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CUSTOMER RELATIONSHIP MANAGEMENT APPLICATION TO SUSTAIN CUSTOMER SERVICE QUALITY

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ABSTRACT

Customer Relationship Management (CRM) is one method for maintaining and enhancing the quality of customer service. By establishing strong customer relationships, it is possible to overcome challenges in comprehending and interpreting client needs. The CRM system is web-based and includes capabilities to effectively reach customers. This study aims to build a CRM system to make it easier for businesses to identify superior features that may be tailored to client needs, including product recommendation features, promotional features, and transaction features. sales transaction. According to the test results, there are four blackbox testing scenarios for system features; as a result, all system features have been operating successfully and in accordance with user requirements, allowing them to be continued during the system implementation phase to support businesses and customers.

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1. INTRODUCTION

Business competition is followed by the evolution of the world of information and communication technologies. This results in digital business competition, with the internet acting as a mediator in carrying out the company's business activities[1], forcing every organization to strive for continued excellence and capability by mobilizing all of their capacity[2]. In business, it is intended that by analyzing customer behavior and demands, the company will be able to take appropriate steps to improve customer service, build customer loyalty, and increase corporate revenue[3]. Improving customer service can be accomplished in a variety of ways, including delivering timely, accurate, and comprehensive information[4] [5].

The current digital business trend necessitates that businesses be able to showcase their merchandise online, either through business websites or existing e-commerce platforms. The growth of transactions in e-commerce has been extremely rapid. Customers are spoilt since they do not need to leave their location, whether they are at work, resting at home, or even on vacation, as long as they have an internet connection to examine, compare, and make selections on the things purchased. Clients are becoming more choosy, and their comfort standards are rising, making it difficult for business people to supply services that can match the expectations of their customers in order to compete in the competitive business sector[6]. With increased rivalry in the business world, firms are considering developing or considering a suitable strategy to win the competition. One option is to create the relationship between the company and its consumers as close as possible by providing a fast and effective service system. appropriate administration Retaining customers is one of the most difficult tasks in business, because if the client is dissatisfied with the services offered and eventually chooses to quit the business actor, the company's efforts to rebuild customer confidence need a significant amount of labor and expense [7].

In the gypsum sales industry, for instance, the Tiara Gypsum business location, which is a unique company that offers gypsum and gypsum lists with varied shapes and patterns of carvings, must naturally examine how to improve customer service. Transactions are still conducted conventionally, i.e., by visiting the store to examine the appearance of the product and placing an order. When marketing products with a lengthy shelf life, it is essential to increase customer loyalty and buyer trust in the products. Customers with larger projects will receive discounts and guarantees, and if any damage occurs within two years, it will be fixed free of charge[8]. The owner recognizes that business activities encompass more than just buying and selling[9], particularly the maintenance of positive client connections. A customer is an individual or group who purchases a product or service based on their own decisions[10], taking into account many variables such as price, quality, location, and service. With the current availability of technology[11] as a resource, it is envisaged that system development[12] can improve customer service and interactions.

An information system that uses the Customer Relationship Management (CRM) method is required to meet client requests and sustain customer loyalty[13]. CRM is a company approach that is utilized to pamper clients so that they do not turn to competitors. Customer Relationship Management (CRM) is a technique for collecting, analyzing, and interacting with customers[14]. By analyzing data to discover improved system characteristics that make it easier for clients to make buy transactions. e-CRM deployment is one of the tactics used to determine consumer wants as well as to attract, keep, or retain customers in order to keep them loyal to the firm. So the research goal is to create a CRM application that will make it easier for businesses to determine superior features that can be tailored to customer needs, such as product recommendation features, promo features, and transaction features. Other goals are to accelerate service transactions to consumers, improve service quality to customers, and make it easier for businesses to sell transactions.

2. METHOD

2.1 Customer Relationship Management (CRM)

Customer Relationship Management is a way for getting new consumers to purchase a company's products and retaining old customers so that they continue to aid in the marketing process for those products. By utilizing a customer management system based on the Customer Relationship Management (CRM) methodology, the company is able to attract new customers and retain existing ones so that they may assist in all marketing processes. Client Relationship Management is one technique to maintain and improve the quality of service to customers[15]; challenges in interpreting customer needs can be overcome by establishing a strong Customer Relationship Management system (CR). Customer Relationship Management (CRM) is a retention strategy. With the development of a deep relationship, it is anticipated that customers would develop brand loyalty[16]. The objective of applying the CRM approach in the aforementioned information system is to retain existing clients by enhancing their happiness with the provided services. With the application of the Customer Relationship Management strategy in this customer service information system, it is anticipated that information and services can be presented more quickly and easily. Some advantages of CRM are[17][18]:

