Web-Based Caricature Sales Information System Using the FAST Method

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Abstract : The use of information technology has become widespread throughout all sectors of society, including government, business, healthcare, and education. Dalis Art Medan is a digital art-focused online store that opened its doors in 2017. Dalis Art's current sales system still relies on Facebook and Instagram because it does not yet have e-commerce, which results in low sales. Reporting mistakes are common since Dalis Art sales transaction data is still manually entered. E-commerce has been suggested as a solution to Dalis Art's issue with developing its sales operation. The FAST (Framework for the Application of Systems Thinking) methodology is used in this study. The FAST technique incorporates system users more actively in each stage of system development, is more adaptable, can be produced with other methods, and can be customized to the author's standard demands. The goal of this study is to make it easier for customers to learn about and purchase products from Dalis Art. Benefits might give consumers quick access to information on the items in Dalis Art. The study's findings demonstrate how fast and accurately a web-based sales information system, including details on products, ordering procedures, and payments, can be accessible via this method.

INTRODUCTION

The use of information technology has become pervasive throughout all sectors of society, including government, business, healthcare, and education [1][2]. For instance, information technology can be utilized in the business sector to boost advertising or to assist in managing existing data so that it can be turned into information [3][4]. Processing data into information, for instance, can be done more quickly and with better results when done with a computer than when done manually [4][5][6].

The ability of internet technology to disseminate information that is accessible by anyone, anytime, and anywhere has been demonstrated to be successful and efficient [7][8][9][10]. The use of internet technology has a significant impact on trade or company [11]. Prospective customers can only see products on a computer screen, access information, place orders, and pay using the various methods from their home or office [12]. Prospective purchasers can save money and time because they don't need to travel to the location of the transaction or the store; instead, they can interact with the seller from their seat without being constrained by time or space [13][14]. This implies that potential customers for online sales transactions come from all over the world [15][16].

A digital art retailer called Dalis Art Medan has been operating online since 2017. Digital art is sold by Dalis Drawings in a variety of forms, including caricatures, vectors, line art, doodles, and other services for bespoke design. Dalis Art's current sales system still relies on Facebook and Instagram because it does not yet have e-commerce, which results in low sales. Reporting mistakes are common since Dalis Art sales transaction data is still manually entered. The reach of sales and promotion is still limited when using Facebook and Instagram as promotional platforms.

E-commerce has been suggested as a solution to Dalis Art's issue with developing its sales operation. E-

commerce is the exchange of goods and services between buyers and sellers over the internet [17][18]. The benefit of employing e-commerce transactions is to generate income through cheaper online sales while also saving on operational costs like paper and catalog printing [19][20].

LITERATURE RIVIEW

Design of a Library Management Information System utilizing the FAST approach at SMAN 1 Negeri Katon, research by Merlin, Setiawansyah, and Arief [21]. The goal of this study on library system design is to provide solutions for the issues associated with tracking loan transactions, book returns, transactions, and book stock. The study's findings indicated that the system can assist the library in maintaining book data and transactions, and that students can use it to determine the number of stacks of books that are still available.

The study "Analysis & Design of Website-Based Sales Information Systems Using the FAST Method & PIECES Framework" was done by Warjiyono, Fandhilah, Amin, & Ahmad [22]. The goal of this research is to increase market share and conduct sales transactions more swiftly, efficiently, and effectively. According to the study's findings, the system can manage the challenges of inventory control, data search, and computerized sales reports.

Information System for Data Processing of Website-Based Cash Flow Reports at CV Sari Agung Perkasa (SAP) Ternate" is the title of Rusdi's [23] study. In order to make it simpler for users to provide reports, this project aims to develop a website-based application to manage income and expenditure data. According to the study's findings, the system can make it easier for users to process electronic data and submit revenue and expense reports to the leadership.

Whitten et al. employ the hypothetical FAST (Framework for the application of systems thinking) approach to illustrate the systems development process in a realistic manner, and each methodology makes use of a different project phase.

