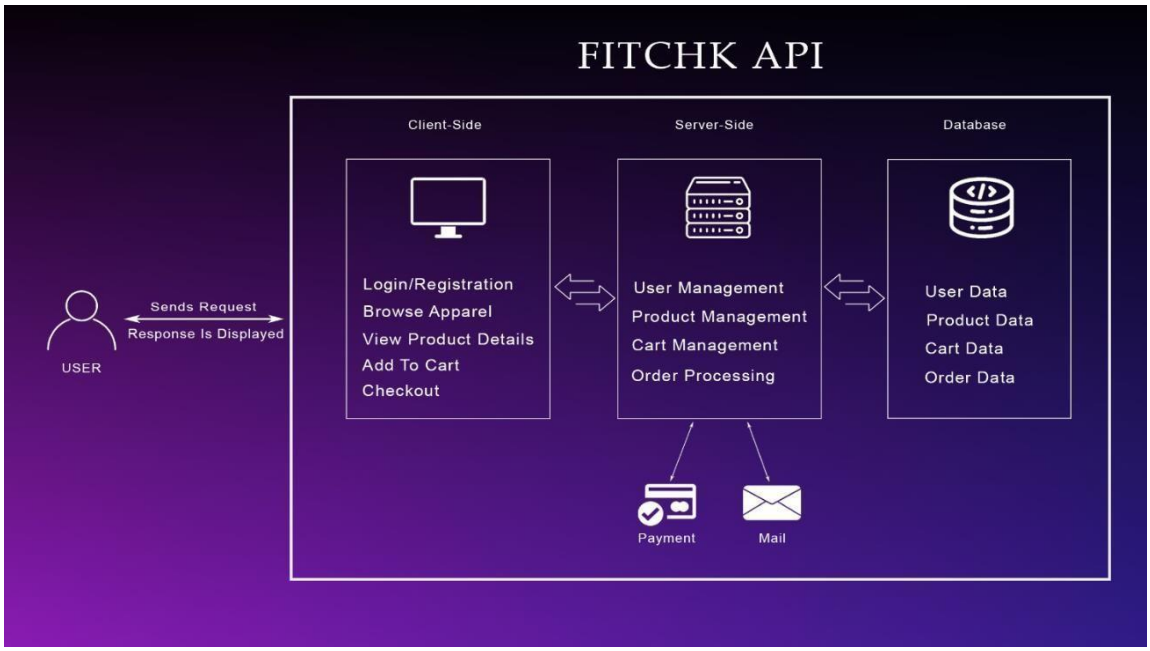

Fig 4.1 System Architecture

1. Client-Side (Frontend)

User Interface (UI):

- **Registration/Login:** Users can register for a new account or log in to an existing one. This process involves input fields for user credentials and a secure authentication mechanism.
- **Home Page:** After logging in, users are directed to the Home Page, where they can view featured products, promotions, and site navigation.
- **Shop Page:** Users can browse through different categories of apparel. They can filter products by various attributes like size, color, and price.
- **Product Details:** Clicking on a product leads to a detailed view where users can see images, descriptions, pricing, and availability.

- **Add to Cart:** Users can add selected items to their shopping cart from the product detail page.
- **View Cart:** The cart page allows users to see all items they've added, along with quantities and total price.
- **Update Cart:** Users can adjust quantities or remove items from their cart before proceeding to checkout.
- **Checkout:** This is the final step where users enter shipping information, choose a payment method, and confirm their order.

2. Server-Side (Backend)

Application Logic:

- **User Management:** Handles user registration, login, session management, and profile updates. It securely stores user credentials and manages authentication and authorization.
- **Product Management:** Manages product data, including categories, pricing, inventory levels, and product descriptions. This module ensures that the correct information is displayed to users.
- **Cart Management**: Manages the user's shopping cart, including adding items, updating quantities, and calculating the total price. It also handles cart persistence across sessions.
- **Order Processing:** Handles the finalization of purchases, including payment processing, order confirmation, and updating inventory levels.

3. Database

- **Database Management System (DBMS):** MySQL
- **User Data:** Stores user information such as login credentials, personal details, and order history.
- **Product Data:** Maintains a catalogue of all apparel products, including their attributes, pricing, and availability.

- **Cart Data:** Temporarily stores the contents of users' shopping carts, allowing them to retrieve and modify their cart before checkout.

4.1.1 MODULE DESCRIPTION

The FitChk platform is composed of several key modules, each responsible for specific functionalities that together create a seamless shopping experience for users. Below is a detailed description of each module:

1. Login Module

Purpose: The Login module manages user authentication and access control.

Key Features:

- **User Registration:** Allows new users to create an account by providing necessary details like name, email, and password.
- **User Login:** Authenticates users by verifying their credentials and granting access to their accounts.
- **Password Management:** Provides options for users to reset or change their passwords securely.
- **Session Management:** Maintains user sessions, ensuring users remain logged in as they navigate the site.

2. Cart Module

Purpose: The Cart module manages the shopping cart functionality, allowing users to add, view, and manage items before making a purchase.

Key Features:

- **Add to Cart:** Enables users to add selected products to their shopping cart.
- **View Cart:** Displays the contents of the user's cart, including product details, quantities, and total cost.

- **Update Cart:** Allows users to change the quantity of items, remove items, or empty the cart entirely.
- **Proceed to Checkout:** Facilitates the transition from the cart to the checkout process, where users finalize their purchases.

3. Products Module

Purpose: The Products module handles the display and management of apparel products available on the FitChk platform.

Key Features:

- **Product Listings:** Shows a list of available products, with options to sort and filter based on categories, price, and other attributes.
- **Product Details:** Provides detailed information about each product, including images, descriptions, sizes, colors, and price.
- **Search Functionality:** Allows users to search for specific products by keywords, category, or other criteria.
- **Stock Management:** Monitors product inventory levels and updates availability status based on stock.

4. About and Contact Module

Purpose: The About and Contact module provides users with information about the FitChk platform and facilitates communication with the support team.

Key Features:

- **About Us:** Offers details about the company, its mission, vision, and the team behind FitChk.
- **Contact Information:** Provides users with various ways to contact customer support, including email, phone, and a contact form.
- **Feedback and Support:** Allows users to submit feedback or request help directly through the platform.

4.2 UML DIAGRAMS

Use Case Diagram

The use case diagram for the FitChk project illustrates the key interactions between users and the system. It represents the primary functions that a user can perform on the e-commerce platform, such as registering or logging in, browsing products, viewing product categories, adding items to their shopping cart, updating or removing items from the cart, and proceeding to checkout. Each use case is connected to the "User" actor, demonstrating the user's ability to engage with these functionalities. The diagram helps in understanding the flow of user actions and the system's responses, serving as a foundational blueprint for designing the FitChk platform's user experience and backend processes.

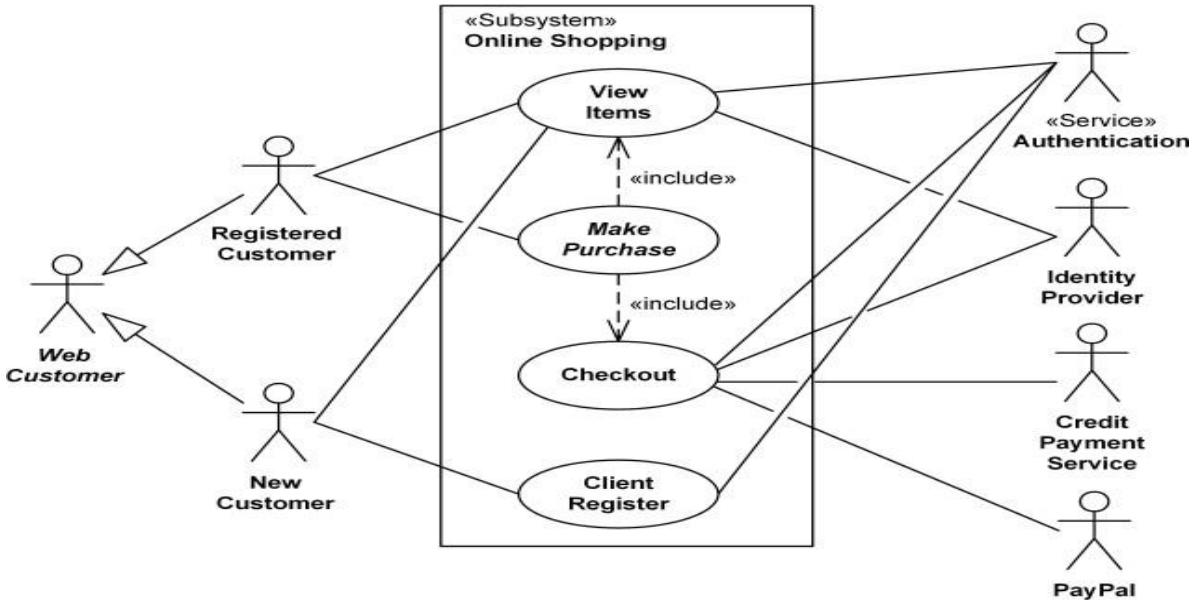

Fig 4.2.1 Use Case Diagram for Proposed System

Sequence Diagram

The sequence diagram for the FitChk e-commerce project illustrates the interactions between a user and the system throughout a typical shopping session. It starts with the user logging in or registering, followed by accessing the home page and navigating to the shop page to view product details. The user can then add items to their cart, update the cart as needed, and proceed to checkout. Finally, after completing the purchase, the user has the option to leave a review for the products. This diagram captures the flow of messages between the user and the system components, detailing how actions and responses are exchanged in a sequential manner.

