

Developing a Web-Based E-Commerce Application for Toko Oleh-Oleh Khas Prabumulih

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Abstract

Prabumulih Typical Souvenir Shop is a business unit selling various pineapple-based processed products that still faces constraints in promotional reach and manual transaction efficiency. This study aims to design and build a web-based e-commerce information system as a solution for digital marketing and sales. The system development method used is Rapid Application Development (RAD), consisting of requirements planning, user design, construction, and cutover phases. The application was built using PHP programming language and MySQL database. The results show that the application successfully facilitates online transactions, real-time stock management, and automated sales reporting, which significantly enhances the shop's operational efficiency.

Keywords: E-commerce; MySQL; PHP; Rapid Application Development; Information Systems.

1. Introduction

The rapid growth of information technology has shifted business paradigms from traditional to digital. Currently, the Prabumulih Typical Souvenir Shop relies on conventional sales and limited promotion through social media (WhatsApp/Instagram). This leads to unintegrated transaction documentation and limited market reach. Based on these issues, this research designs an e-commerce application to facilitate consumers in accessing product information and conducting independent transactions via a web platform.

2. Research Methods

The system development follows the Rapid Application Development (RAD) model:

1. Requirements Planning: Identifying functional needs through direct observation and interviews with stakeholders.
2. User Design: Modeling the system using Unified Modeling Language (UML), including Use Case, Activity, and Class Diagrams.
3. Construction: The coding phase using the PHP language, integrated with a MySQL database.
4. Cutover: System testing using Black Box methods and final implementation in the user environment.

3. Research and Discussion

3.1. System Analysis and Design

The system is designed with two main access levels:

1. Admin: Manages categories, products, orders, payment confirmations, and sales reports.
2. Customer: Performs registration, browses the catalog, manages the shopping cart, and uploads payment proof.

