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Data Flow Design of System Sales Beverage Products for Small Medium Enterprises

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ABSTRACT

This research aims to design a ballo' sales information system in Lembang Rantebua. The method used in this research is a qualitative method. The data collection technique is by interview and literature study. The data analysis method used in this research is descriptive analysis. Regarding the sale of ballo' in Lembang Rantebua, it is carried out to take advantage of an information technology by designing WEB-based sales of ballo' in Lembang Rantebua. By designing a design that starts from a context diagram, DFD level 0, DFD level 1 and DFD level 2 regarding Ballo' sales. is in Lembang Rantebua.

Keywords: *Data Flow Design, Ballo', Small Medium Entreprises*

INTRODUCTION

Today's competitive era requires effort to focus on the needs desired by consumers. Currently, business development in Indonesia has been growing, especially the type of culinary business (food and beverage). With the information system technology that has been computerized and can be accessed by the public, it is certainly very helpful in business processes in this era so that it can facilitate the marketing process.

One of the typical drinks from the Lembang Rentebua area is Ballo. Ballo itself is a sweet snack drink and a drink that does not contain alcohol, which is usually served cold (Gowa, Zakiy, Hamzah, & Asmar, 2021). This drink is produced from anau or palm trees. Ballo contains several nutrients including carbohydrates, proteins, fats

and minerals. Ballo has also become a commodity that can be developed into a processed product of sugar raw materials, the largest content contained in Ballo is sucrose content, with a content of 84.31%, a higher sucrose content when compared to sugarcane juice and siwalan juice where sugarcane juice contains sugarcane juice. of 71.89% and siwalan sap has a content of 76.85%, therefore the sucrose content contained in palm wine (84.31%) makes Ballo very potential to be developed as a raw material for making alternative fuels, namely "ethanol . Ballo 'are widely sold with different price ranges. Ballo' is expensive as July approaches and December approaches. When the price goes up, Ballo' is sold for around Rp. 200,000.00 - and if the price of ballo' decreases, it is sold for around Rp. 90.000,00.

The various benefits of Ballo can certainly bring benefits to the people of Lembang Rantebua, because if it is promoted properly, it will become a source of income (Hasan & Fadillah, 2021). Currently, there are still many promotion and sales mechanisms for Ballo' in the conventional way, namely that buyers directly come to the place of business. A sales strategy like this has weaknesses, including customers/buyers who are located far apart or are out of town, they will have trouble shopping (Batmetan, 2022).

Based on the problems above, it can be seen that we need a platform that can be used by the community, in this case Ballo producers, to be able to market their products massively and reach more consumers. One solution that can be offered is to use a web-based sales information system. Web-based information system itself is very easy to use and access today. This, can maximize Ballo's marketing. The existence of a sales information system is expected to assist in increasing Ballo' sales results.

METHOD

The method used in this research is qualitative method. According to Saryono (2010), qualitative research is research designed to investigate, find, describe, and explain the quality or features of social influence that cannot be explained, measured, or described by a quantitative approach.

Data collection technique

At this stage, the data collection method is used to obtain data and information regarding the sale of Ballo in Lembang Rantebua. The methods used in data collection are:

Literature review

Literature study is a technique that uses books, journals and articles according to the given topic to support the smoothness of the results of this research to obtain correct information from the problems discussed.

Interview

The author conducted interviews during observation to complete the existing material. The author conducted an interview with one of the Ballo' sellers in Lembang Rantebua about the information system under study.

Data analysis

The data analysis method used in this research is descriptive analysis, which is an analysis that aims to provide an overview of the research subject based on variable data taken from the group of subjects studied and is not intended to test hypotheses.

Population and Sample

The population characteristic in this study is Ballo' Sales. The sample in this study is the seller of Ballo' in Lembang Rantebua.

RESULTS AND DISCUSSION

Design is defined as an application process that has in detail various principles and principles for the purpose of a device, process or system that allows its physical realization. The benefit of this system design phase is that complete engineering drawings are provided to guide programming. According to Sommerville in Agus Mulyanto's book (2009: 259) the design process can involve the development of several system models at different levels of abstraction. An information system is a man-made system, generally consisting of several sets of computerized and manual components, designed to collect, store, and manage data and provide output information to users (Alfiansyah, Widipangestu, & Supriyadi, 2022). An information system is a system that is interrelated and integrated and aims to provide information to support operational, managerial, and decision-making functions within an organization (Alfiah, Tarmizi, & Junidar, 2020).

Information System Activities include:

a. Input, describes an activity to provide data for processing.

b. Process that describes how data is processed to produce value-added information data.

c. Output, an activity to generate reports from the above process.

d. Storage, the activity of maintaining and storing data.

e. Control, is an activity to ensure that the information system.

Context Diagram

Context Diagram a simple diagram that describes the relationship between external entities, input and output of the system. In a sentence, it can be said that this context diagram contains "who provides data to the system, as well as to whom the information must be generated by the system."

