

Analysis and Design Car Home Service Applications Web Based

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Abstract— The rapid development of information technology has now entered almost all of life. With the advancement in technology, now there are still many workshops that use conventional methods to do tasks related to the workshop. To create a quality vehicle service, it must pay attention to customer needs and satisfaction. One of customer satisfaction is fast service, and not queued for too long. By utilizing the development of technology, it is necessary to design an application that is able to provide more effective and efficient services to customers with a home service system. From the existing problems, researcher want to design car home service applications web based. The method used in this study is the waterfall method, and system design using the Unified Modelling Language (UML).

Keywords— Workshop, service, automotive, home service, web based.

I. INTRODUCTION

Cars are no longer regarded as goods special, it can be seen from the level of traffic density highways are increasingly congested by a number of vehicles including cars passing by [2] the purpose of this study was to improve the identification of problems of vehicles experiencing minor damage and damage great on vehicles, to increase the number of customers. To facilitate the reader in understanding the results of this study, the authors have done in the form of five parts: I PRELIMINARY Background of the problem, problem formulation, problem definition, research methods, research objectives, the benefits of research, systematic penulisan. II BASIS THEORY This chapter contains a discussion on the definition, literature review, and an explanation of the theory - the theory-related problems will be discussed as the basis for solving the problem. III METHOD in this section will be discussed about the exposure method used by the authors. IV RESULTS AND DISCUSSION in this section will be described about analysis and design of the information systems. V CONCLUSIONS This chapter contains the conclusions of the system design process and suggestions for system design that is generated for the foreseeable future.

II. PLATFORM THEORY

A. System

Definition of the system according to Hitesh Gupta (2011: 14), is a grouping regularly between components that are connected to each other in accordance with a plan to achieve specific goals. In this case, the components can mean physical material part, step - step or procedure managerial structures at various levels.

Meanwhile, according Valacich, et al (2012: 6) "The system is a set of components or business-related procedures used in one business unit and work together for a particular purpose.

B. Understanding Design

The design is a preparatory stage for the design implementation of a web, which describes how a web is formed and can be a drawing, planning and making sketches or arrangement of several separate elements into a unified whole and functioning including configuring components of software and hardware of a web. According Jogiyanto (2015: 196), the design can also be defined as a pattern made to solve the problems facing the company or organization after analyzing first

C. Software Engineering

Understanding the software according to Al Bahra bin Ladjamudin (2015: 3) explains that the software is a particular object that can be run as source code, object code or a complete program. The software products have software written understanding with all items and overall support services can meet the needs of the user.

D. Understanding UML (Unified Modeling Language)

Unified Modeling Language, or UML, is a standard set of engineering diagrams that provide a graphical representation of a model to describe the system development project from analysis through implementation of the system development. Currently most object-oriented system analysis and design approach using UML to describe a system that develops. UML uses a different set of diagrams to illustrate various views of a growing system (Alan Denis, 2012: 43).

E. Waterfall Model

This model is a systematic approach and sequence. Called the waterfall because step by step through which must await completion of the previous stage and walk sequence.

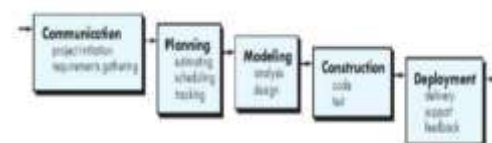


Figure 1. Waterfall Method

a. Communication (Project Initiation & Requirements Gathering) Before starting the work of a technical nature, it is necessary to communicate with the customer in order to understand and achieve the goals to be achieved. The results of such communication is the initialization of the project, such as analyzing problems and collect the necessary data, as well as help define the features and functions of the software. The collection of additional data can also be taken from journals, articles, and the Internet.

b. Planning (Estimating, Scheduling, Tracking) The next stage is the stage of planning that describes the estimation technical tasks to be performed, the risks that may occur, the resources required to make the system

c. Modeling (Analysis & Design) This stage is the stage of system design and architecture modeling that focuses on the design of data structures, software architecture, display interface, and a program algorithm. The goal is to better understand the big picture of what will be done.

d. Construction (Code & Test) Stages of construction is the process of translating the design into code form or shape / language that can be read by machine. After the coding is completed, conducted testing of the system and also the code that has been made. The goal is to find possible errors to be fixed later.

e. Deployment (Delivery, Support, Feedback) Stages of Deployment is a stage of software implementation to the customer, regular software maintenance, repair software, evaluation software, and software development based on the feedback given so that the system can continue to run and develop in accordance with its function. (Pressman, 2015: 17)

III. METHOD

A. Research methods

I use to apply the research methods research. The results of this research can be immediately applied to solve problems in Indo Workshop Adicon.

B. Data Collection

RowData this study were collected through Observation: perform direct observation at the workshop manager and mechanic. Interview: conducting interviews with the workshop manager and mechanical parts

C. Analysis and Design

For the method of analysis and design, using the object-oriented analysis and design, the output of this process is Activity Diagram, Analysis of inputs and outputs, Use Case Diagram, Class Diagram, and User Interface Design.

