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Car Service Services Information System and Website-Based Sparepart Sales in the Company PT. Azka Gilang Mandiri

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A R T I C L E I N F O

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ABSTRACT

The development of the website today is not a difficult thing for students and students to learn because there are many references on the internet to support learning. The formulation of the problem in this study is 1. How to automatically set up service and spare parts data on invoices?. 2) How to manage good service and spare parts data management?. The purposes of this research are: 1. Manage the inventory of spare parts data stock, service income, and manage all reports and transactions at the company. 2. Facilitate the administration of the company in the process of providing services and data collection of spare parts, because the website has been managed properly and the company is more organized for use in data collection services and spare parts data. The research method used in this study using Waterfall. The waterfall method is one of the SDLC models that is often used in the development of information systems or software. The waterfall model uses a systematic and sequential approach. The stages of the waterfall model include requirements, design, implementation, verification, and maintenance. Based on the results and discussion, the following conclusions can be drawn: (i) Information systems for services and sales of spare parts can be used as an answer to problems that occur in the management of the workshop, with this system the management of the workshop can be more easily carried out and much faster and the quality of information is more manageable. well. (ii) Development of an information system website for services and spare parts sales for customers of PT. Azka Gilang Mandiri has been carried out and implemented from the results of the designs that have been made in Context Diagrams, System Actors (List Actors), Use Case Diagrams, Activity Diagrams, and Class Diagrams.

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1. INTRODUCTION

The rapid development of web applications since the advent of internet technology is very helpful in the ease and speed of sending, delivering and receiving information. Starting from companies, schools, colleges, and other institutions or organizations that have used a lot of web applications in sales, promotion, learning and other activities where it is necessary to send, disseminate and receive information so as to provide convenience for users who need. The development of the website today is not a difficult thing for students and students to learn because there are many references on the internet to support learning.

Company at PT. Azka Gilang Mandiri is a business venture engaged in the automotive sector, one of which is a car repair shop. The need for good information is needed, such as information on spare parts inventory, services that occur to report generation. This can be an obstacle in business development if the information is not well organized. As experienced by motorcycle or car repair shops in general, where information management is still done manually, both in data collection of spare parts, data collection of services, transactions and in making reports. Difficulty in collecting spare parts inventory data and in making reports that are less accurate are the main problems for making this application. The formulation of the problem in this study is 1. How to automatically set up service and spare parts data on invoices?. 2) How to manage good service and spare parts data management?. The purposes of this research are: 1. Manage the inventory of spare parts data stock, service income, and manage all reports and transactions at the company. 2. Facilitate the administration of the company in the process of providing services and data collection of spare parts, because the website has been managed properly and the company is more organized for use in data collection services and spare parts data.

2. RESEARCH METHOD

The research method used in this study using Waterfall. The waterfall method is one of the SDLC models that is often used in the development of information systems or software. The waterfall model uses a systematic and sequential approach. The stages of the waterfall model include requirements, design, implementation, verification, and maintenance.

3. RESULTS AND DISCUSSIONS

3.1 Business Process Analysis

a. Old Business Process

Management of data such as transaction data, service data, and spare parts data is still using Microsoft Excel but has not used an automatic data collection system through the system and database. In the management of data that is managed to be stored and searched is still done manually through Microsoft Excel. The old business data collection process can be seen in Figure 1.