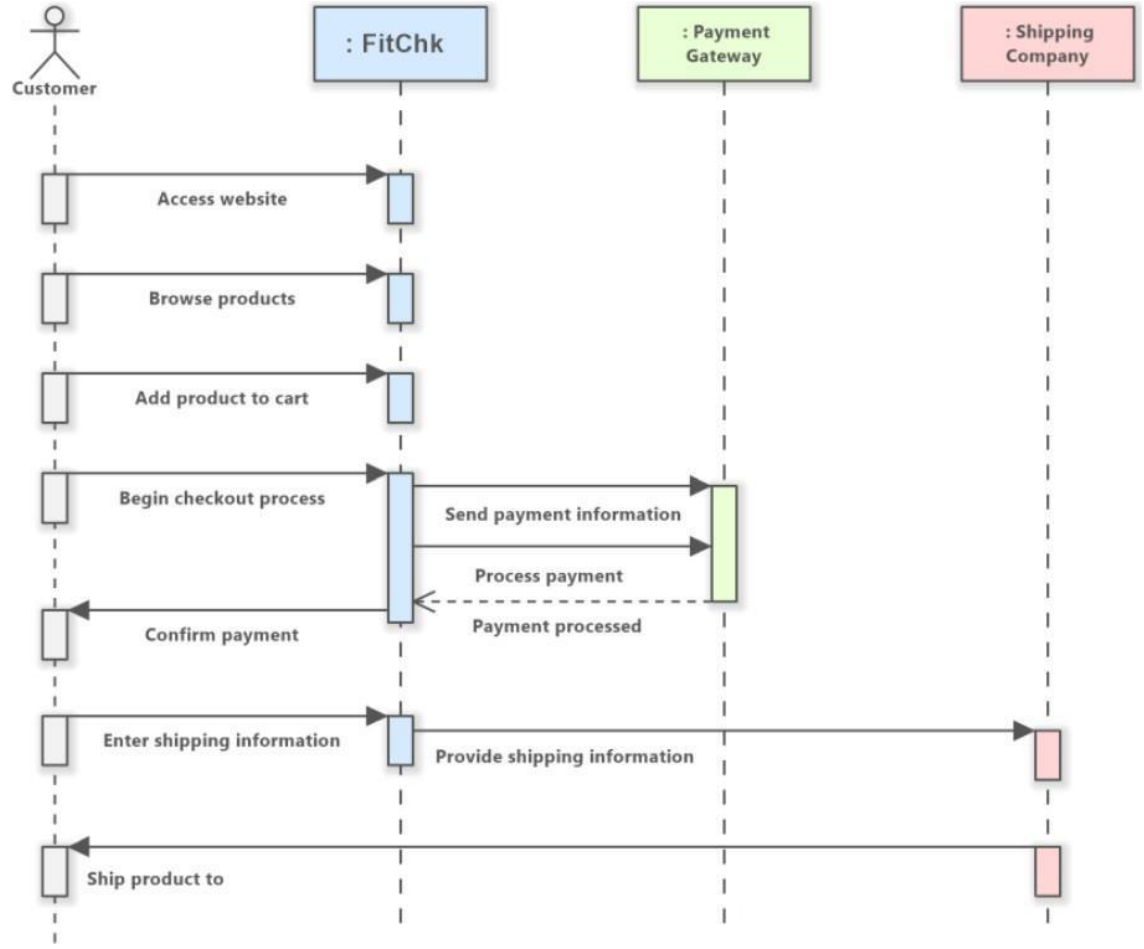

Fig 4.2.2 Sequence Diagram for Proposed System

Class Diagram

The class diagram for the FitChk e-commerce project outlines the key classes and their relationships within the system. It includes classes such as User, Product, Cart, Order, and Review, each with relevant attributes and methods. The User class manages login and registration details, while Product holds information about items available for purchase. The Cart class handles the user's selected items and their quantities, and Order represents the purchase process. Review captures feedback for products. Associations between these classes, such as a User having multiple Orders and Reviews, illustrate the system's structure and how objects interact.

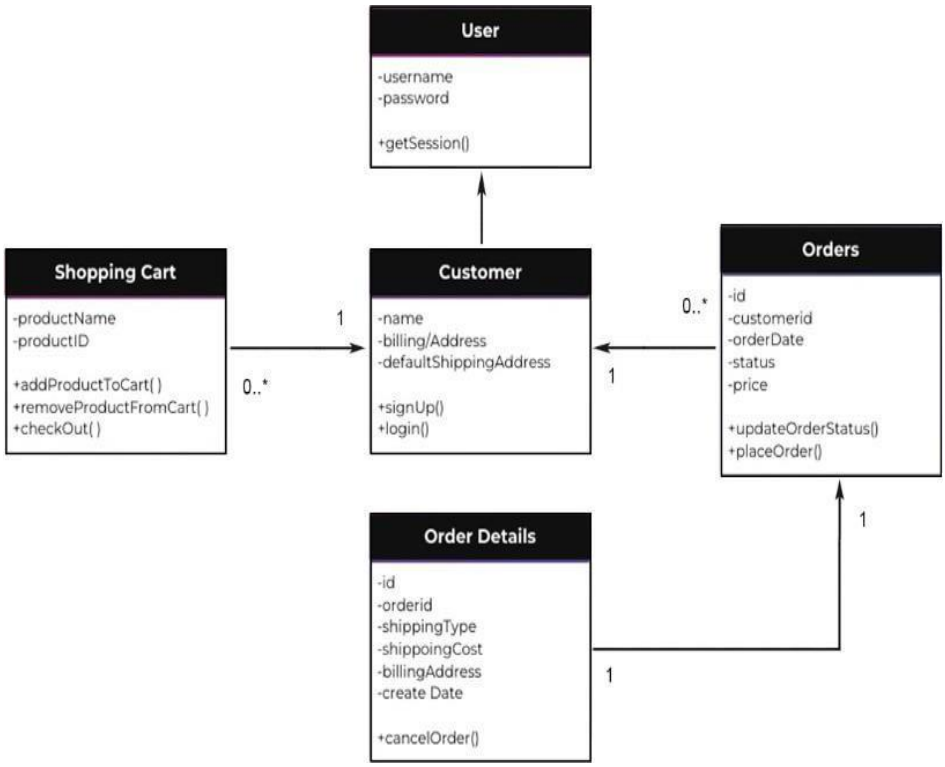

Fig 4.2.3 Class Diagram for Proposed System

Activity Diagram

The activity diagram for the FitChk e-commerce project visualizes the user's journey through various shopping activities. It begins with user authentication, where the user either logs in or registers. The diagram then flows into actions like browsing the home and shop pages, viewing product details, and managing the shopping cart by adding, updating, or removing items. Following this, the user proceeds to checkout and completes the purchase. Finally, the user can provide a review for the purchased products. This diagram captures the sequence of actions and decision points, illustrating the dynamic workflow and user interactions within the system.

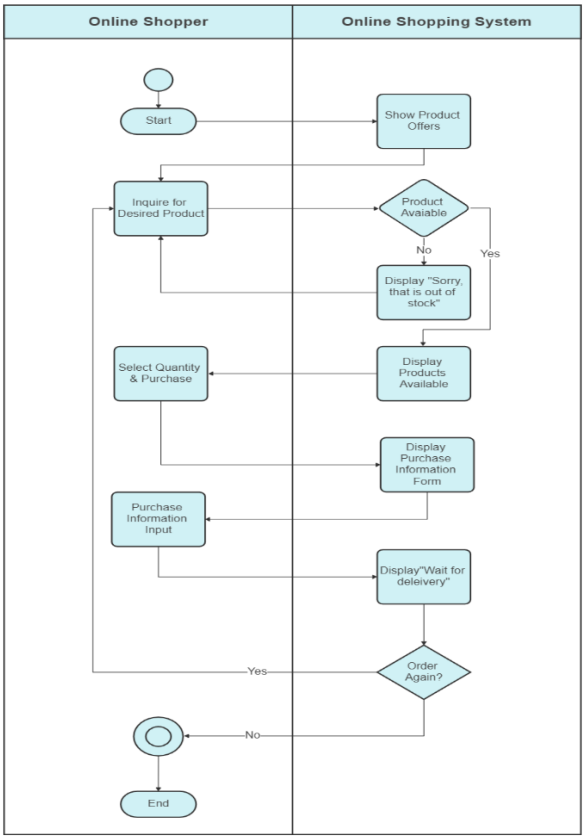

Fig 4.2.4 Activity Diagram for Proposed System

4.3System Design

4.3.1 Modular Design

The modular design of FitChk is structured around key functional areas, ensuring that each module operates independently while interacting seamlessly with others. Below is a brief description of the main modules:

1. Login Module

The login module handles user authentication and account management. It includes:

- **User Registration:** Allows new users to sign up by providing a username, email, and password.
- **User Login:** Authenticates registered users using their credentials and grants access to their accounts.

This module is critical for ensuring secure access to the platform, allowing users to log in and perform actions like adding items to their cart and reviewing orders.

2. Cart Module

The cart module manages the shopping cart functionality, enabling users to:

- **Add Products:** Users can add items to their cart from the product catalog.
- **View Cart:** Users can view the items currently in their cart, including prices, quantities, and totals.
- **Update Cart:** Allows users to modify the quantity of items or remove products from their cart.

This module ensures that users have full control over their shopping experience, from selecting products to finalizing the purchase.

3. Products Module

The products module manages the display and categorization of available apparel. It includes:

- **Product Listing:** Displays all available products, organized by categories based on gender.
- **Product Details:** Shows detailed information about each product, price etc.

This module forms the core of the FitChk platform, showcasing the apparel items and making them easily accessible to users.

4. About and Contact Module

The about and contact module provides information about FitChk and offers users ways to connect with the company. It includes:

- **About Us**: Displays information about the company's mission, history, and commitment to supporting local businesses.
- **Contact Information**: Provides contact details like email addresses, phone numbers, and social media links.
- **Feedback Form:** Allows users to submit inquiries, feedback, or support requests via an embedded contact form.

This module enhances user trust by providing transparency and ensuring users have a way to communicate with the platform for any support or information needs.

Modular Interaction

Each module interacts seamlessly with the others, with the login module enabling personalized user interactions, the cart and product modules handling e-commerce transactions, and the about and contact module maintaining customer relations. This modular design ensures flexibility, maintainability, and scalability for the FitChk platform.

4.3.2 Database Design

The database design for FitChk consists of several core tables that manage user information, product data, cart items, and reviews.

1. Cart Table

The Cart table stores information about the items a user adds to their shopping cart.

- **Fields:**
  - cart_id (Primary Key): Unique identifier for each cart.
  - user_id (Foreign Key from Login): Links the cart to a specific user.
  - product_id (Foreign Key from Products): Links to the product being added to the cart.
  - quantity: The number of units of the product in the cart.
  - total_price: The total price of the products based on quantity.

2. Login Table

The Login table manages user account information, including authentication details and personal information. It ensures secure login and tracks user activity.

- Fields:

- user_id (Primary Key): Unique identifier for each user.
- username: The username used for logging in.
- password: The encrypted password for secure login.
- email: The user's email address for account recovery and notifications.

3. Products Table

The Products table holds all information related to the available apparel items on FitChk. Each product entry contains details necessary for display on the site.

- Fields:

- product_id (Primary Key): Unique identifier for each product.
- product_name: The name of the product.
- description: A detailed description of the product.
- price: The price of the product.
- category: The product categorised based on gender.
- image_url: Link to the product image.

4. Review Table

The Review_Table stores customer feedback and reviews for products. It is linked to both the Login and Products tables to ensure that only authenticated users can leave reviews for products they have purchased.

- Fields:

- user_id (Foreign Key from Login): Links the review to a specific user.
- product_id (Foreign Key from Products): Links the review to a specific product.
- rating: The rating given by the user (out of 5).
- review: The written review or feedback.

- review_date: The date when the review was submitted.

Relationships Between Tables

- The Login table is related to both the Cart and Review_Table through user_id, linking each user to their respective cart items and reviews.

- The Products table is connected to the Cart and Review_Table through product_id, ensuring each cart and review item corresponds to a specific product.

