# Analysis and Design Management Information System Goods

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*Abstract— Today business competition and also of technological development very rapidly growing, so in this obviously, SMEs should apply anything into the business process is in his company to be more efficient and effective in terms of service, and also the process of a business lies the to SMEs. SMEs in Tangerang are one of the producer's macaroni already had a lot of customers, so in the distribution and also service for their customers should timely and can also manage well. In terms of the distribution sometimes going so customers are difficult to get a product she needed and cannot be monitored the availability of these products the to SMEs, hence to managing successfully the distribution process, monitoring and its system also required by approach supply chain management (SCM) that could help and also address the problems that are to SMEs.*

*Keywords— Information system, supply chain, design, analysis.*

## I. INTRODUCTION

Information technology has to be needed in almost all aspects of life, this is shown by the development of the use of computers and the internet in various fields, one of them in business. Competition in the world business now more stringent, more and more companies use media advertising to strengthen business in promoting and sell their products. Today business competition and also of technological development very rapidly growing, so in this obviously, companies should apply anything in the process of business lie to SMEs to be more efficient and effective in terms of service and also the process of the business lie in the company. SMEs Tangerang is one of the producer's macaroni already had a lot of customers, so in the distribution and also service for their customers should timely and can also manage well. In terms of distribution occasionally there are customers to delay the need for the problem and cannot be monitored the availability of products is in the SMEs, hence to managing successfully, the distribution process monitoring system needed service and the supply chain management ( SCM ) and can help and also deal with the SMEs. So it needs a way appropriate to ease the distribution process, monitoring, and service the macaroni is by making the application management information system for the supply chain management web-based.

### A. Research Problem

Based on the background, below are some questions in this study, namely: How to design management information system for the supply chain management web-based simple and light but to ease the standard user and seller in managing data and products

### B. Limitation Research

Based on the formulation of the above problem, the limitation of the problem in this study is that the author only discusses about how to manage goods using supply chain management.

### C. Object and Benefits

Analysis and design management information system for the web-based supply chain management, Designing management information system for the supply chain management capable of presenting the statements as rapid and efficient web-based.

## II. STUDY LITERATURE

### A. Supply Chain Management

Supply chain management is the process of an umbrella in which the product is created and transferred to consumers from structural angles [1]. A supply chain (supply chain) referring to an intricate network of relations that maintains organization with a business to reach a source of production in conveying to consumers. Improving the performance of the supply chain, customer satisfaction, services considered to be more important and also cost savings the production of [2]. The supply chain is a network company involved in supplying raw materials, producing goods, and send it to end-users. And supply chain management is the method to manage the flow of, product information and money in an integrated involving parties of upstream to downstream.

Supply chain management is based on cooperation between elements contained in the supply chain. in achieving its goals addition, transparency of information either in the internal company and parties in firm outer along supply chain constituting the essential principle in. supply chain management SCM good can improve the ability to compete for, overall supply chain but does not cause the one hand sacrifice in the long run [3]. Develop supplier partnerships or strategic alliances. With cooperation with (supplier partnership) and also developed strategic alliances guarantee the smooth movement of goods and information in the supply chain [4]. The downstream (estuary) supply chain included all activity involving. End product delivery to customers downstream in, supply chain the attention diverted, on distribution, warehouse, transportation, and after-sales service [5].

*B. Software Engineering*

Software or software is (1) an instruction (computer program) which when implemented provides functions and, intended performance (2) a structure of data allows the program to manipulate, adequate information, and (3) documents describing the operation and use of programs [6]. Engineering software (software engineering) is a development by using the principle or concept engineering software to produce economic value trusted and work efficiently use the machine [7].

*C. Database*

The data can be defined as the data sets interconnected ceremony was organized in such a way that will be used back quickly and easily. The database is a collection of data described activities of one or more. The organization of data in the development of a system, design database. Has paid he does design the database good influences the performance of a system [8].