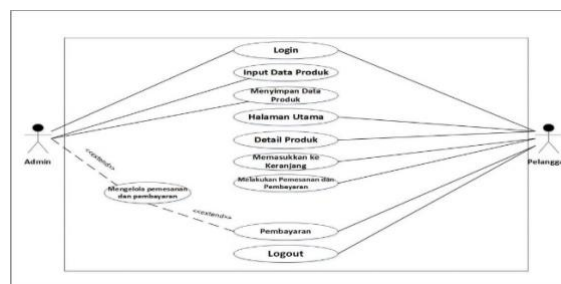


Fig. 1 : Use Case Diagram

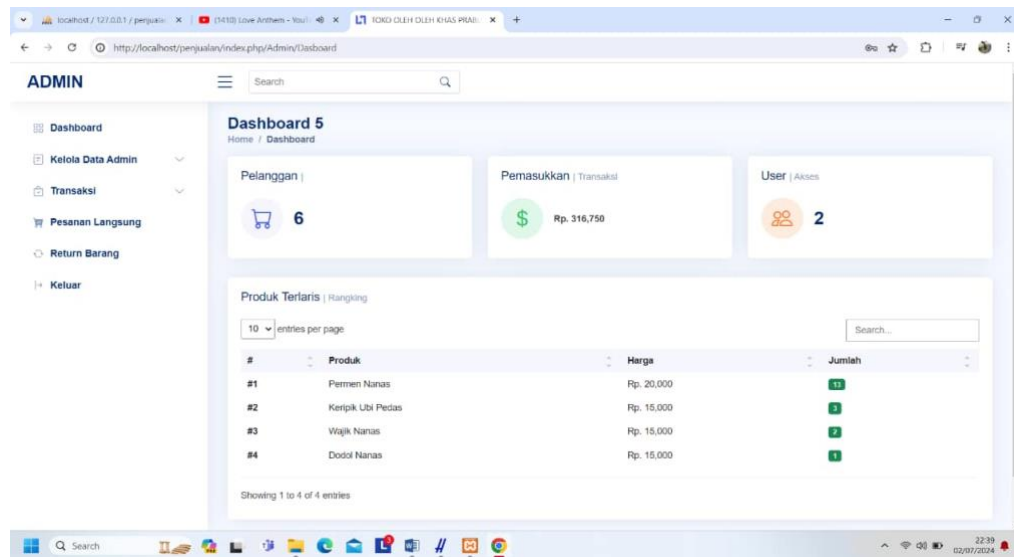


Fig 2. : Dashboard Admin

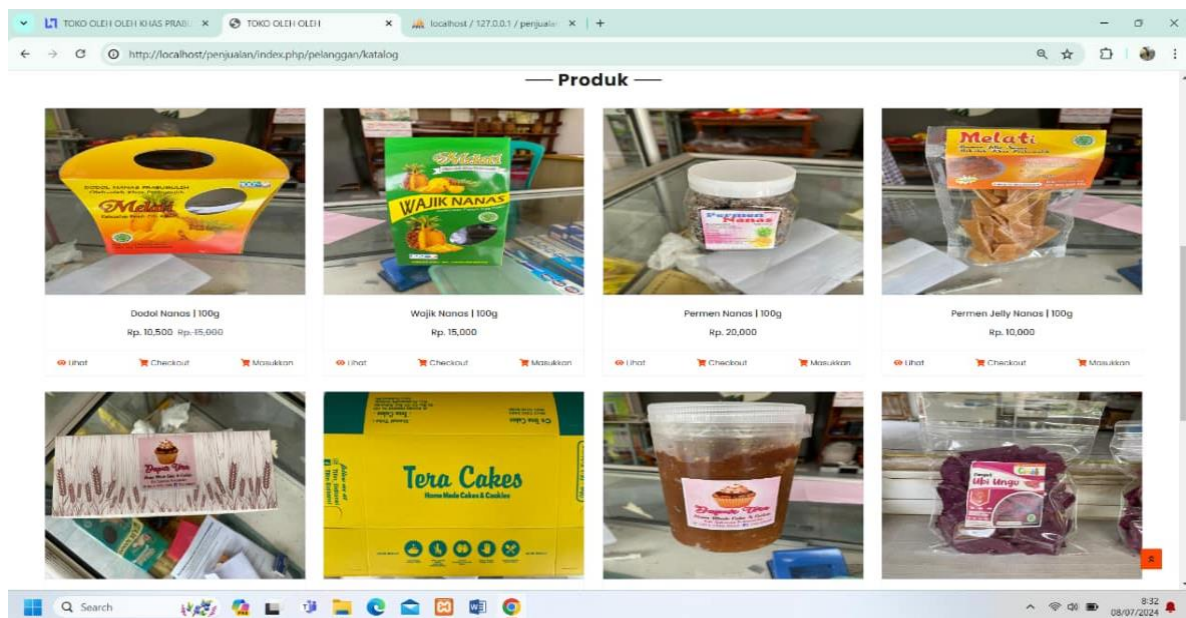


Fig. 3 : user homepage view

3.2. Application Interface Implementation (System Output)

The following are the results of the implemented application interface based on the research:

1. Main Homepage: Displays the catalog of pineapple-based products with search and category filters to enhance user experience.
2. Product Detail Page: Provides comprehensive information regarding product descriptions, pricing, and real-time stock availability.
3. Shopping Cart: A feature for customers to review selected items before proceeding to the checkout process.
4. Admin Dashboard: The control center for the shop owner to monitor incoming orders, daily sales charts, and inventory management.

3.3. System Testing

Testing was conducted using the Black Box Testing method, focusing on functional inputs and outputs:

1. Login Function: Success (Functions as expected).
2. Product Data Entry: Success in saving data to the database (Functions as expected)
3. Transaction Process: Customer orders are successfully notified to the admin (Functions as expected).
4. Payment Confirmation: The proof-of-payment upload feature works correctly (Functions as expected).

