A project report on

Online Shopping Cart

Summited In Partial Fulfillment Of The Award Of The Degree Of

Bachelor Of Technology
In
Computer Science Engineering

BY

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DECLARATION

We hereby declare that the project entitled “ Online Shopping Cart”
is a genuine project.this work has been submitted to the
N.B.K.R.I.S.T ENGINEERING COLLEGE, VIDYANAGAR, NELLORE in partial fulfillment of the B.TECH
DEGREE. We further declare that this project work has not been
submitted in full or part for the award of any degree of this or any
other educational institutions.

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Thank you for adding items to your shopping cart!

Please review your selected products before proceeding to checkout. All prices include applicable taxes unless otherwise stated. Your cart will be saved for a limited time, and product availability is not guaranteed until checkout is completed.

If you have any questions or need assistance, feel free to contact our customer support team.

We appreciate your interest and look forward to serving you!

Thank you for shopping with us!

We have successfully received the items in your shopping cart and your order is being processed. Below is a summary of your order:

Order Number: [Insert Order ID]
Date: [Insert Date]
Items Ordered:

[Item 1]

[Item 2]
...
Total Amount: [Insert Amount]

You will receive a confirmation email shortly with shipping details and tracking information. If you have any questions or need assistance, please contact our customer support.

We appreciate your business!

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An Online Shopping Cart is a critical component of any e-commerce platform, allowing users to select, store, and manage products they wish to purchase. The system typically includes a user-friendly interface where customers can browse products, view detailed descriptions, and add items to their cart. The cart stores item information such as quantity, price, and selected options, allowing users to modify their selections before checkout. It integrates seamlessly with a checkout system that collects user information, shipping details, and payment credentials to complete a purchase. On the backend, it handles inventory management, order processing, payment gateway integration, and user authentication. Advanced features like discount codes, wishlists, order tracking, and multi-currency support enhance the shopping experience. Security measures, including data encryption, secure payment processing, and user privacy compliance (such as GDPR), ensure safe transactions. The system is supported by a structured database with indexed tables for products, users, carts, orders, and payments, enabling efficient data retrieval and scalability. Overall, an online shopping cart system is a robust, secure, and scalable solution that facilitates a smooth e-commerce transaction from product selection to payment and delivery.

Would you like this expanded into a full report or converted into code for implementation?

AIM

The main aim of an online shopping cart is to provide a seamless and convenient way for customers to select, store, and manage items they want to purchase online.

It facilitates the entire shopping process, from browsing and adding products to finalizing the transaction.

The aim of the Online Shopping Cart system is to provide a seamless, efficient, and user-friendly platform that allows customers to browse, select, and purchase products online with ease. It is designed to replicate the convenience of traditional in-store shopping by enabling users to add items to a virtual cart, review their selections, and proceed to a secure checkout process. The system aims to streamline the buying experience by integrating key functionalities such as product management, real-time inventory updates, user authentication, secure payment processing, and order tracking. Additionally, it seeks to enhance customer satisfaction through features like discount application, saved carts, and responsive design for mobile access. For administrators and business owners, the system aims to offer powerful tools for managing products, processing orders, analyzing sales data, and improving operational efficiency. Ultimately, the goal is to create a reliable, scalable, and secure e-commerce solution that benefits both customers and vendors.

Would you like a version of this aim tailored to a project report or proposal format?

INTRODUCTION

An online shopping cart is a digital tool used in e-commerce that allows customers to select, store, and manage items they intend to purchase before completing a transaction. It functions similarly to a physical shopping cart in a store, providing a virtual space to hold selected products while browsing and allowing for easy checkout and payment.

A well-designed shopping cart is crucial for a positive ecommerce experience, as it facilitates the purchasing process and encourages customers to make a purchase.