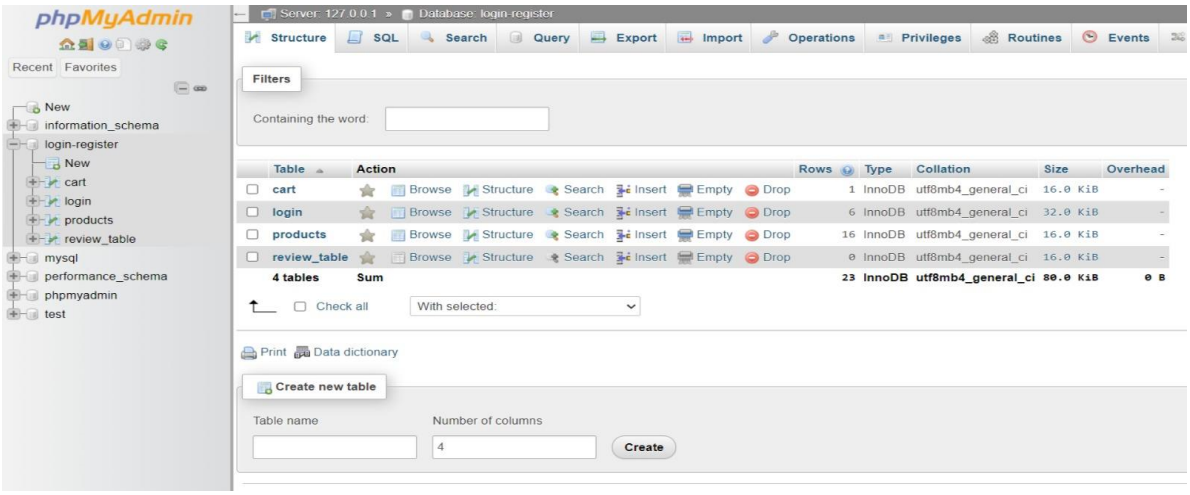

Fig 4.3.1 Database Image

5 IMPLEMENTATION

5.1 IMPLEMENTATION

1. Project Planning & Requirements Gathering

- **Define Scope:** Outline the features (e.g., user registration, product catalog, search functionality, cart management, checkout process).
- **Design Wireframes:** Sketch out the UI/UX layout for all pages (home, product listing, product detail, cart, checkout, user account).
- **Database Design:** Identify the necessary tables (e.g., users, products, orders, order_items, categories, etc.) and their relationships.

2. Setup Development Environment

- **Install Server Software:** Set up a local development environment with Apache, MySQL, and PHP (using XAMPP).
- **Create the Project Structure:** Organize folders for assets (CSS, JavaScript, images), PHP scripts, and HTML templates.

3. Front-End Development

- **HTML Structure:** Create the basic structure for the website using HTML.
- **Develop key pages:** Home, Product Listing, Product Detail, Cart, and Checkout.
- **CSS Styling:** Style the website using CSS, ensuring responsiveness for various screen sizes.
- Use CSS frameworks like Bootstrap for quicker styling and layout design.

4. Back-End Development

- **Database Integration with PHP:** Connect to the MySQL database using PHP. Implement CRUD operations (Create, Read, Update, Delete) for products, users, and orders. Develop the user registration and login system with sessions.

- **Cart Management:**
  Use PHP sessions to manage the shopping cart. Allow users to add, remove, and update items in their cart.
- **Search Functionality:** Develop a search feature using SQL queries to filter products based on user input.
- **Checkout Process:** Handle the checkout process, including order summary, payment processing (mocked), and order confirmation.
  Store order details in the database.

5. Testing

- **Unit Testing:** Test individual components and features (e.g., display using categories, add to cart, checkout).
- **Integration Testing:** Ensure that all parts of the website work together seamlessly.

6. Maintenance and Updates

- **Monitor Performance:** Regularly check for performance issues, such as slow load times or broken links.
- **Security Updates:** Ensure the website is secure by updating PHP and other software, and by fixing any vulnerabilities.
- **Feature Enhancements:** Based on user feedback, add new features or improve existing ones (e.g., adding a wishlist feature, integrating payment gateways).

5.2SAMPLE CODE

login.php

```
<?php
include 'config.php';
session_start();
if(isset($_POST['submit'])){
   $email = mysqli_real_escape_string($conn, $_POST['email']);
   $pass = mysqli_real_escape_string($conn, md5($_POST['password']));
   $select = mysqli_query($conn, "SELECT * FROM `login` WHERE email = '$email' AND
password = '$pass'") or die('query failed');
   if(mysqli_num_rows($select) > 0){
      $row = mysqli_fetch_assoc($select);
      $_SESSION['user_id'] = $row['id'];
      header('location:index.php');
   }else{
      $message[] = 'Incorrect Password or Email!';
   }
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Login</title>
   <link rel="stylesheet" href="log_reg.css">
</head>
<body>
```

```
<div id="video-bg">
      <video autoplay muted loop plays-inline class="background-clip">
         <source src="Images/bg-clip.mp4" type="video/mp4">
</div>
<?php
if(isset($message)){
  foreach($message as $message){
    echo '<div class="message" onclick="this.remove();">'.$message.'</div>';
  }
}
?>

  <section>
<div id="php-form">
  <form action="login.php" method="post">
    <div class="login-heading"><h1>Login</h1></div>
    <div class="login-input">
    <div class="input-box">
      <span class="icon"><ion-icon name="mail"></ion-icon></span>
      <input type="email" name="email" required>
      <label>Email</label>
    </div>
    <div class="input-box">
      <span class="icon"><ion-icon name="lock-closed"></ion-icon></span>
      <input type="password" name="password" required>
      <label>Password</label>
    </div>
    </div>
    <input type="submit" name="submit" id="btn" value="Login Now">
    <div class="register-link">
```

```
    <p>Don't have an account? <a href="register.php">Register Now!</a></p>
    </div>
  </form>
</div>
</section>
<script type="module" src="https://unpkg.com/ionicons@7.1.0/dist/ionicons/ionicons.esm.js"> </script>
<script nomodule src="https://unpkg.com/ionicons@7.1.0/dist/ionicons/ionicons.js"> </script>
</body></html>
```

index.php

```
<?php
include 'config.php';
session_start();
$user_id = $_SESSION['user_id'];
if (!isset($user_id)) {
   header('location:login.php');
};
if (isset($_GET['logout'])) {
   unset($user_id);
   session_destroy();
   header('location:login.php');
};
if (isset($_POST['add_to_cart'])) {
   $product_name = $_POST['product_name'];
   $product_price = $_POST['product_price'];
   $product_image = $_POST['product_image'];
   $product_quantity = $_POST['product_quantity'];
   $select_cart = mysqli_query($conn, "SELECT * FROM `cart` WHERE name = '$product_name' AND user_id = '$user_id'") or die('query failed');
```

```
   if (mysqli_num_rows($select_cart) > 0) {
      $message[] = 'product already added to cart!';
   } else {
      mysqli_query($conn, "INSERT INTO `cart`(user_id, name, price, image, quantity) VALUES('$user_id', '$product_name', '$product_price', '$product_image', '$product_quantity')") or die('query failed');
      $message[] = 'product added to cart!';
   }
};
if (isset($_POST['update_cart'])) {
   $update_quantity = $_POST['cart_quantity'];
   $update_id = $_POST['cart_id'];
   mysqli_query($conn, "UPDATE `cart` SET quantity = '$update_quantity' WHERE id = '$update_id'") or die('query failed');
   $message[] = 'cart quantity updated successfully!';
}
if (isset($_GET['remove'])) {
   $remove_id = $_GET['remove'];
   mysqli_query($conn, "DELETE FROM `cart` WHERE id = '$remove_id'") or die('query failed');
   header('location:index.php');
}
if (isset($_GET['delete_all'])) {
   mysqli_query($conn, "DELETE FROM `cart` WHERE user_id = '$user_id'") or die('query failed');
   header('location:index.php');
}
?>
<html>
<head>
```

```
    <title>Online Shopping Site for all your Clothing Apparels</title>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.5.2/css/all.min.css">
    <link href='https://unpkg.com/boxicons@2.1.4/css/boxicons.min.css' rel='stylesheet'>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <?php
    if (isset($message)) {
        foreach ($message as $message) {
            echo '<div class="message" onclick="this.remove();">' . $message . '</div>';
        }
    }
    ?>
    <!-- HEADER STARTS -->
    <section id="header">
        <div class="sidebar" id="sidebar">
            <h5>SHOP<br>BY</h5>
            <ion-icon name="close-outline" class="closebtn" onclick="closeNav()"></ion-icon>
            <div class="categories">
                <div class="category-name-icon" onclick="toggleDropdown()">
                    <div class="cat-icon"><ion-icon name="list-outline" class="cat-icon"></ion-icon></div>
                    <div class="cat-name">
                        <h2>Categories</h2>
                    </div>
        <div class="dropdown-icon"><ion-icon name="chevron-down-outline"></ion-icon></div>
                </div>
```

```
            <div class="cat">
                <span>
                    <?php

                    $select_category = "SELECT category, category_id FROM products GROUP BY category_id";
                    $result_category = mysqli_query($conn, $select_category) or die("query failed");
                    while ($row_data = mysqli_fetch_assoc($result_category)) {
                        $category_title = ucfirst($row_data["category"]);
                        $category_id = $row_data["category_id"];
                        echo "<a href='index.php?category=$category_title'>$category_title</a>";
                    }
                    ?>
                </span>
            </div>
        </div>
        <hr>
         <div class="brand-name-icon" onclick="toggleDropdownBrand()">
            <div class="brand-icon"><ion-icon name="shirt" class="brand-icon"></ion-icon></div>
            <div class="brand-name">
                <h2>Brands</h2>
            </div>
            <div class="dropdown-icon"><ion-icon name="chevron-down-outline"></ion-icon></div>
        </div>
        <div class="brands">
            <span>
```

```
            <?php
            $select_brands = "SELECT brand, brand_id FROM products GROUP BY brand_id";
            $result_brands = mysqli_query($conn, "$select_brands") or die("query failed");
            while ($row_data = mysqli_fetch_assoc($result_brands)) {
               $brand_title = $row_data["brand"];
               $brand_id = $row_data["brand_id"];
               echo " <a href = 'index.php?brand=$brand_title'>$brand_title</a>";
            }
            ?>
         </span>
      </div>

      <hr>
      <div class="reserved-cpyright">Copyright © 2024, <br> FitChk // Your Ultimate Shopping Companion<br> All
         Rights Reserved.</div>
   </div>
   <div class="content" id="content">
      <button class="openbtn" onclick="openNav()">&#9776;</button>
      <a href="about.php"> <img src="Images/LOGO.png" class="logo"> </a>
   </div>
   <?php
   $select_user = mysqli_query($conn, "SELECT * FROM `login` WHERE id = '$user_id'") or die('query failed');
   if (mysqli_num_rows($select_user) > 0) {
      $fetch_user = mysqli_fetch_assoc($select_user);
   };
   ?>
   <p><b> Welcome, <span><?php echo $fetch_user['username']; ?></span> </b></p>
```

```
        <div>
            <ul id="navbar">
                <li> <a class="active" href="index.php"> Home </a></li>
                <li> <a href="shop.php"> Shop </a></li>
                <li> <a href="about.php"> About </a></li>
                <li> <a href="contact.php"> Contact </a></li>
                <?php
                $select_product = mysqli_query($conn, "SELECT * FROM `cart`") or die('query failed');
                $row_count = mysqli_num_rows($select_product);
                ?>
                <div class="cart-icon">
                    <li> <span class="icon"><ion-icon onclick="location.href='cart.php'" name="cart"></ion-icon></span>
                        <span class="cart-span"><?php echo $row_count; ?> </span>
                    </li>
                </div>
                <li> <a href="index.php?logout=<?php echo $user_id; ?>"
                        onclick="return confirm('Are you sure you want to Logout?');" class="delete-btn">Logout</a></li>
            </ul>
        </div>
    </section>
    <!-- HEADER ENDS -->

    <!-- HERO SECTION SLIDER -->
    <section id="hero">
        <div id="banner-slides">
            <div class="wrapper">
                <div class="wrapper-holder">
```

```
                <div id="slider-img-1"></div>
                <div id="slider-img-2"></div>
                <div id="slider-img-3"></div>
                <div id="slider-img-4"></div>
            </div>
        </div>
    </div>
</section>
<!-- HERO SECTION SLIDER ENDS -->

<!-- PRODUCTS -->
<section id="product1" class="section-p1">
    <h1> Featured Products </h1>
    <p> Summer Collection Is Now For Sale! </p>
    <div class="container">
        <div class="products">
            <div class="box-container">
                <?php
                if (!isset($_GET['category'])) {
                    if (!isset($_GET['brand'])) {
                        $select_product = mysqli_query($conn, "SELECT * FROM `products`")
or die('query failed');

                        if (mysqli_num_rows($select_product) > 0) {
                            while ($fetch_product = mysqli_fetch_assoc($select_product)) {
                                ?>
                                <form method="post" class="box" action="">
                                    <img src="images/<?php echo $fetch_product['image']; ?>"
alt="">
                                    <div class="desc">
```

```
                        <h5 class="product-title"> <?php echo $fetch_product['brand']; ?> </h5>
                    </div>
                    <div class="name"><span><?php echo $fetch_product['name']; ?></span></div>
                    <div class="price">₹<?php echo $fetch_product['price']; ?> </div>
                    <div class="qty-btn">
                        <input type="number" min="1" name="product_quantity" value="1">
                        <a href="view_detail.php?pid=<?php echo $fetch_product['id']; ?>" class="add"><ion-icon
                                name="eye"></ion-icon></a>
                        <button class="btn" name="add_to_cart"> <i onclick="location.href='cart.php'"
                                class='bx bxs-cart-alt' id="cart-icon"></i></button>
                    </div>
                    <input type="hidden" name="product_image" value="<?php echo $fetch_product['image']; ?>">
                    <input type="hidden" name="product_name" value="<?php echo $fetch_product['name']; ?>">
                    <input type="hidden" name="product_price" value="<?php echo $fetch_product['price']; ?>">
                </form>
                <?php
            }; }; }; };
        ?>
    </div>
</section>
<!-- PRODUCTS ENDS -->
<script>
```

```
    function openNav() {
        document.getElementById("sidebar").style.width = "350px";
        document.getElementById("content").style.marginLeft = "350px";
        document.getElementsByClassName("openbtn")[0].style.display = 'none';
    }
    function closeNav() {
        document.getElementById("sidebar").style.width = "0";
        document.getElementById("content").style.marginLeft = "0";
        document.getElementsByClassName("openbtn")[0].style.display = 'block';
    }
</script>
<script>
    function toggleDropdown() {
        var dropdownContent = document.querySelector('.cat');
        if (dropdownContent.style.display === "block") {
            dropdownContent.style.display = "none";
            dropdownContent.style.maxHeight = "0";
        } else {
            dropdownContent.style.display = "block";
            dropdownContent.style.maxHeight = dropdownContent.scrollHeight + "px";
        }
    }
</script>
<script>
    function toggleDropdownBrand() {
        var dropdownContent = document.querySelector('.brands');
        if (dropdownContent.style.display === "block") {
            dropdownContent.style.display = "none";
            dropdownContent.style.maxHeight = "0";
        } else {
```

```
            dropdownContent.style.display = "block";
            dropdownContent.style.maxHeight = dropdownContent.scrollHeight + "px";
        }}
    </script>
 <script type="module" src="https://unpkg.com/ionicons@7.1.0/dist/ionicons/ionicons.esm.js">
 </script>
 <script nomodule src="https://unpkg.com/ionicons@7.1.0/dist/ionicons/ionicons.js"></script>
</body>
</html>
```