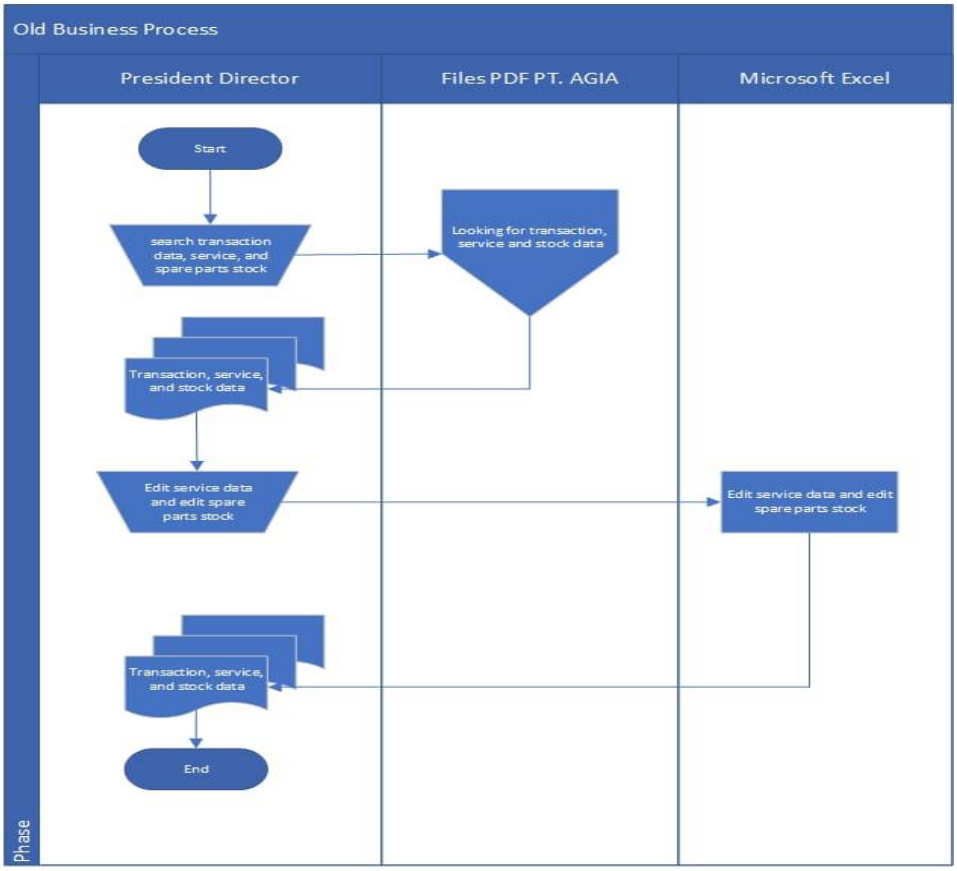

Figure 1. Old Business Process

b. New Business Process
The system created is expected to be able to overcome the problems of the old system and facilitate the management of transaction data, service data, and spare parts data. The new business data collection process can be seen in Figure 2

