Application of Laravel Framework to Build an E-commerce Website for T&T Mobile Store

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***Abstract*—This undergraduate thesis explores the application of the Laravel framework to develop an e-commerce website for T&T Mobile Store. The project covers the theoretical foundations of PHP, Laravel, and MySQL, as well as the analysis and design of the system. The website includes basic functionalities such as product display, customer reviews, and payment options. However, it still requires improvements in data accuracy and practical implementation. The thesis discusses the advantages and limitations of the developed website, highlighting the need for more accurate data and practical application. The project successfully implemented a basic e-commerce website using Laravel, but it still requires improvements in data accuracy and practical application. Future work should focus on enhancing the website's design, adding more payment methods, and improving data management.**

***Index Terms*—Laravel, e-commerce, website, MySQL, MVC, T&T Mobile**

I. Introduction

The thesis introduces the Laravel framework and its advantages, such as the Model-View-Controller (MVC) architecture, and the MySQL database system. It also outlines the requirements and functionalities needed for the e-commerce website of T&T Mobile Store, including product display, customer reviews, and payment methods. The project aims to build a basic e-commerce website that can be used by T&T Mobile Store to showcase its products and facilitate online transactions. The website is designed to support basic functionalities like viewing products, customer reviews, and various payment methods [1]. Related earlier ICTU undergraduate theses provide context for this English summary [3], [4], [5]. Official technical documentation listed by the original thesis provides implementation context [6]. Published articles on the methods and subject of this project provide context for this English summary [7], [8]. Published books on the methods and subject of this project provide context for this English summary [9], [10].

II. Methods

The project utilizes the Laravel framework to build a web application for T&T Mobile Store. The methods include system analysis, use case diagrams, and class diagrams. The website supports basic functionalities like viewing products, customer reviews, and various payment methods. The project also integrates payment gateways such as Momo and VNPAY to enable secure online transactions. The design follows the MVC architecture, which separates the application into models, views, and controllers to ensure modularity and maintainability. The MySQL database is used to store and manage the website's data [1].

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III. Results

The developed website has basic functionalities such as product display, customer reviews, and payment options. However, it still lacks practical data and needs further development to meet real-world requirements. The website is currently in a demo state and has not been deployed in a real-world environment. The integration of payment gateways such as Momo and VNPAY was successful, but the data used for the website is not accurate and is based on simulated data. The website's design is user-friendly and visually appealing, but it requires improvements in terms of data accuracy and practical implementation [1].

IV. Discussion

The thesis discusses the advantages and limitations of the developed website, such as its ability to display products and customer reviews, but also highlights the need for more accurate data and practical implementation. The website's design and functionality are satisfactory, but the lack of real-world data and practical deployment limits its effectiveness. The integration of payment gateways was successful, but the use of simulated data affects the overall performance and reliability of the website. Future work should focus on enhancing the website's design, adding more payment methods, and improving data management to ensure a better user experience and practical application [1].

V. Conclusion

The project successfully implemented a basic e-commerce website using Laravel, but it still requires improvements in data accuracy and practical application. Future work should focus on enhancing the website's design, adding more payment methods, and improving data management. The website's design and functionality are satisfactory, but the lack of real-world data and practical deployment limits its effectiveness. The integration of payment gateways was successful, but the use of simulated data affects the overall performance and

reliability of the website. The project provides a foundation for future improvements and can serve as a starting point for developing a more robust e-commerce platform for T&T Mobile Store [1].

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