



Information System Design Based E-Commerce in Food Marketing

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Abstract

Information system based e-commerce is the most important method in food marketing in term of promotion costs and automatic data without human error. The system serves consumers by providing an easy and effective transaction. Information system based e-commerce has proven to satisfy consumer needs. Therefore, this research aims to design a website-based information system marketing which is better than manual system applied in *CV. Sari Kelapa Group*. *CV. Sari Kelapa Group* is an individual company that develops into a large company and was founded in 1967s engaged in the production of Gresik food producers. Puduk is the first product of the company. Promotion at *CV. Sari Kelapa Group*, It is a fact that unavailability of appropriate promotional media in promoting the products are obvious. Furthermore, the approach uses prototype research and descriptive qualitative by giving interview to the subject. The results show that the website is able to overcome the short comings of the manual system applied by *CV. Sari Kelapa Group* and recommend a complete feature of online chat.

Keywords: E-Commerce, Food, Marketing, Puduk, Traditional, Information system.

JEL Classification: M10 Business Administration: General.

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Contribution of this paper to the literature

This research aims to design a website-based information system marketing which is better than manual system applied in CV.Sari Kelapa Group. CV. Sari Kelapa Group is an individual company that develops into a large company and was founded in 1967s engaged in the production of Gresik food producers.

1. Introduction

The information is useful to various kinds of activity in a company. If the system of marketing information is planned and conducted well by the company, there will be many benefits and simplify the process of management in decision making. The information system of marketing management provides the information for a company about the strategy of delivering the information of marketing promotion.

The sale applies website which is called *Electronic Commerce (E-Commerce)*. E-commerce is the activity between business organization and consumer, that involve internet usage and World Wide Web in order to sell the product and services to the consumer. CV. Sari Kelapa Group is a company that has culinary business from Gresik. The products consist of various kinds of food from Gresik in which the price is ranging from 5.000 - 50.000 rupiahs. In addition, it also serves the wholesale buying.

Promotion and sale strategy in CV. Sari Kelapa Group are applied through Instagram, Facebook, and poster in Gresik. Transaction process in this company is still using manual method in which it doesn't use computerized system so that the data disappears and the purchase invoice report is difficult to make.

2. Review Related of the Literature

2.1. Basic Concepts of the System

The systems emphasis on the elements that interact in order to achieve a certain goal. The two groups of definitions are true and not contradictory, but the difference is the approach. Studying a system will be more effective if knowing in advance what a system is. System is a network of interconnected procedures to conduct an activity or to accomplish a certain target (Jogiyanto, 2005).

The system consists of eight characteristics (Bahra, 2013). Among them component, Limitation, External Influence, Connector, Input, Output, Processor, and Objective. The purpose of design system is divided into three groups (Jogiyanto, 2001). It's covers Integration System, Efficient management, and Decision for management. There are four system (Jogiyanto, 2005) Abstract System, Natural System, Particular System, and Closed System.



Figure-1. General form of process.

Source: Jogiyanto (2005).

2.2. Basic Concepts of Information

Information is the data that has meaning and value for the receivers (Turban, 2005). Information system is a system that receives data input and instruction of data processing, suitable with instruction and outcomes (Gordon, 2013). The quality of a system is affected by three aspects (Sutabri, 2012). Relevancy it's means the information has benefit for the users. Accuracy it's means the information should not be affected by failures, bias, and not mislead. And the Timeliness. The information given, must not be obstructed for the recipients. Information system consists of six components (Jogiyanto, 2005). Among them Input, Model, Output, Technology, Database, and Control. Information cycle is a raw data that needs further process. The data is processed using a method to produce information (Jogiyanto, 2005).