IV. RESULTS AND DISCUSSION

Activity Diagram

1. Activity diagrams service body repair

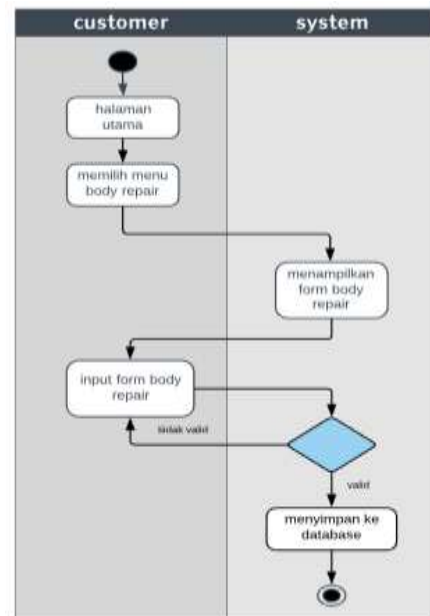


Figure 2. Activity diagram service body repair

2. Activity diagram printing customer list

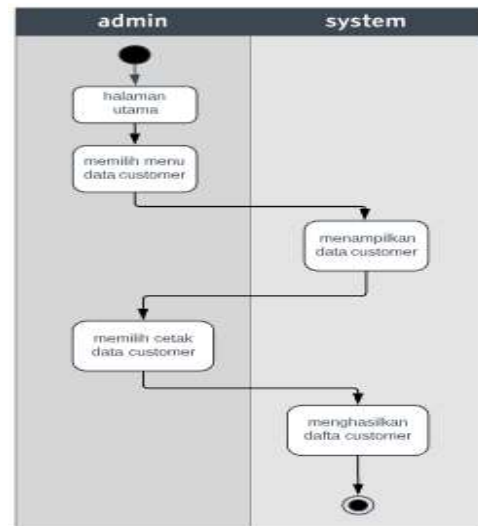


Figure 3. Activity diagram customer list

3. Activity diagrams customer registers

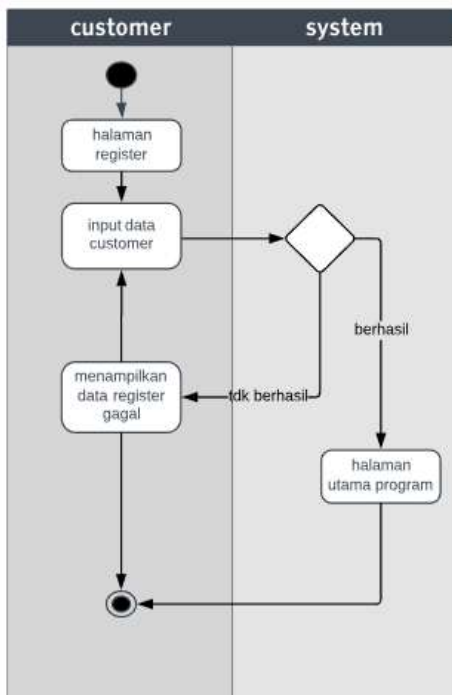


Figure 4. Activity diagram customer registers

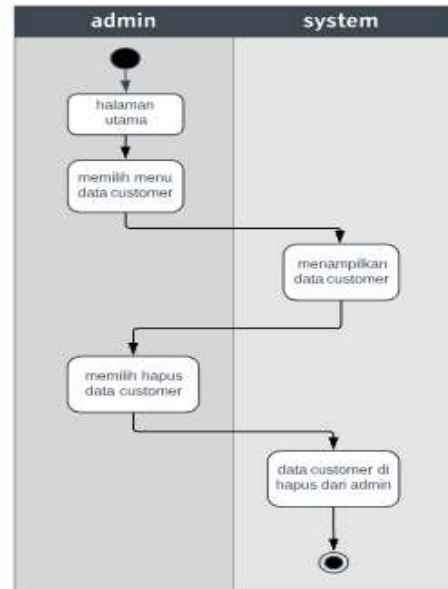


Figure 6. Activity diagram delete customer list

4. Activity diagrams spare input usage reports

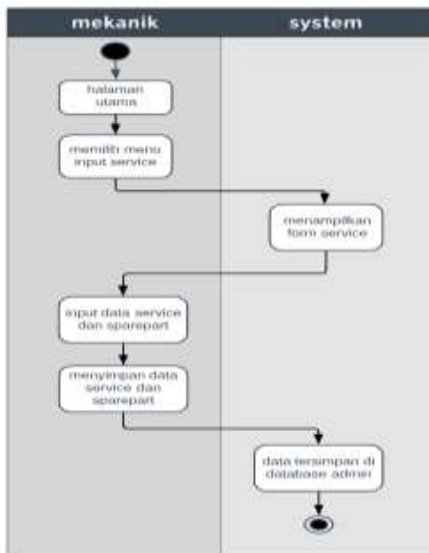


Figure 5. Activity diagram spare input usage reports

5. Activity diagrams delete customer list

Use Case Diagram



Figure 7. Use case diagram

Class Diagram

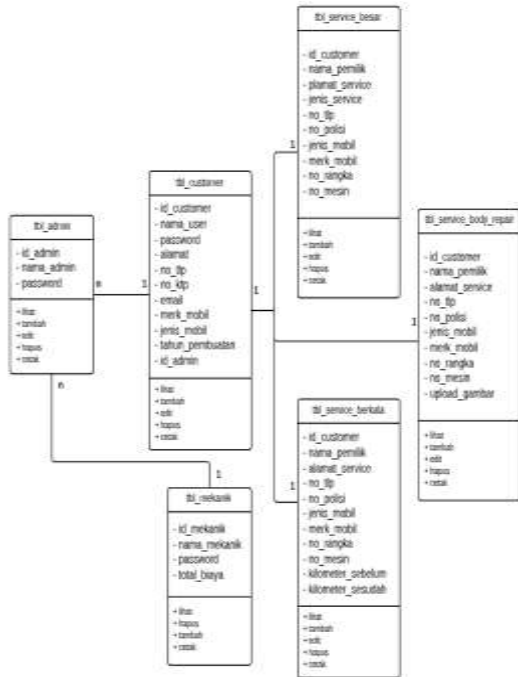


Figure 8. Class diagram

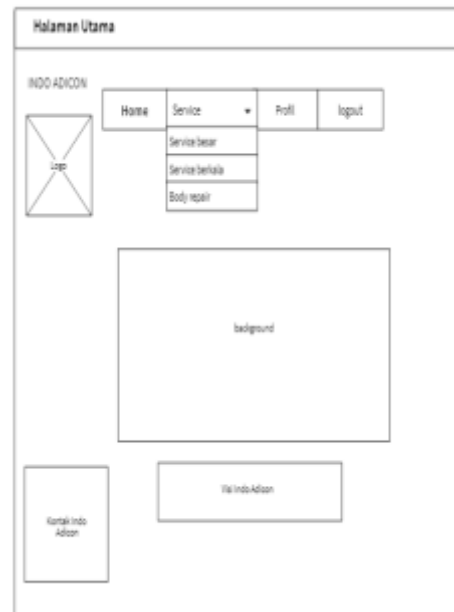