viewdetail.php

```
<?php
include 'config.php';
session_start();
$user_id = $_SESSION['user_id'];
if (!isset($user_id)) {
    header('location:login.php');
};
$sqlProductReview = "SELECT * FROM review_table WHERE  id = " . $_GET['pid'] . "
ORDER BY review_id DESC";
$result = $conn->query($sqlProductReview);
$sqlTotalReview = "SELECT * FROM review_table WHERE id = " . $_GET['pid'] . "
ORDER BY review_id DESC";
$resultTotalReview = $conn->query($sqlTotalReview);
$ratingCount = $resultTotalReview->fetch_assoc();
$sqlReviewCount = "SELECT COUNT(*) AS review_count FROM review_table WHERE
id = " . $_GET['pid'] . " ORDER BY review_id DESC";
$resultReviewCount = $conn->query($sqlReviewCount);
$reviewCount = $resultReviewCount->fetch_assoc();
if (isset($_GET['logout'])) {
    unset($user_id);
    session_destroy();
```

```
        header('location:login.php');
    };
    if (isset($_POST['add_to_cart'])) {
        $product_name = $_POST['product_name'];
        $product_price = $_POST['product_price'];
        $product_image = $_POST['product_image'];
        $product_quantity = $_POST['product_quantity'];
        $select_cart = mysqli_query($conn, "SELECT * FROM `cart` WHERE name =
    '$product_name' AND user_id = '$user_id'") or die('query failed');
        if (mysqli_num_rows($select_cart) > 0) {
            $message[] = 'product already added to cart!';
        } else {
            mysqli_query($conn, "INSERT INTO `cart`(user_id, name, price, image, quantity)
    VALUES('$user_id', '$product_name', '$product_price', '$product_image',
    '$product_quantity')") or die('query failed');
            $message[] = 'product added to cart!';
        }
    };
    ?>
        <?php
        if (isset($message)) {
            foreach ($message as $message) {
                echo '<div class="message" onclick="this.remove();">' . $message . '</div>';
            }
        }
        ?>
<!-- PRODUCTS -->
    <section class="product-detail">
        <?php
        if (isset($_GET['pid'])) {
            $pid = $_GET['pid'];
            $select_product = mysqli_query($conn, "SELECT * FROM `products` WHERE id= '$pid'") or
die('query failed');
            if (mysqli_num_rows($select_product) > 0) {
```

```
            while ($fetch_product = mysqli_fetch_assoc($select_product)) {
               ?>
               <div class="popup-card">
                  <div class="popup-card-detail">
                     <div class="popup-img">
                        <figure>
                           <img src="images/<?php echo $fetch_product['image']; ?>" id="mainImage">
                        </figure>
                     </div>
                     <div class="info">
                     <form method="post" class="box" action="">
                        <div class="brand-name">
                           <h5 class="product-title"> <?php echo $fetch_product['brand']; ?> </h5>

</div>
                        <div class="name"><span><?php echo $fetch_product['name']; ?></span></div>
                        <h3>
                           <div class="price">₹<?php echo $fetch_product['price']; ?> </div>
                        </h3>
                        <div class="qty-product">
                           <span>Quantity</span>
                        <input type="number" min="1" name="product_quantity" value="1">
                        </div>

                           <button class="desc-btn" name="add_to_cart"> <i
 onclick="location.href='cart.php'"
                           class='bx bxs-cart-alt' id="cart-icon"></i></button>

                        <p> <?php echo $fetch_product['detail']; ?></p>

                        <input type="hidden" name="product_image" value="<?php echo
 $fetch_product['image']; ?>">
                        <input type="hidden" name="product_name" value="<?php echo
 $fetch_product['name']; ?>">
                        <input type="hidden" name="product_price" value="<?php echo
 $fetch_product['price']; ?>">
                        </form>
                     </div>
                  </div>
               </div>
               <?php
            }
         }
      }
```

```
?>
</html>
```

cart.php

```
<?php
include 'config.php';
session_start();
$user_id = $_SESSION['user_id'];
if (!isset($user_id)) {
   header('location:login.php');
};
if (isset($_GET['logout'])) {
   unset($user_id);
   session_destroy();
   header('location:login.php');
};
if (isset($_POST['update_cart'])) {
   $update_quantity = $_POST['cart_quantity'];
   $update_id = $_POST['cart_id'];
   mysqli_query($conn, "UPDATE `cart` SET quantity = '$update_quantity' WHERE id =
'$update_id'") or die('query failed');
   $message[] = 'cart quantity updated successfully!';
}

if (isset($_GET['remove'])) {
   $remove_id = $_GET['remove'];
   mysqli_query($conn, "DELETE FROM `cart` WHERE id = '$remove_id'") or die('query
failed');
   header('location:cart.php');
}
if (isset($_GET['delete_all'])) {
```

```
   mysqli_query($conn, "DELETE FROM `cart` WHERE user_id = '$user_id'") or
die('query failed');
   header('location:cart.php');
}
?>
<!DOCTYPE html>
  <!--SHOPPING CART STARTS -->
   <div class="container">
      <div class="shopping-cart">
         <h1 class="heading">shopping cart</h1>
         <table>
            <tbody>
               <?php
               $cart_query = mysqli_query($conn, "SELECT * FROM `cart` WHERE user_id =
'$user_id'") or die('query failed');
               $grand_total = 0;
               if (mysqli_num_rows($cart_query) > 0) {
                  while ($fetch_cart = mysqli_fetch_assoc($cart_query)) {
                     ?>
                     <tr>
                        <td><img src="images/<?php echo $fetch_cart['image']; ?>" height="100"
alt=""></td>
                        <td><?php echo $fetch_cart['name']; ?></td>
                        <td>₹<?php echo $fetch_cart['price']; ?></td>
                        <td>
                           <form action="" method="post">
                              <input type="hidden" name="cart_id" value="<?php echo
$fetch_cart['id']; ?>">
 <tr class="table-bottom">
<td colspan="4">Cart Total:</td>
<td>₹<?php echo $grand_total; ?></td>
<td><a href="cart.php?delete_all" onclick="return confirm('Delete all items from
```

```
cart?');"
class="delete-btn <?php echo ($grand_total > 1) ? " : 'disabled'; ?>">Delete
        All Items</a>
</td>
</tr>
</tbody>
</table>
<div class="cart-btn">
<button onclick="location.href='checkout.php'"
class="checkout-btn <?php echo ($grand_total > 1) ? " : 'disabled'; ?>">proceed to
checkout</button>
<button onclick="location.href='index.php'" class="home-btn"> Back To Home Page
 </button>

        </div>

      </div>

   </div>

   </body>

   </html>
<!--SHOPPING CART ENDS---!>
```

For Full code visit: https://github.com/PraneethDoesDesignz/FitChk

6.TESTING

6.1TESTING

Software testing is a critical component of the software development lifecycle. It involves the process of evaluating software or a system's performance, functionality, and quality to identify and rectify defects, bugs, or errors. The primary purpose of software testing isto ensure that the software or system meets the specified requirements and performs as expected. The types of software testing can be broadly classified into two categories : manual testing and automated testing. Manual testing involves executing test cases manually, while automated testing uses tools to automate the testing process.

1. Unit Testing

Unit Testing focuses on validating individual components or units of the FitChk application, such as functions, methods, or classes.

- Each function or method within the system is tested independently to ensure that it performs as expected.
- Test cases are written for specific functionalities, such as user registration, adding items to the cart, or calculating total costs.
- Any bugs or issues identified at this stage are resolved before moving on to more complex testing phases.

2. Integration Testing

Integration Testing examines how different modules and components of the FitChk platform work together.