1. Boost customer retention by integrating data gathered through web, call center, and field service interactions with other business data. The service department will be able to better serve consumers by making use of a variety of information about them if it can reliably access and receive this data.
2. By implementing CRM, services to customers can have specific and focused information schemes, and by targeting services to the right customers at the right time, costs can be reduced. Thus, the costs incurred will be utilized optimally and not wasted, resulting in cost savings.
3. Increasing the effectiveness of operations will make it easier to make sales and provide service, so lowering the risk of a decline in service quality and relieving pressures on cash flow.

2.2 Research Flow

The research stages are designed to assist researchers in the process of creating problems through the collection of data in order to facilitate the development of answers to user needs for CRM features that cater to customer needs[19]. The progression of the research is depicted in Figure 1 which may be found below.

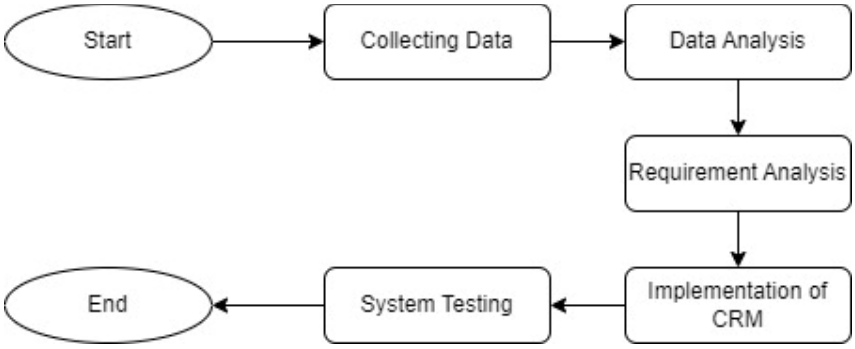

Figure 1. Research Flowcharts

On the basis of Figure 1, the stages of data collection can be explained: observing, documenting, and interviewing the company in order to determine that the business process of product ordering transactions by customers is still conducted conventionally, i.e., by coming to the store to view the product's appearance and placing an order. The subsequent step is to conduct a data analysis and a needs analysis, both of which are useful for determining the CRM features that can be applied to aid companies in sales transactions and customers in order transactions, as well as product recommendation features, discount features, and transaction features. The final step involves testing the CRM system's functionality to ensure that its features are compatible with the needs analysis.

3. RELUST AND DISCUSSION

3.1 Data Analysis

The data analysis stage was derived from the results of promotional interviews with the company and observations so that there was information about the company's current activities only by placing banners in front of the place of business, of course, this promotional technique was not very effective in making businesses and products widely known to customers. Then there is the fact that all transaction-related contact takes place solely through personal chat channels and gives priority to clients who visit the business location. To maintain client loyalty, the program provides discounts and damage guarantees for two years at no additional cost. The acquired data serves as a reference for determining system feature requirements in order to optimize business activities that have been carried out at the company's location using the CRM system.

3.2 Requirement Analysis

The data analysis stage is the foundation upon which the needs analysis stage is built. The needs analysis developed for this study focuses on analyzing the needs of the CRM system functionality in order to determine the superior features of the system that will improve service quality and maintain customer loyalty. The following items make up the functional requirements analysis of the CRM system:

1. Transaction Recording Features
   Orders can be entered into the system so that they are stored, and the owner can receive monthly and annual reports regarding the products that customers are interested in.
2. Promo Features
   This promo feature serves as a venue for owners to educate clients about promotions held by businesses loaded with promo and discount information and the duration of the promotion. Both promotions for prospective consumers and existing members.

3. Product Recommedation Features
   Prospective consumers and members can access the product recommendation feature to explore existing products at the business location. There is a product search function and product recommendations based on kind, price, number, and other search characteristics to assist clients in deciding which product to purchase.
4. Report Features
   The company needs reports to determine the monthly recapitulation of both the transactions completed and the most popular products purchased by clients, as well as the increase in the number of customers accessing the CRM system.

3.3 Implementation of Customer Relationship Management (CRM)

At the CRM implementation stage, it is modified based on an analysis of the system's functional requirements. There are several CRM application features that are implemented in transaction management.

1. Transaction Interface Page

The transaction data page displays added transaction information. On this page, the administrator of the location can add new transaction data, view transaction data details, and search for transaction data.