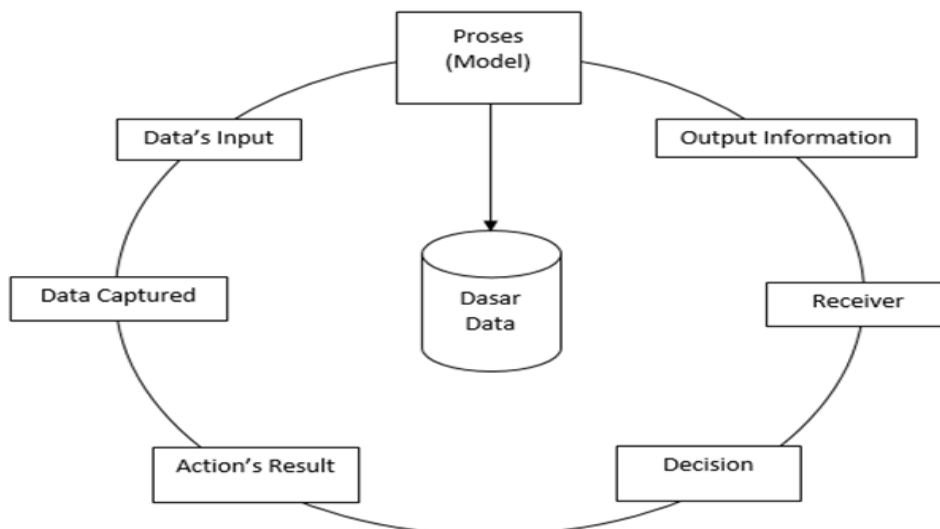


Figure-2. Information cycle.

Source: Jogiyanto (2005).

The benefit of information system is to save work force, to increase efficiency, to accelerate the process, to improve documentation, and to improve decisions.

2.3. Marketing Concept

Marketing is a concept that focus on consumer needs. This philosophy is more concerned on feeling and responding to what consumers need (Kotler, 2012). Marketing is social and managerial process when a person/group of people receive what they need and desirable from the production and the exchange and value of the product (Kotler, 2007). There are three function of Marketing, among them Exchange, Physical Distribution, and Mediator. There are three activity of Marketing, among them To determine what consumer needs, To design and develop a product that can satisfy those needs, and Determine the best method regarding quality accuracy, appropriate pricing, promotion and distribution of appropriate products.

Marketing process consist of four main steps (Kotler, 2007). Among them to analyze the market opportunities, To research and select the marketing target and apply the offering positions, To design the marketing strategy, and To design marketing program. Marketing information system is a complex structure of interaction between people, machines and procedures to produce an orderly flow of information from the sources outside the company and can be used for decision making that can be accounted for by leaders. Marketing information are divided into three types (Kotler and Armstrong, 2003). Among them Marketing information from the company environment, Internal marketing information of a company, and Marketing communication comes from a company to the environment surrounding. The Benefit of Marketing Information System are to know the consumers needs, to know the effective design, and To know the threat.

2.4. Website

Internet is global network that connects computers around the world. Internet is also used as information dissemination, one of the examples is promotion activity of a company product. World Wide Web (WWW) is a service that can show information on the internet, and web is basic part of the information of WWW. Website is the URL address for data and information storage based on certain topic. Electronic commerce or e-commerce is the dissemination, buying, selling, and marketing goods and services through electronic system, like internet or another computer network. E-commerce can involve transferring money, exchanging data, automatic inventory of management system, and automatic data collection.