- After individual units have been tested, they are integrated, and the interactions between them are tested. For example, the interaction between the user login module and the cart module is tested to ensure that a user can log in, add items to their cart, and proceed to checkout seamlessly.

- Testing is done to verify that data flows correctly between modules, such as ensuring that cart updates are reflected in the checkout process.
- Integration testing helps identify issues that might arise from the interaction of multiple components, which may not be apparent during unit testing.

3. Black Box Testing

Black Box Testing focuses on validating the functionality of the FitChk platform without considering the internal code structure. It is concerned with what the system does, rather than how it does it.

- Testers evaluate the system by providing input and examining the output, without knowledge of the internal code.
- For example, a tester might enter different user credentials to test the login process or add various items to the cart to test the checkout functionality.
- Scenarios are created based on user requirements and expected behavior, such as testing for correct error messages when invalid inputs are provided.
- This type of testing helps ensure that the system behaves as expected from the user's perspective.

4. White Box Testing

White Box Testing involves testing the internal workings of the FitChk platform, such as code logic, control structures, and data flow.

- Testers with knowledge of the internal code structure create test cases to validate specific code paths, loops, and conditions.
- For example, code segments responsible for calculating discounts or managing session data are tested to ensure they handle all possible inputs and scenarios.
- White Box Testing includes testing of code branches, loops, and other control structures to ensure that every possible execution path is covered.

6.2 TEST CASES

S. No	Test Case Description	Expected Result	Test Result
1	Test user login with valid credentials	System should allow the user to log in and redirect them to the landing page.	**Success**
2	Test user login with invalid credentials	System should display an error message indicating incorrect username or password.	**Success**
3	Test navigation between pages by clicking on different 'Navbar' redirects	System should redirect to different pages in the site when Navbar buttons are clicked (Shop, About, Contact Pages)	**Success**
4	Test User Interface and smoothness of animations	System should display animations in the UI smoothly when the user hovers over the product cards.	**Success**
5	Test Adding to Cart feature	System should add a product to cart and notify user when button is clicked and reflect the same in the database.	**Success**

6	Test View Details feature	System should allow the user to redirect to a page that displays product information and shows the reviews and ratings of the product.	**Success**
7	Test Review and Rating	System should allow users to be able to provide their reviews and rating regarding a certain product.	**Success**
8	Test Categories and Brands section	System should allow users to select the desired categories and brands and show related products.	**Success**
9	Test Newsletter feature	System should allow users to subscribe to montly feed and reflect the emails of the users in the Google Sheet that is linked.	**Success**
10	Test Shopping Cart	System should display a cart that shows the products added by the user.	**Success**
11	Test Shopping Cart by updating the quantity	System should display the updated quantity of the product when the user increases or decreases the	**Success**

		quantity of the product with the change in price.	
12	Test Shopping Cart by removing items	System should delete a single product or delete all the items in the cart when their respective buttons are clicked.	**Success**
13	Test Checkout (Payment)	System should redirect users to a page where they provide delivery details and be able to complete their payment process.	**Success**
14	Test Feedback form	System should allow users to provide their feedback or any queries if so in the Contact Page. The messages are automatically sent to FitChk's E-mail.	**Success**