*D. The System Design*

The system development methodology used as the research is a system development life cycle (SDLC) or commonly called the life cycle. System development life cycle (SDLC) is the process of determining how to develop information systems that can support, business needs, design systems build an, and hand over to the user [9].

*E. Previous Study*

Based on the background to that which is several previous studies have been successful in design systems information. In this research needs analysis [10] starts from the system and also design system based on the results of the process from analysis using analysis needs pieces and get the result the design and of analysis that was established by the needs of such a system design the customer can make a reservation to the payment of through the application is [11] at the time when the other research information system training and also using analysis method of development prototype and modeling using the unified modeling language UML (covering a diagram use case, diagram activity, sequence diagram, and diagrams of the class) and use a system based on the web. This research [12] supported with a model waterfall system development to produce the program design computerized users by the need, with a design use java programming language to designing programs an inventory of goods and MySQL format to manage the databases. Other research as [13] the results of the implementation done, it can be taken the conclusion that these information systems can ease the management process of the document on the do, civil servants, and data reports as well as use UML as a modeling system design, a methodology using a waterfall and the system is made based website.

III. METHODOLOGY

*A. Research Step*

The first step that the author does is determined the topic wants to do for research by looking for the phenomenon of

problems that exist in unresolved fields. in the second step determine the formulation of the problem, the third step is to conduct a literature review obtained through previous research books and journals. In the fourth step, the author studies the research that has been done before and then compared with the research that will be conducted. then after learning from the literature study, the fifth step is to make direct observations in the field to find out how the business process is currently running. in the sixth step which is conducting a literature study related to research to understand the theoretical basis and also the methods used to support this research. The seventh step is design steps use UML to determine the appropriate information system goods. And the final step is to make conclusions and suggestions about the research conducted.

*B. UML (Unified Modelling Language)*

According to [9] The UML method, a set of standard diagram techniques that provides a fairly rich graphical representation model of every system development project, from analysis to implementation. The purpose of UML is to provide general vocabulary terms based on adequate object and diagramming techniques, complete enough to model the development of any system project, from analysis to design. There are four commonly used diagrams, namely the use-case diagram, class diagrams, activity diagrams and sequences.
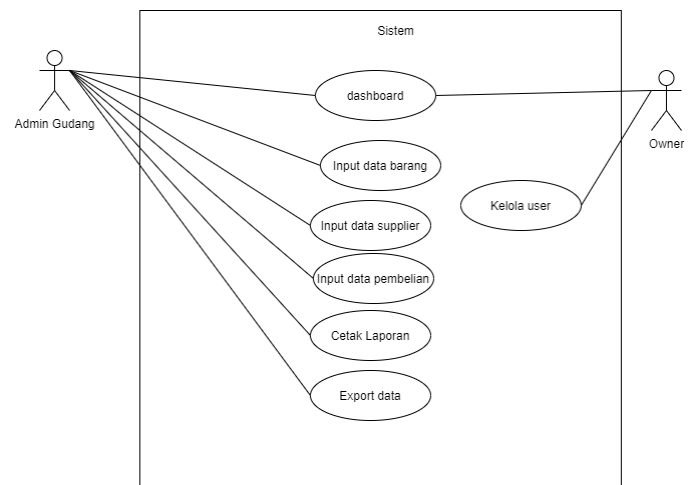


Fig. 1. Use case diagram

Table 1. Design table

| Table | Function |
|---|---|
| User | To store user data |
| Transaction | To store transaction data |
| Supplier | To store supplier data |
| Status of goods | To store goods condition |

*C. Design*

Here is the login page of the architect to be used by any user who would access the application in accordance with its present role.
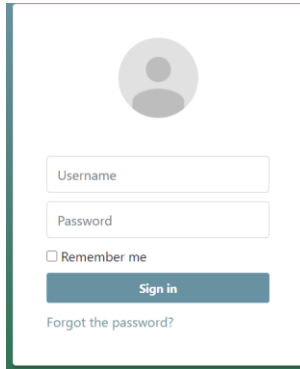
Fig. 2. Login page design

Following is the draft from the yard dashboard used to view a summary of the data on the application by displaying the number.