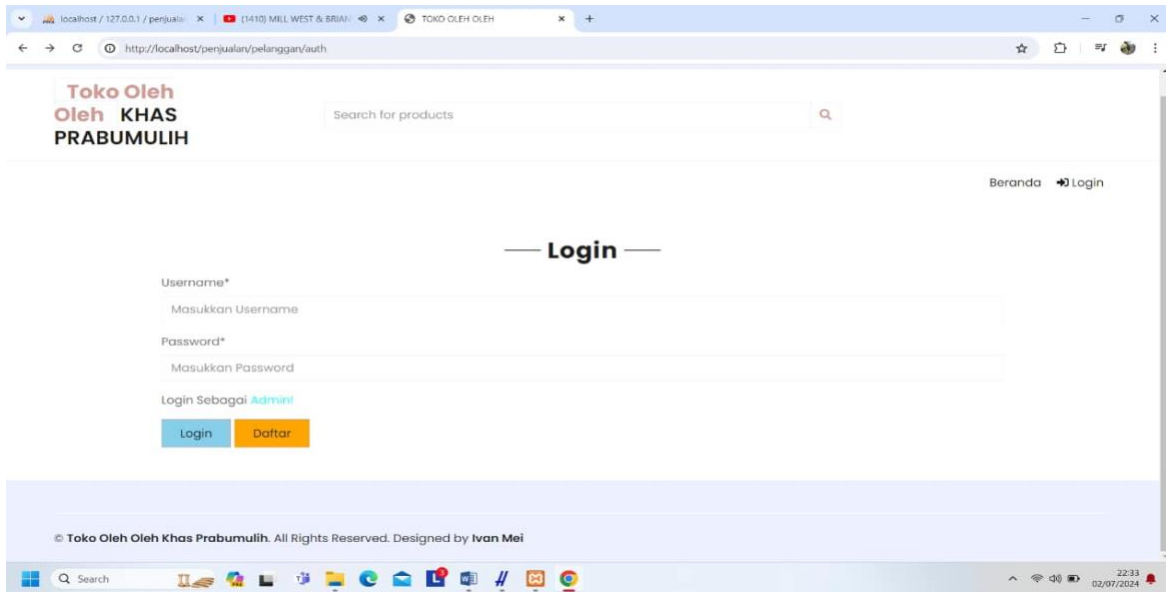


Fig.4 : Login Page

The login page display above is useful for admins and users to enter the sales website.

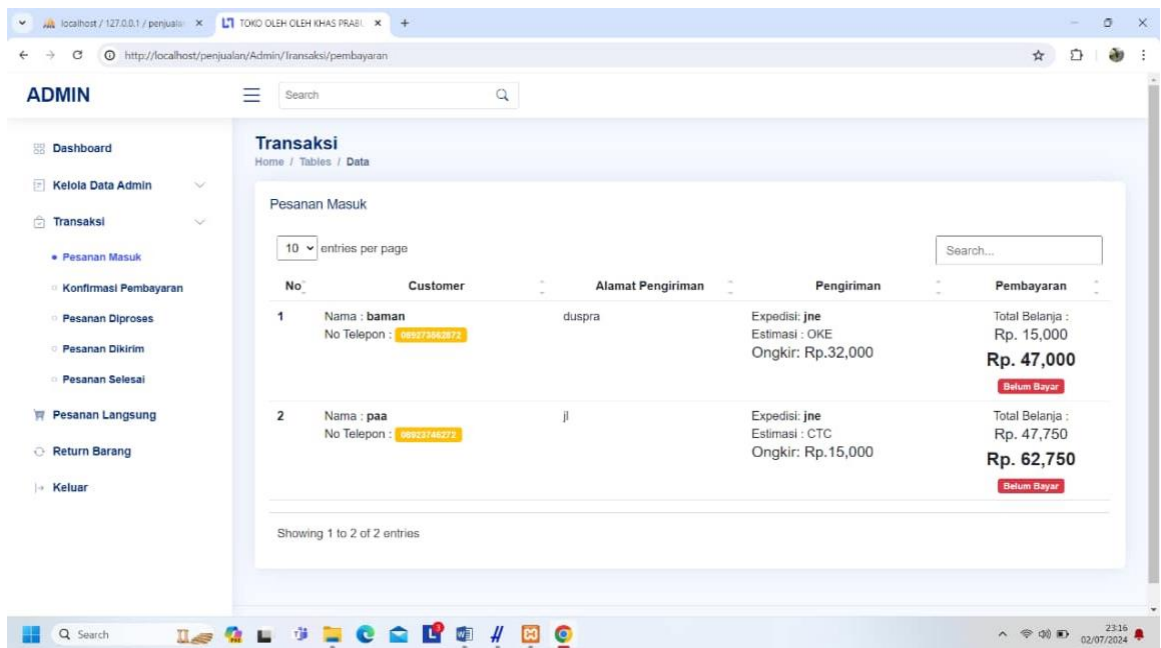


Fig .5 : Incoming Order TransactionIncoming Order Transaction

This page displays incoming transactions into admin transactions that have been made by buyers to make product payments.

