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Cash Information System Design Based on Website (Case Study on Café XYZ)

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***Abstract*—All human activities are very easy due to the rapid development of information technology. A Website is a product of information technology. Currently, the use of websites has mushroomed everywhere as a promotional medium for other uses. Cafe XYZ is one of the sellers of various processed coffee drinks in Surabaya. Before the research was conducted, the cafe cashier's transaction process was still carried out conventionally way only by relying on a notebook which was very inefficient. Not only that, but it is also very difficult in the process of managing the data recap, the possibility of the data being lost is very high. The researcher offers a website-based information system design with the Laravel framework supported by a development method, namely SDLC (System Development Life Cycle) which is connected online on the internet so that it can be accessed by anyone and anywhere. With the design of this cashier website, it is hoped that it can help and simplify the transaction process, process product data collection, and also recap transaction data to be more effective and efficient and can save time and costs.**

Keywords*: *Cashier based on a website, SDLC, Information System, Laravel framework

I. INTRODUCTION

Information technology is growing rapidly in this modern era, because of its many benefits. According to (Anwari et al., 2020) the use of information technology is very important which is useful for obtaining all information such as processing daily transactions, supporting managerial operations, and providing the necessary reports. The application of information technology in the industrial world is very broad. Information technology can be used to design process management within an organization (Hadeeba and Yusoff, 2022), in the banking world with the creation of internet banking (Musfira and Aboobucker, 2018), in education such as the creation of a self-education system (Bagrova et al. 2018), to develop countries through geographic information technology (Amade et al., 2018), in the world of marketing (Hosseini et al. 2018) and (Sukaris and Prestyadi, 2020), as well as the manufacture of cashier information systems (Wahdiniwaty and Taliasih, 2020).

One of the most widely adopted uses of technology is the website. The website is easier to use by people in various regions by only using internet access (Hasugian, 2018). The website can also be used in making a cashier information system to make it easier to record buying and selling activities. Efficiency of time, energy, and cost, as well as many other conveniences for its users, are some of the conveniences offered by website creation (Driss et al., 2022).

Cafe Xyz Surabaya is a business that is engaged in food and beverage, with the main focus on coffee. Cafe Xyz has SOPs in handling incoming customers, including serving visitors, making and preparing visitor orders, and cleaning the cafe area. There are 4 employees owned by this cafe, and each employee has their respective duties at work. Cafe Xyz is a new cafe because it has not been around for too long, so there are still many things that need to be addressed. For example, the cashier transaction process is still carried out conventionally, namely by relying on a notebook or paper for recording orders, while

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visitors to this cafe can reach 50 customers every day, making the service less effective and efficient. Not only that but it is also very difficult in the process of managing data recap, both transaction data, and expenditure data and there is a possibility that these data are lost.

Based on the explanation described above, this is the reason for the author to create a website-based management information system, because the SIM can store fairly large information data in a fairly small space and is also easy to access. Making this information system using the System Development Life Cycle (SDLC) waterfall method. According to Ridwan and Benrahmah (2021) SDLC is a general methodology for developing systems. Compared to using the Fountain method which has been said by (Rizqi, 2019) where a stage of the design process can take precedence or skip stages it will result in confusion or inconsistency in designing information systems. Therefore SDLC is well suited for software products/programs with a clear need from the outset to reduce errors. So that it saves time and costs as well as is a solution to the problems that occur to cafe owners. The target of accessing the website are cafe employees and also cafe owners with the media devices that have been provided.

II. RESEARCH METHODOLOGY

The method used in this study is the System Development Life Cycle (SDLC) waterfall method. This method is widely used to develop a system (Wahid, 2020) and (Zenita and Fiati, 2019). Figure 1 below is a flowchart of this study.

