

Design of Internet Provider E-CRM System on CV. Ahyein Pratama Mandiri Air Joman

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ABSTRACT

CV. Ahyein Pratama Mandiri currently conducts its business activities by waiting for customers to come to the office or customers providing information about places, privileges and products to other potential customers. Inadequate reporting of customer complaints makes it difficult to know the level of customer satisfaction, causing the opportunity to get potential customers to the maximum not to be fulfilled. Dissemination of information that is not neat makes it difficult for customers to know the latest information, thus influencing customers to switch to other providers. Therefore CV. Ahyein Pratama Mandiri requires CRM (Customer Relationship Management) which is applied to the information system, where this system can facilitate CV. Ahyein Pratama Mandiri in managing services for customer satisfaction. In carrying out this research, the researcher uses a qualitative research method which is a method that discusses the problem by describing, interpreting and writing down a situation or event that will be analyzed and then draw a general conclusion from the problems discussed. As a result, the application of CRM on CV. Ahyein Pratama Mandiri can make it easier for companies to provide information to consumers, provide convenience in ordering products that can be done anytime and anywhere, and increase customer loyalty.

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1. INTRODUCTION

The continuous increase in economic growth leads to increasingly fierce business competition. The growth of e-commerce itself will depend heavily on an effective IT security system, where the necessary legal and technological regulations must be continuously applied and enhanced immediately [1]. An Internet Service Provider is an organization or business that connects a user's computer to an Internet computer. Indonesian ISPs are members of the Indonesian Internet Service Providers Association (APJII) [2]. In Indonesia,

there are different types of Customer Information Service Providers also known as Providers, such as: Telkomsel, XL, Indosat, etc [3]. Usually, the service received is a cell phone starter pack that allows users to add internet credits and quotas, but with the growth of mobile phones to smartphones, the incentives that providers offer The level offered is also increasingly diverse [4].

CV. Ahyein Pratama Mandiri Air Joman is a company operating in the field of providing internet services. At that time CV. Ahyein Pratama Mandiri Air Joman does this while waiting for a customer to arrive at the office or for the customer to provide other potential customers with location, perks, and product information. Inadequate reporting of customer complaints makes it difficult to know how satisfied customers are, so with marketing like this, the opportunity to get a large number of leads maximum is not met, which is very unfortunate given the increasing number of Internet products. The dissemination of unclear information makes it difficult for customers to know the latest information, thereby causing customers to turn to other providers.

Customer relationship management (CRM) is a special type of management that addresses theories for managing the relationship between a business and its customers and for improving customer relationships to achieve growth. healthy business development [5]. CRMs are designed to improve profits, sales, and customer satisfaction by helping businesses of all kinds accurately identify their customers, attract more customers, and maintain customer loyalty. A business strategy that includes customized software and services [6]. CRM is a sales, marketing and service strategy that uses information technology through a customer-centric corporate philosophy and culture to make business processes more efficient [7]. Information is data processed in a form that is significant to the recipient and has real value that can be perceived in making decisions now or in the future. [8]. Customer relationship management (CRM) is a type of management that specifically deals with the management theory between a business and its customers, which aims to improve relationships with customers to maximize business growth [9].

Several previous studies that have implemented CRM into information systems include: by Evaryanti, F. P., Estiyanti, N. M., & Sephy Lavianto, S. E. (2020), with the research title "Analysis of Marketing Strategies in an Effort to Increase Sales of Onlinemybaliwisata Travel Agents", as a result mybaliwisata.com managed to get guests when doing online promotions on social media [10]. Then, research by Kifti, W. M., & Swaradana, W. (2020), "Marketing Analysis and Design With the Concept of Customer Relationship Management (CRM)", concluded that the system designed can make it easier for customers to make purchases that can be made anytime and anywhere, making it easier for customers to buy. UD. Terang Jaya sells products that are marketed according to the wishes of consumers. Then the designed system can also attract new customers and retain old customers [11].