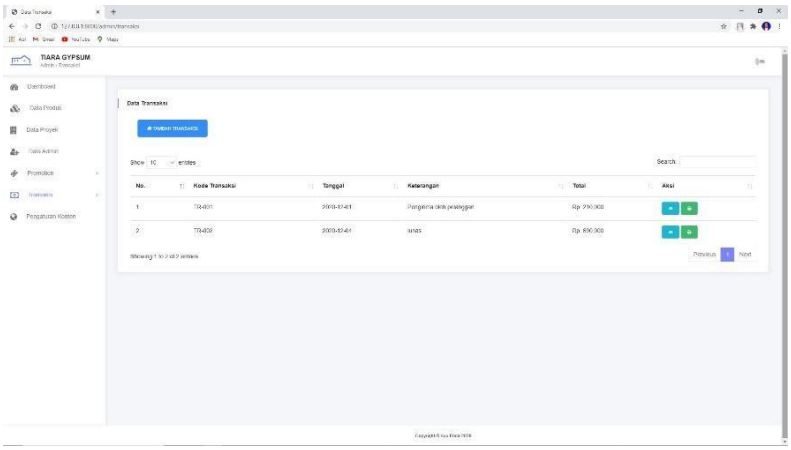

Figure 2. Transaction Data Interface Page

From the transaction process that is submitted by admin access permissions, there is a transaction details button that displays each and every detail of business transactions.

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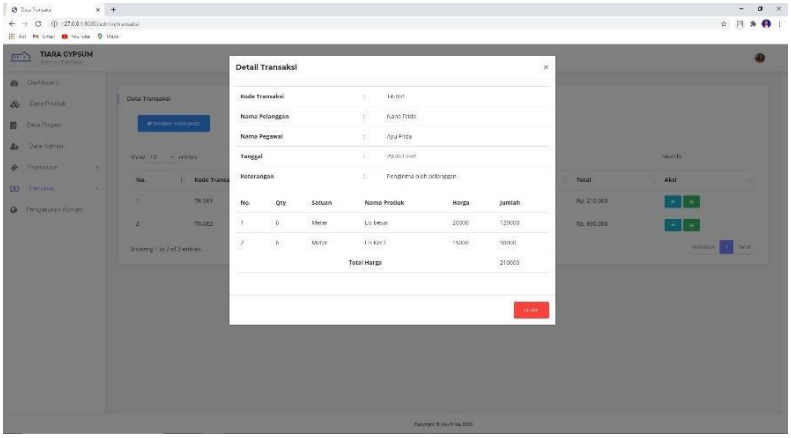

Figure 3. Transaction Detail Interface Page

2. Promo Interface Page

The promotions page offers a list of customer-facing promotions that have been created. The purpose of the promotion page is to deliver information regarding product promotions. By selecting which consumers will receive promotional material. The Promo tab under customer access rights displays ongoing promotion banners and a list of newly added promotions that can be sent to clients.

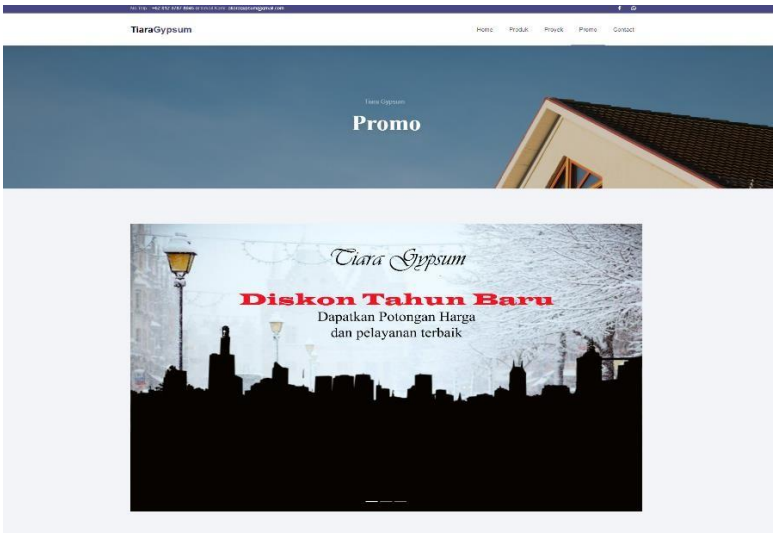

Figure 3. Promo Interface Page

3. Product Interface Page

Customers can view product information on product pages, including names, pictures, descriptions, and prices. The product page also includes information about the available products, a product search menu with options for price and type to make it easier for customers to find the products they want, and product recommendations based on previous product searches by customers.

