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Implementation of Codeigniter 3 Framework in Creating Web-Based Sales System and Company Profile of A Swallow Consultant

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***Abstract*—The developments in telecommunications and technology rank first in order to bring about changes in the social conditions of the world. Business opportunities by utilizing the internet are also increasing, especially for promoting goods and services. CV Andromeda Multi Sarana or commonly known as AMS is a company engaged in Swallow consultancy. The company is engaged in trade and services. In supporting its trading activities, AMS requires a website. Currently, AMS only has one company profile website, while the processing and sales are still carried out using manual recording through Microsoft Excel application. This can also cause ineffectiveness and inefficiency of reports given by administrative staff to their superior. In this study, the researchers provide a solution to the problem by creating online store sales system and company profile using a website-based Codeigniter 3 framework. This study aims to provide solutions to existing problems and facilitate users in making transactions with company admins. The final result of this research is the formation of a Codeigniter framework.**

Keywords : *Codeigniter, Sales system, Company profile, Swallow consultant, Web based*

I. INTRODUCTION

The object of this study is CV Andromeda Multi Sarana or commonly known as AMS. A company engaged in swallow consultancy. AMS always provides solutions for Swallow farmers who want to succeed in cultivating scientifically and modern. AMS also sells various types of Swallow caller voice products and other supporting products in the Swallow business. Processing and sales at CV Andromeda Multi Sarana are still done by using manual recording through Microsoft Excel application. This causes the process of recording and processing data to become less effective, especially when large purchases occur at the same time. This can also cause administrative staff when making reports to superior become less effective because they have to search for sales data then collected into one and printed. Sales data that are still stored offline in the computer also cause a high risk of large data loss, due to the absence of available data backup [1].

The sales process and company profile information at AMS require a system that is able to manage buyer data, employee data, and data of Swallow voice product so that it can improve the efficiency and quality of services to buyers and can provide information about the company. The data used in this study were buyer data consisting of buyer name, buyer phone number, buyer email, and buyer address; product data consisting of product name, product price, and product type; agent data consisting of agent name, agent address, and agent phone number; purchase data consisting of purchase date, buyer name, product purchased, transfer date, and description.

In this study, a Website Company Profile and Online Store Sales System were built to be more useful, including by adding storage facilities; and search and data processing such as buyer data, sales data, swallow voice product data, and agent data. The system is also able not only to display but also to print tables from sales reports. Therefore, administrative staff only need to focus on product marketing because sales data recording is automated [2][3]. Then in the creation of the system, a website-based Codeigniter 3 framework were used. CodeIgniter itself is an open source PHP framework and uses the MVC (Model, View, Controller) method to make it easier for developers or programmers to build a web-based application without having to build it from scratch. This Codeigniter is built for developers with PHP programming languages who need tools and facilitation to create a full-featured web [4][5].

II. RESEARCH METHODS

In this research method part, the flow from the process of implementing the research to the method used in the implementation of the research are explained. The following is the framework of this study:

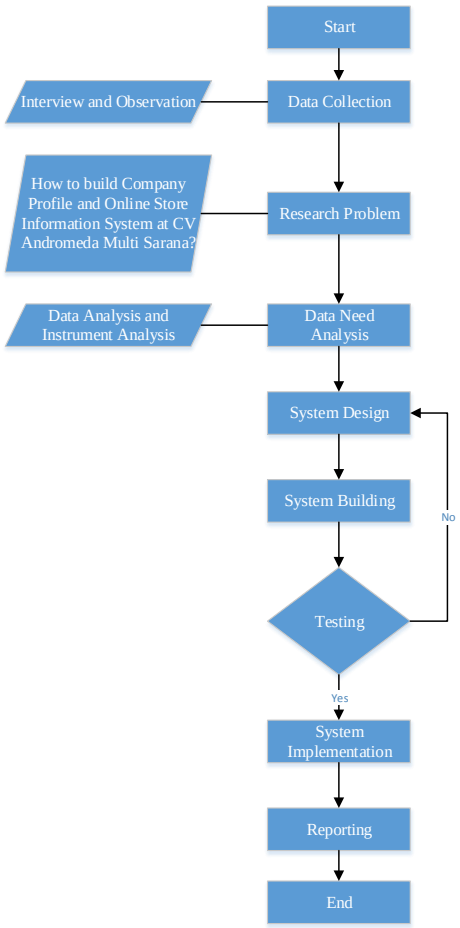

Figure 1. Research Framework

Figure 1 explains how the process of this study is carried out, starting from data collection to testing and application to the research object. Each of the research processes is explained as follows:

2.1 Data Collection

Data collection method is a technique or a way done by researchers in collecting data. Data collection is carried out in order to obtain the information needed in order to achieve the research objectives. The data collection methods used here were as follows:

1. Observation: it was done by conducting direct observation, data recording, and data collection which were carried out in the CV Andromeda Multi Sarana.
2. Interview: by means of giving question and answer and discussion with the admin of CV Andromeda Multi Sarana to obtain information related to the sales data management system in the company.

2.2 Research Problem

The formulation of the problem is a specific statement about the scope of the problem to be examined. Research problems are questions about the problems of a thing or an event in the form of simple, short, solid, and clear interrogative sentences. The research problem of this study is how to build a Sales System and Company Profile at the Swallow company called CV Andromeda Multi Sarana.

2.3 Need Analysis

The data needed for the Company Profile, Information System, and Online Store at CV Andromeda Multi Sarana to be built are product data, agent data, sales data, and company information data.

2.4 System Designing

System design is the process to design a system or improve an existing system so that the system becomes better and can carry out work activities effectively and efficiently. The design process can be in the forms of input design, output design, file design.

The system design process in this study is to design the display and database of the sales system and company profile at CV Andromeda Multi Sarana to be built. The sales system created is planned to become an online store or also called E-Commerce. E-commerce itself is a website to offer goods that are sold online, where the process of sales and purchases (transactions) are carried out online. Although it is also not impossible to carry out offline payment process, which is commonly known as cod (Cash on Delivery), i.e. payment is made simultaneously when the goods have been received by the buyer [6]. Then for the design of the company profile itself is the identity of a company; both in the field of services and products that aims to inform, influence and persuade, and remind customers about the company [7].

For the system design itself used Object-Oriented Analysis and Design (OOAD); a method used in the design of e-Learning Social systems. This method is one of the system design methods that approaches the problem from the perspective of the object, not from the perspective of functionality as in structured programming. The concept of OOAD includes the analysis and design of a system with an object approach, namely object-oriented analysis (OOA) and object-oriented design (OOD). OOA is an analysis method that examines the requirements that a system must meet from the viewpoints of classes and objects encountered in the scope of the agency. While OOD is a method to direct software architecture based on manipulation of system objects or subsystems [8][9].

Furthermore, the design of system development was carried out using the prototype method, which is a system life cycle method based on the concept of working model. The purpose of the prototype method

is to develop the model into a final system. Hence, this system can be developed fast with lower cost. The prototype method is a very fast development method and testing of new application work models through repeated interaction processes so that it can be used properly. The prototype method can overcome the problem of misunderstanding between users and analysts, the problem of users not being able to identify clearly [10]

.2.5 Building the System

System building is a process created in such a way as to identify discrepancies in the results of an information system with the expected results. The system building in this study using PHP programming language which is a web-based programming language that runs on the server side, which can be used to build a dynamic website [11]. Then for databases using MySQL (My Stuctured Query Language) which is a database relation system or Relational Database Management System (RDBMS) that is able to work quickly and easily. MySQL is also a database access program that is networked so it is appropriate for multi-user applications (many users). MySQL is distributed under the GPL (General Public License) [12].

Framework of PHP using CodeIgniter, it is an open source PHP framework and uses the MVC (Model, View, Controller) method to make it easier for developers or programmers to build a web-based application without having to build it from scratch. In the official site of Codeigniter, (Official Website CodeIgniter, 2021) states that Codeigniter is a powerful PHP framework and little bug. This Codeigniter is built for developers with PHP programming languages who need tools to create a full-featured web. [13].