A web-based information system is a system used by an organization that satisfies the demands of processing daily transactions, supports operations, is managerial in nature, and operates on a browser application [24]. It also provides certain external parties with the necessary reports and allows for direct interaction. Internet technology is also [25].

A caricature is an illustration or representation of a real-world thing that exaggerates its features [26]. The Italian term "caricature," which meaning to exaggerate or exaggerate, is where the word "caricature" originates. The caricature shows a well-known subject and is typically made to make people who are familiar with the image laugh [27]. Caricature works are frequently employed as a more refined form of social and political criticism. Since they are thought to be distinctive and fascinating, caricature works are now utilized as gifts or gifts at numerous types of occasions [28].

METHOD

The FAST (Framework for The Application of System Thinking) approach is what the author utilizes to create a website that sells caricatures at Dalis Art.

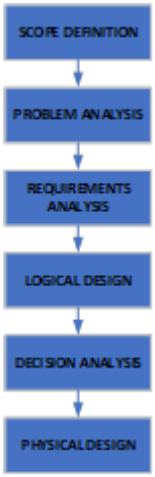

Fig 1. The Structure of The FAST Method

The following are the steps of the FAST technique that are used:

1. Scope Definition
   The first step in FAST is scope definition. The basis for the following step is laid during this stage. The focus of this article is only on Dalis Art, which includes showing thorough product information, product promotions, sales, orders, and payments made by bank transfer.
2. Problem Analysis
   Several issues were discovered during the problem analysis stage, including the lack of a computerized system and the sales process being limited to Facebook and Instagram, which reduced market share and sales.
3. Requirement Analysis
   - Actor
     Only the administrator, a user with access to all menu pages on the website, is involved in operating the caricature-selling website.
   - Analysis of functional system requirements
     Menu Residence, Category, Ordering information, a member list, and member login. Form for customers to fill out to sign up as members and place cartoon orders. Forms for logging in and out for registered members. There is a thorough description of each item. Form for placing an order. Purchase Order Form. payment type. from the payment authorization. Form for Admin Login. Form for admin access to manage transactions and product data.
   - Non-functional system requirements analysis
     Users can easily comprehend the display system. Possess a clever system. The system can operate with accuracy and speed. The security of the system is good.
4. Logical Design
   The process of incorporating the requirements identified during the requirements analysis stage into the system model that will later be constructed is carried out at the logical design step.
5. Decision Analysis
   The software and hardware that will be utilized to implement the system are chosen through decision analysis.
6. Physical Design
   The physical design step entails building the user interface and a thorough design for a web-based caricature sales information system in order to translate the logical concept into the actual physical form of a website

The website for Dalis Art has a system design that seeks to define the system that will be developed. The FAST approach was used to create the system design process. The phases of scope, issue analysis, requirements analysis, logical design, and physical design are all included in the FAST technique.

A web-based caricature sales information system program was built utilizing UML (Unified Modeling Language) modeling during the system's design phase. Use case diagrams and ERD are part of the UML utilized in the design of this system (Entity Relationship Diagram).

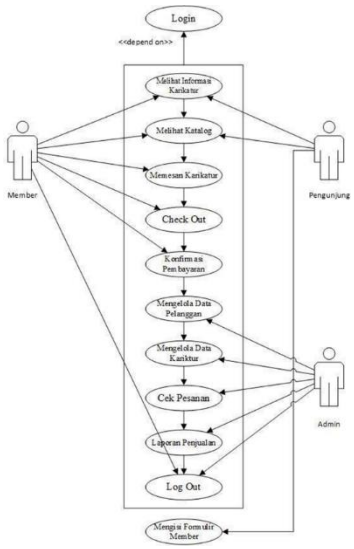

Fig 2. Usecase Diagrams System

Use case diagrams to explain how actors and the system interact. Three different actors are involved in this system: members, visitors, and admin. If the three actors wish to use the system, they must log in. However, the Visitor actor is exempt from this requirement when simply browsing the merchandise.

The creation of the ERD (Entity Relationship Diagram), which will eventually serve as the basis for developing the program, comes next. In this diagram, we may discover the relationship that exists between one entity and another. The database on Dalis Art's table relationships are shown schematically in the table below.