Based on the background of the problems above, the authors build a system using CRM (Customer Relationship Management). The system built will use the PHP

programming language. PHP is one of programming language that used to create web-based applications. It means that the applications can change its content under certain conditions and the applications may provide feedback to the user [12]. With this system is expected to facilitate CV. Ahyein Pratama Mandiri Air Joman in managing services for customer satisfaction. So that customers remain loyal and on the other hand also get new customers from time to time.

2. RESEARCH METHOD

The framework is a stage or flow that is carried out in solving problems that will be carried out in designing an Internet Provider sales application on CV. Ahyein Pratama Mandiri Air Joman using the PHP and MySQL programming languages. The stages of the framework carried out are as follows:

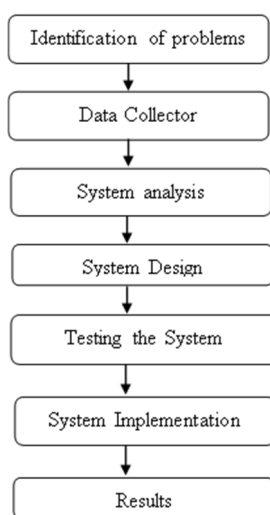


Figure 1. Research Framework

Based on the picture of the research framework above, the research framework can be described as follows: (1) Researchers must identify problems that will be faced in the process of designing sales of Internet Providers on CV. Ahyein Pratama Mandiri Air Joman with the aim of anticipating problems that will be faced later. And the author can also immediately fix and resolve the problems at hand. (2) Data collection is the method used by the author to collect data. Data collection was carried out in order to obtain the information needed in order to achieve the research objectives. In the case of researchers collecting data by means of interviews, observations, and brochures. (3) System analysis aims to determine the application of CRM Internet Provider sales on CV. Ahyein Pratama Mandiri Air Joman. Analysis of the existing system needs to be done before analyzing the problems, system

weaknesses, and system requirements. (4) System design means making a design about the system you want to make. In designing applications on CV. Ahyein Pratama Mandiri Air Joman, the researcher divides the process into several stages, namely the login display, the menu for all types of packages, and the menu for ordering. (5) Testing the system is done to find out whether the website designed is as expected, as well as re-checking for writing. In addition, to test whether there are still problems with the designed website and then fix any errors on the website. (6) After the system is tested, the next stage is the implementation of the system where this stage is the stage of implementing the system which will help reduce and eliminate existing problems. (7) The system that has been implemented the results will be used by the company employees CV. Ahyein Pratama Mandiri Air Joman in running the business.

When conducting this study, researcher used qualitative research methods. Qualitative research methods is a method of discussing a problem by describing, interpreting and writing about a situation or event to be analyzed and then drawing general conclusions from the issues discussed. This form of research is conducted through interviews or direct observations, with the aim of describing a fact or situation that exists in the place where the research is conducted.

3. RESULTS AND DISCUSSION

3.1. System Design

Basically, a system is a collection of entities (hardware, brains, software) that interact, cooperate and collaborate to achieve certain goals [13]. Systems design is the stage of drawing, planning, and sketching or knowing several separate elements into a unified and functioning whole. This includes configuring the software and hardware components of the system.

3.1.1. Running System Flow

The system carried out on the CV. Ahyein Pratama Mandiri Air Joman is still done manually, and can be explained by the following system flow:

1. Customers come to the store to buy products.
2. Administrator/Cashier serving customers and showing all kinds of products.
3. After the customer selects the product, then the administrator / cashier immediately processes the order and makes the payment process.
4. After the payment process, the customer receives the product. Administrator/cashier makes purchase invoices that are printed in 2 copies.
5. The purchase invoice is given 1 copy to the customer and 1 copy as a left for the administrator / cashier.

6. Based on the purchase invoice, the administrator/cashier makes a sales report in 2 copies. 1 copy is given to the owner and 1 copy is handed over to the cashier to be used as an archive.

