ADVANCING E-COMMERCE FOR IMPROVING SLOW PAGE RELOADS

UNDERGRADUATE THESIS
Submitted as one of the requirements to obtain
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FACULTY OF COMPUTING

INFORMATICS STUDY PROGRAM

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May, 2024

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2024

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ABSTRACT

In the rapidly growing e-commerce landscape, the speed and efficiency of web interactions are paramount to user satisfaction and business success.

This capstone project addresses the important issue of slow page reloads, which significantly impacts user experience and conversion rates.

By leveraging cutting-edge web technologies and user-centered design approaches, we aim to develop a web application powered by Next.js that ensures fast and seamless interactions as well as improves overall usability. Our solution focuses on several key aspects. First, we integrate clear progress indicators and streamlined payment steps to reduce friction in the purchasing process. Second, we offer multiple payment options, improving flexibility and reducing payment abandonment. Third, one-click shopping integration simplifies transactions, serving loyal customers by leveraging securely stored payment information. Additionally, we are exploring the potential of Progressive Web Apps (PWA) to deliver native app-like experiences directly through the web browser, ensuring seamless user interaction. While not the main focus, community reviews and suggestions are also taken into account, with a moderation system to maintain the quality of user-generated content. A core element of our approach is a focus on iterative improvements through user feedback. Regularly scheduled feedback collection mechanisms, agile development approaches, and transparent communication with users about implemented changes ensure that the platform continuously evolves to meet needs and expectations of the user.

By combining these elements, the proposed solution aims to create a highly responsive, efficient and user-friendly e-commerce platform. This project aims to not only solve the immediate problem of slow page reloads, but also set a new standard for the online shopping experience through continuous refinement and improvement of the user experience. The expected result will be a powerful and innovative platform that significantly improves user satisfaction and drives business success in the competitive e-commerce landscape.

DEDICATION

I would like to dedicate this project to:

1. My beloved mother who never gives up on me and always believes in me. Thank you for your endless support and love which you've been giving me since I was born. Thank you for always raising me up when I am down.
2. My sister Purwanti, thank you for always being there and helping me to go through the hardship. Thank you for your never-ending support and love.
3. My Advisor Sir Nur Hadisukmana, whose wisdom and guidance have illuminated the path of our academic endeavors. Your dedication to fostering our growth and learning is deeply appreciated.
4. All computing lecturers. Thank you for giving me valuable knowledge during my academic study.
5. My beloved friends Napis, Rayyis, Abel, Fadhil and Akbar who are always there for me whenever I have problems. Thank you for your positivity and support for me throughout my capstone.
6. And to all those who strive to make the digital world faster and more efficient, this work is a tribute to your relentless pursuit of innovation and excellence.

Thank you all for believing in me and supporting me in my quest to advance e-commerce by improving slow page reloads.

ACKNOWLEDGMENTS

I would like to explore this topic in depth, focusing on cutting-edge e-commerce strategies and their impact on consumer behavior and business practices.This study will look at innovations like personalized shopping, mobile commerce and omnichannel retail to see how they improve user experience and drive sales. By analyzing data from online retailers and consumer surveys, the research aims to provide practical insights and recommendations for businesses. The importance of this research lies in its ability to help businesses adapt to the rapidly changing e-commerce landscape. By understanding these advanced strategies, businesses can improve their online presence and customer satisfaction. Ultimately, the research aims to contribute to the growth and success of e-commerce by providing clear, actionable insights. In summary, this study aims to provide detailed analysis of cutting-edge e-commerce strategies, helping businesses and consumers navigate the digital marketplace more effectively.

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