Construction of an E-commerce Website for Nhật Minh Mobile

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***Abstract*—This thesis presents the construction of an e-commerce website for Nhật Minh Mobile using the Laravel PHP framework. The author describes the theoretical foundations of Laravel, including its advantages and structure, and details the design and implementation of the website's backend and frontend functionalities. The project successfully developed backend management features and frontend customer functionalities, but acknowledged limitations in performance and user interaction. The website was tested with a small dataset, and the comment feature was not fully optimized. The frontend design was basic and could be improved.**

***Index Terms*—Laravel, PHP, e-commerce, website, backend, frontend**

I. Introduction

The thesis introduces Laravel, a PHP framework known for its clear syntax, modular structure, and robust features. It discusses the framework's advantages, such as form validation, MVC architecture, and support for secure data handling. The author also explains the directory structure and routing mechanisms in Laravel, highlighting its flexibility and ease of use. The project aimed to create a functional e-commerce website for Nhật Minh Mobile, focusing on backend management and frontend customer functionalities [1]. Related earlier ICTU undergraduate theses provide context for this English summary [4], [5], [6], [7], [8], [9], [10].

II. Methods

The author designed and implemented a website for Nhật Minh Mobile using Laravel. The project involved creating backend management features like user login, product management, and order handling, as well as frontend functionalities for customers to browse products, place orders, and leave comments. The thesis details the use of Laravel's routing, controllers, and views to build the website. The backend management features were well-implemented, but the frontend design and user interaction could be enhanced. The project did not include a comprehensive performance evaluation or user testing [1].

III. Results

The website was successfully developed, with backend and frontend functionalities implemented. The backend management features, such as user login, product management, and order handling, were well-implemented. The frontend allowed customers to browse products, place orders, and leave comments. However, the performance was tested only with a small dataset, and the comment feature was not fully optimized. The frontend design was basic and could be improved [1].

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IV. Discussion

The project successfully created a functional e-commerce website using Laravel. The backend management features were well-implemented, but the frontend design and user interaction could be enhanced. The author suggests adding more features and improving the frontend design in future work. The limitations in performance and user interaction highlight the need for further optimization and testing. The source specifically notes that the system was tested on a small dataset and was not stress-tested with many simultaneous users [1].

V. Conclusion

The thesis concludes that the Laravel framework is suitable for building e-commerce websites. The project successfully implemented backend and frontend functionalities, but acknowledged limitations in performance and user experience. Future work should focus on optimizing the frontend and expanding the backend features. The source lists revenue statistics, additional computer-accessory products, customer vouchers, and administrator chat as proposed future features. Its reported functionality is therefore a prototype result under limited test conditions [1].

References

[1] Phạm Văn Hoàng, "Construction of an E-commerce Website for Nhật Minh 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 với UML
[3] Phạm Hữu Khang, Xây dựng ứng dụng Web bằng PHP & MySQl, Nhà xuất bản Phương Đông. {Các trang web tham khảo}
[4] ICTU Student 79, "Construction of a Mobile Phone Sales Website for Đức Minh Store," internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2008.
[5] ICTU Student 149, "Construction of an E-commerce Website for Selling Mobile Phones for Company Nguyen Du," internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2009.
[6] ICTU Student 181, "Analysis and Design of an E-Commerce Website - Introduction and Sale of Mobile Phone Products for Phuong Nga Company," internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2010.
[7] ICTU Student 187, "E-Commerce and Website Construction," internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2010.

[8] ICTU Student 182, ”Analysis and Design of an E-commerce Website for Computer Products - Introduction and Sales for H3T Corporation,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2010.
[9] ICTU Student 70, ”Application of E-commerce,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2008.
[10] ICTU Student 14, ”Construction of an Online Store Website for an Electrical Appliance Shop,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2007.