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Web-Based Sale Information System for Pollux Shoes at CV Noto Putra

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ABSTRACT

Objective: *This study aims to analyze the* ***digital transformation strategy*** *of CV Noto Putra, a Surabaya-based footwear manufacturing company, in strengthening its competitiveness through the adoption of* ***e-commerce platforms*** *and legal compliance in online transactions.* ***Method:*** *The research applies a* ***descriptive qualitative approach*** *focusing on company practices related to technology adoption, marketing strategies, and adherence to Indonesia's* ***Civil Code*** *in conducting digital business operations.* ***Results:*** *Findings indicate that the integration of e-commerce has enhanced* ***operational efficiency****, expanded* ***market reach****, and improved* ***customer engagement****. Furthermore, compliance with legal frameworks reinforces* ***consumer trust and transaction transparency****.* ***Novelty:*** *This study highlights how traditional manufacturing companies, such as CV Noto Putra, can leverage* ***digital innovation combined with legal integrity*** *to sustain competitiveness and achieve long-term business growth in Indonesia's evolving footwear industry.*

INTRODUCTION

CV Noto Putra is a company engaged in the shoe and sandal manufacturing industry, located in Petemon IV, Surabaya [1]. In an effort to meet the public's need for quality footwear, this company presents various products for various market segments, ranging from school children, teenagers, to adult men and women. With experience and excellence in product variations, especially for the women's shoes and teenage men's sandals category, CV Noto Putra continues to innovate to increase the competitiveness of its products. One of its flagship products is the Pollux branded shoe, which has a fashionable design and is in accordance with trend fashion woman teenager and mature. Through product This, company determined for expand marketing and maximizing brand awareness in the ever-increasing competitive shoe market.

Development technology information Also push change significant in method transact. CV Noto Putra sees a big opportunity in the electronic commerce (e-commerce) system [2] as a marketing tool and sale Which effective. With utilise platform digital, company can reach A wider consumer base without geographical limitations, and simplifies the ordering and payment processes. Furthermore, buying and selling, as a form of legal agreement regulated by the Civil Code, serves as the legal basis for every transaction. Good in a way direct and online. By Because That, CV Noto Son besides notice product quality, also providing attention and level of customer satisfaction in every aspect of business transactions. With background behind This, CV Noto Son committed For Keep going develop his business to be able to compete in level local And

national, as well as become manufacturer shoe Which known And trusted by the wider community [3]. By considering the background that has been explained, the author is motivated to discuss the topic. " **System Information Web- Based Sales of Pollux Shoes at CV Noto Putra** ".

RESEARCH METHOD

In obtaining the data needed for this research, the author applied several methods to support the system design process that will be carried out. developed. Some of the methods used include the following: [4].

1. Method of collecting data :

a. Observation is a data collection technique that involves directly observing the object being studied to obtain data. The following data is collected regarding packages and customers within the study. CV Noto Putra [3].

b. Interviews (Interviews) in order to obtain appropriate data and the data needed by the author, the author conducted direct interviews with related parties to study the system currently used in order to analyze existing deficiencies, so that it can be used as a reference in program development [5].

c. Documentation is a technique for collecting data regarding activities, business profiles and existing organizations to be used as a basis for system development [6].

d. Literature study, the activity of collecting data or information from sources relevant to the research topic [6].

2. Design system This built based on studies case related and needs users will the system created in design system device soft [9].

a. Flow chart

Purpose of flowchart is to explain the steps to make purchases or transactions on CV Noto Putra website. For make things easier Customer purchases will be directed to page following as stated on the website that has been available.