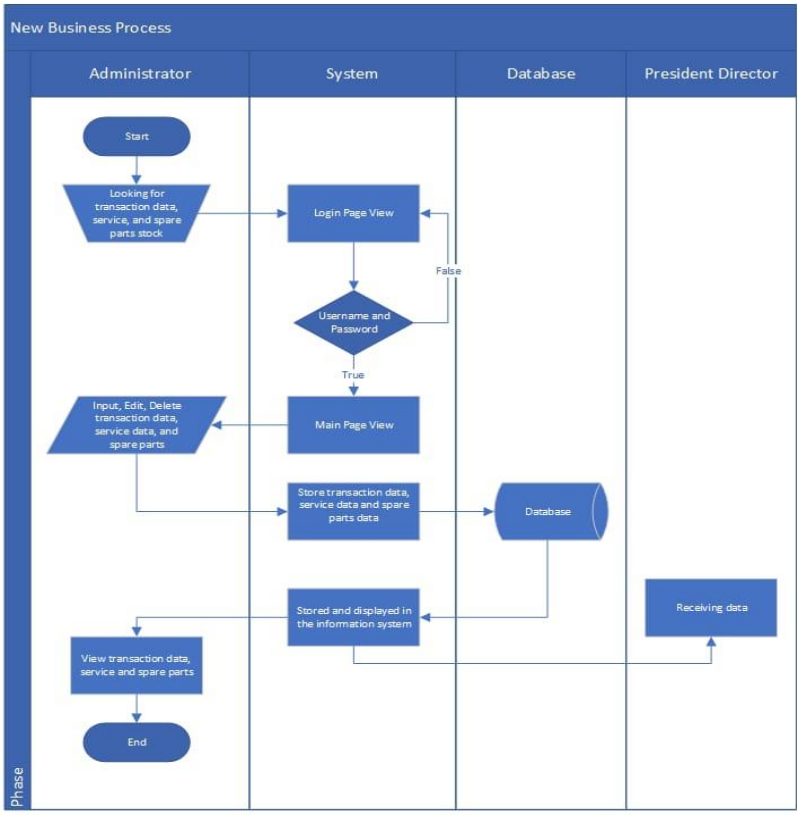

Figure 2. New Business Process

3.2 System Design

a. Context Diagram

Context diagram is a diagram that describes the business processes of a system that is made. The context diagram for this practical work is shown in Figure 3.

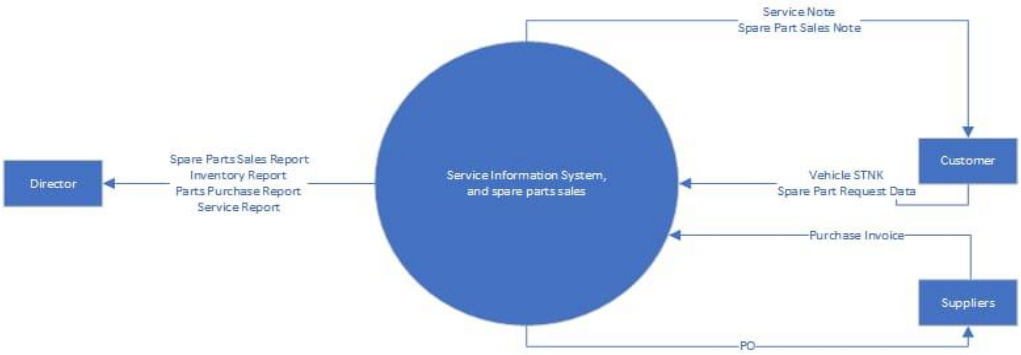

Figure 3. Context Diagram

b. Use Case Diagram

Use case diagram is a diagram that describes the expected functionality of a system and can show the relationship between a list of use case diagrams and a list of actors. The use case diagram is shown in Figure 4.

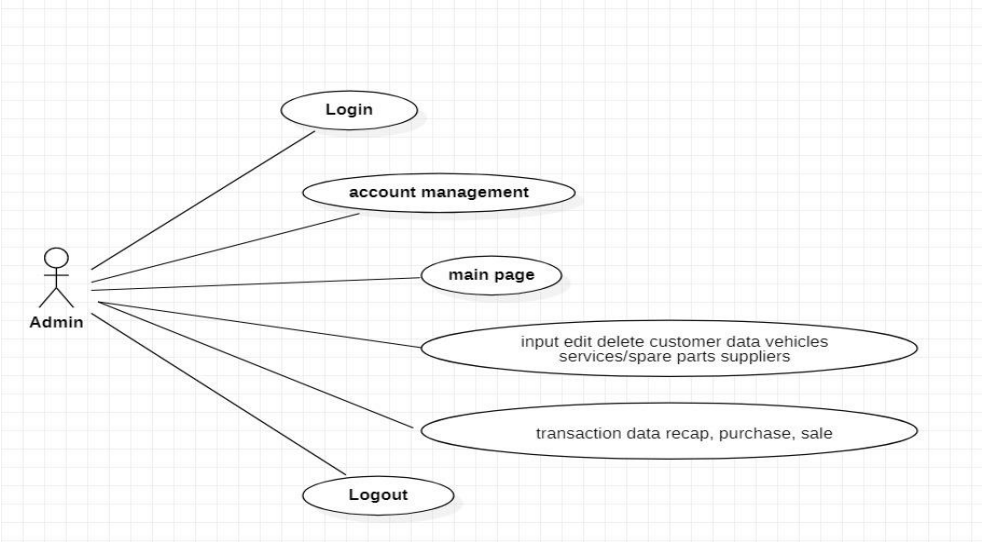

Figure 4. Use case Diagram

3.3 Implementasi

a. Main page

On this page displays the Main Page data management system PT. Azka Gilang Mandiri. Main Page shown in Figure 5

