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DESIGN AND CONSTRUCTION OF A WEBSITE-BASED VIRTUAL SALES SYSTEM AND SERVICE FOR FOUR BEAUTY SKINCARE STORE

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ABSTRACT

As technology rapidly advances, many business sectors are shifting to digital platforms, including the skincare industry. The aim of this study is to design and develop an effective and efficient website-based sales system for the Four Beauty skincare store. This system is designed to provide convenience for customers shopping online, while also simplifying inventory and transaction management for the store operators. The development approach used for this system is the Agile software development model, supported by technologies such as PHP, HTML, CSS, JavaScript, and MySQL for database management. The outcome of this development is an integrated online store website featuring various functions, such as a product catalog, payment system, and management of transactions and customer data, all of which enhance the overall digital shopping experience for customers.

Keyword : Online Sales, E-commerce Website, Skincare, Four Beauty, Sales System

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INTRODUCTION

In technological advancements, it has brought many benefits to society, including in improving access to information and public services. Modern technology is not only able to store and transmit data, but also contribute to realizing the country's development goals and aspirations. In recent years, the development of information technology has resulted in various significant innovations that affect human well-being. One such innovation is the internet, which has become an important invention in modern life. The internet allows the creation of a web-based information system that functions as a means of direct interaction between the government and the community in improving the quality of public services (Sahfitri et al., 2023).

One of the main benefits of internet technology is its ability to provide access to information. Through the internet, people can easily access a wide range of information, from those generated by individuals to relevant global information. This access makes it easier for people to acquire new knowledge, both simple and complex. In addition, the internet also allows the public to find out about changes in information made by the government, so that people can be more critical of existing policies. This critical attitude, in turn, helps the government in evaluating and improving the work programs that have been implemented (Rohmatun et al., 2017).

Along with the development of information systems designed for the benefit of society, various web-based systems have emerged that allow people to access and search for information more easily. By utilizing advances in information technology, the government can improve the quality of public services, accelerate access to information, and realize more effective and transparent government management. The application of information technology in public services is a strategic step to create better relationships between the government and society (Ikhwan & Lubis, 2023).

The beauty industry, especially in the skincare sector, is experiencing rapid development with increasing public interest in skincare products. Along with the development of technology, many retail businesses are turning to digital platforms to reach consumers more easily and quickly. One of the major transformations that has occurred in the business world is the use of a website-based sales system that

allows skincare stores, such as Four Beauty, to market their products online, reach a wider market, and provide convenience for customers without the need to visit physical stores (Wahyu, 2021).

Skincare or skin care is a series of steps taken to care for and maintain healthy skin. The main goal of skincare is to maintain moisture, cleanliness, and skin condition to stay healthy, hydrated, and protected from various skin problems such as acne, aging, or irritation. Skincare usually involves the use of certain products that are tailored to a person's skin type and condition. And domestically made skincare products that are now increasing and are also heading to the global market are skincare products from Four Beauty. (Scott, 2024).

Four beauty is a local cosmetic product from Indonesia. PT. Putra Bumi Yusuf creates products at affordable prices, attractive packaging, and provides various products such as facial wash, micellar water, toner, and crean day. Although the main target market is teenagers, many adults also use the product because of the quality that is not inferior to similar products from other brands.

For skincare stores like Four Beauty, website development as a means of sales can strengthen competitiveness in an increasingly competitive market. The website system allows stores to provide more complete product information, introduce more personalized services, and simplify the transaction process for consumers. In this case, designing and building an intuitive, accessible, and secure sales system is very important to improve customer experience and encourage business growth (Yulianti, 2022).

Based on the description above, e-commerce business people should be more prepared when there are competitors entering Indonesia at low prices and with the same quality, then a new or innovative marketing strategy is needed in adjusting the free trade policy.