7.OUTPUT SCREENS

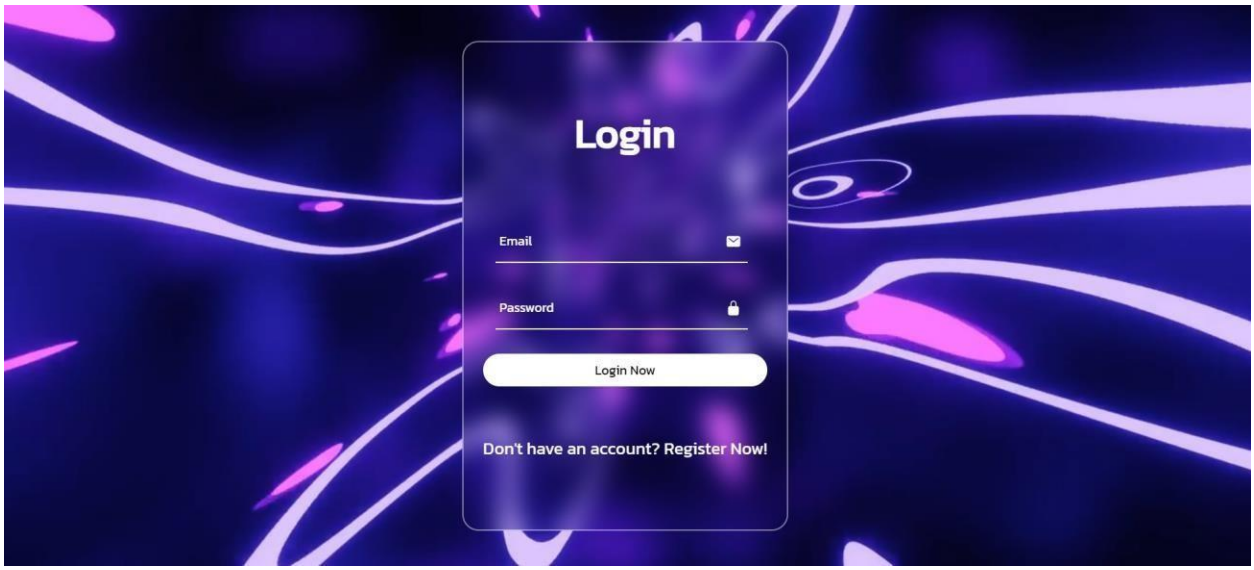

Fig 7.1 User Login page

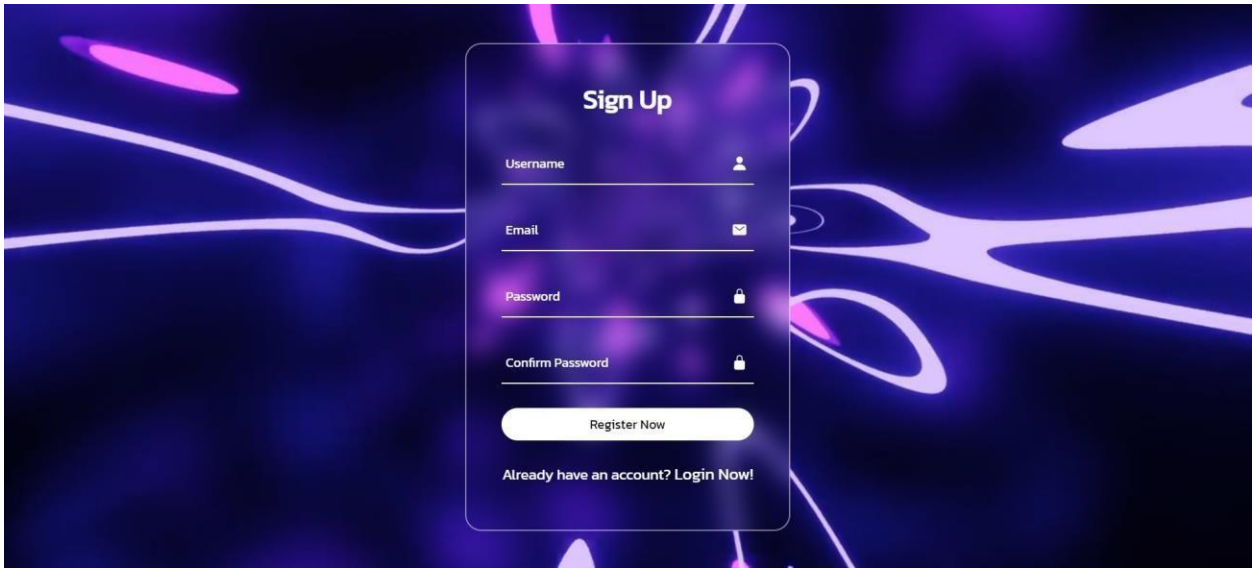

Fig 7.2 User Registration Page

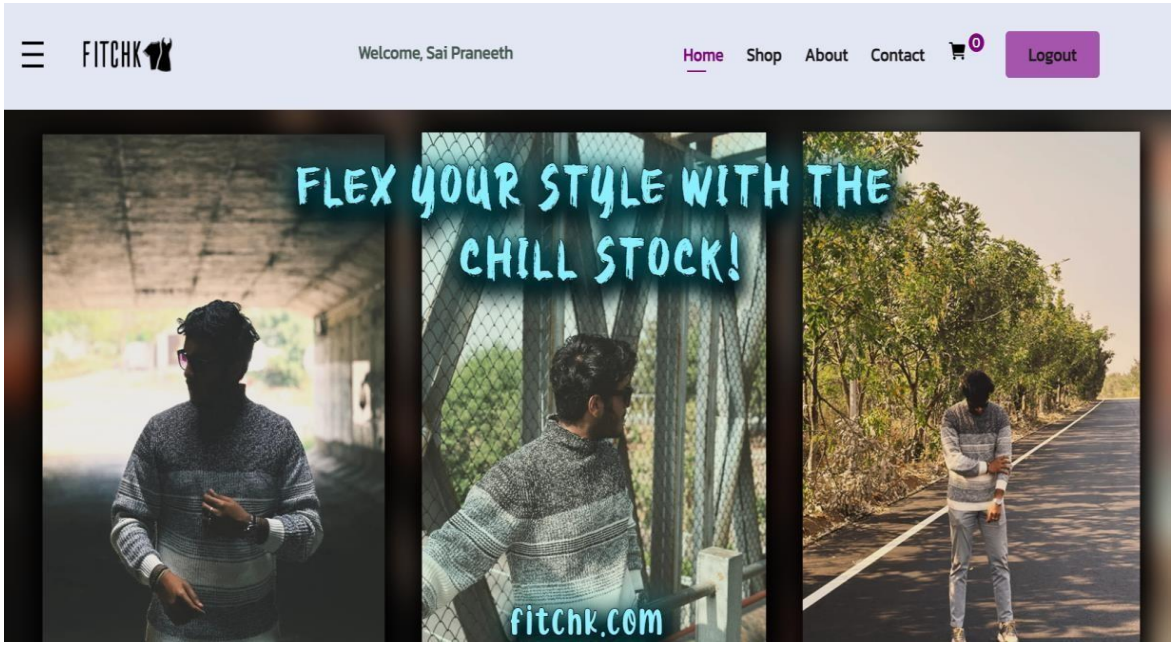

Fig 7.3.1 FitChk Home Page

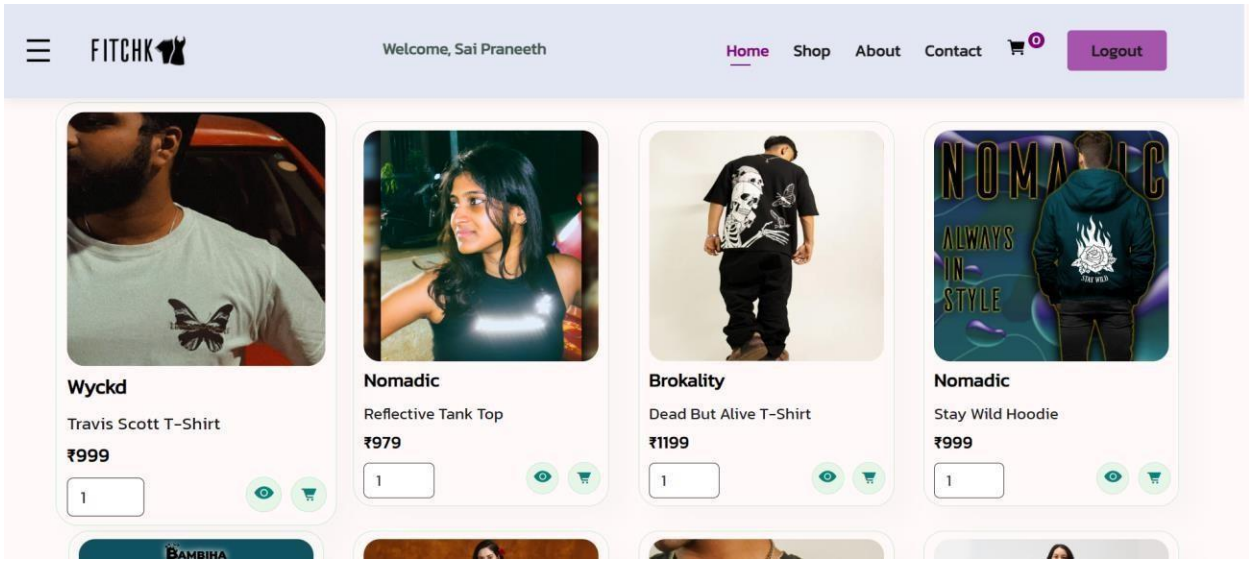

Fig 7.3.2 FitChk Home Page

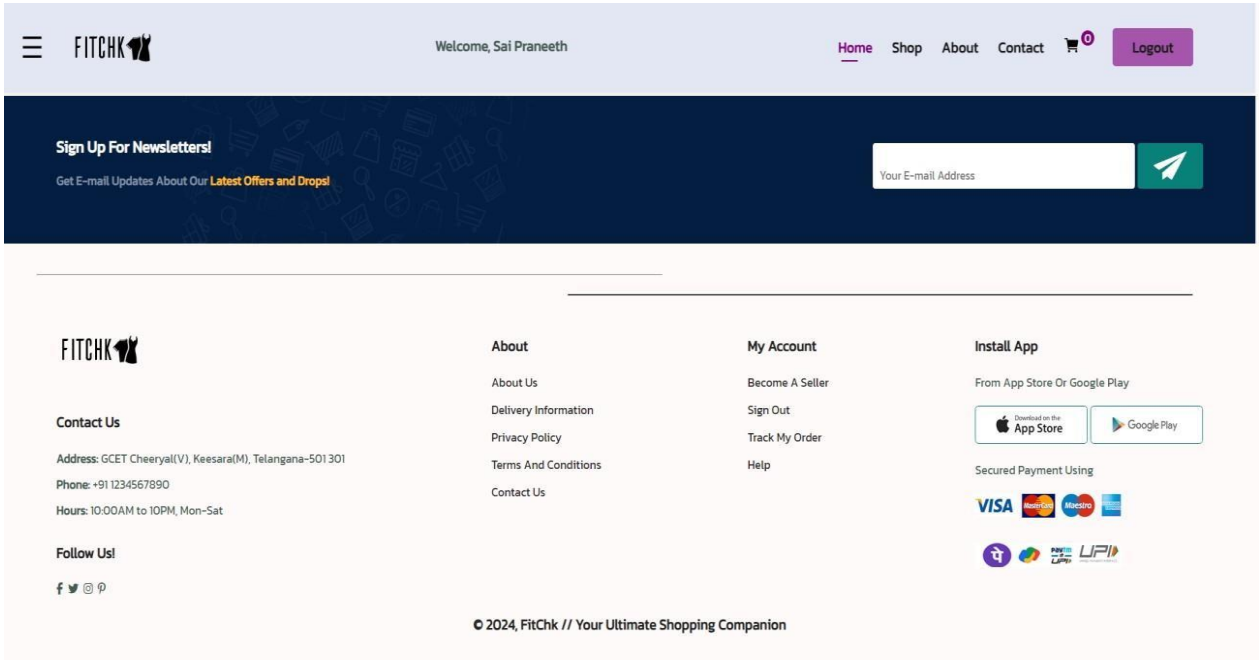

Fig 7.3.3 FitChk Home Page

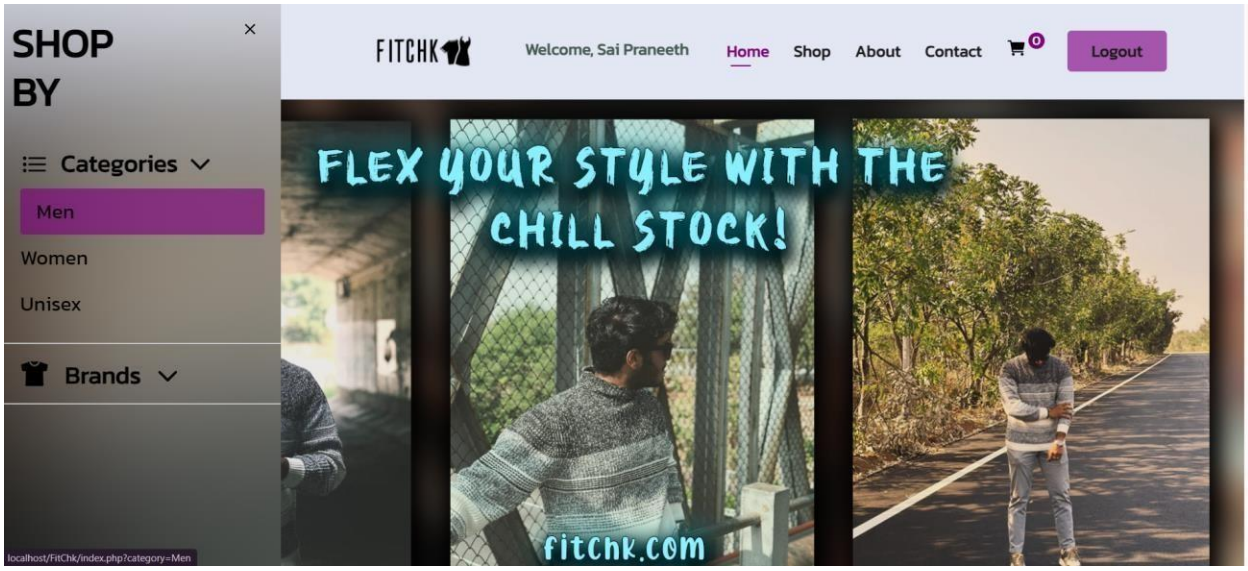

Fig 7.4 Categories

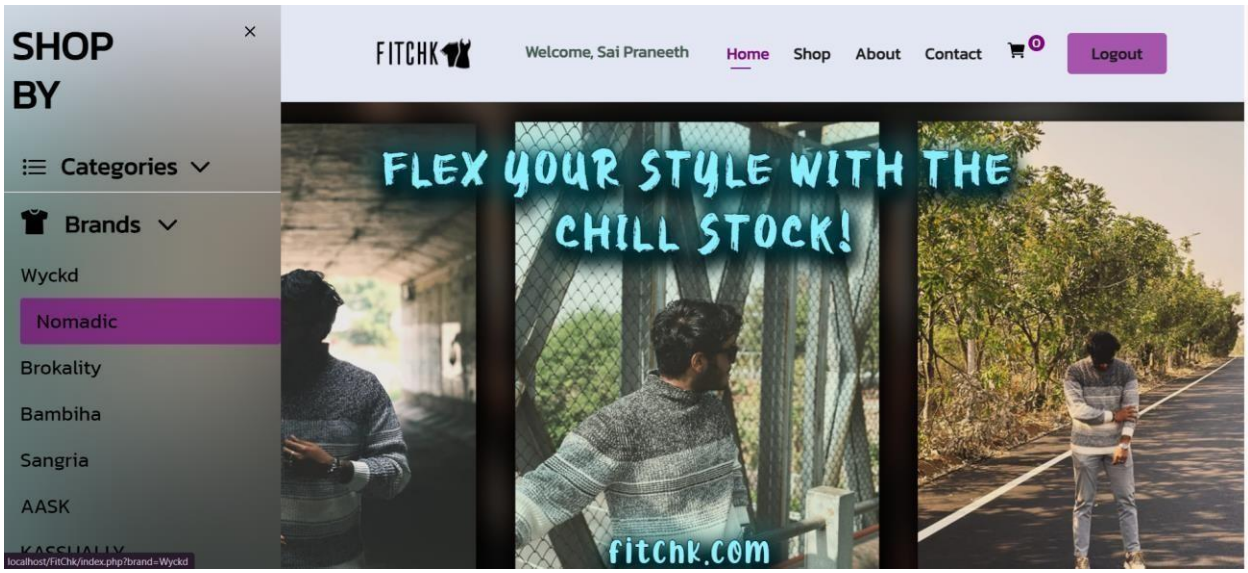

Fig 7.5 Brands

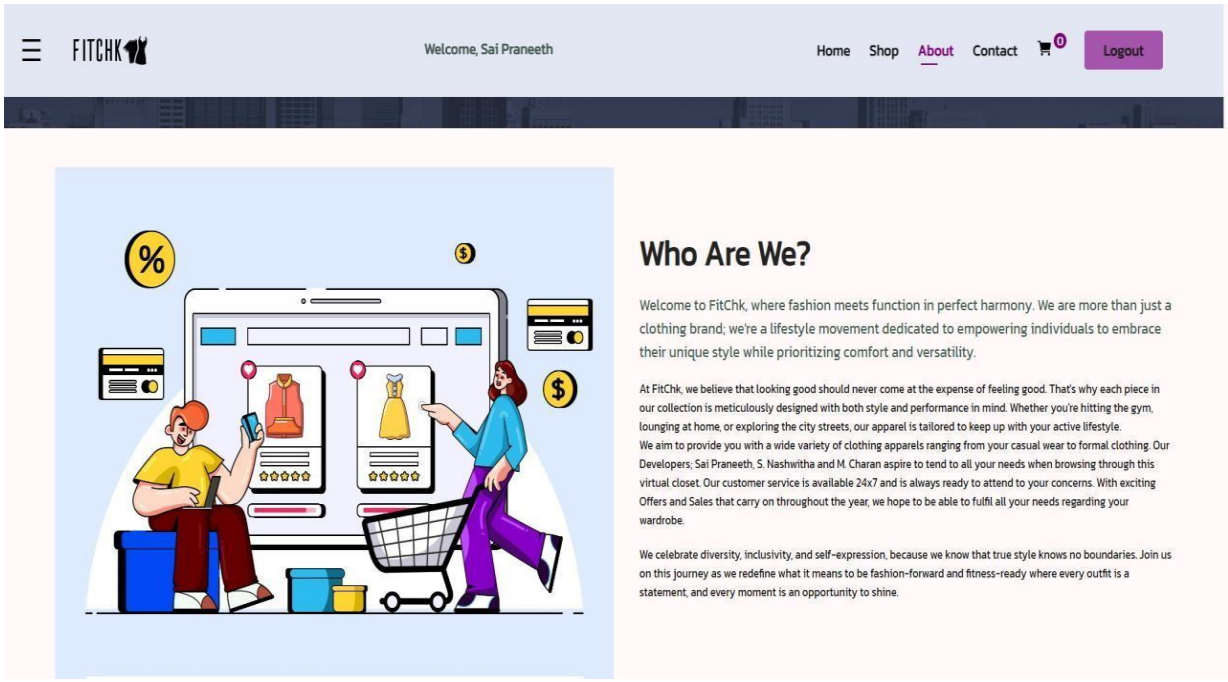

Fig 7.6 About Us Page

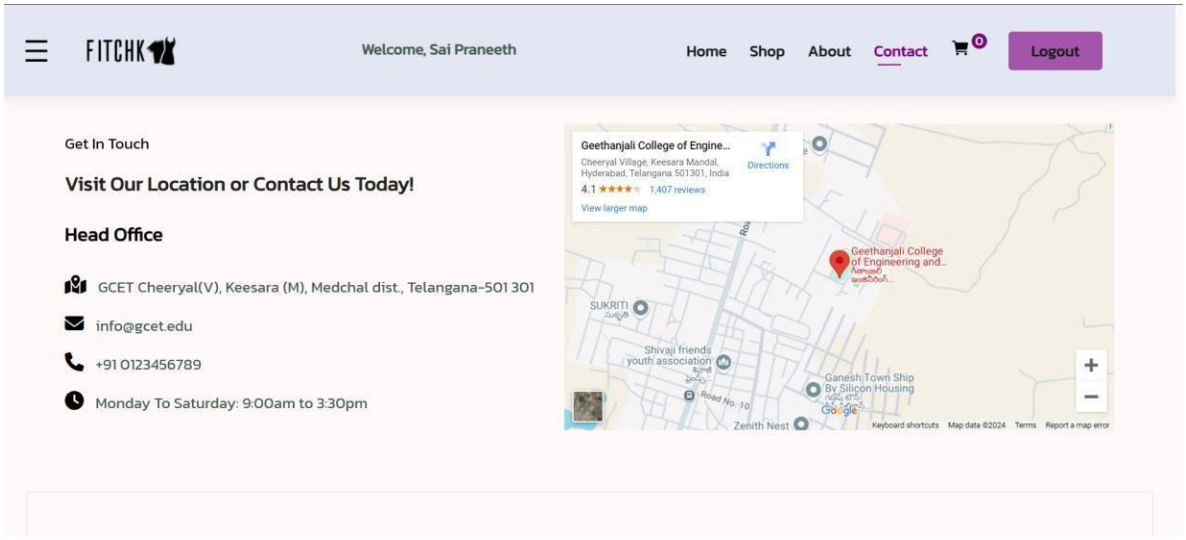

Fig 7.7.1 Contact Page

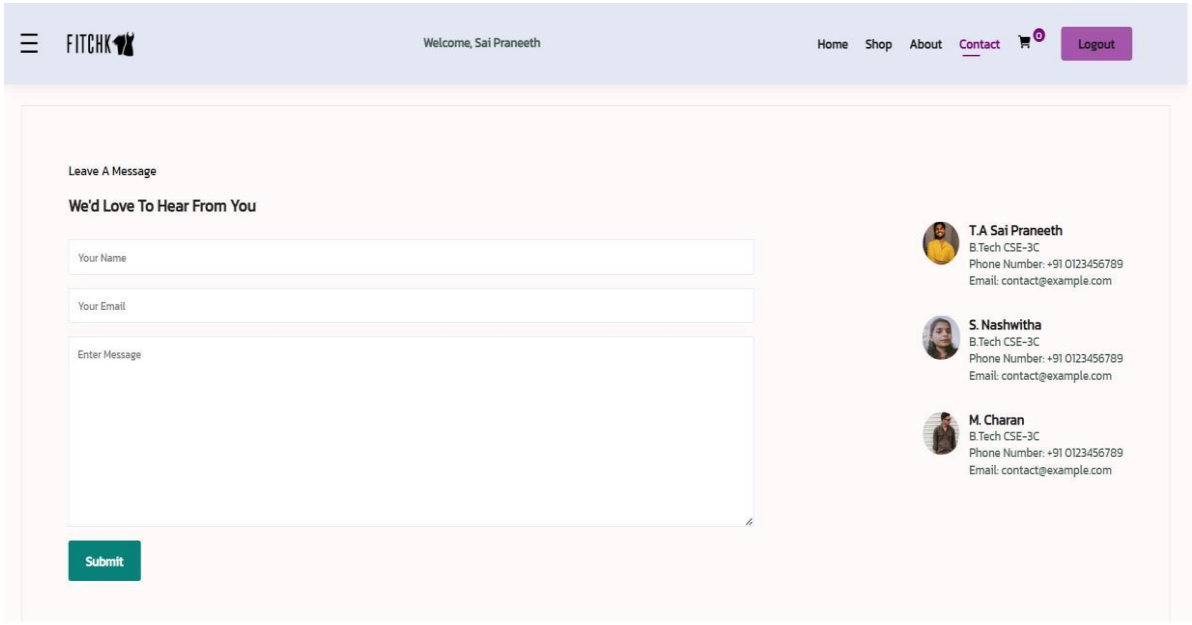

Fig 7.7.2 Contact Page

Fig 7.8 Product Details Page

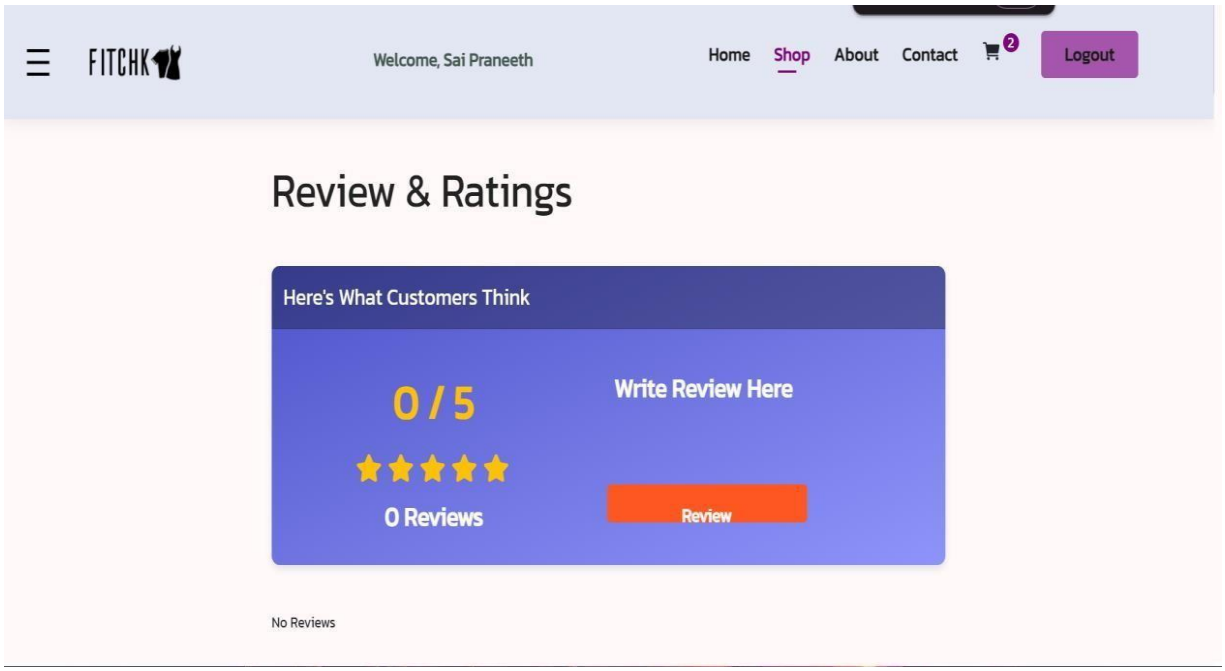

Fig 7.9 Review & Ratings Page

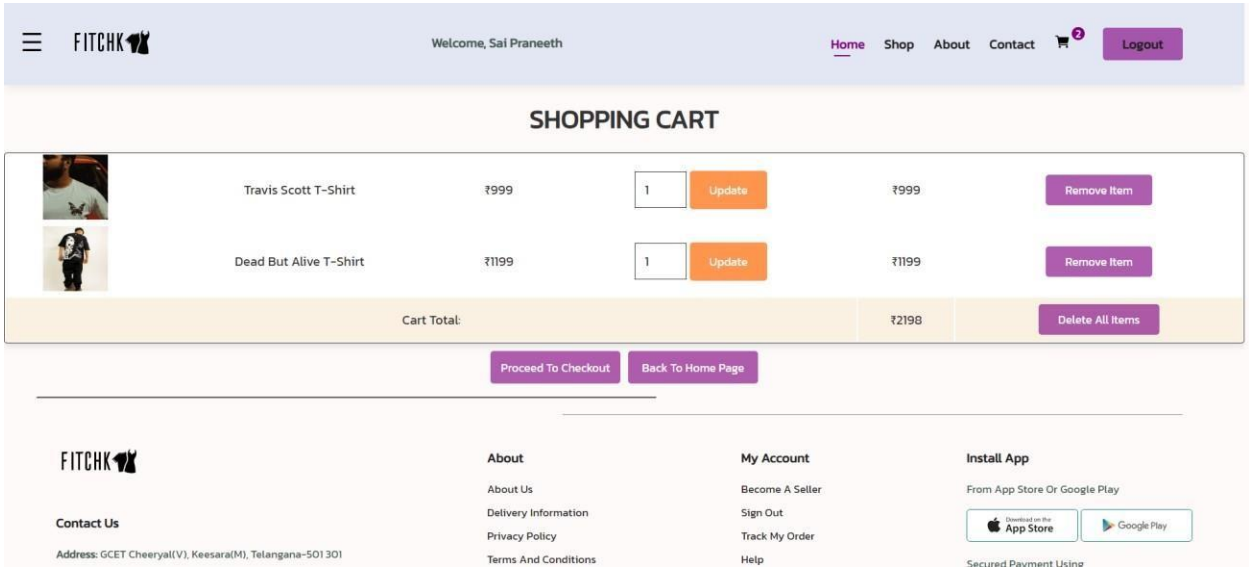

Fig 7.10 Cart Page

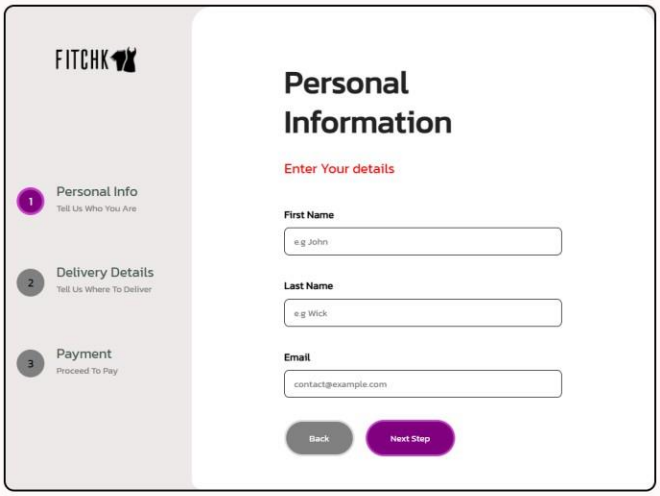

Fig 7.11.1 Checkout Page

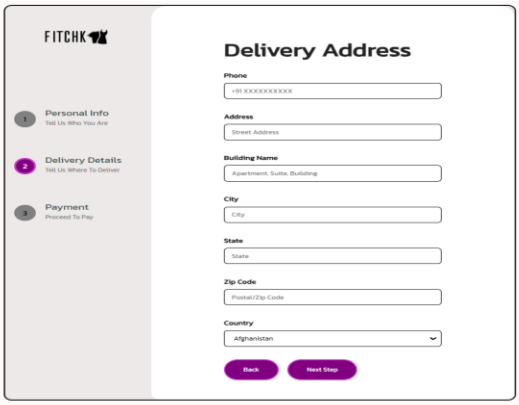

Fig 7.11.2 Checkout Page

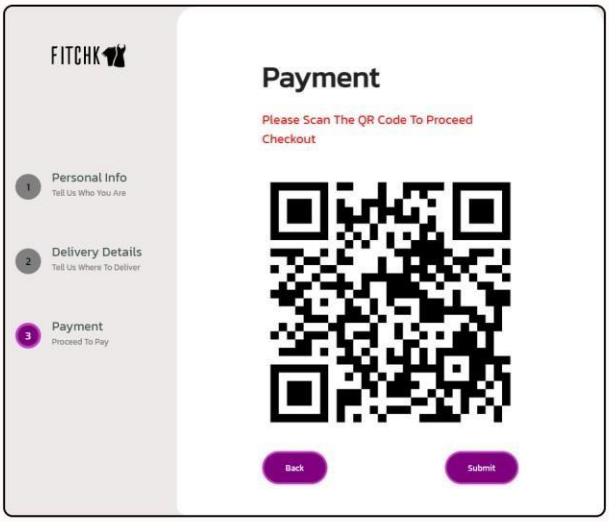

Fig 7.11.3 Checkout Page

8.CONCLUSION

8.1 CONCLUSION

The FitChk project represents a modern, user-centric e-commerce platform that successfully integrates essential features such as secure user registration, comprehensive product browsing, efficient cart management, and a streamlined checkout process. By supporting local businesses and offering a wide range of apparel options, FitChk positions itself as a versatile and scalable solution in the competitive online retail market.

The architecture of FitChk is designed to ensure both usability and security, providing a seamless shopping experience across multiple devices. With its robust backend and carefully crafted user interface, the platform meets the needs of today's consumers while laying the groundwork for future enhancements, such as personalized recommendations and expanded product categories.

Overall, FitChk not only fulfills its core mission of delivering a reliable and enjoyable online shopping experience but also demonstrates a commitment to supporting local businesses and adapting to the evolving demands of the e-commerce landscape.

8.2 FURTHER ENHANCEMENTS

Here are some future enhancements that could be done to improve shopping experience:

- Improved UI for better navigation between pages.
- Powerful search bar can be implemented to help users search for the desired product in our database.
- Payment Gateways can be implemented instead of scanning a QR that could not only make easy payment methods but also ensure safety and security.
- Increased size of our database would help users choose from a wider range of products.
- Delivery agencies can be associated with us at FitChk, to help users track their order and keep a check on the status of delivery.