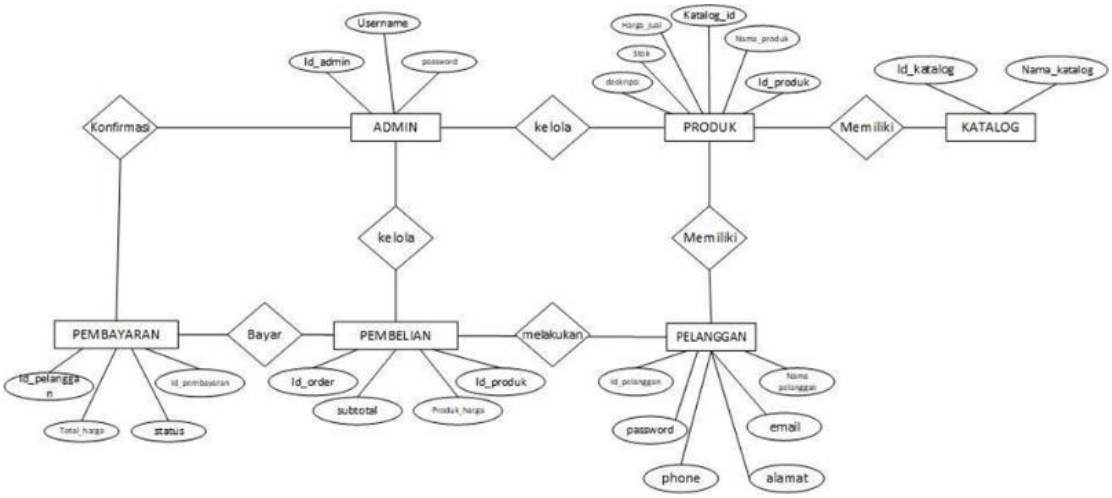

Fig 3. Entity Relationship DiagramSystem

RESULT

According to the system design, the study's findings will outline the specifics of the system's implementation as an interface display from the website for the caricature sales information system. The admin login is visible on this page. The administrator must enter the login and password. Product data is shown on the next page to provide information on the product's specifics, including the cost and frame size. Admin can modify or remove inventory items here.

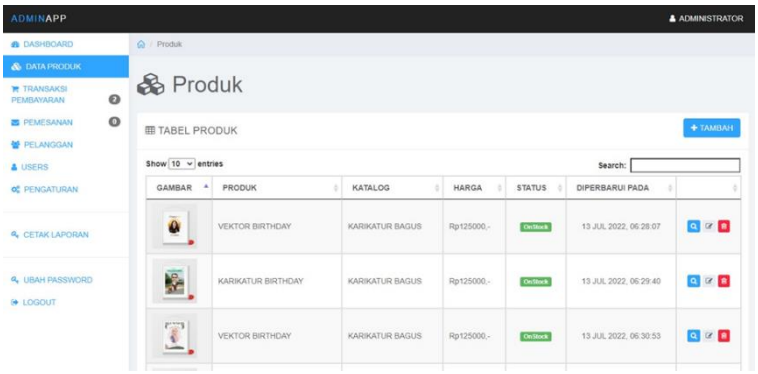

Fig 4. Display Product Data Page

This main page displays information and caricature images when customers start shopping on the Dalis Art website.

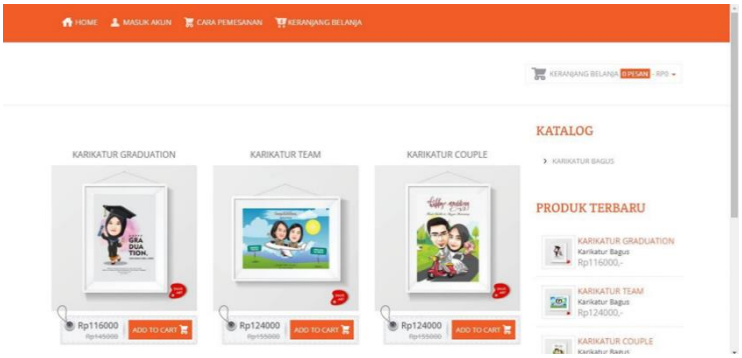

Fig 5. Home Page Display

Products that are on the customer's shopping list before making a purchase are displayed in the basket menu view. Customers can still update their shopping cart items on this page if there are any items left to buy or ones that will be canceled.