2.6 System Testing

After coding in the building of the system, of course, testing will be carried out. There are a lot of ways to test, for example using a white box or a black box. Using the white box means testing the code while the black box tests if the display functions are correct and can be used according to the functions or not.

2.7 Implementation of the System

Implementation is the stage of which a system that has passed the testing process, based on the results of the analysis and design, that has been carried out and is ready for use.

III. RESULT AND ANALYSIS

3.1 System Design

The design process or often called process modeling is a way to draw an operating system to be created by the researchers. Process design is a process of solving existing problems, with the aim of being used to create a new information system that can meet the expected goals and objectives as defined in the previous discussion; namely, the building of a sales system and website-based company profile on Swallow consultant.

3.2 System Flowchart

Here is the flowchart of the sales system and the company profile to be created:

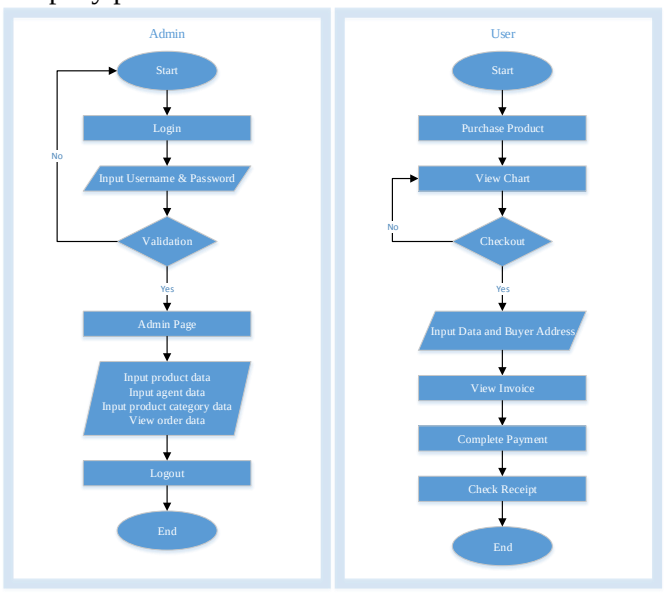

Figure 2. Flowchart of Admin and User

The explanation of the admin and user flowchart in the figure above is that the admin starts then log in by entering the username and password, then validated by the system whether correct or incorrect, if correct the admin can directly enter the admin page then can input agent data, product data, product category data, and will enter the database. Admin can also view order data and sales report data. Meanwhile, in the User flowchart, the user starts then the user can see the company information and make the purchase of goods by entering it into the shopping cart and then checkout, get an invoice, and the user can check the delivery receipt.

3.3 Use Case Diagram

Use Case Diagram is used to explain what activities can be carried out by actors on a running system or what conditions must be met by the system from the point of view of the actors or users of the system. The following are the actors involved in the sales system and company profile at CV Andromeda Multi Sarana.

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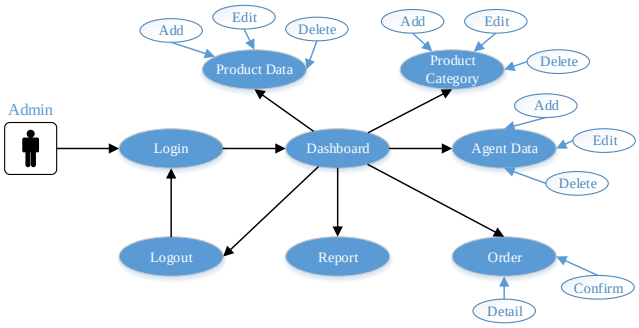

Figure 3. Use Case Admin

Admin here can login and manage product data, product categories, agent data, orders, and reports. On the report page, the admin confirms and edits the details of the existing orders.