LITERATURE REVIEW
Designing a Website-Based Skincare Sales Information System

Web-Based Cosmetic Sales Information System Designing is the process of designing and building an information system that can help in managing cosmetic sales online. This system is designed to make it easier for customers to order and pay for skincare products, as well as make it easier for managers to manage stock, sales, and customers. The goal is to increase the operational efficiency of skincare sales, expand market share and increase sales as well as make it easier for customers to place orders and payments.**Information Systems**

Selling Skincare Based on Websites

A system designed to manage skincare sales online through the website. This system allows customers to order and pay for skincare products online, as well as allows managers to manage stock, sales, and customers. The technology that can be used is in the form of databases and platforms in the form of web, mobile, and desktop.

Website-based skicare four beauty product sales application

Along with the development of technology, a website-based skincare product sales application is designed to facilitate the process of selling skincare products. This application allows customers to place orders and payments for skincare products online, as well as to manage stock, sales, and customers, many retail businesses are turning to digital platforms to reach consumers more easily and quickly.

One of the major transformations that has occurred in the business world is the use of a website-based sales system that allows skincare stores, such as Four Beauty, to market their products anywhere online, reach a wider market, and provide convenience for customers without the need to visit a physical store (Wahyu, 2021).

ANALYSIS AND PLANNING

System Planning

Hardware Design

A system needs analysis is carried out to determine the technology that will be applied during system development. The following is a breakdown of the hardware specifications used in this study:

1) Operating System: Windows 10.
2) Processor: Intel Core i3.
3) RAM: Minimum 8GB.
4) Printer

This hardware specification is designed to support the smooth operation of website-based sales applications in Virtual Service Systems.

Software Design

Here is the software needed by the user to run the system:

1) PHP version 7.4.
2) PhpMyAdmin version 5.0.2
3) MySQL (Xampp)
4) Visual Studio Code (Editor)
5) Browser: Google Chrome

The software was chosen to ensure the development of a fast, stable, and easy-to-use system in data management, while MySQL and PhpMyAdmin are used to manage the application's database. Visual Studio Code as the editor and Google Chrome as the browser will ensure optimal access for users of this web-based application.

Use Case Diagram

Figure 1. Use Case *Diagram*

In Figure 1 there are 3 factors, namely customers, admins and payments. Customers are those who order products, admins are store managers and payments are defined as payment systems that are used to make sales transactions To use this information system, each customer and administrator must log in as soon as possible to use it according to their respective assessment rights. Customers can view product catalogs, order products, cancel orders and view transactions that have been made. While admins can access product orders, manage product orders and view sales reports.

Activity diagram

Figure 2. Activity diagram
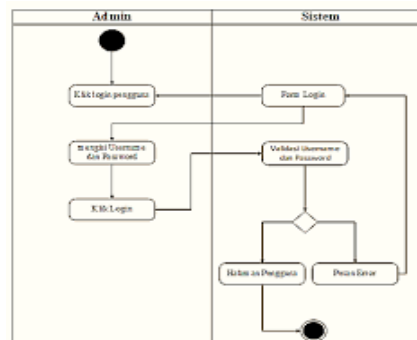
An activity diagram is a representation of an activity or workflow on a system that will be executed. In figure 4 is the activity diagram of the cosmetic sales information system at the beauty cosmetic store. In this activity diagram, it explains the process of accessing the information system which contains Where the user checks in to the system then the system will display the homepage, customers can search for products and the system will display the product catalog. Then the customer enters the product ordering page and then the system will process the customer's request. After that, customers can make online payments on the system, then the payment will check the payment and confirm the payment to the system and then the process is completed

Implementation and Testing
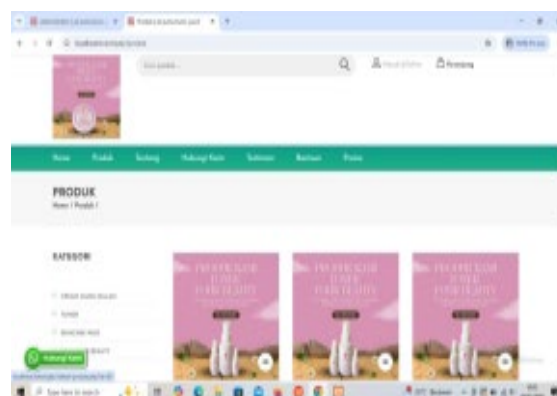
SYSTEM IMPLEMENTATION
App Display
To clarify the form of application system implementation above, here are the applications that have been created.