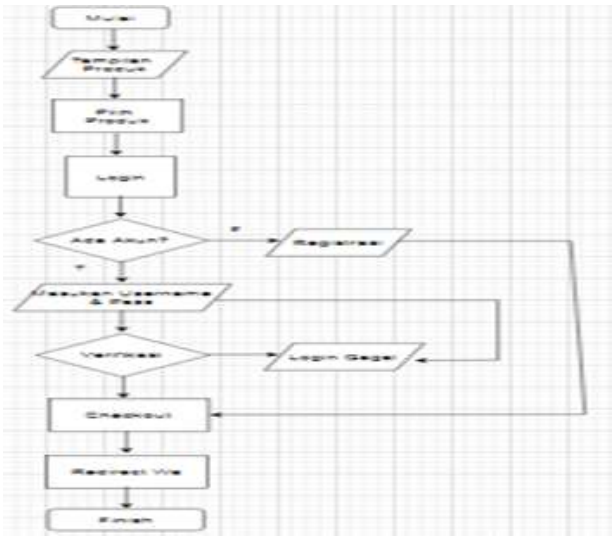

Figure 1. *User flowchart*

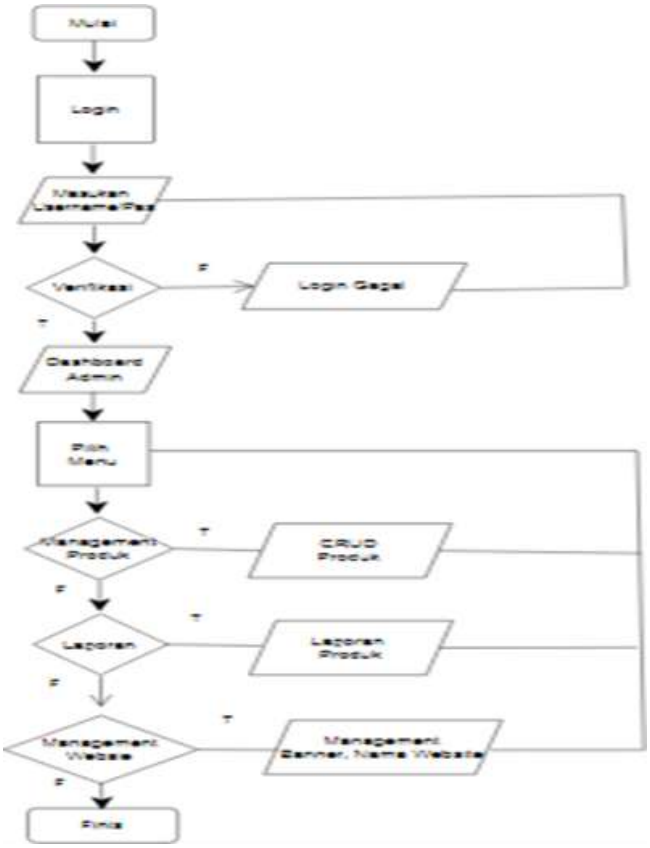

Figure 1.2 Admin *flow chart*

b. Context Diagram

All data flows in the system lead to a specific process. There are two main entities involved, namely admin and user, each of which has data input and output in the system. Further details can be seen in the illustration below [7].

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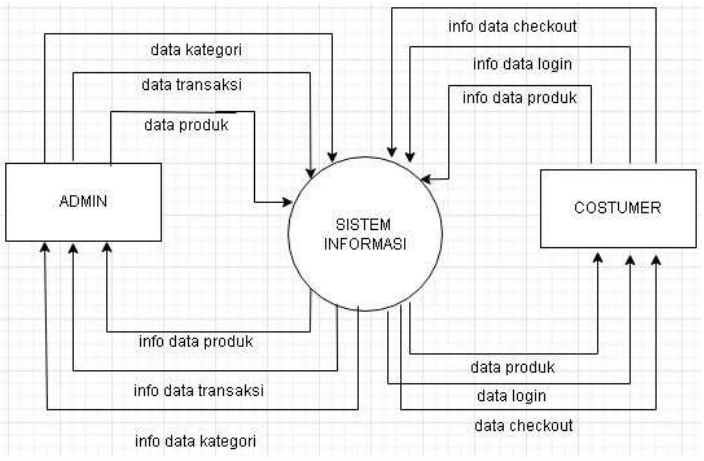

Figure 2. *DFD level* 0

c. DFD level 1

DFD level 1 is an extension of the context diagram. In DFD level 1, there are three entities involved: admin, customer, and proof of payment, each with its own data flow. Each data flow will be stored in the database [10]. The following image is DFD level 1.