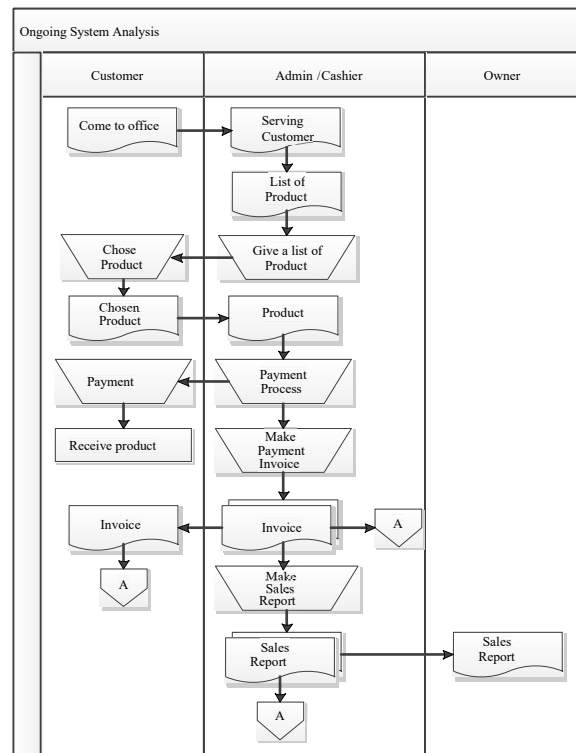


Figure 2. Current System Flow

3.1.2. Proposed System Flow

The system that will be proposed is a design system that is Customer Relationship Management to support the realization of a new system that can advance the sales process and deliver information about the products sold by CV. Ahyein Pratama Mandiri Air Joman, in order to be able to compete in this increasingly advanced product sales business world.

The flow of the system with Customer Relationship Management can be seen in the following figure:

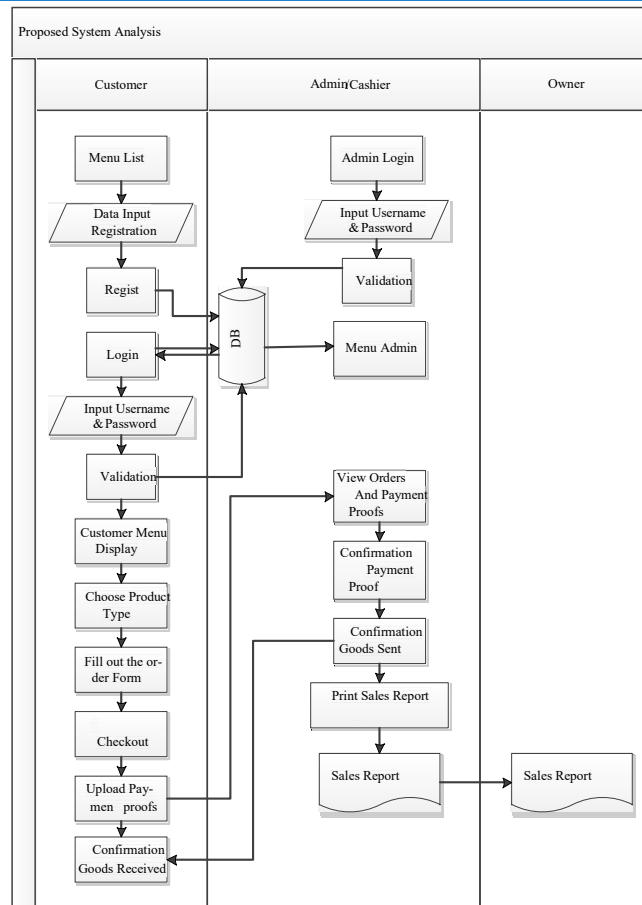


Figure 3. Proposed System Flow

1. Customers who want to order products online can visit the CV website. Ahyein Pratama Mandiri Air Joman and register customer accounts on the list menu which will be automatically stored in the database.
2. Next, the customer does the login process by entering the username and password then validating the username and password to the database.
3. Next, the customer will enter the customer page view that displays all types of products.
4. The customer selects the desired product, then fills in the order form provided, after placing an order, the customer checkout and confirms the order.
5. Then the customer confirms the payment by uploading the proof of payment.
6. The admin does the login process, then checks the order and proof of payment.
7. Next, the Admin processes the delivery of the product ordered by the customer.
8. After the product is sent, the Admin prints a sales report and submits it to the owner.

3.1.3. Unified Modeling Language

Unified Modeling Language (UML) is a standardized language used to document, specify, and create software. UML is an object-oriented system development methodology and also a system development aid [14].

Use Case Diagram

A use case diagram represents the interactions between one or more actors and the information system being created. Use Case is an abstraction of the interaction between the system and actors. Actors in the design of the system that will be designed on the CV. Ahyein Pratama Mandiri Air Joman is described in the following table:

Table 1. Table Defenisi Aktor

No	Actor	Description
1	Admin	Admin is in charge and has access rights to manage all data, namely profile data, product categories, products, orders, shipping costs, how to purchase, and reports.
2	Customer	Customers can view profiles, how to purchase, product categories, all products, send messages, and register Customers.

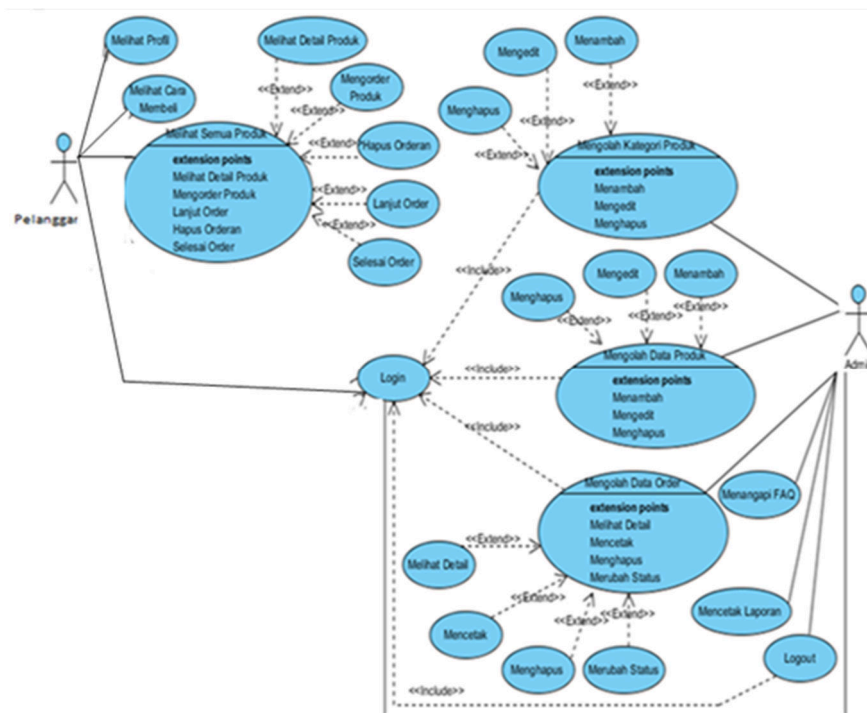


Figure 4. Use Case Diagram

For more complete details on the use case diagram for the design of the new system CV. Ahyein Pratama Mandiri Air Joman can be seen in the following table.