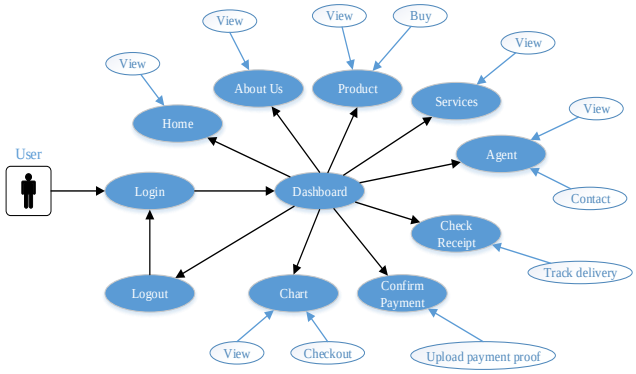

Figure 4. Use Case User

Then for user can carry out the login process and can see all the features in the sales system and company profile and conduct product purchase transactions contained in the sales system.

3.4 Admin Page View

On the admin page there are several features and menus starting from the login page and the admin main page. The following page is a view of the login page of the web-based Sales and Company Profile System at CV Andromeda Multi Sarana. The Login page is the page that users visit when they access the administrator page. By entering a valid username and password according to the database.

Figure 5. Admin Login Page

Then the next is the view from the admin page after the login process. The figure below shows the admin dashboard page. On this page there is some information such as product data, product category data, agent data, order data, and reports.

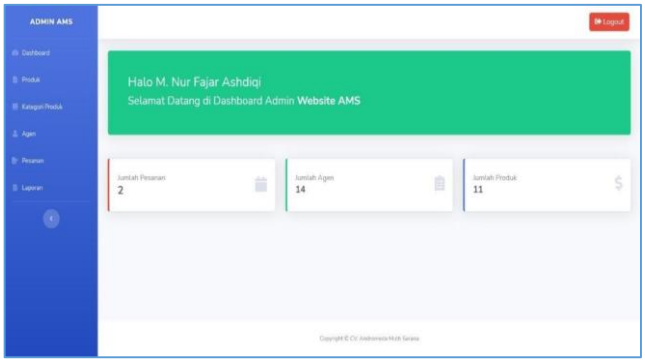

Figure 6. Admin Dashboard Page

3.5 User Page View

The website main page is the page that first appears when visitors open the sales system and company profile of CV AMS. Visitors can only view Product and Service types.

Figure 7. Sales and Company Profile System Main Page

The next page is the page that contains the information which displays about the company information of CV AMS.

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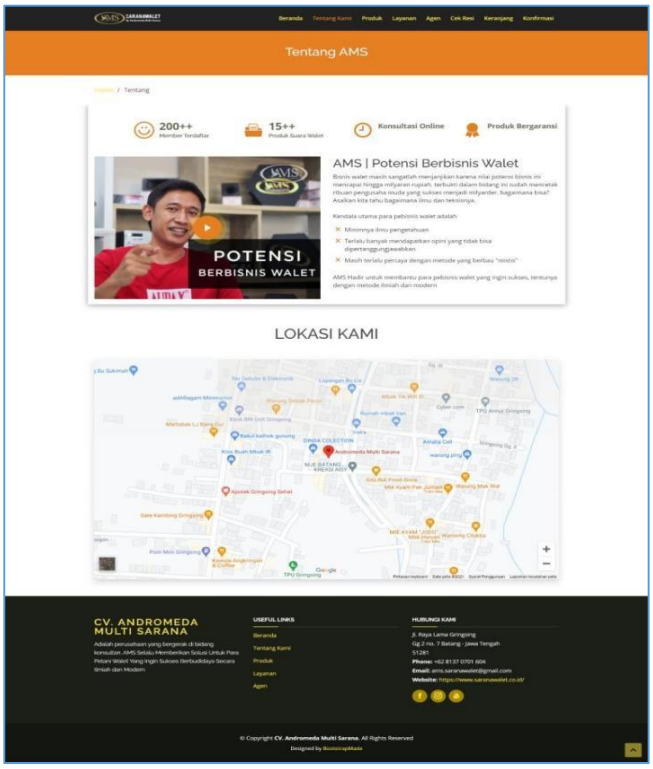

Figure 8. Company Information Page

Then following is the product page, on this page there are product types available in CV AMS. Visitors can only view and know product information, view product prices, and know product details. The Product View on the visitor page can be seen in the following figure.