Fig. 3. Dashboard page design

The following are of the architect yard for data input goods to be got into the barn who input by the admin warehouse.
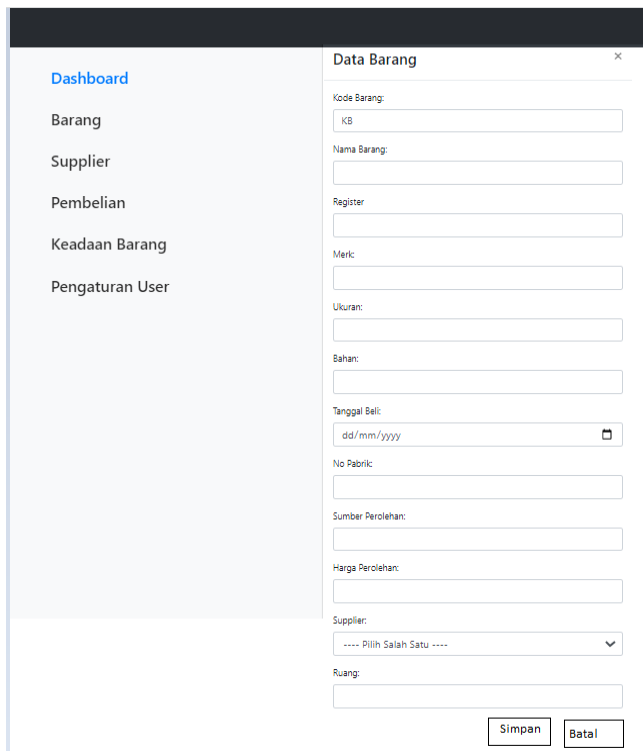


Fig. 4. Goods page design

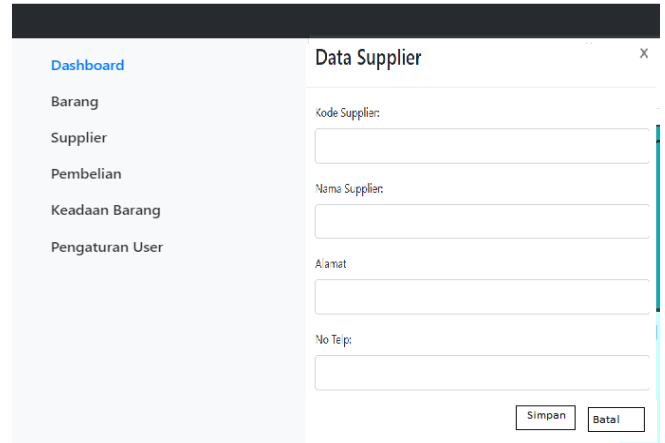Here is the yard for data input into the application supplier conducted by the admin warehouse.



Fig. 5. Supplier page design

The following is the yard for print and export of the data conducted by the admin warehouse on the transaction page.
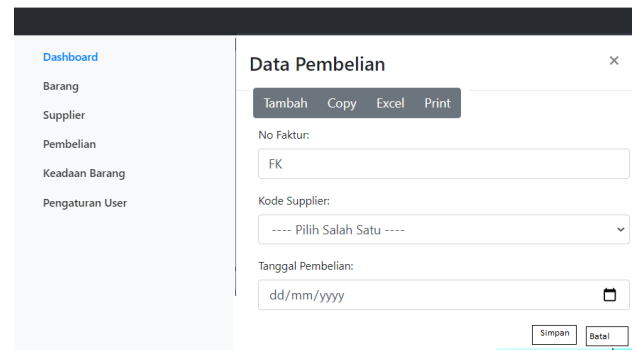


Fig. 6. transaction page design

## IV. CONCLUSION

Based on the evaluation results obtained to conclude that the design a system that will be made is expected to meet the needs of the user because they have seen the mockup that can be seen directly in the system. As for advice can be taken from the study, including the following: Did research similar to enrich data and sustainable development, Approach different to get the comparative and can get the different.

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