Table 2. Use Case Scenario Table

No	Use case	Description	Actor
1	View Profile	Customers can view profiles.	Customer
2	View Product Categories	Customers and Customers can view by Product category.	Customer
3	Sending message	Customers can send messages.	Customer
4	View Product Details	Customers can see in detail about the product	Customer
5	Ordering Products	Customers can order Products.	Customer
6	Delete Order	Customers can delete order if cancelled order .	Customer
7	Register	Customer could register for so Customer	Customer
8	See Basket Shopping	Customer could see basket shopping after logging in.	Customer
9	See Total Shopping Details	Customer could see total shopping details after done shopping	Customer
10	Login	Admins and Customers for enter homepage private .	Admin, Customer , Supplier
11	Changing Password	Admin can change password _ in accordance desire .	Admin
12	Updates Profile	Admin can update profile for renewal .	Admin
13	Process Category Product	Admin can process category productslike add , edit and delete category Product .	Admin
14	Processing Product Data	Admin can processing product data like add , edit and delete product data .	Admin
15	Processing Order Data	Admin can processing order data such as view details, print , delete and change order status.	Admin
16	See Message	Admin can see message from Customer .	Admin
17	Print Report	Admin can print report sales .	Admin
18	Confirmation purchase product	Admin confirmation purchase product and change payment status	Admin
19	Testimonials	Comments on products that have been sold	Customer/Admin
20	logout	Admin do <i>logout</i> for go out from admin page .	

Class Diagram

Class diagram describes the structure of the system in order to define the classes that will be generated to create the system. Classes must have properties and object methods or operations [14]. A class diagram shows the presence or existence of classes and relationships (relationships) in the logical design of a system. All processes performed by actors on the application will be identified by the product with a class diagram. A class diagram is a chart

that will show and explain the database tables and the relationships between the tables that will be used in the system. For a clearer class diagram on the system in CV. Ahyein Pratama Mandiri Air Joman is shown in Figure 5.

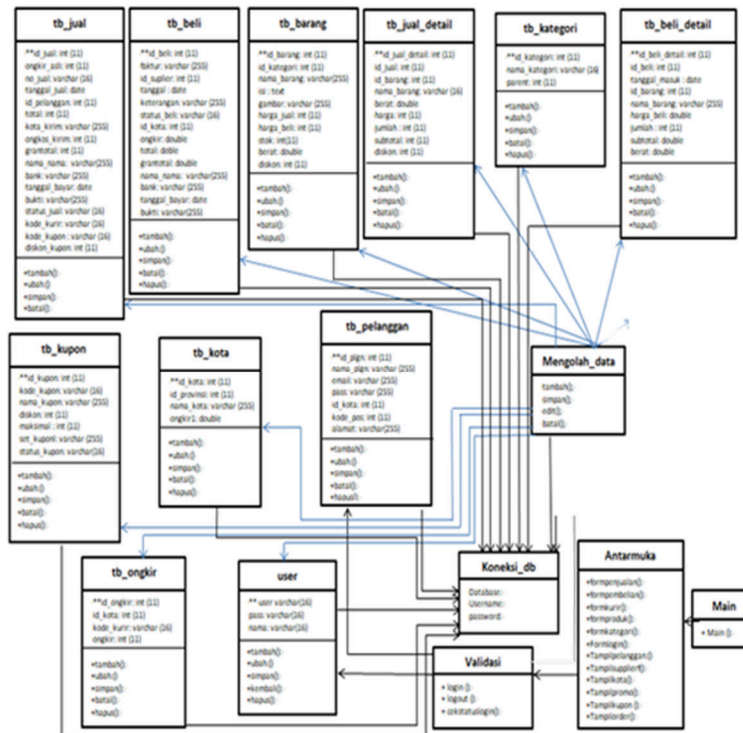


Figure 5. Class Diagram

3.2. Result and Implementation

System requirements contain the facilities required by the system, including user interface requirements, hardware requirements and software requirements.

Users will interact with these system applications using tools such as the following:

1. Keyboard, used to enter commands into the application.
2. Mouse, used to execute commands against applications.
3. Monitor, used to view the display in the application.

