

Web-Based Clothing Sales Information System for FreyeyClothing Micro and Medium Enterprises

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ABSTRACT

Objective: This study aims to design and implement a web-based sales information system for the micro and medium enterprise "FreyeyClothing" to overcome challenges in managing sales transactions, inventory, and financial reporting efficiently. **Method:** The system was developed using the **Agile development methodology**, which involves iterative stages of planning, designing, developing, testing, and deployment to ensure adaptability and continuous improvement based on user feedback. **Results:** The implementation of this web-based system significantly enhanced operational efficiency, particularly in the management of sales and inventory data. The automated processes reduced manual errors, improved data accuracy, and provided timely access to sales information. Additionally, the system's reporting features supported more effective business decision-making through real-time financial insights. **Novelty:** The novelty of this research lies in the application of the Agile method for developing a scalable and adaptive web-based information system specifically tailored for micro and medium enterprises, demonstrating its effectiveness in improving digital transformation and decision-making processes in small-scale retail operations.

INTRODUCTION

Technological advances and the intensity of competition in the business world encourage business actors to continue to adapt and adjust to various changes. By designing this clothing sales information system so that MSMEs have the advantage of full control over the website, branding, promotional flexibility and reduced commission costs. Information systems are the key to success and encourage the business world to operate efficiently and effectively, both at the local and global levels. This involves the use of quality human resources as well as the production of goods or services [1], Therefore, there is a need to simplify the process. The use of the internet is the most important element in supporting this sales process, because through the internet, computers can easily exchange data and information. Thus, business opportunities, especially for MSMEs that utilize internet technology and websites are growing [2].

Sales through a website are known as a web-based sales information system. By utilizing internet technology, various activities such as product offerings, promotions, collaboration, and building relationships with potential customers can be carried out more easily and efficiently. The marketing process is less labor-intensive; all business information is simply presented online [3]. Creating an online store website is a strategic

step in building a business effectively. Furthermore, this information system can also replace manual data processing, which is often time-consuming and inefficient [4]

With good management in e-commerce that utilizes the internet effectively for sales, this design will facilitate the sale of clothing products and reduce errors in manual processes [5]. The large number of local products circulating in the market encourages producers to improve quality and service in order to compete with other big brands. One form of service offered is through the use of websites or social media to expand market reach. An easily accessible website can attract more customers to buy their products [6].

RESEARCH METHOD

This sales system was designed using an Agile approach. Agile is a software development method that focuses on iterative work cycles, with predetermined rules and solutions. This approach emphasizes structured and organized collaboration between teams. Agile methods are particularly well-suited for short-term projects due to their ability to quickly adapt to changes that occur during the development process [7]. The following is the flow of the agile method:

1) Plan

The planning phase in the Agile methodology is a crucial step that helps the team understand the project's objectives, determine requirements, and devise strategies to achieve the desired results.

2) Design

In the design phase, the team creates a detailed design for the product to be created. This design includes visual elements, the user interface, and the overall structure of the product [8].

3) Develop

The development phase is the process in which the team transforms the plan into functional program code. The features prioritized in the planning phase are implemented and integrated into the product.

4) Testing

The testing phase aims to ensure that the developed features work as expected and are free from errors or bugs.

5) Deployment

The deployment phase is the process of releasing or implementing the completed product into the production environment or to end users.

RESULTS AND DISCUSSION

At this stage, the design process involves several design stages in order to provide a more organized structure in application development,

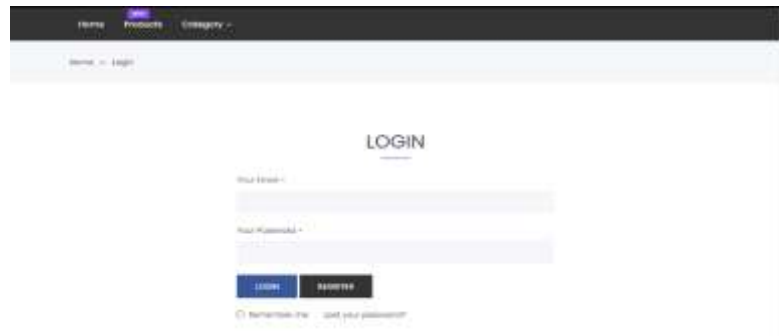


Figure 1. Login Page

A login page is a specially designed display within a specific application, website, or system. This display allows users to enter their username and password to access or log in to a specific account or system.



Figure 2. Home Page

The image shows the Home page, which is the main page after logging in to the system. After successfully logging in, you are redirected to the Home page, which displays some of the information contained in the information system.