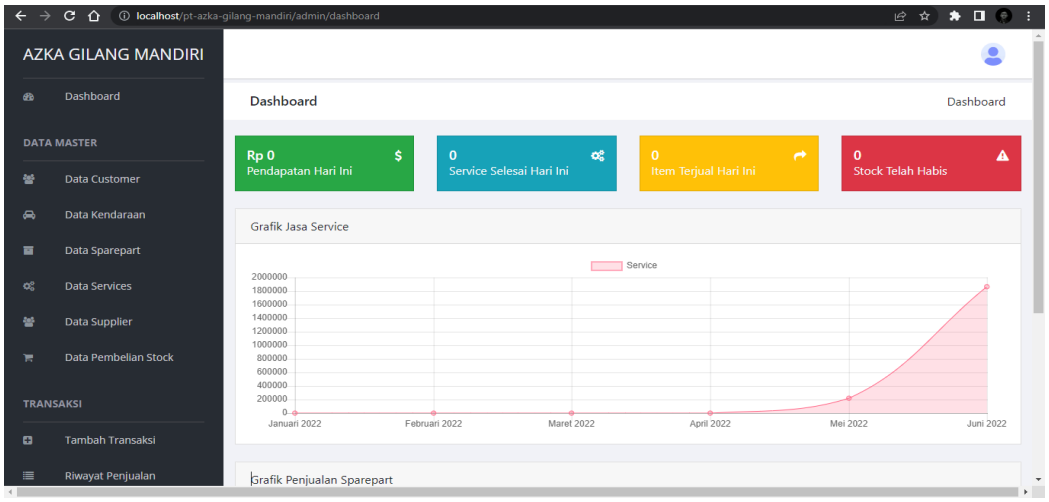

Figure 5. Main Page

b. Customer Data Page

This page displays customer data that can be added, edited, and deleted by the administrator. The customer data page is shown in Figure 6.

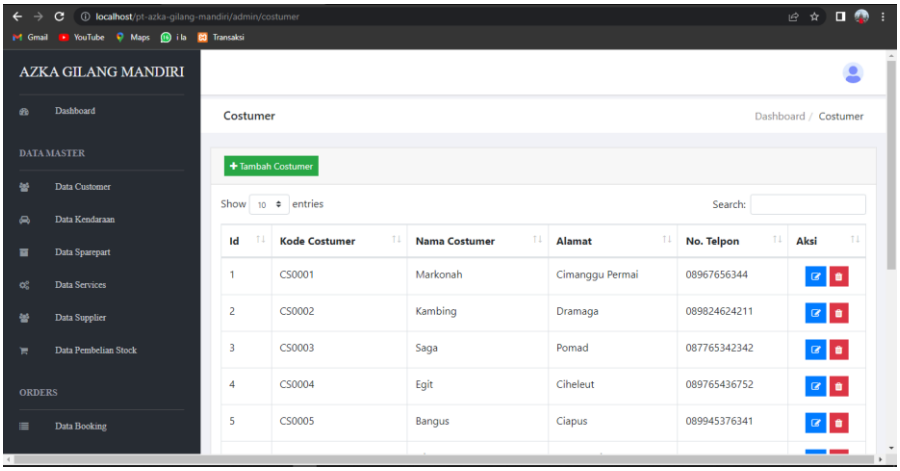

Figure 6. Customer Data Page

c. Vehicle Page
This page displays the vehicle data page. the vehicle data page is shown in 7.