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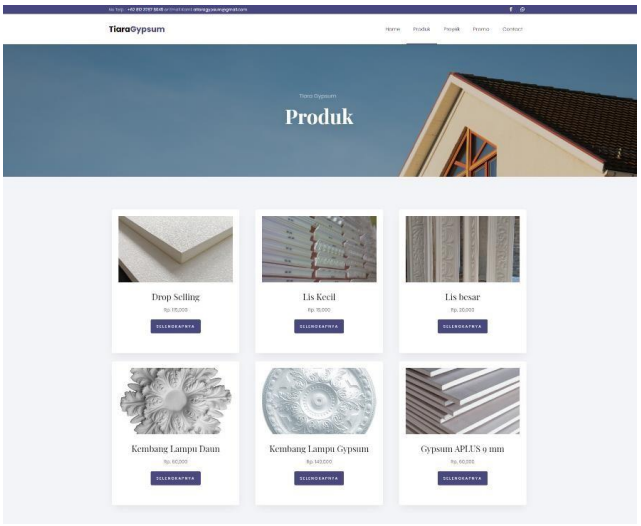

Figure 4. Product Interface Page

4. Report Interface Page

The administrator and owner of the business can access the report data page to view transaction data by filtering the report start date and report end date. The admin and owner can print transaction and product report data based on monthly or ad hoc transactions based on the date filtering performed on this page.

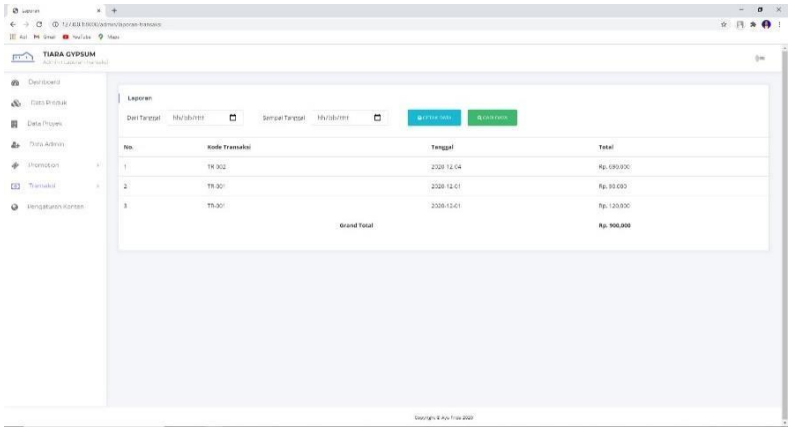

Figure 5. Report Interface Page

3.3 System Testing

Blackbox testing is a testing method that is used throughout the phase of system testing. This testing method checks the adequacy of system functionality by determining whether or not it is running lawfully and in line with the scenario that is executed on each feature page[20] of the CRM application. In order to ensure that there is no error message displayed on the system when it is accessed, the procedure of checking each feature and process on the menu button is carried out inside a test scenario that is based on a study of user requirements. The results of blackbox testing are presented in Table 1 down below.

Table 1. Blackbox Testing Scenarios

No	System Features	Scenario Result	Description of testing
1	Transaction interface page	Success	The system can operate correctly and appropriately
2	Promo Interface Page	Success	The system can operate correctly and appropriately
3	Product Interface Page	Success	The system can operate correctly and appropriately
4	Report Interface Page	Success	The system can operate correctly and appropriately

Based on the results of blackbox testing of system functionality, it can be deduced that all system features have been operating successfully and in accordance with user requirements, allowing system implementation to continue to support businesses and customers.

4. CONLUSION

Based on the findings, it is clear that this study has been successful in developing a Customer Relationship Management (CRM) system that will aid businesses in identifying superior features that can be tailored to customer needs, such as product recommendation features, promotional features, and transaction features; the system will also help to speed up service transactions to customers and enhance the quality of service provided to customers. Using a computerized system for data storage allows for more accuracy and neater storage, while the delivery of promotional information can be sped up and the response to sales will be accelerated; these are all examples of the importance of Customer Relationship Management in promotion for optimal customer reach. All elements of the system have been functioning well and in accordance with user requirements, so they may be carried forward into the system implementation phase to serve business locations and customers, as evidenced by the results of the four blackbox testing scenarios for system features.

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