Figure 8. Product Page

The next page is the service page, it displays the types of services available in CV AMS. Starting from the handling of buildings for Swallow cages, site surveys, consultations, and guidance.

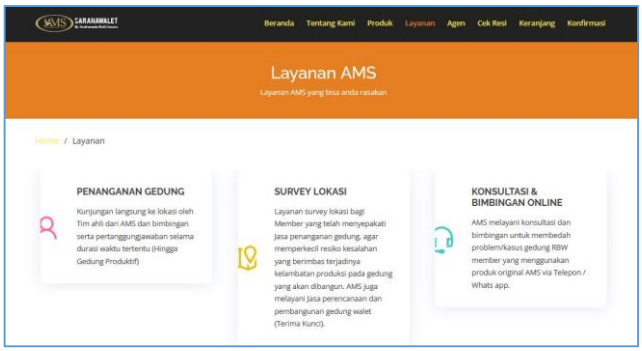

Figure 9. Service Page

The next page will display the details of the agent data provided by CV AMS. Visitors can contact and select available agents.

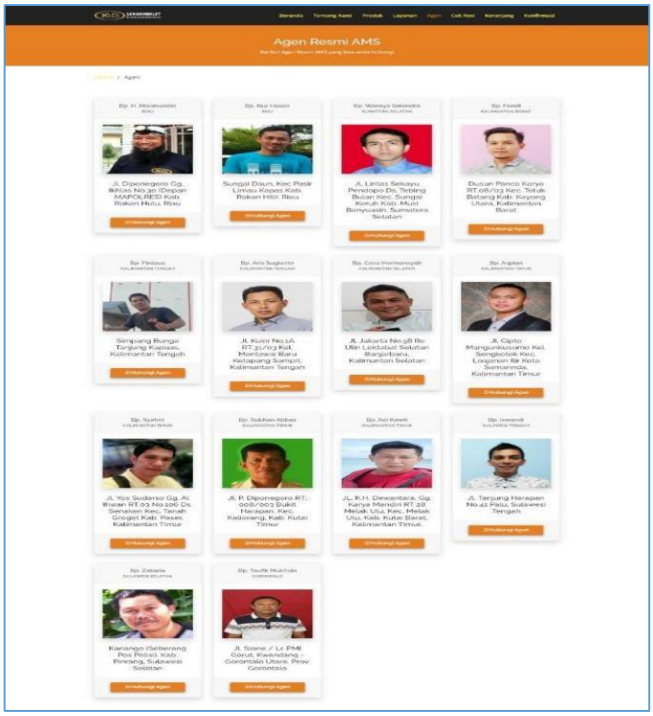

Figure 10. Agents Page

Next is the receipt check page to display the form to know our order process by entering the receipt number that has been obtained and then entered and the progress of the order process can be monitored.

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Figure 11. Receipt Check Page

The next page is the shopping cart page, used to display the number of orders already ordered and put in the shopping cart to checkout.

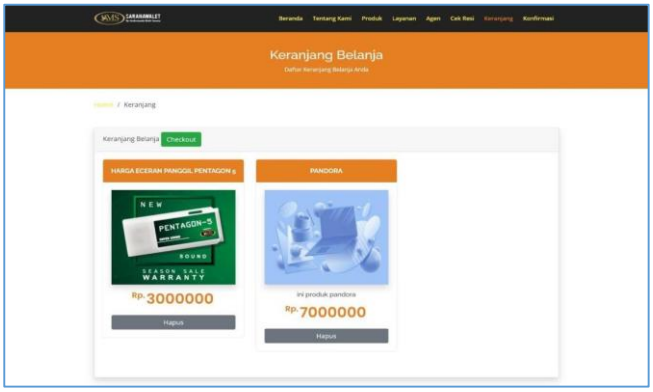

Figure 12. Shopping Cart Page

After placing the order in the shopping cart, the next step is to make an order confirmation through the order confirmation page which displays the order confirmation form that will be filled in by the customer who wants to order the product. The customer must fill it in validly.

