Construction of an Online Sales System for Galaxy Mobile

Phạm Đình Toán
Thai Nguyen University of Information and Communication Technology
Thai Nguyen University, Thai Nguyen, Vietnam
student447@ictu.edu.vn

***Abstract*—This thesis presents the construction of an online sales system for Galaxy Mobile using the Laravel PHP framework. The author conducted a survey to identify the current state of the problem and analyzed the requirements for the system. Use case diagrams and activity diagrams were created to design the system's functionalities. The system was built with basic functionalities such as user login, product management, and order processing. However, the backend and frontend performance were not extensively tested, and some features like user comments and frontend design were not fully optimized. The system improved upon the previous system by allowing product management, order processing, and customer interaction. However, it faced limitations in handling high traffic and had a less attractive frontend design compared to the previous system.**

***Index Terms*—Laravel, PHP, Web development, Online sales, System design**

I. Introduction

The thesis introduces the Laravel PHP framework, highlighting its advantages for web development, such as its robust structure and ease of use. The author also discusses the basic components and libraries used in Laravel for website design. The framework's modular architecture and extensive documentation make it a popular choice for web developers. The author surveyed the current state of the problem and analyzed the requirements for the system, identifying key functionalities such as user login, product management, and order processing. The system was designed using use case diagrams and activity diagrams to ensure a clear understanding of the system's functionalities and interactions [1].

II. Methods

The author conducted a survey to identify the current state of the problem and analyzed the requirements for the system. Use case diagrams and activity diagrams were created to design the system's functionalities. The system was built using Laravel, and the backend and frontend were developed to manage products, users, and orders. The backend was designed to handle user authentication, product management, and order processing. The frontend was developed to provide a user-friendly interface for customers to browse products, place orders, and interact with the system. The author also created detailed class diagrams and database schemas to ensure the system's functionality and performance [1].

Supervisor: Bùi Anh Tú, Thai Nguyen University of Information and Communication Technology (batu@ictu.edu.vn).

III. Results

The system was developed with basic functionalities such as user login, product management, and order processing. However, the backend and frontend performance were not extensively tested, and some features like user comments and frontend design were not fully optimized. The system allowed users to log in, manage products, and process orders. However, the system faced limitations in handling high traffic and had a less attractive frontend design compared to the previous system. The author did not conduct any performance testing or user evaluation, and the system was not deployed in a real-world environment [1].

IV. Discussion

The developed system improved upon the previous system by allowing product management, order processing, and customer interaction. However, it faced limitations in handling high traffic and had a less attractive frontend design compared to the previous system. The author identified several areas for improvement, including optimizing the frontend design and enhancing the system's performance to handle high traffic. The system's backend was designed to handle user authentication, product management, and order processing, but the author did not conduct any performance testing or user evaluation. The system was not deployed in a real-world environment, and the author did not provide any evidence of its practical effectiveness [1].

V. Conclusion

The thesis concludes that the system was built using the Laravel framework and provided a platform for product management and customer interaction. However, it still requires further optimization to handle high traffic and improve the user interface. The author identified several areas for improvement, including optimizing the frontend design and enhancing the system's performance to handle high traffic. The system was not deployed in a real-world environment, and the author did not provide any evidence of its practical effectiveness [1].

References

[1] Phạm Đình Toán, "Construction of an Online Sales System for Galaxy Mobile," internal undergraduate thesis (original in Vietnamese), Thai Nguyen University of Information and Communication Technology, 2021.

[2] Nguyễn Đình Hiến, 2007, Phân tích và thiết kế hệ thống hướng đối tượng vói UML, Nhà xuất bản Đại học quốc gia Hà Nội
[3] Đoàn Văn Ban – Nguyễn Thị Tĩnh, Giáo trình phân tích thiết kế hệ thống hướng đối tượng bằng UML, Nhà xuất bản Đại học Sư Phạm
[4] Ths.Nguyễn Thị Thanh Huyền, Phân tích và thiết kế hệ thống, Nhà xuất bản thông tin và truyền thông
[5] Phạm Hữu Khang, Xây dựng ứng dụng Web bằng PHP & MySQl, Nhà xuất bản Phương Đông
[6] Vn-Guide, Sách - Tạo Website Hướng Database T1 Bằng PHP & MySQL, Nhà xuất bản Thống kê
[7] Vn-Guide, Sách - Tạo Website Hướng Database T2 Bằng PHP & MySQL, Nhà xuất bản Thống kê
[8] Joel Murach – Ray Harris, Lập trình cơ bản PHP và MySQL, Nhà xuất bản khoa học và kĩ thuật
[9] Joel Murach – Ray Harris, Lập trình nâng cao PHP và MySQL, Nhà xuất bản bách khoa Hà Nội
[10] Nguyễn Minh – Lượng Phúc, Kỹ thuật và thủ thuật lập trình hướng đối tượng PHP, Nhà xuất bản Hồng Đức. {Các trang web tham khảo}