An Online Shopping Cart is a fundamental component of modern e-commerce platforms, designed to facilitate the online buying process for both customers and businesses. It serves as a virtual equivalent of a physical shopping basket, allowing users to browse a wide range of products, select desired items, and store them temporarily before proceeding to checkout. The system streamlines the entire shopping experience by providing features such as real-time price calculation, quantity adjustment, discount code application, and secure payment integration. It also enables customers to review their orders, enter shipping information, and choose preferred payment methods, making online transactions faster and more convenient. For businesses, an online shopping cart offers efficient inventory management, order tracking, customer data handling, and sales reporting tools. Additionally, the system supports user account creation and login features, ensuring personalized experiences and secure access. With the increasing demand for online shopping, the online shopping cart has become a critical tool for enhancing user satisfaction, expanding market reach, and boosting sales efficiency in the digital marketplace.

EXITING SYSTEM

An online shopping cart is a system that allows customers to browse products online, add them to a virtual cart, and complete their purchase through an online payment gateway. This system eliminates the need for physical stores and offers convenience, a wide variety of products, and potentially lower prices.
The online shopping process involves consumers browsing products, adding items to a shopping cart, paying typically with a credit card, and having purchases delivered to their home

The existing system for online shopping typically involves basic e-commerce platforms that allow users to browse products, add items to a shopping cart, and proceed to checkout. While these systems fulfill the fundamental purpose of online shopping, they often lack advanced features, personalization, and scalability. Many existing platforms are limited in terms of user experience, offering minimal options for cart management, limited payment methods, and poor mobile responsiveness. Additionally, some systems may not include real-time inventory updates, leading to issues such as ordering out-of-stock products. From an administrative perspective, existing systems may provide only basic tools for managing products, tracking orders, and generating sales reports, which can hinder business growth and decision-making. Security measures in older systems may also be insufficient, exposing users to risks related to data breaches and payment fraud.

DISADVANTAGES OF PERVIOUS SYSTEM

The main disadvantages of traditional online shopping carts included a less seamless user experience, potential for increased cart abandonment due to multiple steps, and concerns about security and privacy. Additionally, they could contribute to a feeling of detachment from the shopping experience compared to physical stores.
Customers couldn’t physically inspect or try on products before purchasing, leading to potential disappointment if the product didn’t meet expectations.

The previous system of online shopping carts, though functional, comes with several notable disadvantages that limit user satisfaction and business efficiency. One major drawback is the lack of user-friendly interfaces, which can lead to confusion during product selection or checkout, ultimately causing cart abandonment. These older systems often do not support real-time inventory updates, resulting in situations where customers purchase out-of-stock items. Additionally, limited payment options and poor integration with modern payment gateways make the checkout process inconvenient and less secure. Another significant issue is inadequate mobile optimization, which fails to cater to the growing number of mobile shoppers. From a business standpoint, these systems typically lack advanced features like customer behavior analytics, personalized recommendations, and automated order management, reducing the ability to optimize sales and marketing strategies. Security vulnerabilities such as weak data encryption and outdated authentication methods also pose serious risks to user data and transaction safety.

PRESENT PROJECT DETAILS

An online shopping cart project involves developing aweb-based application that allows users to browseproducts, add them to a virtual cart, and then proceed tocheckout and make a purchase. Key features includeproduct browsing, adding items to the cart, updatingquantities, removing items, checkout functionality,payment processing, and order management.

This document details the development of an online shopping cart application, a web-based platform allowing users to browse products, add items to a virtual cart, and complete purchases. It focuses on the user interface, functionality, and backend implementation using technologies like HTML, CSS, JavaScript, and PHP for frontend and backend development, and MySQL for the database

The present project focuses on the development of a comprehensive and user-friendly Online Shopping Cart system that addresses the limitations of previous systems and meets the evolving needs of modern e-commerce. This project aims to provide a seamless shopping experience for users by allowing them to easily browse products, add items to their cart, modify quantities, and complete purchases through a secure and efficient checkout process.

The system includes features such as real-time inventory management, multiple payment gateway integrations, responsive design for mobile devices, and user authentication for secure access. Additionally, the admin panel offers robust functionalities including product management, order tracking, sales analytics, and customer management tools.

USAGE/BENFITES

An online shopping cart is a crucial component of e-commerce,facilitating the process of purchasing goods and services online. It allows customers to browse, select, and manage items beforemaking a purchase, enhancing the shopping experience andpotentially boosting sales. The benefits of using an onlineshopping cart are numerous, including improved userexperience, reduced cart abandonment, and increased salesopportunities.