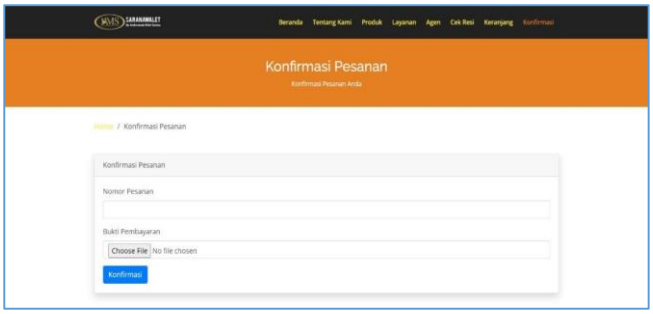

Figure 13. Order Confirmation Page

The process will then be directed to a checkout page that displays a form for product checkout. Before clicking checkout, customers are expected to fill out a form with valid personal data to place an order for products.

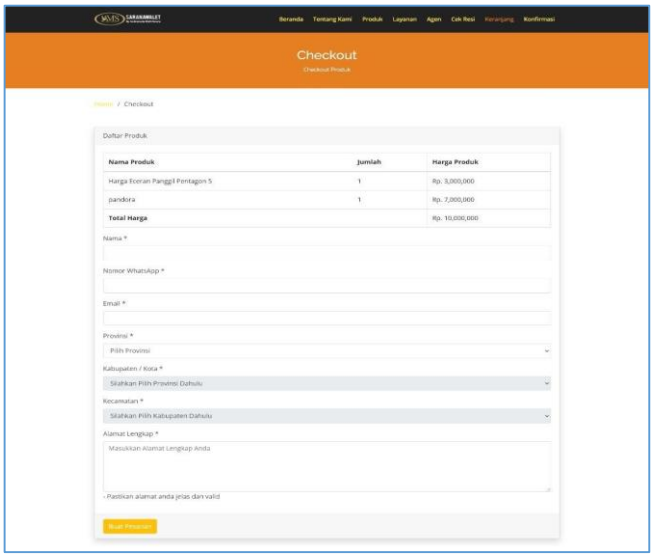

Figure 14. Order Checkout Page

And the last is that the customer will get an order invoice. Where this invoice is obtained after we checkout the order. These order details serve as a notification to the customer of what products the order was purchased for and the total amount paid for.

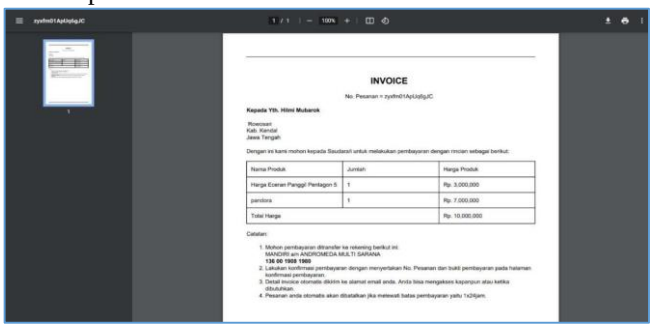

Figure 15. Order Invoice

IV. CONCLUSION

From the results of the study that have been done, it can be concluded that the Web-Based Sales System and Company Profile of CV Andromeda Media Sarana can be used as a medium of information, promotion, and sales for companies. The system makes it easier for customers and visitors to get information about the company and products sold in the form of Swallow callers and Swallow business handbooks. Then for the company itself, the Sales System and Company Profile System at CV Andromeda Media Sarana can make it easier to manage data and create reports with an attractive and easy to use view because it uses the CodeIgniter3 Framework in creating its website-based system. The final result of this research is the formation of an online store application.

Here, the researchers submits some suggestions regarding the shortcomings of this website. It is expected that later it can be developed by readers who want to build the similar website to be better, as in the Website that was built here, the system still involves admins to confirm payments. All activities on the website in the future can be made automatic,

it is necessary to have a system that integrates directly with the bank (Bank Payment Gateway). And it is expected that in the next development, online consulting features will be added, to make it easier for customers who want to use company consulting services.

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