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DIGITALIZATION OF WEB-BASED MOBILE PHONE ACCESSORIES SALES AT DZMOON STORE

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ABSTRACT

Dzmoon Store is a business that sells mobile phone accessories. The challenges faced include requiring customers to visit the store in person to obtain product and stock information, product promotions not yet reaching customers outside the region, online ordering not yet available, and ineffective sales report processing. This research aims to develop a web-based mobile phone accessory sales information system that can facilitate customer product information access, online ordering, and sales data management. The waterfall method used consists of analysis, design, implementation, testing, and maintenance. Data collection was conducted through observations and interviews at Dzmoon Store. The system was designed using Unified Modeling Language (UML) and implemented using PHP and MySQL. The results show that the system is capable of providing online product and stock information, facilitating website purchase transactions, and generating sales reports stored in a database. Testing results indicate that the login, data management, data search, and report printing functions operate according to user requirements. Therefore, the developed web-based sales system can improve the ease, speed, and effectiveness of the sales process and data management at Dzmoon Store.

Keywords: Digitalization; Sales; Mobile Phone Accessories; Website; Information System.

INTRODUCTION

The development of information and communication technology has driven digital transformation in various areas of life, including the trade sector. Digitization is one way businesses can improve operational effectiveness, expand marketing reach, and enhance the quality of customer service. The use of web-based technology enables business processes to be carried out more quickly, accurately, and efficiently, without being limited by location or time.

Dzmoon Shop is a business that sells various types of mobile phone accessories. The accessories sold include a variety of products that support mobile phone use and are in high demand. However, the sales process is still carried out conventionally. Customers must visit the store in person to obtain information about products and stock availability. Furthermore, product promotions cannot reach customers outside of Medan City due to the lack of online marketing channels. Another problem is the in-person ordering process, which limits sales reach and makes it difficult for customers outside the region. In terms of data management, shop owners also experience difficulties in managing transaction data and compiling sales reports effectively.

Previous research has shown that implementing a web-based sales information system can improve data management efficiency and expand marketing reach. Research conducted by Kharisma, Firliana, and Nugroho (2024) shows that a mobile phone accessory sales information system can assist with stock management, online transactions, and sales reporting. Research by Astuti (2024) concluded that a web-based sales system can serve as a promotional medium and a means for online product ordering, contributing to increased sales. Meanwhile, research by Rouyati and Zahra (2024) stated that a website-based sales information system can improve the effectiveness of product information delivery, expand market reach, and simplify the transaction process for customers.

Based on these issues and the results of previous research, a web-based sales information system is needed that can provide real-time product and stock information, facilitate online ordering, and assist with data management and sales reports at the Dzmoon Store. This system is expected to address the limitations of the conventional sales process currently in place.

This research aims to design and build a web-based mobile phone accessory sales information system at the Dzmoon Store using the Waterfall method. This method was chosen because it offers systematic stages, from needs analysis, design, implementation, testing, and system maintenance. The hypothesis of this research is that the implementation of a web-based sales system can increase the effectiveness of the sales process, make it easier for customers to obtain product information and make transactions online, and help manage data and prepare sales reports at the Dzmoon Store.

RESEARCH METHODS

This research is a system development research using the Waterfall method with the stages of needs analysis, design, implementation, testing, and maintenance. The object of the research is the sales process of mobile phone accessories at the Dzmoon Store in Medan City. The research data consists of product data, customers, and sales transactions obtained through observation, interviews, and literature studies. The system is designed using the Unified Modeling Language (UML) and implemented with the PHP programming language and MySQL database. The variables observed include the web-based sales information system and the effectiveness of the sales process as reviewed from the ease of information access, ordering, data management, and report preparation. Data analysis is carried out descriptively based on user needs, while system testing uses the Black Box Testing method to ensure all system functions run according to user needs.

RESULTS AND DISCUSSION

This research resulted in a web-based mobile phone accessory sales information system at the Dzmoon Store, developed to address various challenges encountered in conventional sales systems. The system provides features for managing product data, customer data, transaction data, shipping costs, payment validation, and sales reporting. Furthermore, the system allows customers to obtain product information and make transactions online without having to visit the store in person.



Figure 1. Admin Dashboard

Figure 1 shows the admin dashboard, which is used to manage all data in the system. Through this dashboard, admins can manage product data, product categories, customers, sales transactions, payment confirmations, and sales reports. The admin dashboard is designed to simplify data management, making administrative work more effective and efficient. Besides admin use, the system also provides a dedicated customer page. On this page, customers can view the available product catalog, obtain stock information, place orders, provide product reviews, upload proof of payment, and view their transaction history. These features facilitate customer transactions without being restricted by location or time.