Nesses and consumers. They enhance the shopping experience,streamline the checkout process, and provide valuable data forbusiness insights. For businesses, this translates to increasedsales, reduced abandonment rates, and improved customerengagement. For customers, it means convenience, flexibility,and a more efficient shopping experience.

The usage and benefits of an Online Shopping Cart system are vast, offering convenience and efficiency to both customers and businesses in the digital marketplace. For customers, it provides a smooth and flexible shopping experience, allowing them to browse products, compare prices, add items to the cart, and complete purchases from the comfort of their home or on the go. Features like quantity adjustments, discount application, and saved cart functionality enhance user control and satisfaction. The system supports secure payment processing and order tracking, ensuring transparency and trust throughout the buying process. For businesses, an online shopping cart automates sales operations, reduces manual workload, and improves inventory management by updating stock levels in real-time. It also offers valuable insights through analytics tools, helping store owners make informed decisions based on customer behavior and sales trends.

Moreover, the system enhances customer retention with personalized recommendations and account features. Overall, an Online Shopping Cart significantly boosts operational efficiency, customer engagement, and revenue generation in the e-commerce environment.

TOOL USED

Online shopping carts are primarily powered by specializedshopping cart software that manages the entire purchaseprocess, from adding items to checkout. These platforms offerfeatures like inventory management, order processing,payment processing, and more. Popular options includeShopify, Ecwid, OpenCart, WooCommerce.

Inventory Management: Tracks product availabilityand updates when items are added to the cart.Order Management: Processes orders, includingPayment and shipping information.Payment Processing: Integrates with paymentgateways to securely process transactions.Storefront: Creates the online store interface forcustomers to browse and shop.Shipping Options: Allows setting up various shippingmethods and costs.Third-Party Integrations: Connects with other toolslike accounting software or CRM systems.

The development of the Online Shopping Cart system involves the use of various tools and technologies to ensure a robust, scalable, and user-friendly platform. On the frontend, tools such as HTML5, CSS3, JavaScript, and frameworks like React.js or Angular are used to create an interactive and responsive user interface. For the backend, technologies such as PHP, Node.js, or Python (Django/Flask) are employed to handle server-side operations, including user authentication, product management, and order processing. The database layer utilizes systems like MySQL, PostgreSQL, or MongoDB to store and manage data related to users, products, orders, and payments.

For payment integration, APIs from services like PayPal, Stripe, or Razorpay are implemented to facilitate secure online transactions. Additionally, tools like Git and GitHub are used for version control and collaboration, while platforms such as XAMPP, WAMP, or Docker are used for local development and testing environments. Security tools and best practices, including SSL encryption, input validation, and secure authentication protocols, are also applied to ensure safe and reliable operations. Together, these tools enable the creation of a fully functional and efficient online shopping cart system.

MODULUS IN YOUR SYSTEM

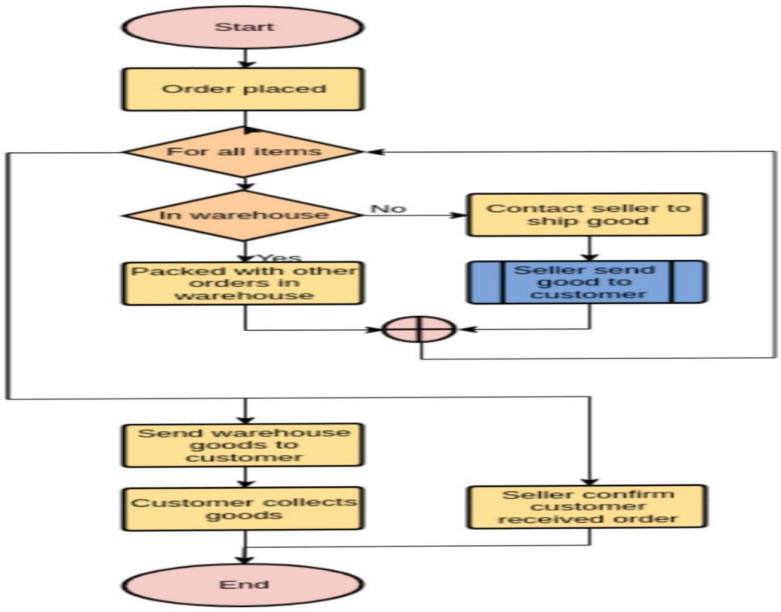
In the context of an online shopping cart,“modulus” typically refersto a mathematical operation that calculates the remainder afterdivision. While it’s not directly used in core shopping cartfunctionality, it can be relevant in certain calculations within an ecommerce system. For example, it could be used in:

However, it’s important to note that while these aretheoretical possibilities, the core functions of a shopping cart,such as adding items to a cart, calculating total cost, handlingpayments, and shipping, are generally not directly reliant onmodulus as a primary mathematical operation

The Online Shopping Cart system is structured into several key modules, each designed to perform specific functions that collectively ensure a smooth and efficient shopping experience. The User Module manages customer registration, login, profile updates, and password recovery, providing secure and personalized access. The Product Module allows users to browse and view detailed information about items, while administrators can add, update, or delete products, manage categories, and control inventory levels. The Cart Module enables customers to add products to their cart, adjust quantities, remove items, and view real-time totals before proceeding to checkout. The Order Module handles the checkout process, including billing, shipping information, order confirmation, and invoice generation.

Integrated with this is the Payment Module, which processes transactions securely through payment gateways like PayPal or Stripe, ensuring safe financial operations. The Admin Module provides tools for managing products, monitoring sales, viewing user activity, and generating reports. Additional modules such as the Wishlist Module, Review Module, and Notification Module enhance user engagement and experience. Each module works cohesively to deliver a fully functional, secure, and user-friendly online shopping environment.

WORK FLOW DIAGRAM



The workflow of the Online Shopping Cart system follows a logical and user-centered process that begins with the customer accessing the website or application. The user first interacts with the homepage, where they can browse through products using categories, filters, or a search function. Once a product is selected, they are directed to the product detail page, where they can view specifications and add the item to their cart. The selected items are stored in the shopping cart module, where users can review their choices, update quantities, or remove products. When ready, the user proceeds to the checkout process, where they enter billing and shipping information and choose a payment method.

The payment gateway securely processes the transaction, and upon successful payment, the system generates an order confirmation and updates inventory levels in real-time. The user then receives a confirmation email or message, and the order status can be tracked via their account dashboard. On the administrative side, the system updates the order management module, allowing admins to monitor order progress, manage deliveries, and generate reports. This streamlined workflow ensures a seamless experience for both customers and administrators, covering the entire e-commerce lifecycle from product browsing to order fulfillment.

IMAGES OF ONLINE SHOPPING CART

CODE SNIPPETS

```
#include <stdio.h>
#include <string.h>

#define MAX_ITEMS 100

// Item structure
typedef struct {
    int id;
    char name[50];
    float price;
    int quantity;
} Item;

// Shopping cart structure
typedef struct {
    Item items[MAX_ITEMS];
    int count;
} Cart;

// Function to add an item to the cart
void addItem(Cart *cart) {
    if (cart->count >= MAX_ITEMS) {
        printf("Cart is full!\n");
        return;
    }

    Item item;
```

```
    printf("Enter item ID: ");
    scanf("%d", &item.id);

    printf("Enter item name: ");
    scanf(" %[^\n]", item.name);

    printf("Enter item price: ");
    scanf("%f", &item.price);

    printf("Enter item quantity: ");
    scanf("%d", &item.quantity);
```

```
    cart->items[cart->count++] = item;
    printf("Item added to cart
successfully.\n\n");
}

// Function to display all items in the
cart
void displayCart(const Cart *cart) {
    if (cart->count == 0) {
        printf("Cart is empty.\n\n");
        return;
    }

    float total = 0.0;
    printf("\n--- Shopping Cart ---\n");
    for (int i = 0; i < cart->count; i++) {
        Item item = cart->items[i];
        float subtotal = item.price *
item.quantity;
        printf("%d. %s (ID: %d) - $%.2f x
%d = $%.2f\n",
               i + 1, item.name, item.id,
item.price, item.quantity, subtotal);
        total += subtotal;
    }
    printf("Total: $%.2f\n\n", total);
}

// Main function
int main() {
```

```
    Cart cart = {.count = 0};
    int choice;

    do {
        printf("=== Online Shopping Cart
===\n");
        printf("1. Add Item\n");
        printf("2. View Cart\n");
        printf("3. Exit\n");
        printf("Choose an option: ");
        scanf("%d", &choice);

        switch (choice) {
        case 1:
            addItem(&cart);
            break;
        case 2:
            displayCart(&cart);
            break;
        case 3:
            printf("Exiting... Thank you for
shopping!\n");
            break;
        default:
            printf("Invalid choice. Try
again.\n");
        }
    } while (choice != 3);

    return 0;
}
```