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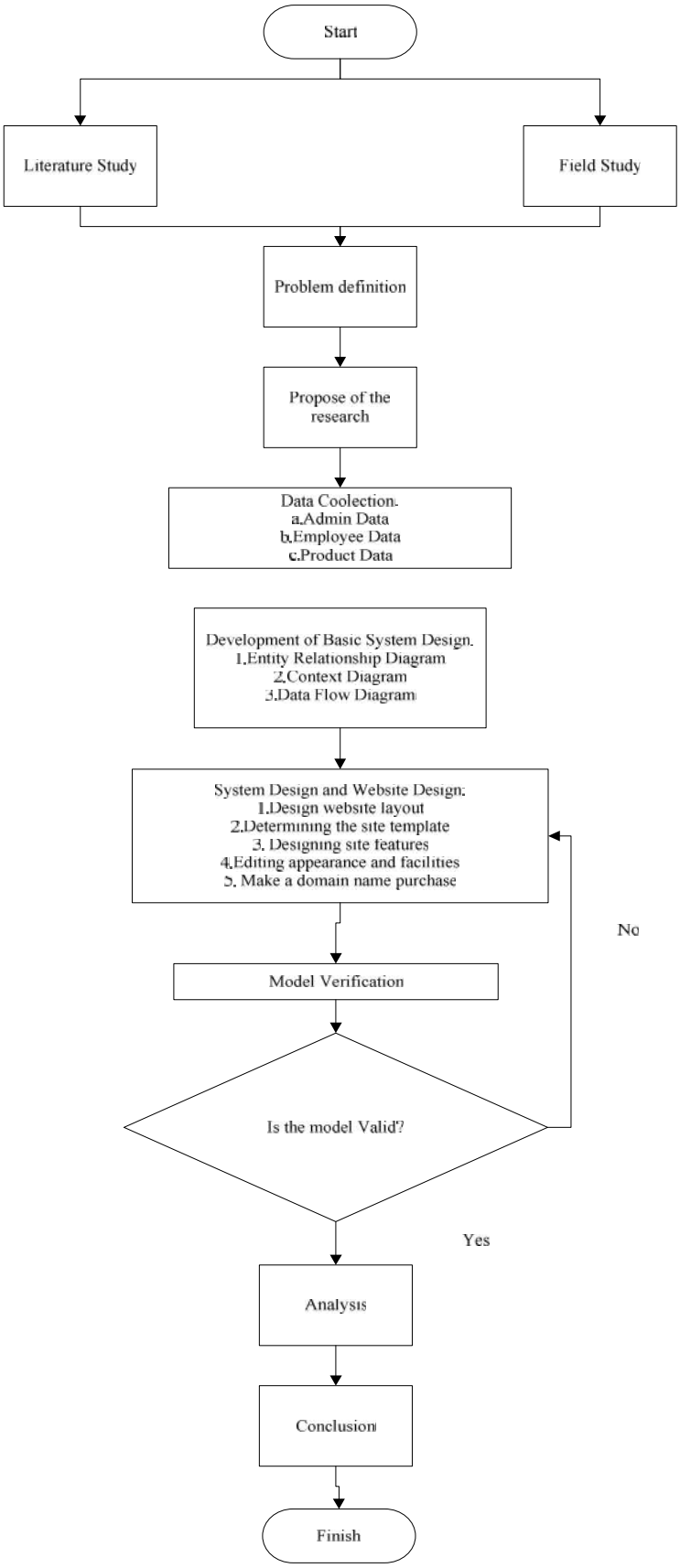

Figure 1. Research Methodology

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III. RESULT AND DISCUSSION

A. Entity Relationship Diagram (ERD)

The entity Relationship Diagram provides information on what entities are interrelated in a system that is built(Banjarnahor et al., 2021).

Figure 2 is ERD for this case.