Visitor homepage

Here is the view of the visitor page shown in the image below.

Figure 3. Visitor Home Page

Formmain Visitor Display

The main page will be displayed when the visitor opens the XMPP website page On this page there is a home, product, registration, and login menu. The home and product menu displays products sold, the registration menu functions to register as a member on xmpp, and login is used to log in if you are already registered as a member.

Login page view

Here's what the login page looks like in the image below.

Figure 4. Login page view

Login Page View

On the login page view, there is a field to enter your username and password. If the username and password are entered correctly then the process continues, but if it is wrong then an error notification will appear on the username and password, if the username is wrong then a notification of the wrong username will appear, as well as if the password is wrong then a notification of the wrong password will appear, and if the username and password are wrong then a notification will appear and the wrong password will appear again on the login page.

Payment methods

Here is the view of the visitor page shown in the image below.
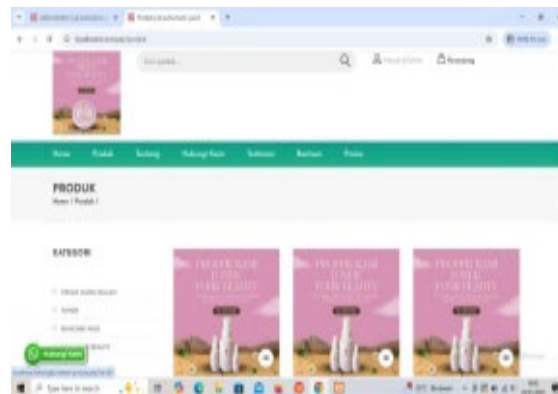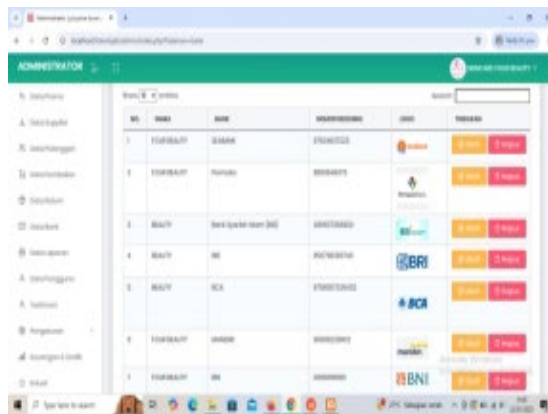
Figure 5. Payment methods

Payment Methods

Payment via bank is one of the most commonly used methods in online transactions, especially in Indonesia. There are several types of bank payment systems that can be applied in the e-commerce website for Four Beauty Skincare Stores. Here are some options that can be used for payment via bank: SEABANK, MANDIRI, BRI, BSI etc.

Interactive maps

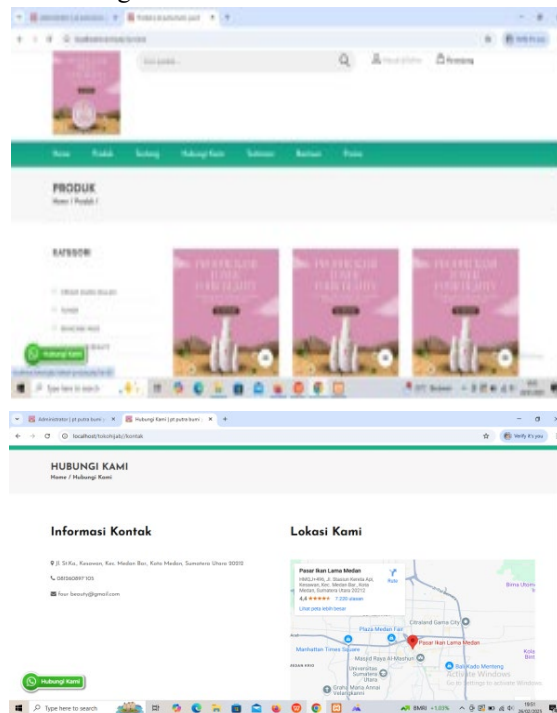Here's the interactive map shown in the image below.