21:09

WORKING EXPLANATION

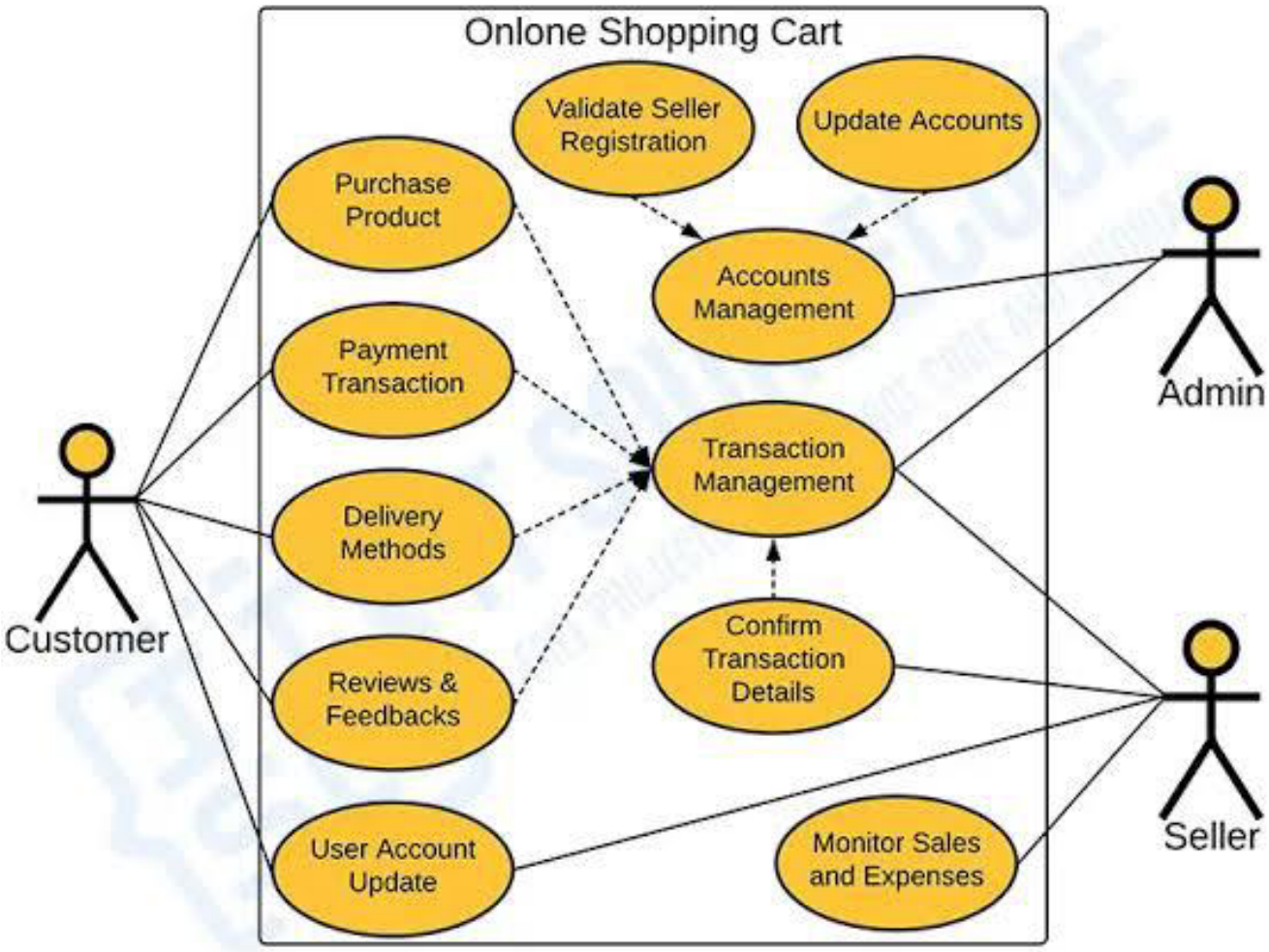
Online shopping involves purchasing goods or services froman online seller through the internet, typically using a webbrowser or mobile app. Consumers browse products, addthem to a virtual cart, and complete their purchase online,with the items delivered to their homes.