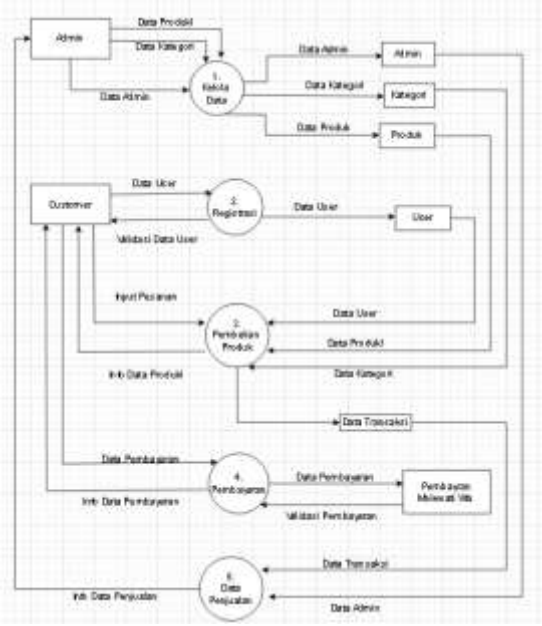

Figure 3. *DFD level* 1

d. ERD (Entity Relationship Diagram)

The structure of entities and their relationships forms the basic structure of an information system. Each entity represents a real object in the system, while relationships show the relationships between these entities. Diagram under This describe relation between entity in system in system Which being analyzed. The attributes contained in the entity section or relations can be placed into a table [7].

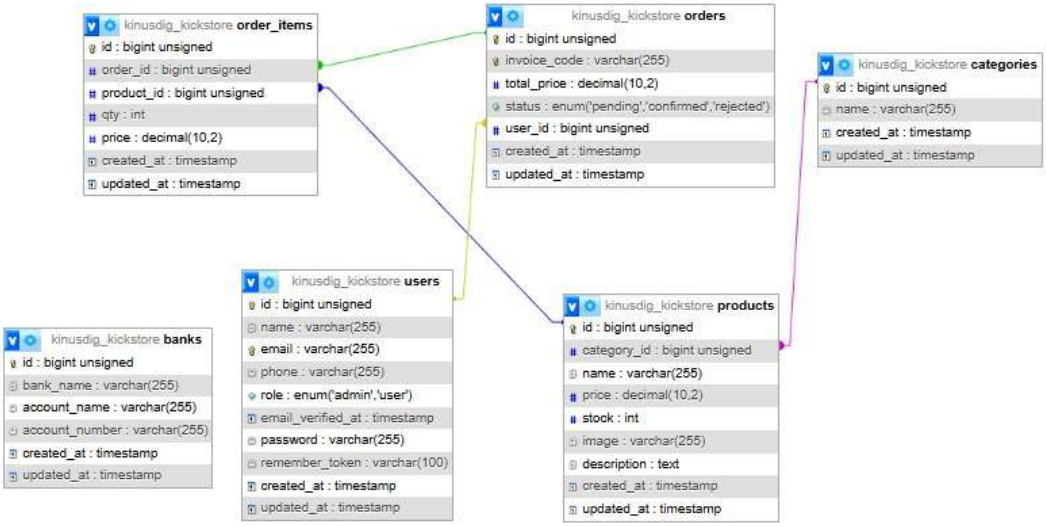

Figure 4. *ERD* (*Entity Relationship Diagram*)

RESULTS AND DISCUSSION

A. System Research Results

The analysis results show that the system and interface produce results in the form of the main display of the system. processing sales information shoe Pollux based web on CV Noto Son [8], Which designed according to user needs. After the system design and application interface design processes are completed, the next process is the implementation stage.

Following is appearance from website page and various menus as following.

Figure 5. Website Home Page

In Figure 5, when you first access the Pollux shoe sales information system website, CV Noto Son Basalist Web then will display appears login. Page login this can accessible by Customers can register for both admin and user accounts. Customers can register for usernames and passwords using the account first.