Figure 6. Interactive Map

Interactive maps

Interactive maps are one of the most common ways to display locations on the web. Using services such as **Google Maps** or **OpenStreetMap**, these maps allow users to view and explore locations, zoom in, zoom out, or search for specific places. In addition, this map can be equipped with **markers** or markers to indicate important locations, such as:

- Business address
- Tourist attractions
- Event location

Testimonial data
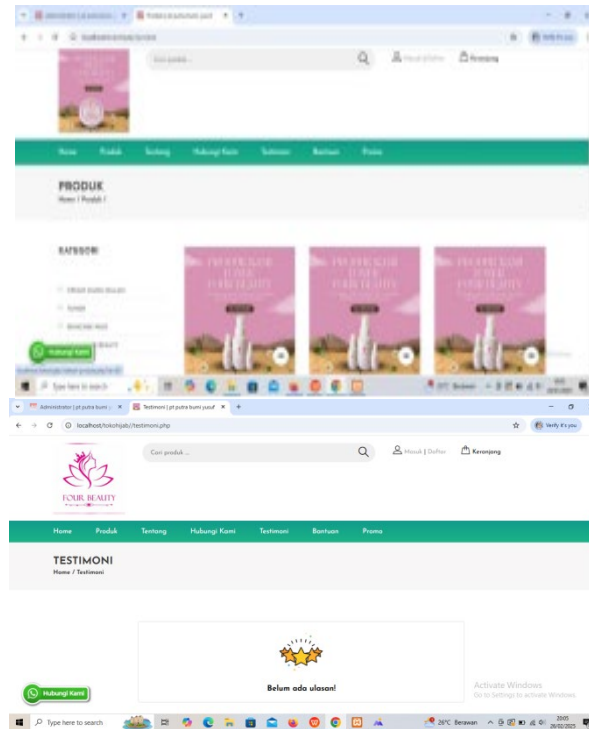The following is the display of testimonial data displayed in the image below

Figure 7. Testimonial data

A. Testimonial data

Testimonial data is a collection of reviews or opinions from customers, users, or other individuals who provide feedback about a product, service, experience, or company. These testimonials are often used by businesses or organizations to demonstrate the credibility, trustworthiness, and quality of what they offer.

Skincare promo data
The following is the display of skincare promo data shown in the image below.
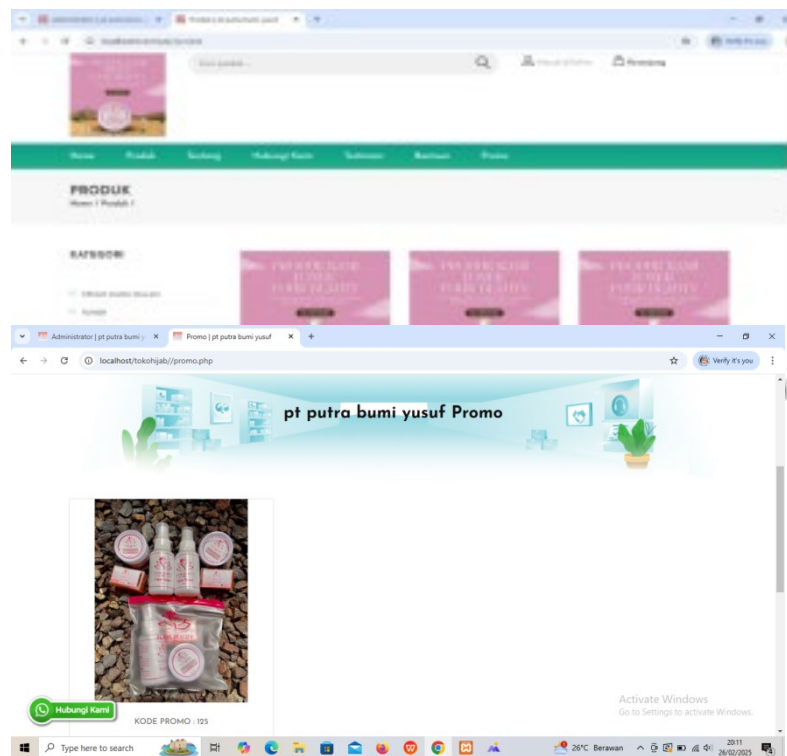
Figure 8. Skincare promo data