9 BIBLIOGRAPHY

9.1 REFERENCES

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- **Laudon, K. C., & Traver, C. G. (2018). "E-Commerce: Business, Technology, Society."**The authors discuss scalability and security in e-commerce platforms, which informed the design principles of FitChk to handle user growth and ensure data protection.
- **Nielsen, J., & Norman, D. A. (2012). "Usability Engineering."**This work highlights the critical role of usability in e-commerce, guiding the user interface design of FitChk to prioritize intuitive navigation and user satisfaction.
- **Baymard Institute (2017). "E-Commerce Checkout Usability."**
  The study on cart abandonment and checkout processes influenced the streamlined and user-friendly checkout design in FitChk to reduce friction and improve conversion rates.
- **Rivest, R. L., Shamir, A., & Adleman, L. (1978).** "A Method for Obtaining Digital Signatures and Public-Key Cryptosystems."
  This foundational paper on cryptography supports the secure transaction processes in FitChk, ensuring the protection of user data and payment information.
- **Garfinkel, S., & Spafford, G. (2002). "Web Security, Privacy & Commerce."**
  The book's insights on secure login mechanisms and data protection were applied in FitChk to develop secure user authentication and session management.

10 APPENDICES

Appendix A: System Requirements

Software Requirements

- Web Server: XAMPP (version 3.3.0)
- Database: MySQL (libmysql - mysqlnd 8.2.12)
- Programming Languages: PHP, JavaScript
- IDE/Text Editor: VSCode (version 1.92.2)

Hardware Requirements

- Computer: Minimum Intel core i3, 2GB RAM, and 4GB Storage.
- Network: 9Mbps Down and 4.5Mpbs Up (Internet Speed)

Appendix B: Installation Guide

Step-by-Step Installation

1. Download and Install XAMPP
    - https://www.apachefriends.org/
    - Installation instructions
2. Set Up the Development Environment
    - How to configure XAMPP and start the Apache and MySQL services
3. Download and Configure FitChk
    - Clone/Download FitChk from GitHub https://github.com/PraneethDoesDesignz/FitChk
    - Configuration settings (e.g., database connection details)
4. Accessing the Application
    - Instructions on accessing FitChk via a web browser (e.g., localhost/fitchk)

Appendix C: Database Schema

Tables and Fields

- **Login Table**
    - Columns: id, username, email, password, etc.
- **Products Table**
    - Columns: id, brand, brand_id, name, rating, price, category, etc.
- **Cart Table**
    - Columns: id, user_id, name, price, quantity, etc.
- **Reviews Table**
    - Columns: user_name, user_rating, user_review, etc.

Appendix D: User Manual

User Roles and Permissions