2.5. Conceptual Framework

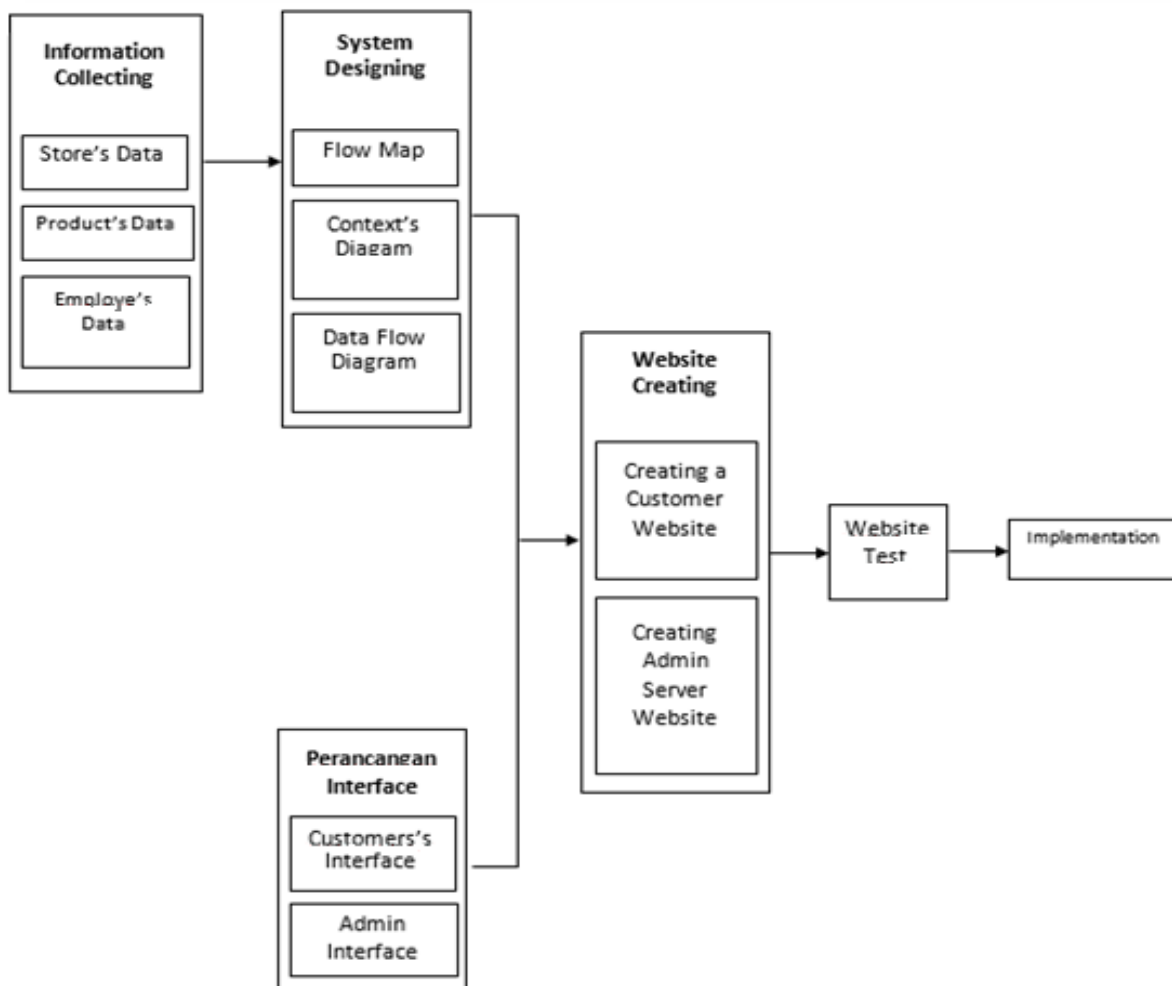


Figure-3. Conceptual framework.

The framework of design system consists of:

2.6. Flow Map

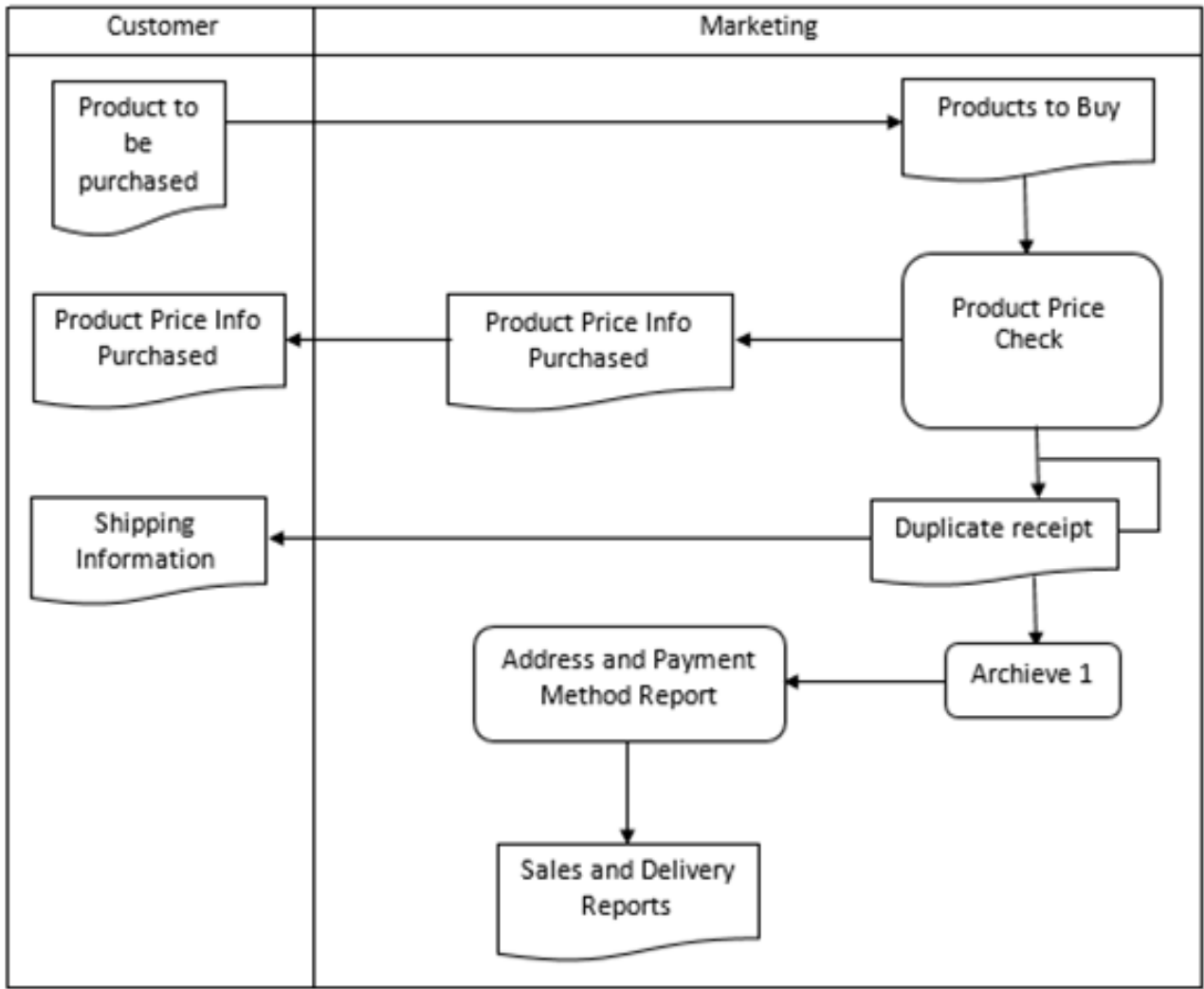


Figure-4. Proposed marketing system flow map.