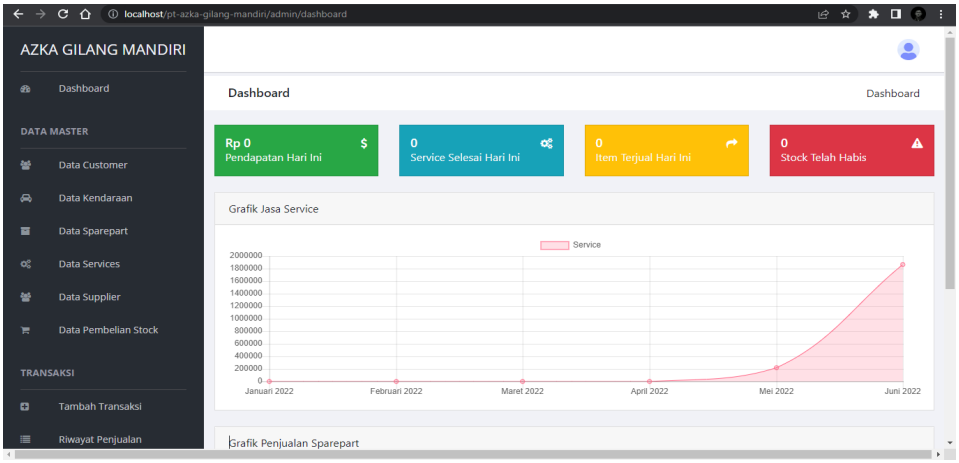

Figure 7. Vehicle Page

d. Data Services page
On this page displays the Data Services Page. The Data Service page is shown in Figure 8.

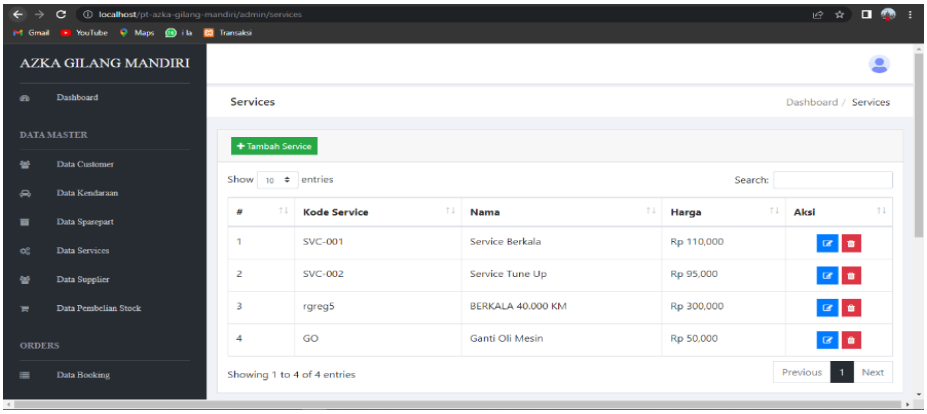

Figure 8. Data Services page

e. Booking Service Data Page
This page displays the Booking Service Data Page. The booking service data page is shown in Figure 9.

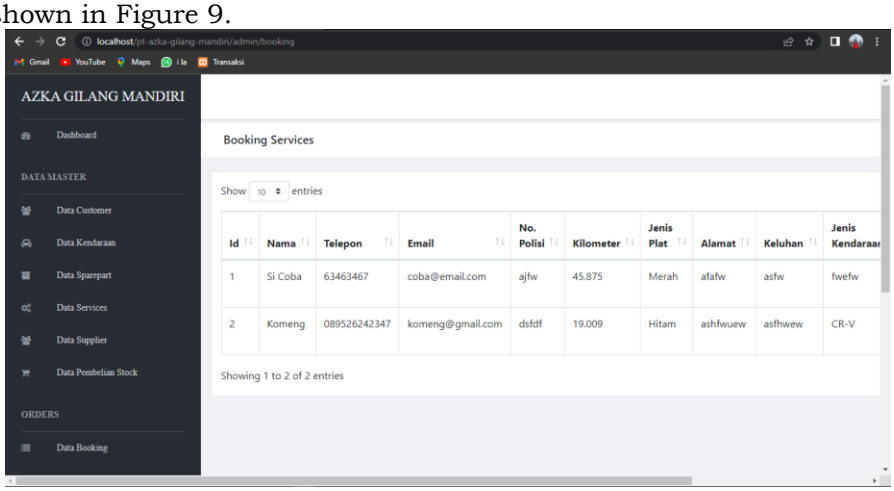

Figure 9. Booking Service Data Page

f. Add Transaction (Work Order) page
This page displays a page for adding service transactions and work orders. The add transaction page and work order data are shown in Figure 10.