1. Administrator Menu Page

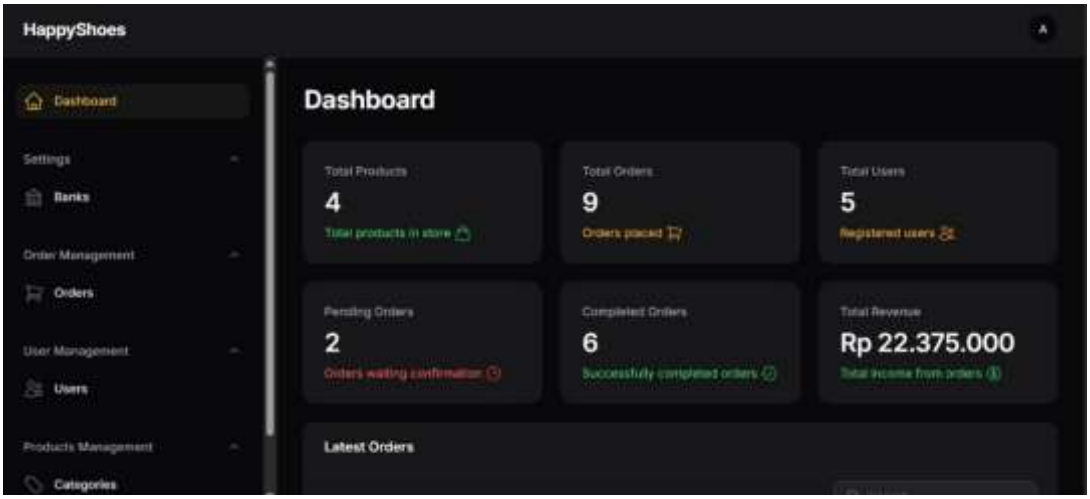

Figure 6. Admin Dashboard

In Figure 6, the Admin Dashboard displays the bank, order, user, and product menus. Only customer admins can access the menus on the dashboard.

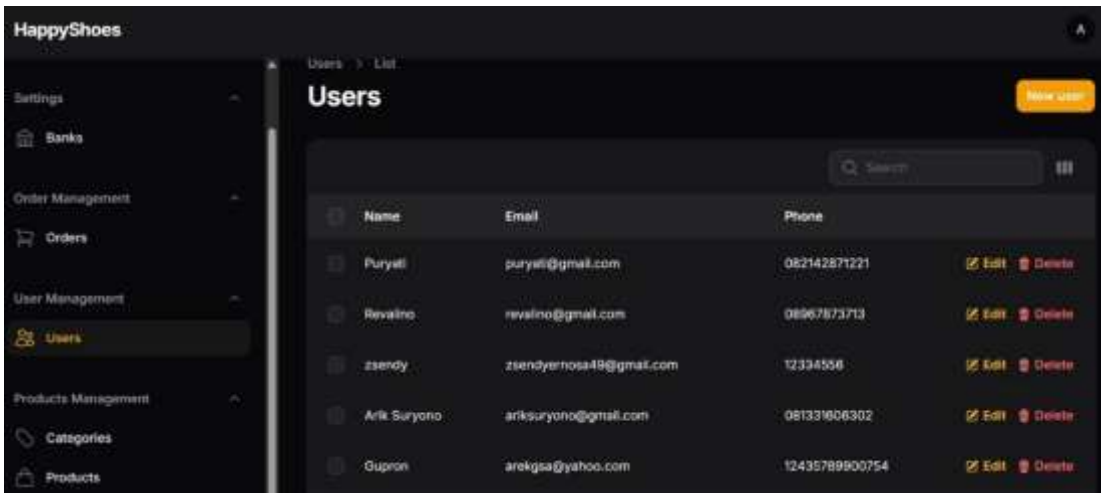

Figure 7. Happy Shoes User Page

In Figure 7, it shows the customer data page. In this menu, the admin can see which customers have registered and the admin can edit the customer's name and delete the customer's email and telephone number.