Browsing: Consumers visit an e-commerce website or app to browse available products.
Selection: They choose items they want to purchase and add them to a virtual shopping cart.
Checkout: They proceed to the checkout page, where they provide their shipping and payment information.
Payment: They finalize the purchase by paying online, usually using a credit card or other digital payment method.
Delivery: The purchased items are then shipped to the customer's address.

An online shopping cart is a virtual tool used in e-commerce websites that allows customers to select and store products they intend to purchase. When a customer browses through an online store, they can add desired items to the cart, similar to placing products in a physical shopping cart at a retail store. The shopping cart keeps track of the selected items, their quantities, prices, and sometimes available discounts or promotions. Customers can view the contents of the cart at any time, make changes such as adding or removing items, and proceed to checkout when ready. During checkout, the cart calculates the total cost, including taxes and shipping fees if applicable, and directs the customer to payment and delivery options. Once the payment is completed, the order is confirmed, and the cart is cleared for the next purchase. This system provides a seamless, convenient shopping experience and is a fundamental feature of any online retail platform.

SAMPLE OUTPUT IAMGE

ONLINE SHOPPING CART



USE CASE DIAGRAM

CONCLUSION

In conclusion, online shopping has revolutionized the retaillandscape, offering unparalleled convenience, access to awider variety of products, and often, competitive pricing.While concerns about security and the lack of physicalinspection remain, the overall benefits of online shopping,such as time-saving and ease of use, continue to drive itspopularity.

In conclusion, online shopping has revolutionized the retail landscape,offering unparalleled convenience and a wide array of choices. Itsaccessibility, 24/7 availability, and extensive product catalogs havemade it a preferred shopping method for many. While challenges likesecurity concerns and potential returns exist, the advantages of onlineshopping, including price comparison and informed purchasing decisions, continue to outweigh the drawbacks for most consumers

In conclusion, the online shopping cart is a crucial feature that enhances the convenience, efficiency, and personalization of the e-commerce experience. It allows customers to easily browse, select, and review products before making a final purchase. With features such as product recommendations, price comparisons, and easy checkout options, online carts contribute significantly to boosting sales and customer satisfaction.

Furthermore, by enabling users to save items for later, track their orders, and apply discount codes, they help improve the overall shopping experience. As e-commerce continues to evolve, the functionality and design of shopping carts will likely become even more advanced, offering additional ways to streamline the purchasing process for consumers and businesses alike.

In conclusion, the online shopping cart serves as a vital component in the e-commerce ecosystem, providing a seamless and efficient way for customers to browse, select, and purchase products. By offering features such as easy navigation, order review, secure payment options, and promotional discounts, it significantly enhances the user experience. The shopping cart also helps retailers manage inventory, track customer preferences, and optimize sales strategies. As technology continues to advance, shopping carts will likely evolve to integrate even more personalized and user-friendly features, further improving both customer satisfaction and business performance. Ultimately, the online shopping cart plays a central role in driving the success and growth

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