2.7. Context Diagram

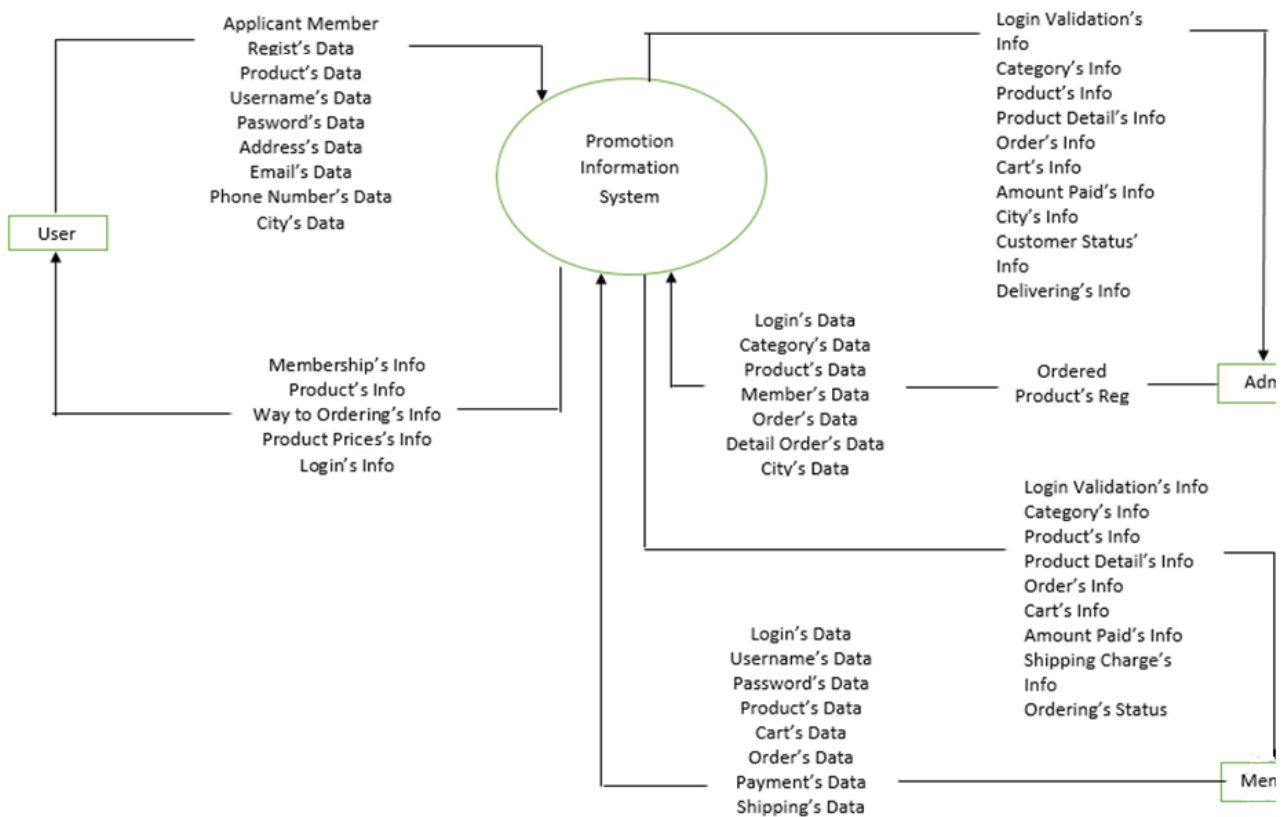


Figure-5. Context diagram of the proposed system.

And data flow diagram.