Skincare promo data

Skincare promo data is information about special offers, discounts, or promotional programs related to ongoing skincare products. This promo can be in the form of price discounts, bundling purchases, free gifts, or other attractive offers that aim to attract consumer attention and increase sales of skincare products. Price discount This is a type of promo that provides discounts on certain products, it can be in the form of percentage or nominal discounts.

Example of Price Discount Promo Data:

- **Promo Name:** "20% Off All Skincare Products"
- **Related Products:** Serum, Moisturizer, Face Mask
- **Discount:** 20% for any product in the skincare category
- **Effective Date:** March 1 - March 7, 2025

SYSTEM TESTING

System testing for **the Design and Construction of Website-Based Virtual Sales Systems and Services for Four Beauty Skincare Stores** is an important stage to ensure that the developed platform functions properly, meets user needs, and has optimal performance. Here are some types of testing that can be done in the development of this system

Functional Testing

aims to check whether the features in the website work as expected. Some of the aspects tested include:

- **User Registration and Login Process**: Ensures that users can register, log in, and manage their accounts.
- **Product Search**: Testing the search function to ensure users can find the products they are looking for easily.
- **Purchase Process**: Test the purchase flow from selecting products, adding to carts, choosing payment methods, to order confirmation.

- **Payment Process**: Verify that the integration with the payment system (e.g., bank transfer, e-wallet, credit card) is smooth.
- **Review and Rating Feature**: Users can provide reviews and ratings on products that have been purchased.

User Testing (Usability Testing)

This test involves real users to identify whether the design and user interface (UI) are easy to use and intuitive. Things tested include:

- **Ease of Navigation** : Ensures users can easily navigate the site to find products and complete purchases.
- **Responsive Design** : Ensures that the website runs well on a variety of devices, both desktop and mobile devices.
- **User Satisfaction Level**: Collect feedback from users regarding their experience using the website.

Yes	System Functions	Test Description	Expected Results	Status
1.	User Registration and Login Process	Test whether the user can perform the registration process	Ensure that users can register, log in, and manage their accounts.	Good
2.	Product Search	Test users can perform searches	Testing the search function to ensure users can find the products they are looking for easily.	Good
3.	Purchase Process	Test the purchase flow from choosing a product	Add to cart, select a payment method, and confirm your order.	Good
4.	Payment Process	Test the payment method via bank transfer.	Verify that the integration with the payment system (e.g., bank transfer, e-wallet, credit card) is working smoothly.	Good
5.	**Review and Rating Features**	Testing to be able to give features or ratings to product sales	Users can provide reviews and ratings on products that have been purchased.	Good
6.	Login Process	Test whether users can sign in using an already registered account	Users can log in to the system by entering the correct username and password.	Good
7.	User Data Security	Testing whether user data is protected and properly encrypted	User data is secure, no data is leaked or can be accessed without permission.	Good

CONCLUSION

Based on the overall research, it can be concluded that the design of ui/ux cosmetic sales at this beauty cosmetic store is an online sales platform designed to make it easier for skincare stores to promote and get maximum results in sales. This design is carried out using the figma application which produces prototype and wireframe designs. In the design of the ui/ux of cosmetic sales at the Four Beauty skincare store, it contains login, register, shopping cart, home, voucher, product selection, product recommendations, product checkout and logout. The methods used in this study include prototype development and data collection using observation and questionnaires.

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