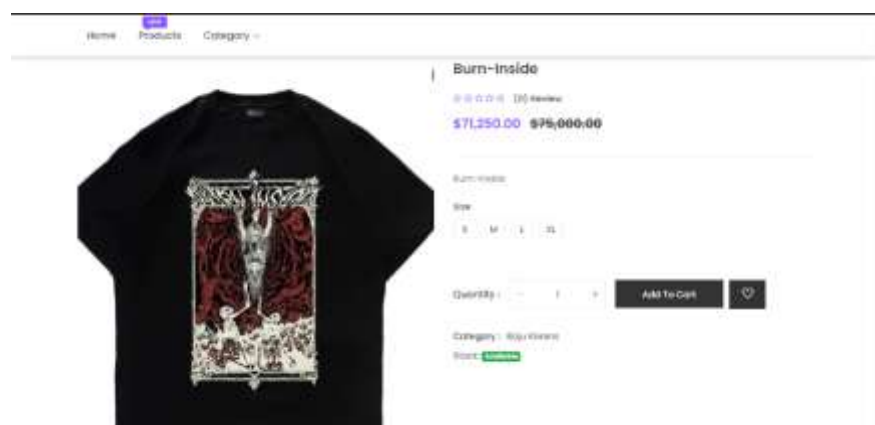


Figure 3. Cart Page

This page is a continuation of the order page. After ordering, you will be taken to the cart page to click checkout to enter the database.

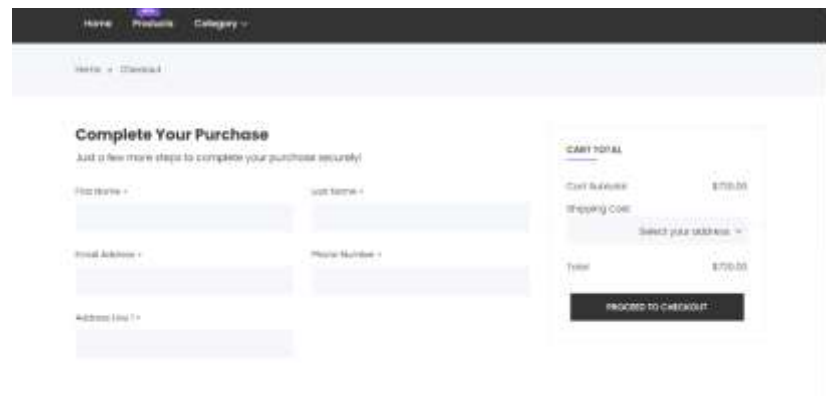


Figure 4. Checkout Page

After clicking "buy" on the clothing item, we are directed to the order menu from the cart page.

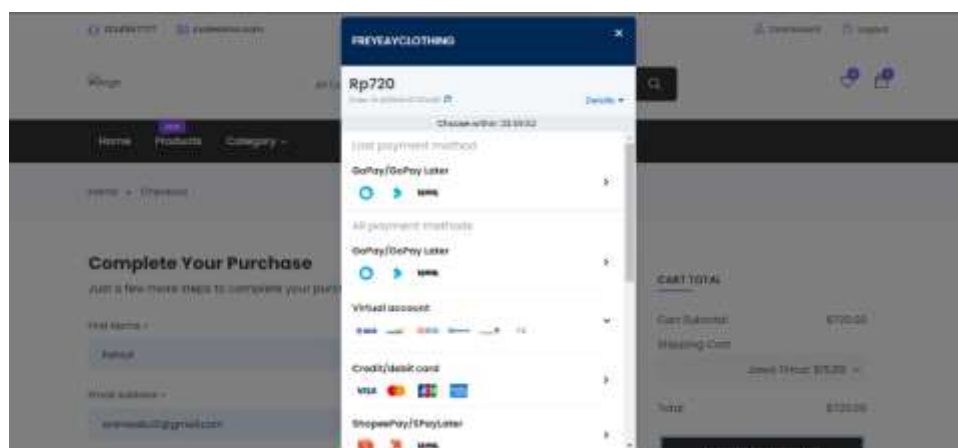


Figure 5. Payment Page

This page contains the payment information. After filling in your details, click check out to make the payment using Midtrans.

This test was conducted using the Blackbox Testing method. This testing method focuses on evaluating the application's output, namely test data, to ensure that the application performs according to predetermined requirements.

CONCLUSION

Fundamental Finding : This study successfully developed a web-based sales information system for FreyayClothing MSME that effectively improves sales efficiency, product management, and marketing reach, while ensuring transaction security through payment gateway integration. **Implication :** The system's implementation demonstrates that adopting digital solutions can significantly enhance MSME competitiveness, streamline business operations, and support broader economic growth through improved accessibility and customer engagement. **Limitation :** However, the research

was limited by the small-scale testing environment and the absence of long-term performance evaluation, which may affect the generalizability of the results to other MSME sectors. **Future Research** : Further studies are recommended to integrate advanced features such as predictive analytics, customer relationship management (CRM), and mobile-based applications, as well as to evaluate system performance across various industries and larger user groups to ensure scalability and sustainability of the proposed system.

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