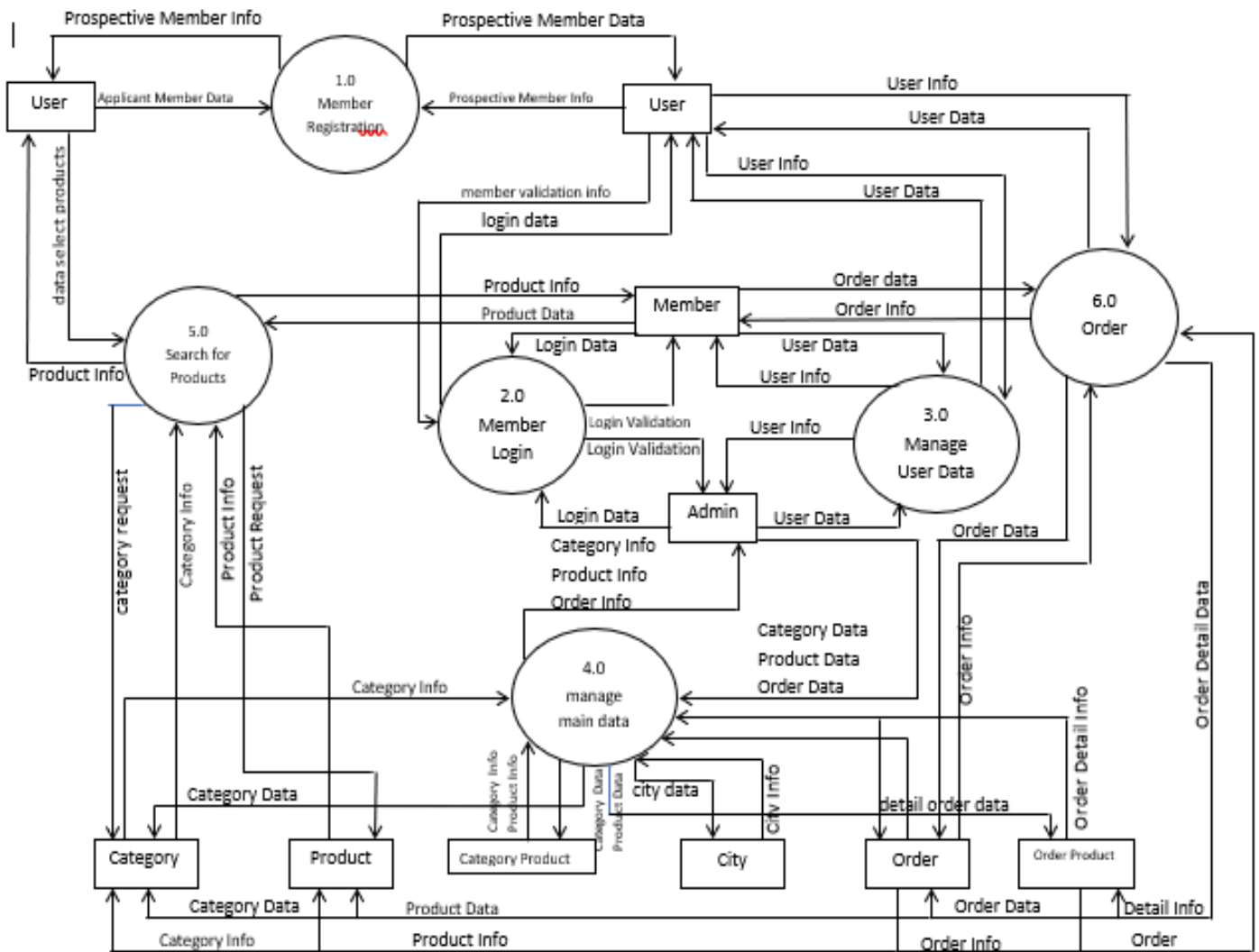


Figure-6. Data flow diagram level 0 (overall) proposed.

3. Research Method

This research uses descriptive qualitative method. The method is chosen because it illustrates a situation where the events and conditions of the research in *CV. Sari Kelapa Group* as the case study. Furthermore, it obtains an overview of the current processes and activities. In addition, this research uses prototype approach that develops a system to make program quickly and gradually, so that it can immediately be evaluated by the user.

