

# DESIGN AND IMPLEMENTATION OF ONLINE SHOPPING CART MANAGEMENT SYSTEM USING PHP WITH MYSQL-AN OVERVIEW

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**Abstract** - The "Online Shopping Cart Management System" project is a web-based shopping system designed to enhance interactivity and user-friendliness. Its main objective is to simplify the process of searching, viewing, and selecting products online. This system allows customers to browse a virtual store on the Internet, add selected items to a shopping cart, and proceed to checkout. During checkout, additional information such as billing and shipping addresses, shipping options, and payment details, including credit card numbers, may be required to complete the transaction. Once the order is placed, a confirmation email is sent to the customer. The project is developed and implemented by using HTML, CSS, Javascript, PHP, and MySQL. HTML, CSS, and JavaScript are used for web page development (front end). PHP is used for server-side Scripting. MySql is used to store the data.

**Key Words:** online store, virtual store, PHP, CSS, MySql

## 1. INTRODUCTION

The Online Shopping Management System automates the manual process of shopping by allowing users to browse and purchase products from various shops. The system consists of two login pages, one for the administrator and another for the user. The administrator is responsible for creating categories and subcategories for the products. Once the categories are set up, the administrator can insert products with their specifications for purchasing.

Customers have the option to browse and view products on the home page without registration. However, if they wish to make a purchase, they need to register. Registered users can create wish lists, add items to their cart, and place orders. The system retrieves the details of the selected items from the database and displays them to the customer. After each transaction, the database is updated with the latest product information.

Overall, the Online Shopping Management System streamlines the shopping process by providing a user-friendly interface for browsing, selecting, and purchasing products, while also ensuring that the database is kept up to date with the latest information.

## 1.1 OVERVIEW OF THE SYSTEM

### 1. Home page:

The home page of the website showcases products categorized by category and subcategory. It also includes a search option to easily find specific products. A login page is provided for customers or users to access their accounts. The menu displays options such as login, wish list, and add to cart. Once logged in, the page transforms into the customer's personalized page, where they can add products to their wish list, add items to their cart, and place orders for purchase.

### 2. User Page:

On the user page, the main menu prominently features options such as login, wish list, and add to cart. For new users, there is an option to sign up or register on this page. Once a user logs in, the page transitions into the customer's personalized page. Here, they can conveniently add products to their wish list, add items to their cart, and place orders for purchase.

### 3. Admin Page:

The Admin Page serves as a platform for managing products within the system. Administrators can create categories and subcategories, as well as add products with their respective specifications. Additionally, the Admin Page allows for the management of customer login credentials. Administrators can add, delete, and update products as needed.

## 1.2 A.FUNCTIONAL REQUIREMENTS:

**Registration:** During the registration phase, customers are required to provide their details including their name, date of birth, email ID, password, and phone number. The provided information will undergo validation to ensure its accuracy and completeness. This registration process applies only to new users who are creating an account for the first time. **Login:** This phase will ensure that only authorized users are entering the website with valid credentials. It gets an Email ID and password from the

user. If not a registered user, it must show user Must be registered and move to the registration phase.

Product:

The product section of the website displays products categorized by category and subcategory. The menu is designed to easily navigate and view products within each category. The product details include the product name, quantity, unit price, total per item, and the final total of the order. Users have the option to update or delete an item with a single button click.

For the payment process, users can choose between two categories: net banking and cash on delivery. Users will be prompted to provide all the necessary details based on their chosen payment option.

After providing the payment information, users will be directed to the review order page. This page displays the payment information along with the order details for users to review. To proceed with the order, users can use a "Check Out" button. Once the order is placed, users will receive an appropriate order confirmation message indicating the success or failure of the transaction.

## B. NON FUNCTIONAL REQUIREMENTS:

The application is implemented by using PHP with MySQL. The front end is developed by using HTML, CSS, and Javascript. The server-side scripting is written by PHP. MySQL is used to manage the database.

Hardware Limitations: The minimum hardware requirement for the system is 128 MB of RAM and a 60MB hard disk drive.

## 2. LITERATURE SURVEY

Shoewu et al. [1] proposed a method for developing an eCommerce website utilizing HTML, ASP.NET, and MYSQL. They also emphasized the importance of addressing security risks, which are crucial considerations when presenting the website to clients due to their potential impact. Additionally, they provided a comprehensive database design, offering detailed insights into the contents of various database tables.