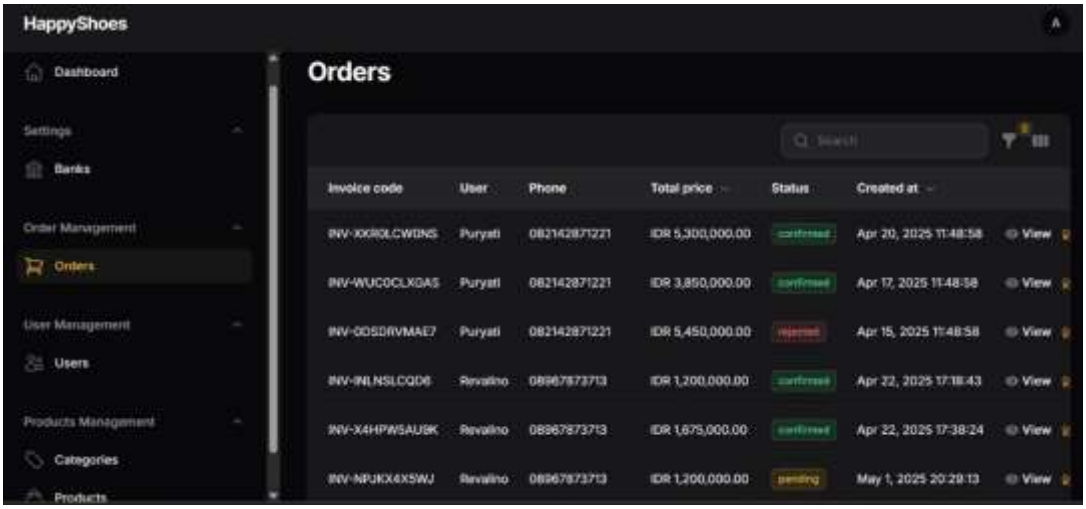

Figure 8. Order Page

In Figure 8, this page shows customer order information. This order page explains... invoice code, Name customer, number telephone, price shoes, status, date purchase customer, and view orders.

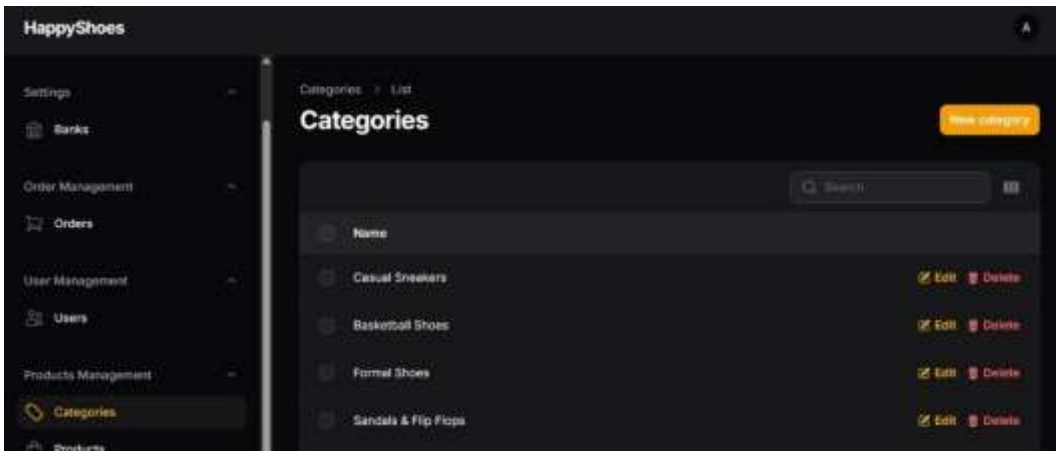

Figure 9. Admin Report Summary Page

Figure 9 shows the shoe categories. Several types of shoes are offered in the admin's categories menu, including casual shoes, basketball shoes, formal shoes, and sandals.

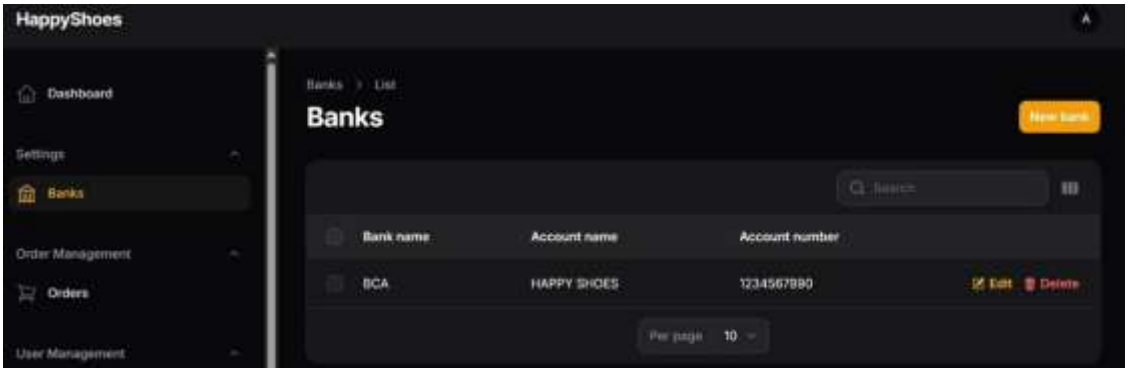

Figure 10. Bank Page

Figure 10 shows the bank menu. This menu allows Happy Shoes to make payments through a bank, and once a transaction has been completed, customers can make payments through the bank account information sent via WhatsApp.