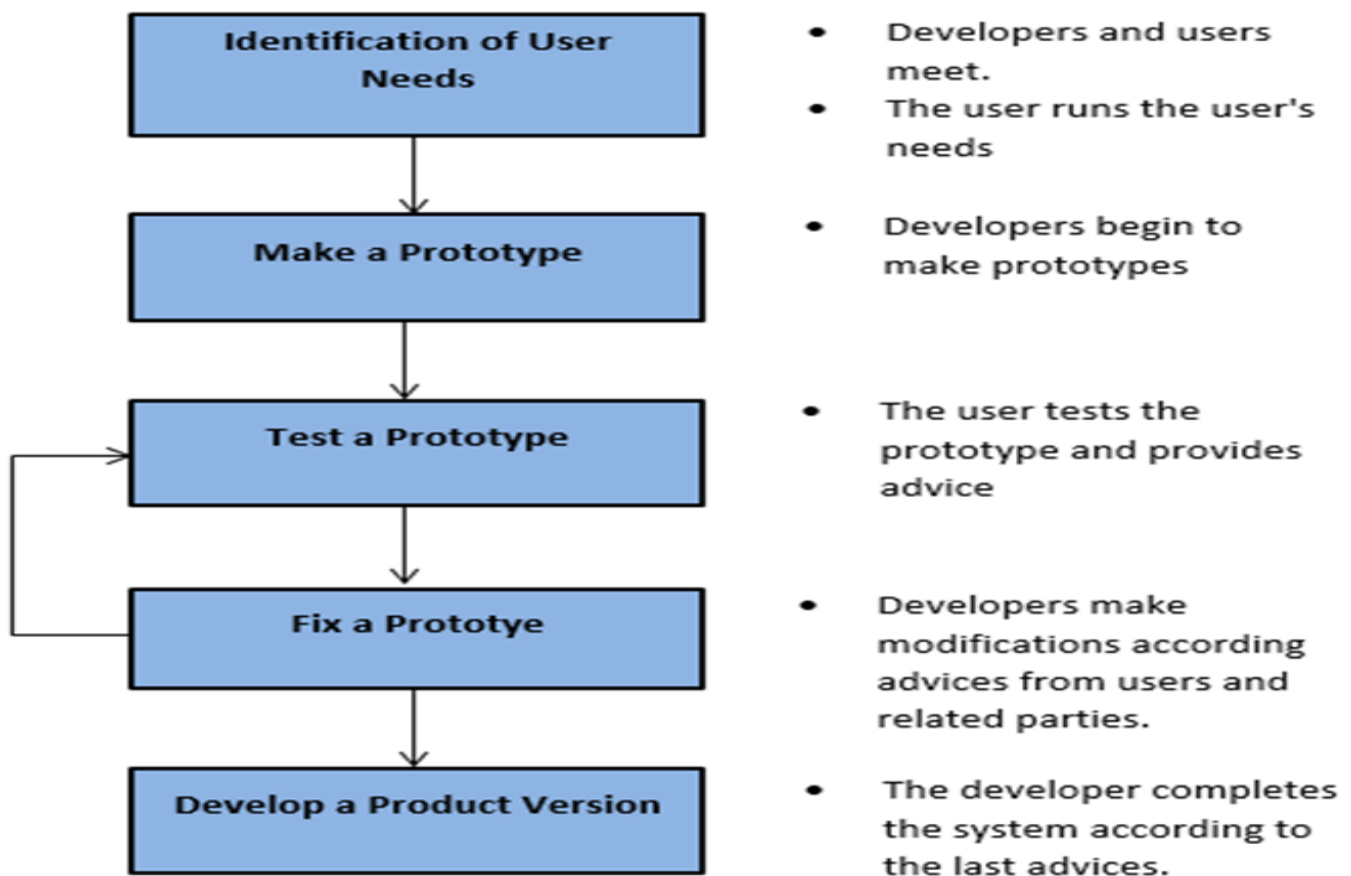


Figure-7. Mechanism of system development with prototypes.

Source: McLeod (2005).

According to the research title and objectives, the focus of the research is to design e-commerce website for *CV. Sari Kelapa Group* so that it can be used as the media for implementing marketing information system. In order to create the website, the researchers implement several proponent systems to create e-commerce sales website. The following proponentsystem for creating the website are *Open Source, MySQL, PHP, XAMPP, and Wordpress*.

This research is conducted at *CV. Sari Kelapa Group* which is located at JaksA AgungSuprap to Number 77, Gresik, East Java, post code 61116. The company is chosen because it is one of the largest specialty food sales store. However, the company needs to be improved because it still uses manual and conventional methods in sales and data processing system.

The subjects of the research are the personnel of *CV. Sari Kelapa Group* that also act as user in the use of websites that have been created. The other subject is a person who has the ability in information systems to analyze the feasibility and disadvantages of website design that has been created as a mean of implementing information system in *CV. Sari Kelapa Group*.

Data Collection performed with Observation and Interview. Data analysis is the process of searching for and compiling data obtained from interviews, observations or field notes, documentation, conducted by organizing data into categories, describing units, doing synthetics, choosing which ones are important and which are will be studied, and making conclusions so that they are easily understood by themselves and others (Sugiyono, 2011).

Qualitative research considers researchers as the main research instruments. The reason is that, everything has no definite form. Problems, research focus, research procedures, hypotheses used, even expected results, all of which can not be determined with certainty and clearly in advance (Sugiyono, 2011).

4. Results and Discussion

CV. Sari Kelapa Group is an individual company that develop into a large company and was founded in 1967s engaged in the production of Gresik food producers. *Pudak* is the first product of the company. *Pudak* is made from rice flour wrapped in corn stalks or areca nut fronds and steamed into a delicious meal.

In 2000s, the company released its newest product, named *otak-otak bandeng*, which is made from milkfish and the bones are cleaned. This food is very popular among the people, especially for those who like spicy food. Vision of *CV. Sari Kelapa Groups* Becoming the largest and most trusted producer of Gresik food producers. The Missions are Creating the highest quality products and delicious taste, Opening some branches in various regions and owning an official online sales shop, and Cooperating with all media, from local, national and international in delivering marketing information.