In their research paper, Aftab et al. [2] have presented a comprehensive review and assessment of the e-commerce landscape, shedding light on the developmental aspects of an e-commerce website using JavaScript, HTML, and CSS. The authors have not only outlined the construction process but also offered a payment solution tailored to the suggested website. The paper concludes with valuable

insights and recommendations for enhancing the e-commerce industry in the future.

Rajasekar et al. [3] explored the influence of e-commerce in India in their research paper, detailing its developmental timeline, economic ramifications, and recommendations for enhancing infrastructure. Additionally, they discussed the challenges encountered by companies operating in the Indian market.

Abdul[4], in his research, expressed his perspective on how e-commerce is influencing emerging economies like India and Bangladesh. He discussed the progress, expansion, and hurdles encountered by e-commerce enterprises in such nations. Additionally, he highlighted the advantages, including cost reduction, expedited transportation, and increased visibility for various sellers, particularly in burgeoning economies.

Shahid et al. [5] expressed their perspective on the state of commerce within this nation, highlighting the rapid advancement of e-commerce infrastructure. Additionally, they discussed the purchasing patterns observed among users in this context.

Amandeep et al.[6] offers valuable insights into the evolution of e-commerce, shedding light on emerging trends and technologies that captivate customers and furnish management with actionable information. Alongside delving into the intricacies of e-commerce, we've also endeavored to grasp the comprehensive system design and fundamental information flow within e-commerce operations.

## 3. Technologies used:

### 3.1 HTML

**HTML** stands for Hypertext Markup Language. It's the standard markup language for creating web pages and web applications. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects, such as interactive forms, can be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes, and other items. It can embed scripts written in languages such as JavaScript, which affect the behavior of HTML web pages.

### 3.2 Cascaded Style Sheet:

CSS, which stands for Cascading Style Sheets, serves as a straightforward mechanism for incorporating styles such

as fonts, colors, and spacing into web documents. This project involves the introduction of various styles to enhance the visual presentation of web content.

### 3.3PHP:

PHP, short for the PHP Hypertext Preprocessor, empowers web developers to craft dynamic content that seamlessly interacts with databases. Widely utilized in web-based software application development, PHP serves as a foundation tool for aspiring developers looking to enhance their skills in the field. This tutorial serves as a comprehensive guide for establishing a strong foundation in PHP.

### 3.4 MySql:

MySQL stands out as a widely embraced and freely available Open Source Relational Database Management System (RDBMS). Within this system, data is organized into tables, often interlinked. Employing Structured Query Language (SQL), MySQL facilitates the storage, administration, and retrieval of data, while also governing data accessibility. Recognized as a premier RDBMS, MySQL is extensively utilized in the development of web-based software applications.

## 4. Characteristics of an online shopping management system:

### Product Management:

This involves not only adding and updating products but also categorizing them effectively. Descriptions should be detailed and accurate, images high-quality and representative, and pricing transparent. It may also involve managing product variants, such as different sizes or colors, and organizing products into categories and subcategories for easy navigation.

### Inventory management:

Inventory management involves the real-time monitoring of stock levels, receiving alerts for low-stock or out-of-stock items, and continuously updating inventory counts as sales occur. Successful inventory management mitigates risks of overselling, stock-outs, and back-orders, thereby guaranteeing a seamless shopping experience for customers.

### Order management :

Order management encompasses a range of tasks, starting from the placement of an order to its fulfillment and delivery. These tasks include order processing, invoicing, packaging, and shipping. Enhancing transparency and

trust is achieved by keeping customers informed about order status updates and providing shipment tracking information throughout the process.

### User management:

User management includes the creation of accounts, implementation of login functionality, and the administration of user profiles. It also entails incorporating security measures, such as password encryption and two-factor authentication, to safeguard user accounts against unauthorized access.

### Payment processing:

Payment processing involves the integration of secure payment gateways, enabling customers to conduct transactions using diverse payment methods like credit cards, PayPal, or digital wallets. Upholding PCI compliance and implementing SSL encryption ensures the security of sensitive payment information, fostering trust with customers.

### Security :

Security is maintained through strong measures, including data encryption, firewalls, and routine security audits. These measures protect sensitive information like customer data and payment details, shielding them from cyber threats and potential data breaches.