Data Flow Diagrams

Data Flow Diagram (DFD) is one of the modeling tools in the software requirements analysis process. This DFD discusses what features are needed by a system and what data flows are involved between the processes it contains. DFD is a useful tool to verify that the system built meets the desired criteria.

In designing this Ballo sales information system, the resulting data flow diagram is as follows.

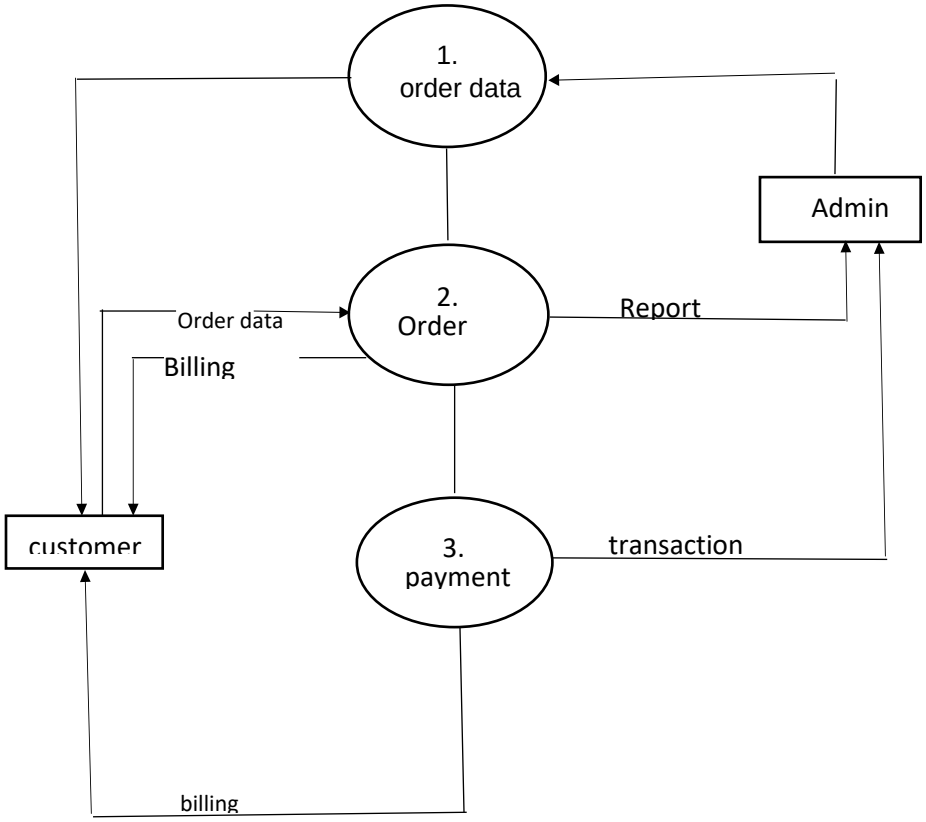

Figure 1. Data Flow Diagram

Information:

1. admin conducts data collection on ballo drinks' products

2. The buyer places an order and it will be processed

3. the buyer makes the payment

DFD LEVEL 1

DFD level 1 is explained in more detail and complete because the main process is divided into several subs with their respective functions.