The hardware requirements used in this system are a set of computers or laptops with the following specifications:

1. Processor minimum Intel Pentium Dual Core 2.7 GHZ.
2. Minimum RAM 1 GB.
3. Minimum VGA 512 MB.

Deployment is the adoption or execution of an application. When implementing this system, the implementation of the interface design is shown.

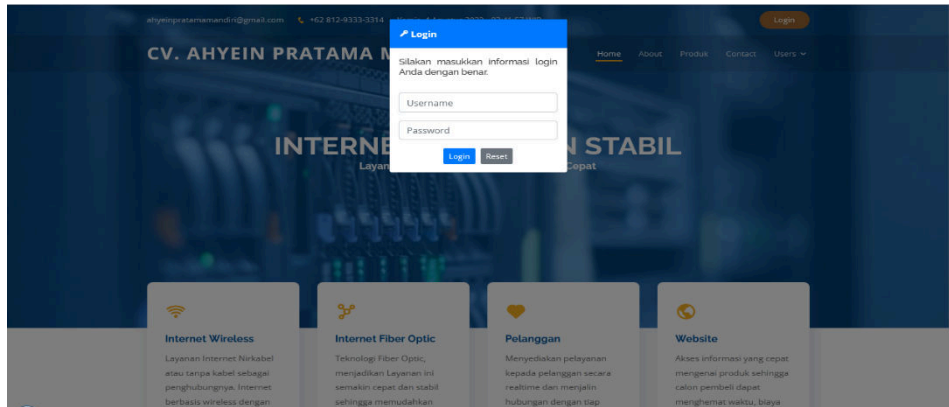


Figure 5. Homepage

The homepage is the first page found after a user enters the CV. Ahyein Pratama Mandiri Air Joman online.

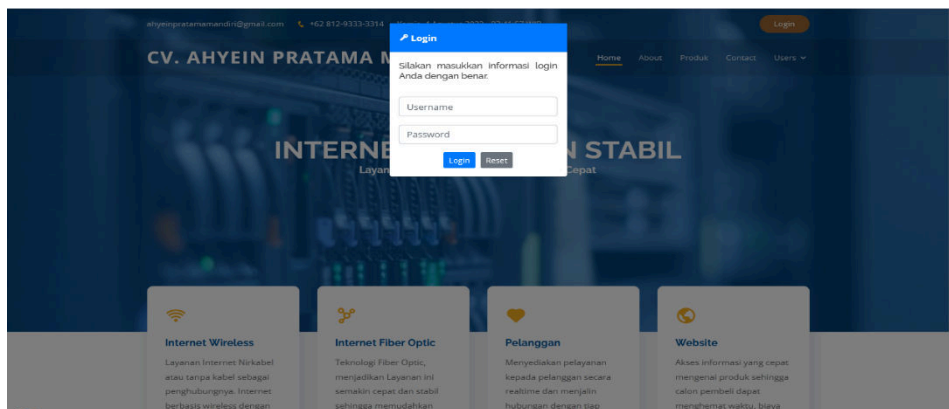


Figure 6. Login Page

The login page is a page to clarify administrator rights to enter the processing system. Administrators with a valid username and password have access to the system through the login page.



Figure 7. All Products Page

All products page is a page that contains a list of products on the CV. Ahyein Pratama Mandiri Air Joman.

Program Testing

Results of implementation and test results is that the design system on the CV. Ahyein Pratama Mandiri Air Joman is a system that brings convenience to administrators in handling data. Consumers can also quickly select and order products. In addition, the FAQ function allows consumers to easily ask questions about products and get answers directly from customer service departments, making it easy for purchasers to obtain the information they need.

4. CONCLUSION

Current marketing information systems still have weaknesses, especially in the dissemination of promotional information. Using a web-based computer system, the data storage process is stored more accurately and cleanly, the process of providing advertising information is faster, and the response to sales is faster. The proposed system meets the requirements and has the advantage of being able to integrate with customer relations and marketing related systems through the implementation of e-CRM systems.

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