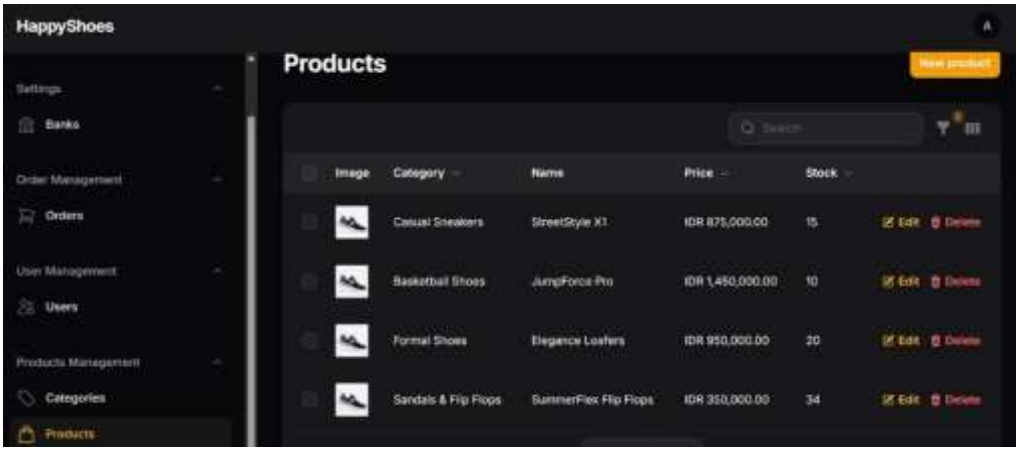

Figure 11. Product Page

In figure 11, This page displays the product menu. Several products are offered, including casual, basketball, formal, and sandals.

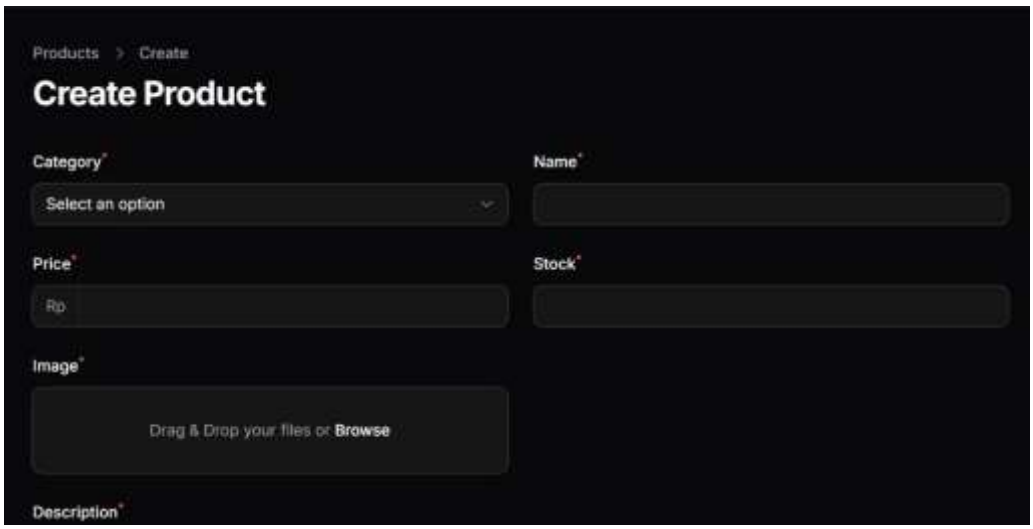

Figure 12. Create Product page

In Figure 12, in this display menu there is a create product which in the display menu creates product category product, price Product, picture product, Name shoe, and admin include stock Which is on the product.

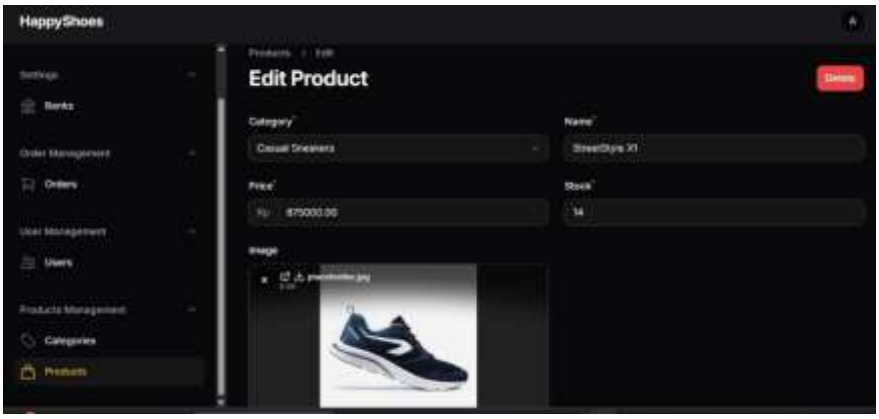

Figure 13. Edit Product Page

In figure 13, On menu This there is appearance edit product. Only admin Which Can edit product which on page This. On menu This There is a number of appearance in between other category, price, Name, stock, And picture.