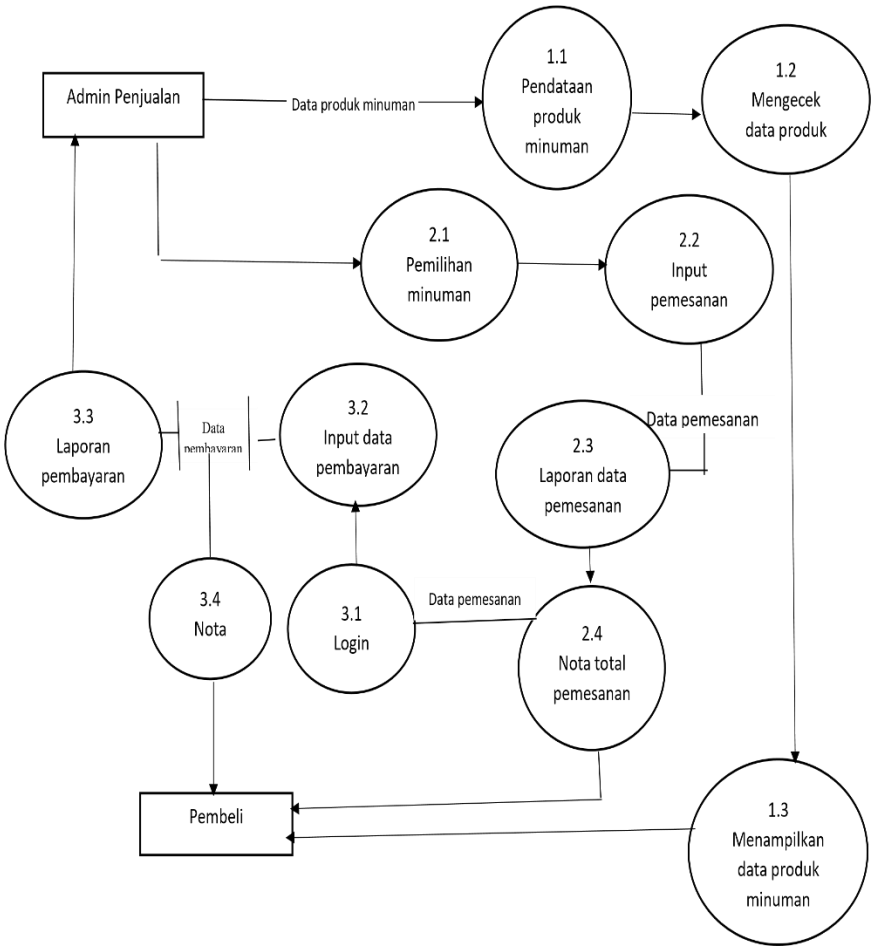

Figure 1. Data Flow Diagram Level 1

Information:

1. Admin performs data collection on beverage products on 1.1
2. At 1.2 the admin checks the ballo' drink product data
3. In 1.3 admin displays/shows ballo drink product data, to buyers
4. In 2.1 the sales admin offers buyers to choose the desired beverage product
5. 2.2 sales admin inputting orders that have been ordered by buyers
6. 2.3 sales admin reports order data to buyers
7. 2.4 buyers receive a receipt for the total order
8. 3.1 buyer login for payment
9. 3.2 buyers input payment data
10. 3.3 the buyer reports the payment data to the sales admin
11. 3.4 Sales admin provides a payment receipt to the buyer

DFD LEVEL 2

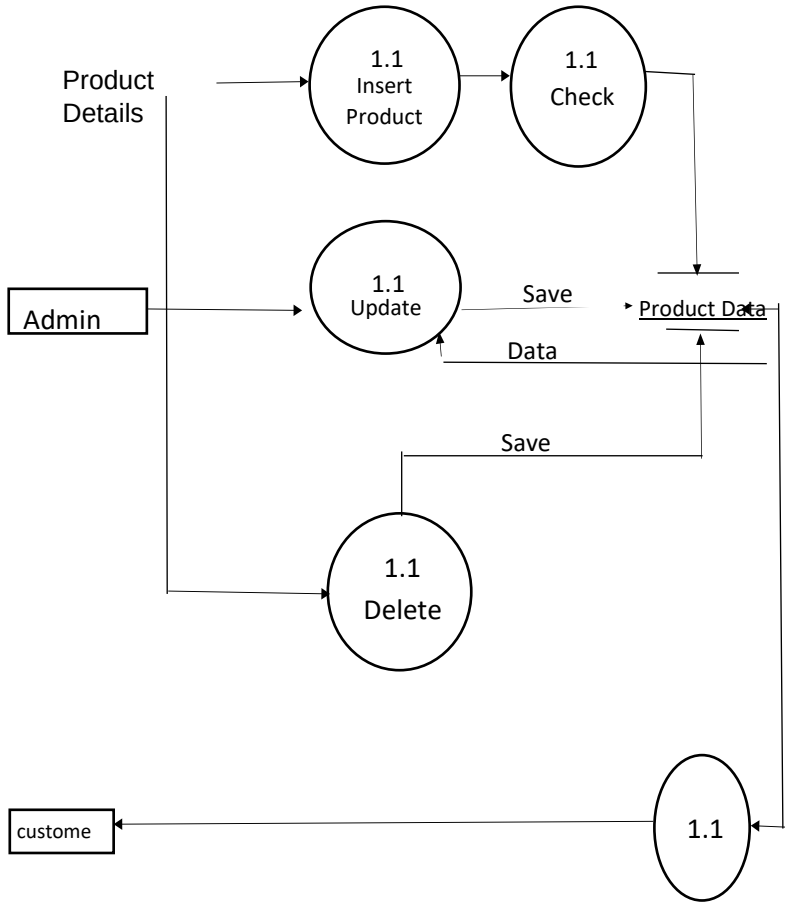

Figure 2. Data Flow Diagram Level 2

In this study, the design of Data Flow Diagrams is used to describe a sales information system that is applied to Ballo' marketing so that it can be seen that the data flow used for input, process and output needs. This makes it easy to communicate the designed system to other users. DFD on this information system also shows that the system consists of interconnected subsystems.

CONCLUSION

The development of a web-based sales system for Ballo' products is really needed to do more massive marketing and reach more customers. With the support of computer network technology and hardware as well as the large number of customers who use smartphones, it really supports the long-distance sales system, with online sales, the area is no longer limited so that sales of goods can be wider and there can be much more customers.

From the conclusions made above, there are several suggestions that might help so that this website-based information system can work optimally, namely: Increasing the number of visitors who visit the website, it is expected to always update so that the website becomes more dynamic because the information in it always follows developments.

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