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By Nurmaidah Febrica Waruwu

Web-Based Sales Information System in One of The Cash Shops Using the Business to Customer Method

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Abstract

Science and information technology's rapid and sophisticated progress motivates humans to generate novel solutions that facilitate easy and speedy information acquisition. Consumer behavior has experienced a substantial transformation in the present digital age. Many people opt for Internet purchasing due to the ease, accessibility, and flexibility it provides. The fashion industry is not immune to this phenomenon, as internet retailers are gaining popularity as a preferred method for buying clothing and accessories. Online retailers offer advantages such as convenient access to product catalogs, the ability to purchase at any time and from any location, and a broader selection of options. This offers a substantial opportunity for fashion retailers to access a larger pool of potential customers and enhance their market dominance.

The sales process in a particular fashion store now depends on a traditional system involving direct transactions at the physical store and maintaining sales data through paper documents. This technique encounters multiple impediments that must be surmounted. A significant challenge is the limited accessibility to clients beyond the geographical confines of the physical business. In addition, using paper documents to manage sales data also needs to be improved in efficiency and accuracy. The method is laborious and prone to human errors.

As inferred from the background description, the author's objective is to develop a web-based sales information system for a fashion retailer utilizing the business-to-customer approach. This system will streamline the sales process and aid in managing sales data, encompassing product data, customer data, and transactions. The system development will utilize the PHP programming language and the MySQL database, widely employed in online development. The research methodologies encompass literature review, observation, and interviews.

The chosen approach for system development is Object-Oriented Software Engineering (OOSE), which utilizes Unified Modeling Language (UML) for system modeling. This includes using various diagrams such as use case, activity, sequence, and class diagrams. Hence, the sales information system is anticipated to offer a more efficient resolution for carrying out sales procedures and enhancing data administration promptly, safely, and precisely. Implementing this strategy will enable the fashion store to expand its consumer base, particularly among individuals located beyond the geographical reach of the actual store, thereby improving overall business performance.

Keywords : Information Systems, Data Management, PHP, Databases, MySQL, OOSE

INTRODUCTION

Consumer behavior has experienced a substantial transformation in the present digital age. (Effendi et al., 2022). A significant number of people opt for Internet shopping due to the ease, accessibility, and flexibility it provides. The fashion industry is not immune to this phenomenon, as online retailers are gaining popularity as a convenient platform for buying clothing and accessories. Online retailers offer

advantages such as convenient access to product catalogs, the ability to purchase at any time and from any location, and a broader selection of options. (Nguyen & Dullaert, 2018). This offers a substantial opportunity for fashion retailers to access a larger pool of potential customers and enhance their market presence.

Nevertheless, one fashion business currently employs a traditional sales method, including direct transactions within its brick-and-mortar

store. Certain limits associated with this method require attention, including the constraints of time and geography in reaching clients who are located beyond the physical store region or have hectic schedules. Customers need to visit the store in person to make purchases, which limits their convenience and flexibility. (Maslowska, Malthouse & Viswanathan, 2017).

Moreover, the current system in a particular fashion store could be more effective in gathering and overseeing consumer and transaction data. The store needs help monitoring client preferences, recognizing purchasing patterns, and formulating effective marketing plans due to the absence of a well-structured sales intelligence system. (Valaskova, Durana, & Adamko, 2021). The scarcity of customer data hinders the store's capacity to offer clients a more tailored and individualized experience. (Rachmawati, et al., 2019).

Furthermore, managing the product catalog is also a matter of concern. Insufficient information systems complicate and prolong the process of updating and incorporating new items. Efficiently handling inventory, adjusting prices, and offering current product details are essential for sustaining competition and ensuring a gratifying shopping experience for customers

Within this particular context, there is a requirement to create an online sales information system for a fashion retailer utilizing the business-to-customer approach. This solution will enable the store to overcome the constraints of traditional sales tactics, enhance operational efficiency, and deliver an enhanced shopping experience for customers.

This project aims to develop a web-based sales information system with advanced

functionalities, including multi-user authentication, user registration, apparel catalog, shopping cart, product data management, transaction data management, profile data management, and user data management. The system will additionally offer a user-friendly and highly responsive interface for clients, enabling them to browse products, make purchases, and leave online feedback. (Eunike & Umar, 2020).

System

Wibowo et al. (2023) define a system as a cohesive entity that is organized, interconnected, interdependent, and composed of essential components or subsystems, all working together to accomplish a specific objective.

Data

Romindo et al. (2021) state that information is a compilation of processed and arranged data or facts that yield comprehensible and advantageous outcomes for the recipient.

Sales

As stated by Dr. Ir. Abdul Aziz Jakfar et al. in their book "Teaching Madura Corn Marketing 3" (2022), sales represent the primary objective within a firm. Highlighting the exchange of goods or services for money, sales are regarded as a component of marketing endeavors.