- Customer
    - Access rights and functionalities

Common Tasks

- Browsing for products
- Checking categories and brands
- Subscribing to monthly feed
- Adding desired products to Cart/Wishlist
- Suggestions

Appendix E: Troubleshooting

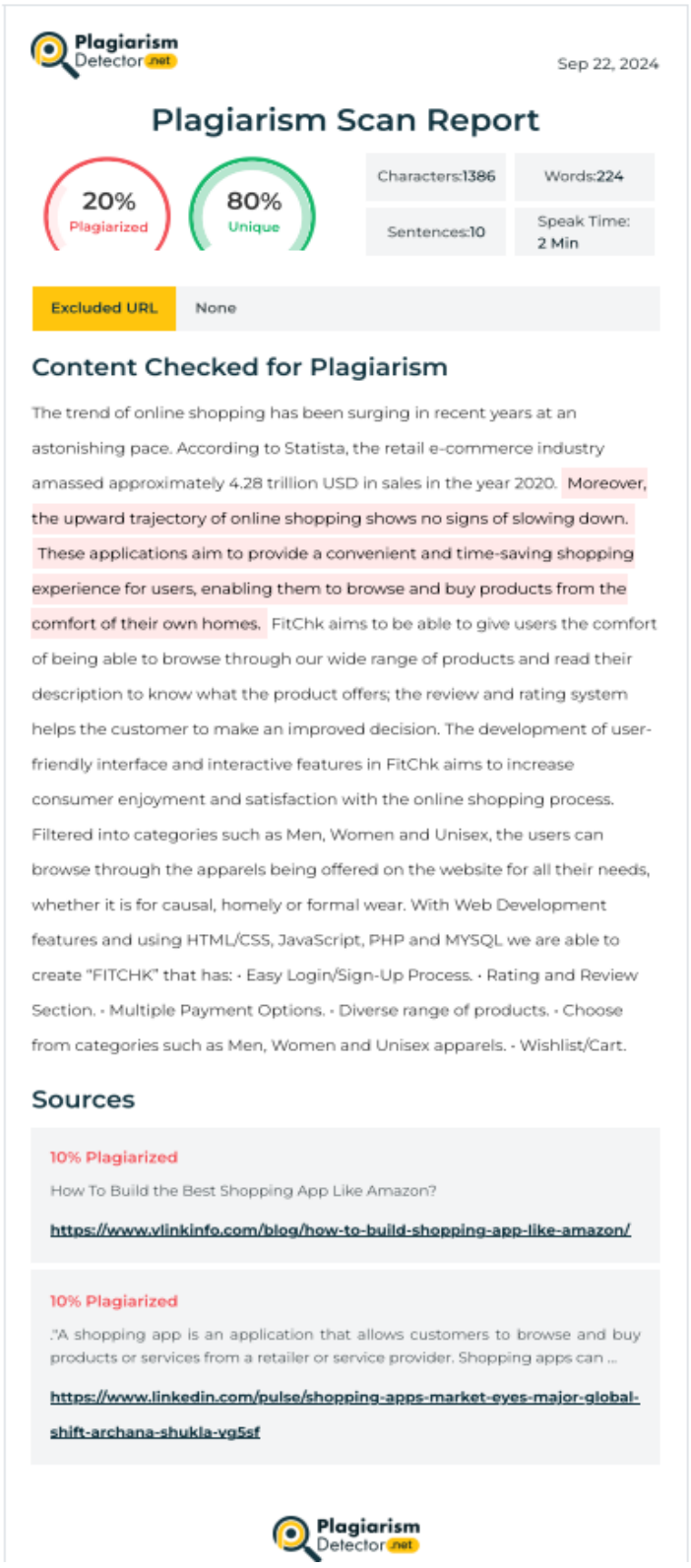
Common Issues

- Error: “Database Connection Failed”
    - Solution: Check database configuration in config.php
- Error: “Page Not Found”
    - Solution: Ensure URL is correct and files are in the correct directory

Appendix F: Glossary

- PHP: A server-side scripting language designed for web development.
- MySQL: A relational database management system.
- XAMPP: A free and open-source cross-platform web server solution stack package.

11.PLAGIARISM REPORT



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Plagiarism Scan Report

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The trend of online shopping has been surging in recent years at an astonishing pace. According to Statista, the retail e-commerce industry amassed approximately 4.28 trillion USD in sales in the year 2020. Moreover, the upward trajectory of online shopping shows no signs of slowing down. These applications aim to provide a convenient and time-saving shopping experience for users, enabling them to browse and buy products from the comfort of their own homes. FitChk aims to be able to give users the comfort of being able to browse through our wide range of products and read their description to know what the product offers; the review and rating system helps the customer to make an improved decision. The development of user-friendly interface and interactive features in FitChk aims to increase consumer enjoyment and satisfaction with the online shopping process. Filtered into categories such as Men, Women and Unisex, the users can browse through the apparels being offered on the website for all their needs, whether it is for causal, homely or formal wear. With Web Development features and using HTML/CSS, JavaScript, PHP and MYSQL we are able to create "FITCHK" that has: · Easy Login/Sign-Up Process. · Rating and Review Section. · Multiple Payment Options. · Diverse range of products. · Choose from categories such as Men, Women and Unisex apparels. · Wishlist/Cart.

Sources

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How To Build the Best Shopping App Like Amazon?

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."A shopping app is an application that allows customers to browse and buy products or services from a retailer or service provider. Shopping apps can ...

https://www.linkedin.com/pulse/shopping-apps-market-eyes-major-global-shift-archana-shukla-vg5sf

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