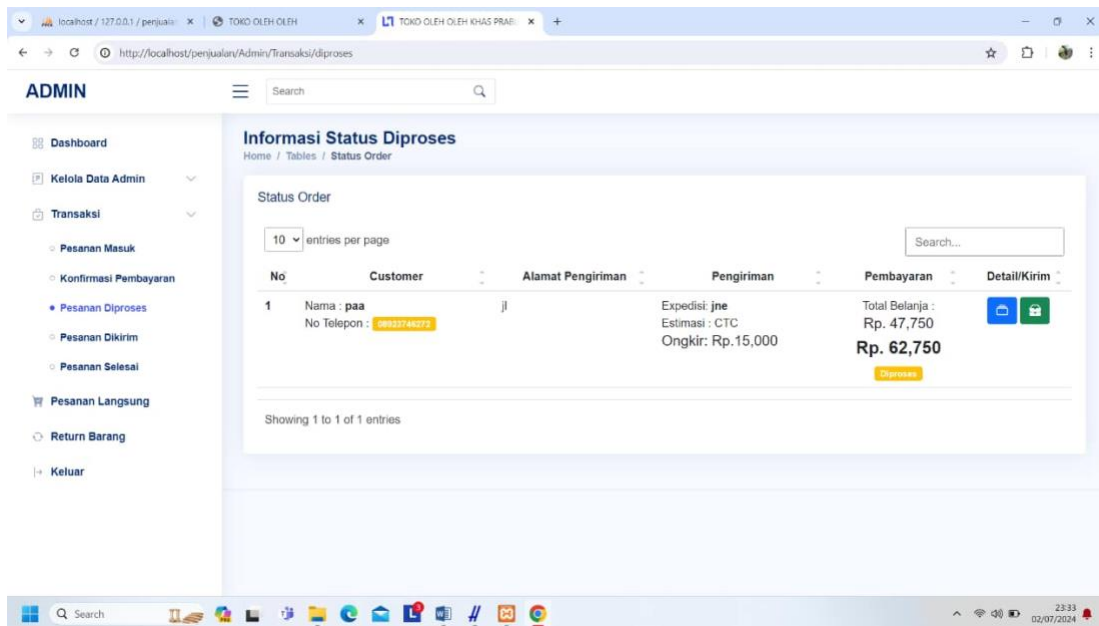
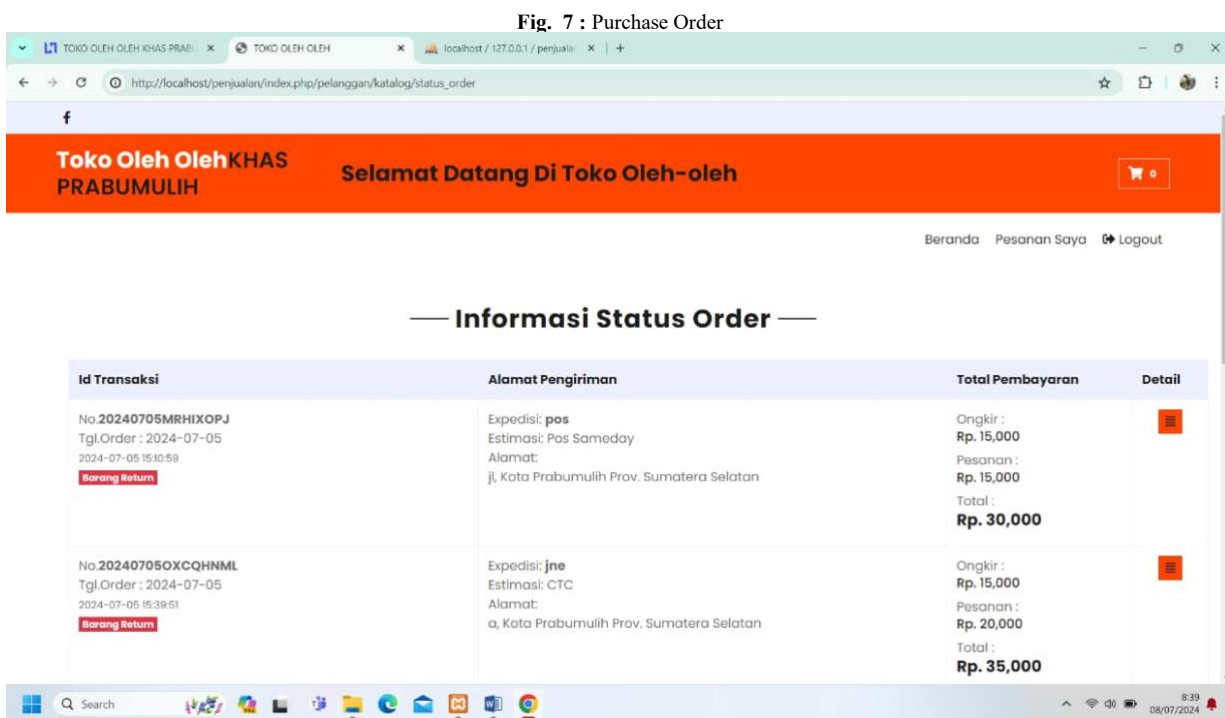


Fig. 6 : Order Menu in Process

This page displays orders that are being processed by the admin to send orders to customers.



This page displays purchases made by users to make payment transactions along with photo proof of payment that has been paid by the user to the sales store.

4. Conclusion

The e-commerce application for the Prabumulih Typical Souvenir Shop was successfully developed using the RAD method. The application overcomes manual limitations by providing 24-hour online transaction capabilities, accurate stock management, and systematic reporting. The implementation of this system is expected to increase sales volume and the competitiveness of SMEs in Prabumulih City.

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