A WooCommerce Plugin for Installment Payment Plans

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***Abstract*—This thesis designs and implements a WordPress and WooCommerce plugin for installment payment plans. The plugin, named DEPART in the manuscript, adds administrative rules and plan settings and offers a customer flow for selecting an installment option during purchase. The report presents use cases, sequence diagrams, settings screens, order-plan recalculation, and checkout views. The author states that the core functions are complete and that the plugin could be submitted to the WordPress repository. The source does not show that submission or approval, nor does it verify a real payment processor, financial compliance, or live transaction settlement. It also identifies code-structure, usability, and theme-compatibility limitations. The contribution is a documented payment-plan prototype, with real financial use requiring separate security and operational validation.**

***Index Terms*—WooCommerce, WordPress plugin, installment plan, checkout, e-commerce**

I. Introduction

Online stores may wish to present customers with installment choices at checkout. The thesis explores how a WooCommerce extension can represent those choices within a WordPress shop. It introduces plugin architecture and the intended administrative and customer roles. The objective is to design rules, schedules, and checkout interaction for an installment plan. The report is an implementation study and does not establish that a lender or payment provider processed real transactions [1]. Earlier ICTU student work on related designs is included here for context [6], [7]. Related published studies provide context for the subject and methods [8], [9], [10]. These contextual works were selected for this English summary; they are not asserted to appear in the original thesis bibliography.

II. Methods

The author specifies use cases for administrative settings, plan rules, order recalculation, and customer selection of installment options. Sequence diagrams describe the interactions. DEPART is implemented as a WordPress plugin that works with WooCommerce products and orders. The practical chapter shows settings tabs, rule management, a purchase page, plan selection, and checkout screens. The manuscript does not define an independent security review or test with a live payment processor [1].

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III. Results

The source displays the plugin interface and examples of configuring plan rules and recalculating an order schedule. It also shows a customer selecting a plan during a purchase workflow. The conclusion says the core intended functions were implemented. The author further says the plugin is ready for possible submission to WordPress.org; no evidence of actual publication is provided. The source does not report completed financial settlements or measured conversion effects [1].

IV. Discussion

A configurable plugin can expose installment terms inside an existing shop, but financial workflows require accurate calculations, clear disclosure, data protection, and compatibility with themes and other plugins. The thesis acknowledges inflexible code, possible difficulty for new users, and limited theme compatibility. Its screens are sufficient to demonstrate a prototype, not to establish compliance or operational safety. External review and payment-system tests would be necessary before live commerce [1].

V. Conclusion

The thesis documents DEPART, a WooCommerce installment-plan plugin with settings, rules, schedules, and checkout interaction. Design diagrams and screens support the implemented workflow. The author identifies code, usability, and compatibility limitations and proposes further work. The source does not establish publication in the official plugin repository or real payment processing. The product remains a student prototype pending financial and security validation [1].

References

[1] Lô Văn Đại, ”A WooCommerce Plugin for Installment Payment Plans,” internal undergraduate thesis (original in Vietnamese), Thai Nguyen University of Information and Communication Technology, 2024.
[2] digistar, Giới thiệu wordPress, https://digistar.vn/.
[3] vinahost, trình bày về các thành phần trong wordpress, https://vinahost.vn/wordpress-la-gi/.
[4] W3school, Learn PHP,Jascript,MySQL, https://www.w3schools.com
[5] WordPress, Plugin Handbook, https://developer.wordpress.org/plugins/.
[6] Nguyễn Khánh Phượng, ”Application of Online Payment in Building an E-commerce Trading Platform at Thai Nguyen Information and Communication Technology Center,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2013.

[7] Nguyễn Thị Hương, ”Construction of an Online Sales Website for ECOMVIET E-commerce Development Center,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2013.
[8] Li Wang et al., ”Optimal duration, rate and price when online retailers offer installment payment services,” Nankai Business Review International, 2021. doi:10.1108/nbri-08-2019-0039.
[9] Reavis Cox, ”Installment Buying,” Science, 1962. doi:10.1126/science.135.3497.48-c.
[10] Xiaoli Wu et al., ”Installment Payment Strategy for Online Retailer Platform under Commercial Loan Financing,” IFAC-PapersOnLine, 2022. doi:10.1016/j.ifacol.2022.10.196.