By using this web-based sales information system, one fashion store can anticipate an improvement in sales process efficiency, customer accessibility, more effective collection of client data, and enhanced administration of the product catalog. (Chindy, 2022). Moreover, this technology can potentially optimize the client experience and facilitate the overall expansion of the fashion retail enterprise. Hence, considering the concerns above, the author intends to choose a thesis titled "Developing a Web-based Sales

Information System for a Fashion Store Utilizing the business-to-customer Approach."

METHOD

2 This study aims to create a web-based sales information system that is customized to meet the specific requirements of a cash shop, utilizing the business-to-customer (B2C) approach. The aim is to optimize the effectiveness of sales procedures, enhance operational capacities, and deliver an exceptional online shopping experience for clients.

The study will begin by thoroughly examining the current body of literature on web-based sales information systems, business-to-customer (B2C) techniques, and the specific needs of cash stores. An exhaustive examination will assist in identifying optimal methods, possible obstacles, and crucial aspects for achieving a proficient and customer-focused system.

The study will employ an object-oriented 4 software engineering (OOSE) methodology using unified modeling language (UML) tools such as case diagrams, activity diagrams, sequence diagrams, and class diagrams. The system will incorporate functionalities such as multi-user authentication, user registration, a comprehensive product catalog, shopping cart capabilities, and efficient product management, transaction, profile, and user data management. The development will utilize widely used web development resources, like the PHP programming language and the MySQL database, to guarantee a sturdy and expandable solution.

The method of gathering information will involve making careful observations, conducting interviews, and thoroughly examining the current systems used in cash businesses. This will allow us to gain practical knowledge about the specific needs and difficulties of traditional sales procedures. The data-gathering step is essential for comprehending the practical elements and user expectations, which in turn aids in creating a customized and user-friendly system.

3 The web-based sales information system that has been built will be put into operation at the chosen cash shop, and its performance will be comprehensively assessed. (Nirsal, & Syafriadi, 2020) The evaluation will consider system efficacy, user contentment, and its influence on sales and operational procedures. Customer and store operators' feedback will be gathered to evaluate the efficacy and pinpoint potential areas for enhancement.

This project aims to develop a robust, easy-to-use, and effective 8 web-based sales information system for cash businesses following the business-to-customer (B2C) model.

RESULTS AND DISCUSSION

a) Current System Analysis

This analysis aims to gain a comprehensive understanding of the present sales system used at one of the Busana fashion stores. The details are as follows:



b) Evaluation of the Current System

After analyzing the ongoing process, the author found several deficiencies that must be developed in the system as follows:

Permasalahan	Penyelesaian
Sistem yang masih dilakukan yaitu secara konvensional sehingga dapat memberikan potensi kehilangan atau rusaknya dokumen dan arsip, mengakibatkan keterbatasan waktu dan jangkauan pelanggan, kurangnya efisien dalam pengumpulan data pelanggan dan analisis transaksi, kurangnya kemampuan dalam pengelolaan katalog produk, serta keterbatasan aksesibilitas dan kenyamanan pelanggan.	Merancang dan membuat aplikasi penjualan berbasis web dengan metode <i>Business to Customer</i> yang dapat meningkatkan efisiensi penjualan pada toko Siska Busana. Sistem yang di rancang mencakup fitur-fitur seperti <i>login multiuser</i> , daftar akun, katalog produk, jualan, keranjang belanja, data barang, transaksi, profil, dan <i>logout</i> . Sehingga memudahkan pengelolaan data produk, penjualan, dan data pelanggan secara otomatis. serta dapat diakses kapan saja.

c) SWOT Analysis

The SWOT analysis pertains to evaluating the strengths, weaknesses, opportunities, and threats that affect one of the Busana fashion stores. A SWOT analysis is conducted on a Busana fashion store to identify the internal and external factors that can impact the business's success and growth.

Kekuatan (Strengths)	Kelemahan (Weakness)	Peluang (Opportunities)	Ancaman (Threats)
Toko Siska Busana memiliki koleksi produk busana dan aksesoris yang menarik dan diminati oleh pelanggan, produknya yang berkualitas, dan reputasi baik.	Penggunaan sistem konvensional yang dapat mengakibatkan kehilangan atau kerusakan dokumen. Sistem konvensional ini juga mengakibatkan keterbatasan waktu dan jangkauan pelanggan, kurangnya efisien dalam pengumpulan data pelanggan dan analisis transaksi, kurangnya kemampuan dalam pengelolaan katalog produk, serta keterbatasan aksesibilitas dan kenyamanan pelanggan.	Penggunaan sistem informasi penjualan berbasis web untuk meningkatkan efisiensi dan pelayanan di toko Siska Busana. Sistem ini memiliki berbagai fitur-fitur seperti <i>login multiuser</i> , daftar akun, katalog produk, keranjang belanja, data barang, transaksi, profil, dan <i>logout</i> . Sehingga dengan adanya sistem ini memudahkan toko Siska Busana dalam pengelolaan semua data penjualan, termasuk data produk, transaksi dan pelanggan secara otomatis, lebih cepat dan akurat, serta dapat diakses kapan saja.	Dalam menjalankan proses penjualan berbasis web, toko Siska Busana harus mempertimbangkan masalah keamanan data, seperti serangan siber dan pencurian data pelanggan dalam sistem informasi berbasis web.

