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CISC3003 -- Web Programming

Project Report

Shopping Cart System

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Abstract

The shopping cart system is an e-commerce application developed using HTML, CSS, JS, jQuery, and PHP. It allows users to browse products, add them to the shopping cart, and complete the purchase through a secure checkout process. The system utilizes MySQL for database management and XAMPP stack for local development. The project was implemented in the Eclipse IDE for PHP developers.

The system consists of five main files: index.php, config.php, checkout.php, cart.php, and action.php. The index.php file serves as the homepage, displaying available products with their details and an "Add to Cart" button. The cart.php file displays the products added to the cart, allowing users to update quantities and remove items. The checkout.php file collects user information and processes the order. The action.php file handles various cart operations, establishes a database connection, executes queries, and implements security measures.

The project has been successfully implemented, providing online shoppers with a user-friendly interface, smooth functionality, and a good purchasing experience.

Project List of Services

1. Product browsing: Users can view a list of available products with their details.
2. Adding products to the cart: Users can add products to the shopping cart.
3. Cart management: Users can update quantities, remove items, and clear the entire cart.
4. Checkout process: Users can enter their personal and payment details to complete the purchase.
5. Database management: The system establishes a connection to the MySQL database and performs necessary operations using XAMPP.

Project List of Tasks

1. Designing the user interface for the homepage and cart page.
2. Implementing the functionality to add products to the cart using AJAX.
3. Creating the checkout page and handling form submission.
4. Developing the backend script to handle various cart operations and database management.
5. Implementing stable measures data store in MySQL, and error handling.
6. Testing the system for functionality, usability, and security.
7. Deploying the application and ensuring it runs smoothly in Eclipse environment.

Project Accomplishments

1. Successfully implemented a functional shopping cart system with a user-friendly interface.
2. Implemented AJAX functionality to add products to the cart without page reload.
3. Developed a secure checkout process, including user input validation and data store.
4. Established a connection to the MySQL database and performed necessary database operations.
5. Implemented proper error handling and exception handling techniques for robustness.
6. Tested the system for functionality, usability, and security, ensuring a smooth user experience.
7. Deployed the application and ensured its successful operation Eclipse environment.

Project Incomplete - What have not been done

1. **Integration with a payment gateway:** The project does not include integration with a payment gateway for real-time payment processing. This would require additional implementation and configuration.
2. **User authentication and account management:** The system does not provide user authentication or account management functionality. Users cannot create accounts or track their order history.
3. **Product inventory management:** The project does not include functionality for managing product inventory. There is no mechanism to track product availability or prevent overselling.
4. **Responsive design:** The user interface has not been fully optimized in cart page. There is still room for improvement in responsive design.
5. **Performance optimization:** The application's performance, such as page load times and database query efficiency, has not been fully optimized. Further optimization measures can be implemented to enhance system performance.

Self-Assessment Rubric

FONG CHON HOU D-B9-2130-6	Raw Score Assigned	Raw Score Earned
Design and layout of the homepage (index.php)	5	5
Functionality of the "Add to Cart" button in homepage (index.php)	5	5
AJAX implementation for adding products to the cart	5	5
Displaying products in the Cart Page (cart.php)	5	5
Updating quantities and removing items in the Cart Page (cart.php)	5	4
Clearing the entire cart in the Cart Page (cart.php)	5	5
Collecting user information in Checkout Page (checkout.php)	5	5
Processing the order and storing details in the database in the Checkout Page (checkout.php)	5	5
Displaying a thank you message and user receipt in the Checkout Page (checkout.php)	5	5
Handling cart operations in the Backend Operations (action.php)	5	4
Establishing a database connection and executing queries in the Backend Operations (action.php)	5	5
Implementing security measures in the Backend Operations (action.php)	5	3
Input quality validation	5	4
User-friendly interface and responsive design	5	4
Smooth functionality	5	5
Encryption of sensitive data	5	3
Error handling and exception handling	5	5
The layout of picture are well structured	5	5
The backend (database part) functioned correctly	5	5
Overall, the whole system functioned correctly and the whole system are welled structured	5	4
Total score	100	91