4.1. Organizational Structure

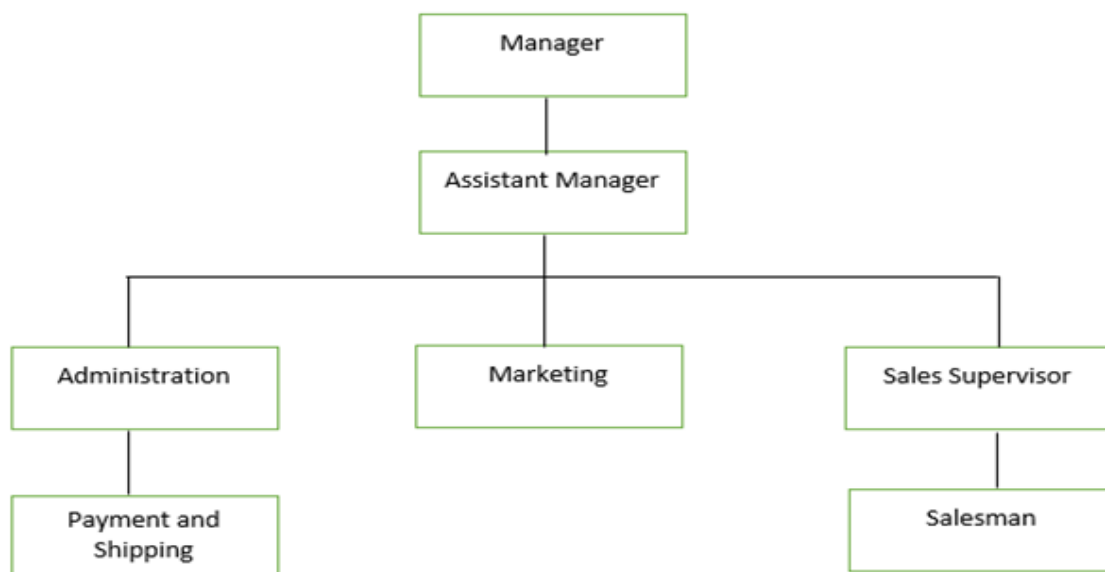


Figure-8. Organizational structure of CV. Sari Kelapa group.

Source: CV. Sari Kelapa group's data.

4.2. Finding

Promotion at *CV. Sari Kelapa Group*, It is a fact that unavailability of appropriate promotional media in promoting the products are obvious. The Current promotion by the company is by selling through Facebook and Instagram as well as distributing posters and participating in food exhibitions in Gresik. As consequences, the company will certainly spends a lot of time and money.

Transactions at *CV. Sari Kelapa Group* is the method still uses conventional system in which every transaction with a customer occurs, the administrator of marketing makes proof of payment of two copies of the transaction by note taking for each product that has been purchased by consumers. Whereas the first copy is kept as an archive by marketing for calculation and submitted to the shop owner.

Data management at *CV. Sari Kelapa Group* is making report currently uses note taking in bookkeeping. The increase number of products and transactions make difficult for the company in term of the process of data finding.

Archiving is applied by using paper so that it is easily lost and worn. Providing information to consumers is felt to be less effective because the company cannot provide comprehensive and detailed information about the products offered, so consumers may not obtain accurate information.

4.3. Test Result

The system can fulfill the administrator expectation. The system facilitates the delivery of promotional information system, sales and shipping.

The system meets the user's expectation. The user easily makes payment and shipping transactions. Furthermore, the company provides details of the product to be purchased.

The results can be related with previous research in which e-commerce is applied as the information system. The difference is in marketing field, whereas the research is limited in the CRM field.

5. Conclusion and Suggestion

5.1. Conclusion

The research entitled the design of information system based e-commerce in Gresik food marketing, has found the following conclusion:

1. The effectiveness of using system information based e-commerce can change the transaction process manually into an online transaction. The system can provide comprehensive and accurate information about the products provided by *CV. Sari Kelapa Group*.
2. The use of information system based e-commerce promotes the products and expands networks effectively and efficiently.
3. The implementation of information system based e-commerce provides convenience for customer in conducting the transaction process and for administrator to process sales transaction, data processing, and the automatic report.

5.2. Suggestion

The results of the research promote the development of information system based e-commerce because it uses prototype system that can be developed by using some suggestions:

1. There will be online chat facilities directly on the e-commerce website, so that customers can do personal questions on the website without asking questions via email.
2. There is a need for development in credit card and online payment systems such as pay-pal, for customers who do not have an ATM, they can pay by credit card and online payment.
3. Website interface can be made more attractive.
4. It is expected that there are multiple languages in the website to make it easier for customers to understand the content in website.
5. It is expected to improve Search Engine Optimize (SEO) so that it can be known and accessed by many people.

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