

## ABSTRACT

### **DESIGN AND DEVELOPMENT OF A WEB-BASED PRODUCT CUSTOMIZATION APPLICATION USING THE RAPID APPLICATION DEVELOPMENT (RAD) METHOD (Case Study: Herman Sablon)**

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The advancement of digital technology has encouraged businesses to utilize technology to improve operational efficiency and customer service. This study aims to design and develop a web-based product customization application using the Rapid Application Development (RAD) method. The application addresses challenges in manual product customization processes, such as specification mismatches, difficulties in customer data management, and limited customer access to self-design their products. RAD process involves iterative development with a focus on user needs. The application provides key features, including online product customization, real-time preview, and an integrated system for order management. Testing results show that the application can enhance the operational efficiency of Herman Sablon and deliver a better customer experience. Recommendations for further development include adding 3D visualization features, integrating AI for design recommendations, and expanding accessibility through mobile devices.

**Keywords:** Product customization, web-based application, Rapid Application Development (RAD), operational efficiency, Herman Sablon.

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