d) Proposed New System

i. Use case diagrams

Proposed use case for the store

Siska Clothing is as follows:

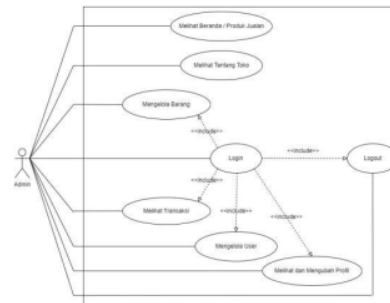


Figure 1. Admin Use Case Diagram

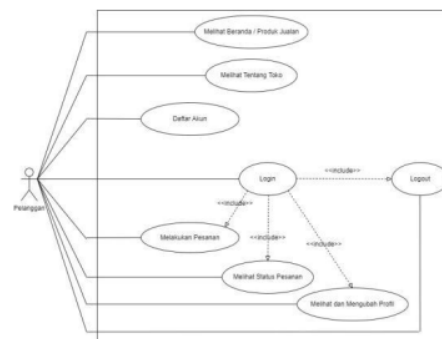
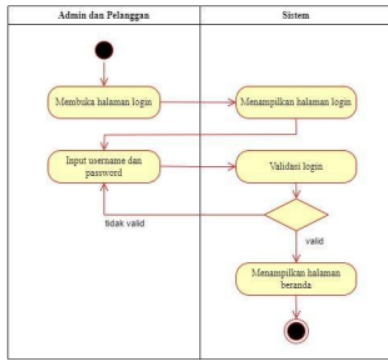


Figure 2. Customer Use Case Diagram

ii. Scenario Table

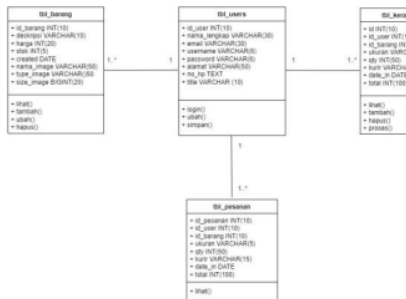
Use Case	Login	
Actor	Admin dan Pelanggan	
PreCondition	Aplikasi terbuka, sistem menampilkan Form Log	
PostCondition	Sistem menampilkan halaman beranda	
Main Flow of Event		
Action Actor	System Response	
1 Mengisi username dan password	3	Sistem melakukan verifikasi username dan password
2 Mengklik tombol Masuk		a. Jika benar, sistem menampilkan halaman beranda b. Jika salah, sistem menampilkan kesalahan

iii. Activity diagrams



e) System Design

i. Database Design



No	Field	Type	Size	Keterangan
1	Id_user	Int	10	PK
2	Nama_lengkap	Varchar	30	
3	Email	Varchar	30	
4	Username	Varchar	6	
5	Password	Varchar	6	
6	Alamat	Varchar	50	
7	No_hp	Text		
8	Title	Varchar	10	

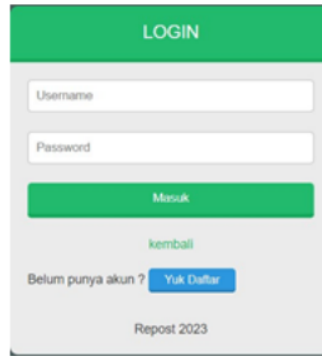
ii. Interface Design



Interface Implementation

The interface implementation refers to creating a program's page display based on the design outcomes from the preceding chapter. Displayed below is the page that has been created:

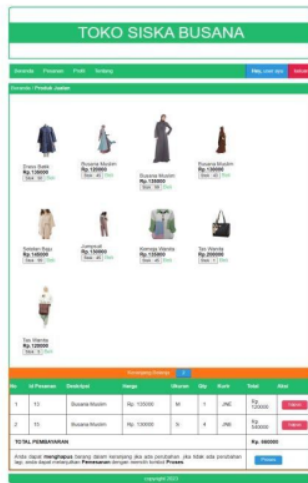
Login Page Display



Admin Home Page Display



Customer Page Views

**CONCLUSION**

The sales information system at Siska Fashion Store, which was developed based on the conducted study, has led to the following conclusions on the analysis, design, and implementation procedures of the system:

Implementing a web-based sales information system in One of The Cash Shops enables a quicker and more streamlined sales procedure.

This program facilitates the administration of sales data, including product information, client particulars, and transactions, assuring a more expedient, secure, and precise procedure.

This online sales information system still needs to improve, necessitating additional advancement. Suggestions for future system design and development encompass:

The author recommends routine software and hardware maintenance to ensure dependable and enduring usage. Furthermore, it is crucial to incorporate user training to guarantee the most efficient utilization of the system in day-to-day operations.

Enhancing the system's robustness and comprehensiveness can be achieved by updating the system interface and functionality in future research, focusing on increased collaboration.

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