

Design and Implementation of an E-commerce Database System

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PROBLEM

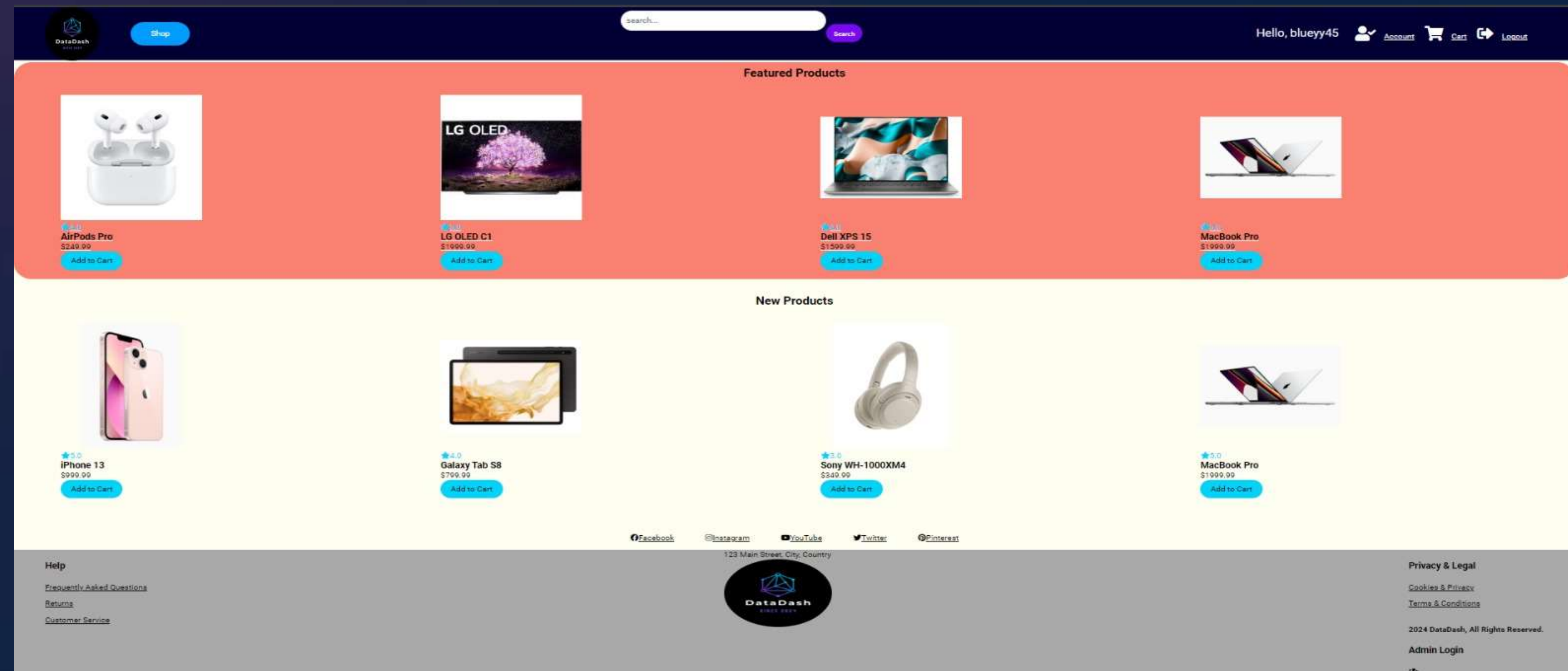
The primary aim of the DataDash project was to create a robust and feature-rich e-commerce database system and website using PHP, HTML, CSS, and JavaScript. The platform should enable users to browse a diverse range of products, manage their user accounts, add items to a shopping cart, complete checkout processes, and view order history.

SYSTEM DESIGN

DataDash employs a client-server architecture. The frontend, built using HTML, CSS, and JavaScript, serves as the client, interacting with the backend server written in PHP. The backend handles business logic, database interactions, and server-side processing.



Current System



OBJECT DESIGN

Account: Represents a user and has a information such as: username, password, email, payment method, address, order history, etc..

Product: Represents a product in the catalog, containing attributes like name, description, price, category, images, and inventory details.

Category: Represents a product category, allowing for product organization and browsing by category.

Shopping Cart: Represents a user's shopping cart, managing items added to the cart, quantities, and subtotal calculations.

Order: Represents a completed purchase, containing order details such as order ID, user information, order date, items purchased, total amount, and shipping information.

SUMMARY

DataDash is a comprehensive e-commerce database system and website built using PHP, HTML, CSS, and JavaScript. It provides a user-friendly platform for online shopping, enabling users to browse products, manage his/her account, and view order history. The heart of DataDash lies in its shopping features, enabling customers to easily search, filter, and sort products, add desired items to their cart, and proceed through a checkout process all through a modern and intuitive user interface. While there are still quite a few areas for improvement and expansion, this project is on its way for real world useability.

REQUIREMENTS

- XAMPP (or similar local server environment): This provides the Apache web server, MySQL database, and PHP interpreter necessary for running the website
- Import the database schema
- Populate the database with sample data
- Configure database connection:
- Have a working IDE or code editor and Install Composer

IMPLEMENTATION

Database Design: Creation of a MySQL database with tables to store user data, product information, categories, orders, shopping cart, and other relevant data.

Backend Development: Implementing PHP code for user authentication, product catalog management, shopping cart functionality, order processing, user information, and search functionality.

Frontend Development: Developing HTML, CSS, and JavaScript code for user interface elements, product displays, product information, managing the shopping cart, handling checkout processes, and overall style of the website.

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