B. Black-Box Testing Results

The Black Box Testing method tests a program without looking at its internal details. Black Box Testing tests a program that has been created by attempting to enter data into each form. This testing is necessary to ensure that the program meets company requirements [12]. The Black Box method is used to test the system with the aim of identifying existing weaknesses, ensuring that the output data matches the input data after the execution process, and to avoid errors and deficiencies in the application before it is used by users [13].

Table 1. Testing Blackbox Testing Admin

No.	Testing	Test Case	Hope	Results
1	Website access	Enter the web domain address CV Noto Putra	Go to the login page	Correct
2	Login	Username and password are correct	Enter the dashboard page	Correct
3	Admin	View admin details	Show admin details	Correct
4	Dashboard	View admin sub-menu and payment report data	Can switch to dashboard page and displays payment data by online	Correct
5	User Data	Admin can view existing users registered	Displays complete User details with user information	Correct
		Admin edits and deletes customer data	Displays the edit customer and delete sub-menu customer	Correct
6	Data Categories	Admin adds product	Display package details	Correct
		Admin edits and deletes product data	Displays the edit package sub-menu and deletes data.	Correct
7	Bank	Admin can to inform payment via transfer	Display customer payment details	Correct
		Admin edits and deletes payment data	Displays the sub-menu for editing payment data and deleting payment data.	Correct
		Admin prints payment invoice	Display payment invoice	
8	Product	Admin can edit available products	Displays payment report summary	Correct

No.	Testing	Test Case	Hope	Results
		Admin edits website settings data	Display website settings	Correct
9	Logout	Exit the system	Go to the login page	Correct

Table 2. Testing Blackbox User Testing

No.	Testing	Test Case	Hope	Results
1	Website access	Enter the domain address of CV Noto Putra's website	Go to the login page	Correct
2	Login	Username and password are correct	Enter the dashboard page	Correct
3	User	View user data	Display customer name	Correct
4	Product	Users can see with see product details	Can display more many products	Correct
5	Cart/ Checkout	Users can check out after selecting goods Printing payments	Displays the number of selected products Display payment invoice	Correct Correct
6	Process	Users can processing items that have been checked out	Displays payment report summary	Correct
7	Logout	Exit the system	Go to the login page	Correct

This information system testing was conducted using the *black box testing method*, which focused on the functional aspects of the system. The test results showed that the system could perform its main functions well, including the login feature, which allows users to access the system using their respective usernames and passwords [9]. Testing with valid data showed that there were no errors in the process, so it can be concluded that the system has run according to the expected specifications. To maintain the consistency and stability of the system, it is necessary to implement clear usage procedures and access restrictions for users.

In addition to functional testing, non-functional testing is also performed to assess additional aspects of the system. This testing includes: the application's ability to execute commands on various devices, as well as evaluate security system in a way comprehensive. The goal is For ensure that the application can run optimally in different user environments and remains safe from potential interference or misuse [5].

CONCLUSION

Fundamental Finding : The development of the web-based Pollux Shoe Sales Information System at CV Noto Putra has successfully enhanced the effectiveness and accuracy of managing customer data, billing records, and monthly payment processes. The system significantly reduces data input errors common in manual methods using forms or Excel and accelerates data retrieval and report generation. **Implication :** The integration of all operational components within the system ensures seamless information flow, supporting improved service quality, administrative efficiency, and more transparent payment monitoring—ultimately contributing to better organizational performance. **Limitation :** Nevertheless, the system's current implementation may still face challenges in scalability, user adaptability, and data security, especially as transaction volumes and user access increase. **Future Research :** Future studies should focus on developing mobile-based interfaces, enhancing data protection mechanisms, and integrating advanced analytics or AI features to optimize decision-making and operational insights for the company.

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