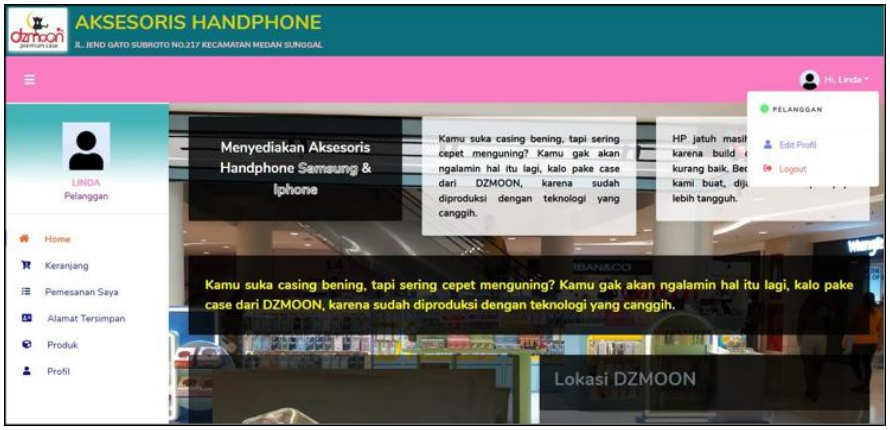


Figure 2. Customer Dashboard

Figure 2 shows the customer dashboard, which serves as a means of interaction between customers and the system. Through this dashboard, customers can access comprehensive product information and complete the online purchasing process. This feature helps improve service quality and makes it easier for customers to obtain the products they desire. To determine the success of the developed system, testing of the system's main functions was conducted. Testing was conducted to ensure that each feature functioned according to user needs.

To find out the success of the system that has been developed, system testing is conducted to determine whether the system is operating according to user expectations. System testing is conducted using self-testing. The functions tested include logging in, adding data, changing data, deleting data, displaying data, searching data, and displaying reports.

Table 1. Self-testing

No	Nama Test	Hasil Yang Diharapkan	Hasil
1	*Login*	Users can *log* in/log in to *the website*	Conform
2	Add data	Users can add data	Conform
3	Change data	Users can change the data	Conform
4	Clear data	Users can delete data	Conform
5	Display data	Users can view the data that has been stored in the *database*.	Conform
6	Search data	Users can search for data that has been stored in the *database*.	Conform
7	Appear report	Users can view reports that can be printed or downloaded in pdf format.	Conform

Based on the test results in Table 1, all of the system's main functions performed successfully according to user requirements. The login feature successfully verified user access rights. Data management features, such as adding, modifying, deleting, and searching data, also ran smoothly. Furthermore, the system was able to automatically display and print sales reports. The test results indicate that the developed system meets the operational needs of the Dzmoon Store and can be used as a web-based sales tool.

One of the main outputs of the developed system is the ability to automatically generate sales transaction reports. These reports are used to assist store owners in monitoring sales activity and serve as evaluation materials for business decision-making.



Laporan Penjualan Produk

Periode : 09 July 2025 - 10 July 2025

No	Nota Penjualan	Nama Lengkap	Tanggal Pesan	Sub Total	Jasa Pengiriman	Ongkos Kirim	Diskon	Total
1	10000001	Nova	09 July 2025	Rp700,000	JNE	Rp1,540	Rp70,000	Rp631,540
2	10000002	Linda	10 July 2025	Rp350,000	JNE	Rp770	Rp35,000	Rp315,770

Figure 3. Sales Transaction Report Output

Figure 3 shows a sales transaction report generated by the system. This report contains information about customer transactions and can be printed as an administrative document. With reports stored in the database, the sales information management process is more organized compared to the previous manual system.

The results of the study indicate that implementing a web-based sales information system helped Toko Dzmoon overcome various problems previously encountered. Customers can quickly obtain product information, place orders online, and monitor transaction status more easily. From the store manager's perspective, the system helps expedite data processing and the preparation of sales reports. These findings align with research by Kharisma, Firliana, and Nugroho (2024), which states that a web-based sales information system can improve the effectiveness of data and transaction management. These results also support research by Astuti (2024) and Rouyati and Zahra (2024), which demonstrated that website utilization can expand marketing reach and improve customer service quality.

Although the system has met user needs, several limitations remain. The payment confirmation process is still carried out manually by the admin, and the system is not yet integrated with electronic payment services or automatic delivery tracking. Nevertheless, the system has several advantages, including simplifying sales data management, providing online product information, supporting remote transactions, generating automatic sales reports, and helping expand the Dzmoon Store's marketing reach. Therefore, digitizing web-based sales at the Dzmoon Store can be an effective solution for improving business process efficiency and customer service quality.

CONCLUSIONS

The web-based mobile phone accessory sales system can accelerate and simplify the sales process. Using the online sales system, customers can make purchases directly through the website, and the items will be shipped directly to their address, eliminating the need for in-store visits. This will also increase the awareness of the Dzmoon Store among the wider community. The online sales system simplifies the processing of sales data.

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