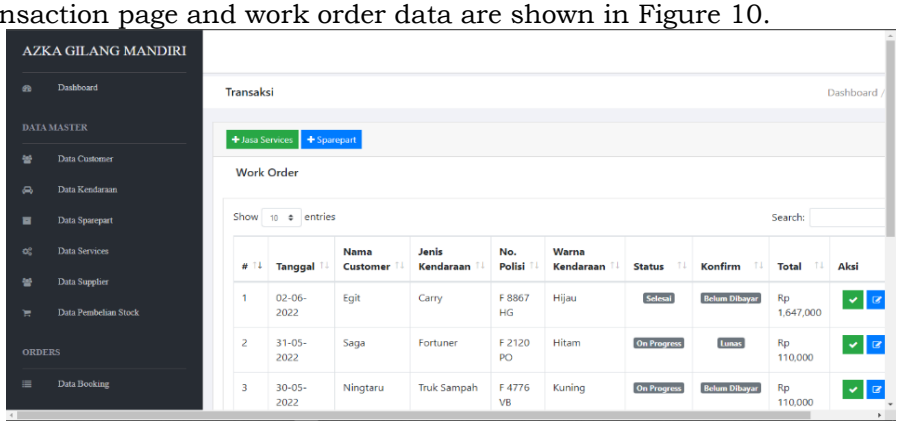

Figure 10. Add Transaction (Work Order) page

g. Testing
System testing is intended to test the various processes of using the system, whether they are running as expected

h. Test Plan
The method used to find out if the system is functioning properly. Black box testing is a test data design method based on a system that has been created. Some of the things that will be tested using the black box method are as follows:

Table 1. System Test Explanation

Test Class	Test Items	Type Test
Login	*Login*	*Black Box*
Information Management	- Web Settings Management. - Management of Customer Data Entry. - Vehicle Management. - Management of Data Service and Spare Parts. - Supplier Data Management. - Spare Parts Data Management. - Booking Service Management.	*Black Box*

i. System Functional Test Results
Functional testing includes checking the system whether it is running as needed or not. The system is shown in Table 1 Functional Testing Results.

Table 2. System Functional Test Results

No	Skenario Uji	Skema	Hasil	Keterangan
1	*Login*	*User and Admin enter correct Username and Password*	Login Successful	Username and User and user password are correct
2	*Login*	User dan Admin mengiputkan Username dan Password yang salah	Login Failed	Incorrect username and user password
3	Web Settings Management.	*Admin add, edit and delete webview data*	Successfully added, edited and deleted WebView data	Complete data input
4	Customer Data Entry Management	*Admin add, edit and delete Customer Data Entry*	Successfully added, edited and deleted Customer Data Entry	Compl ete data input
5	Vehicle Data Managemen t.	*Admin add, edit and delete Vehicle Data.*	Successfully added, edited and deleted Vehicle Data.	Complete data input
6	Data Management Service and Spare Parts.	*Admin adds, edits and deletes Data Service and Spare Parts.*	Successfully added, edited and deleted data service and spare parts.	Complete data input
7	Supplier Data Management.	*Admin adds, edits and deletes Supplier Data.*	Successfully added, edited and deleted Supplier Data	Complete data input
8	Spare Parts Stock Data Management.	*Admin add, edit and delete Spare Parts Stock Data*	Successfully add, edit and delete Spare Parts Stock Data	Complete data input
9	Booking Service Management.	*Admin add, edit and delete Booking Service.*	Successfully added, edited and removed Booking Service.	Complete data input

4. CONCLUSION

Based on the results and discussion, the following conclusions can be drawn: (i) Information systems for services and sales of spare parts can be used as an answer to problems that occur in the management of the workshop, with this system the management of the workshop can be more easily carried out and much faster and the quality of information is more manageable. well. (ii) Development of an information system

website for services and spare parts sales for customers of PT. Azka Gilang Mandiri has been carried out and implemented from the results of the designs that have been made in Context Diagrams, System Actors (List Actors), Use Case Diagrams, Activity Diagrams, and Class Diagrams.

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