Figure 10. Main Page Design

3. Customer Service Design

User Interface

1. Login Design

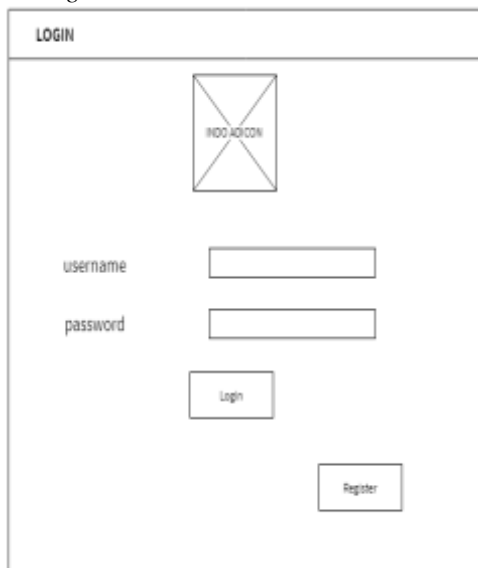


Figure 9. Login Design

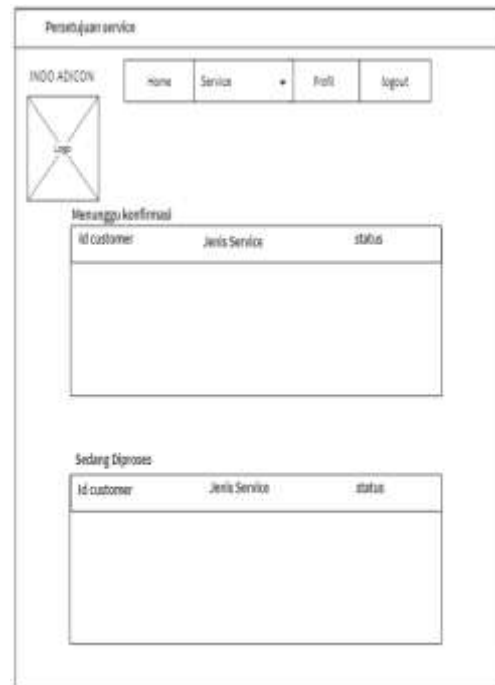


Figure 11. Customer Service Design

2. Main Page Design

4. Mechanical Data Reports Design



Figure 12. Mechanical Data Reports Design

V. CONCLUSION

Based on the description and discussion that has been described in previous chapters researcher can be concluded as follows:

1. This research resulted in a draft application to facilitate the public in doing service vehicle car without having to come to the workshop.
2. This research resulted in the design of application service vehicles by damage to the home service web-based system.

3. The design of this application generates the system regularly provide service for customer vehicles.

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