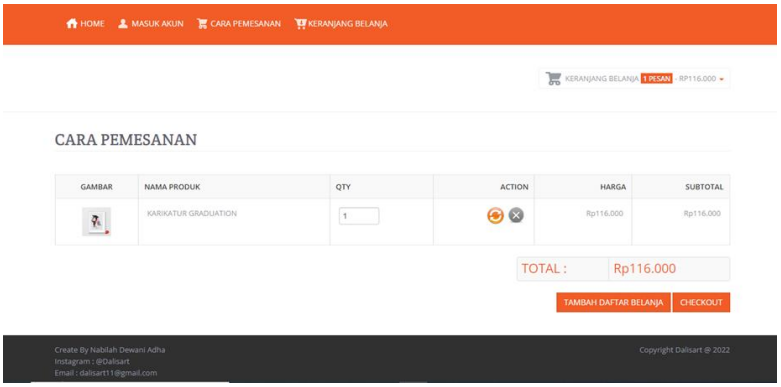

Fig 6. Display on Shopping Cart Page

The customer's transfer destination account number can be found on the payment confirmation page. Customers must provide the date of their transfer before clicking the confirm button. The order will then be processed right away.

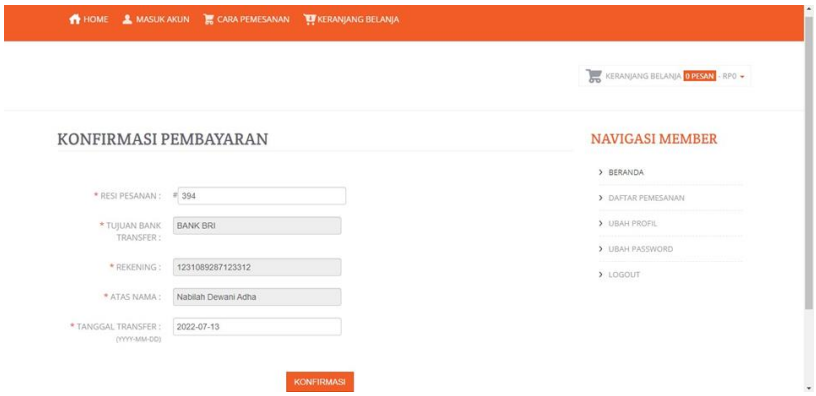

Fig 7. Confirmation of Payment

DISCUSSION

It has been successful to develop this website-based caricature sales information system. The first steps in creating this system are to analyze the nature of the issue, the system requirements, and the system design. The creation of a caricature sales information system at Dalis Art aims to assist owners in resolving issues with product management, managing orders, assisting in the promotion of their goods, and making it simple for customers to place orders and locate comprehensive information on Dalis Art products on their own. In this system, there are two user levels: admin and customer. The highest level is admin, and admin has access to more menus than clients.

You can, for instance, edit customer and caricature data, view payments, confirm payments, and so forth. Customers can only view caricature information, modify passwords, make purchases, send payments, and check the progress of their payments at this time.

This system was created using the FAST methodology. where each FAST stage has been completed in order to create a website that is effective and meets user needs. In order to prevent consumers from growing weary of using the current system, the author makes an effort to create the user interface as attractively and effectively as feasible. The user merely needs to access the website's main page to use the provided search form to find the information they need, making this system incredibly simple to use.

CONCLUSION

The following inferences can be made in light of the findings of the study on developing a website-based caricature sales information system:

1. Anyone and everywhere can access this website, which is a way of selling caricatures online.
2. A computer system enables quick and accurate access to a web-based sales information system, which includes detailed information on products, ordering procedures, and payments.
3. Customers find it simpler to place orders when given simple or intuitive menus.

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