**Search and Navigation:** Enhancing search capabilities and simplifying navigation aids customers in swiftly locating desired products. Incorporating features such as auto-complete suggestions, category or price range filters, and sorting options elevates the shopping experience and boosts conversion rates.

**Customization:** Providing customization options for branding, layout, and design empowers businesses to craft a distinctive online shopping experience that mirrors their brand identity and resonates with their desired audience. These customization features may encompass selecting color schemes, incorporating logos, and arranging page layouts to suit individual preferences.

**Data Analytics and Reporting:** Data analytic tools monitor critical metrics like sales performance, customer behavior, and website traffic. Extracting insights from analytics assists businesses in recognizing trends, evaluating the impact of marketing initiatives, and making informed, data-driven choices to enhance the performance of their online store.

**Customer Support:** Offering various customer support channels, including live chat, email, or phone assistance,

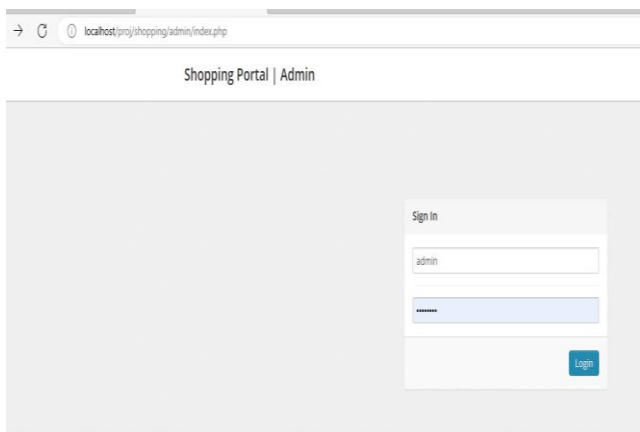
ensures accessibility for customers seeking help with inquiries, issues, or feedback. Responsive and effective customer support fosters satisfaction and loyalty among customers.

Together, these attributes enhance the efficiency and triumph of an online shopping management system by enhancing user experience, streamlining business operations, and fostering sales expansion.

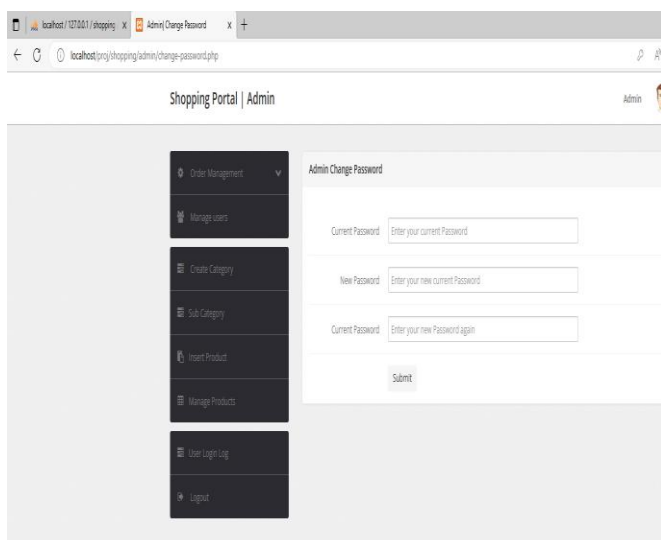
### 5. Output:

The following figures depict the output of this project.

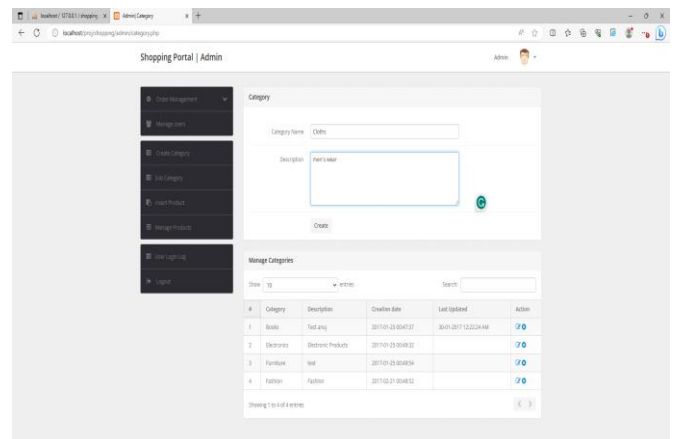
#### Admin Page:



**Fig -1: Admin Login**

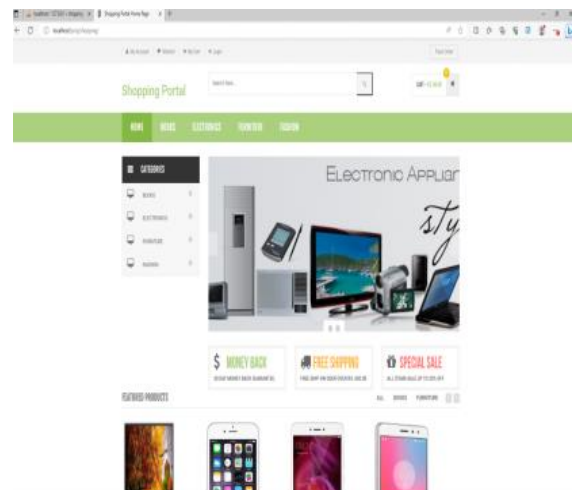


**Fig -2: Admin Page**

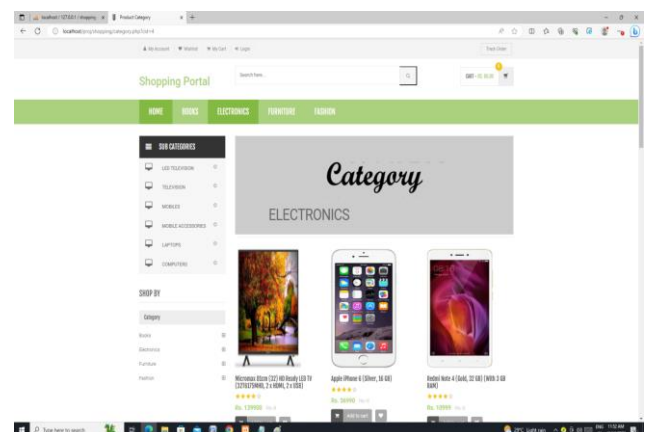


**Fig -3: Creating a New Category**

#### Customer Page:



**Fig -4: Customer Page**



**Fig -5: Category wise**

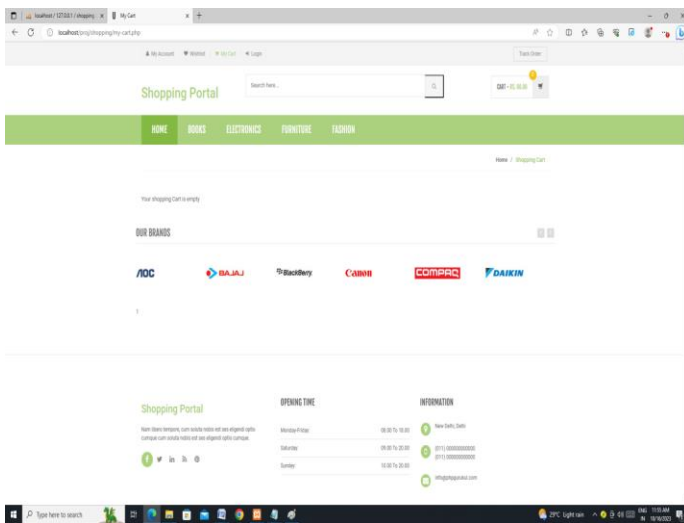


Fig -5: Customer Order

## 5. CONCLUSIONS

This paper delves into the creation of an online shopping cart management system using PHP with SQL, offering insights into emerging trends and technologies that captivate customers. It also provides valuable information for management regarding E-shopping. In comprehending the intricacies of e-shopping, the paper explores system design and the fundamental flow of information in operating e-shopping.

A more sustainable approach involves concurrently developing both e-commerce and traditional businesses. With the escalating population, relying solely on E-shopping becomes challenging to meet the diverse needs of a vast population. The proliferation of mobile usage contributes to an indefinite surge in global e-commerce adoption, pushing technological boundaries. This, in turn, challenges firms to create a secure and compatible environment to accommodate the evolving landscape.

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## BIOGRAPHY



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