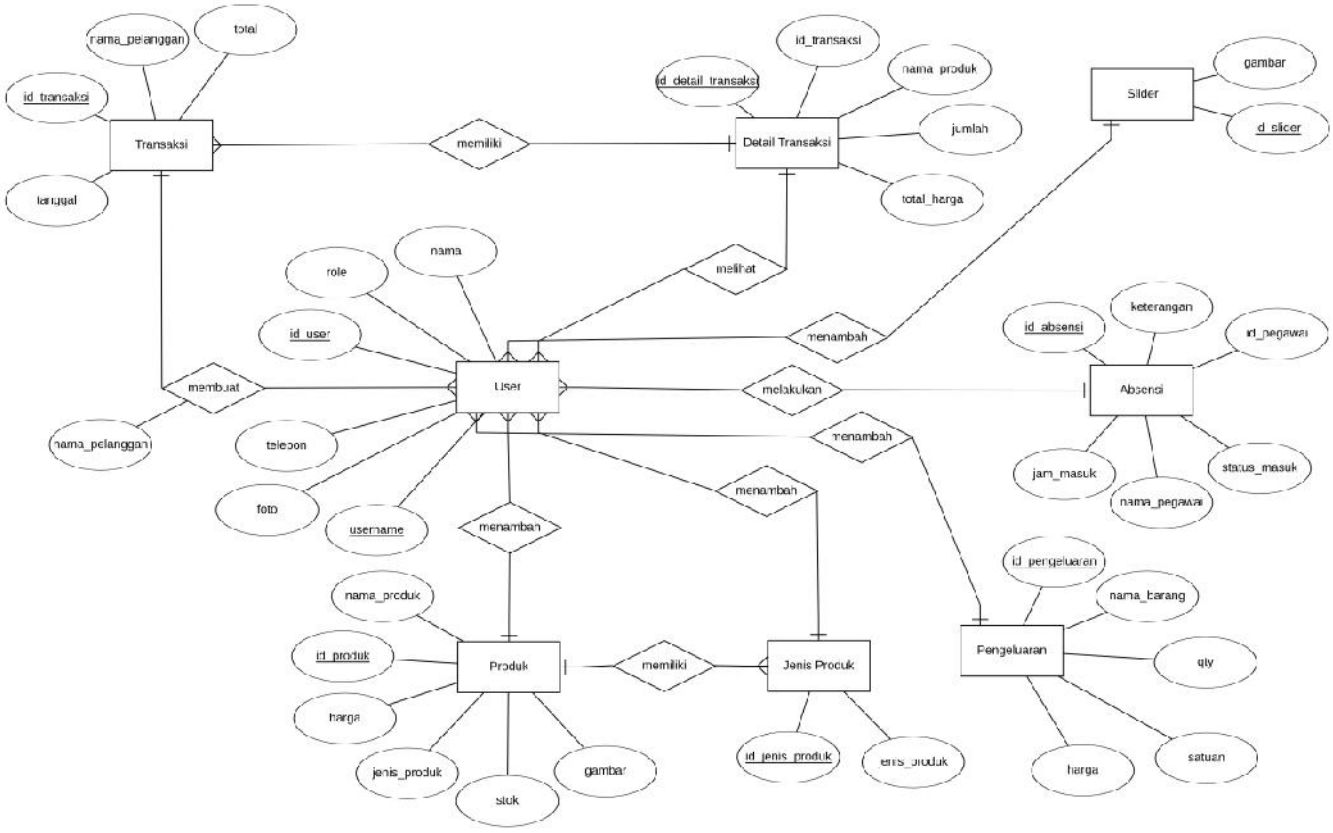

Figure 2. Entity Relationship Diagram

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B. Context Diagram

A Context Diagram (CD) is a diagram that consists of a process and describes the relationship between external and internal entities (Sylkin et al., 2019).

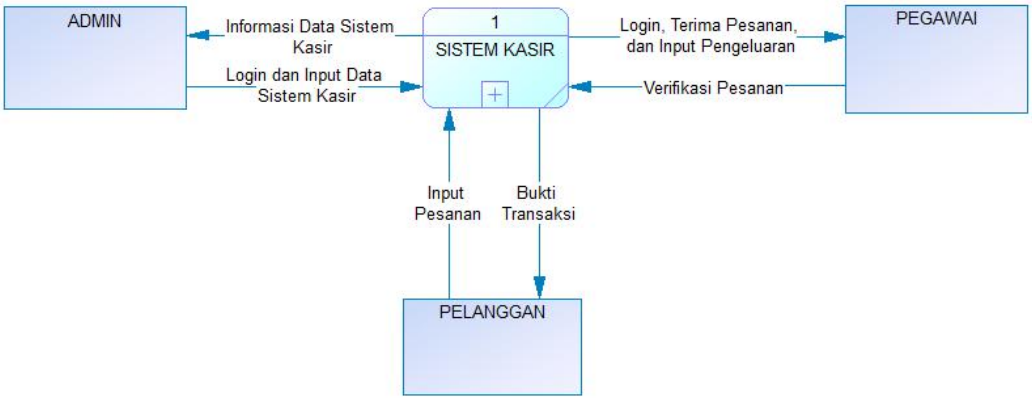

Figure 3. Context Diagram

C. Data Flow Diagram (DFD)

DFD is a tool that can be used to see the data flow of the system being created (Muliadi et al., 2020). Figure 3 below is the DFD made from the system in Café SYZ.

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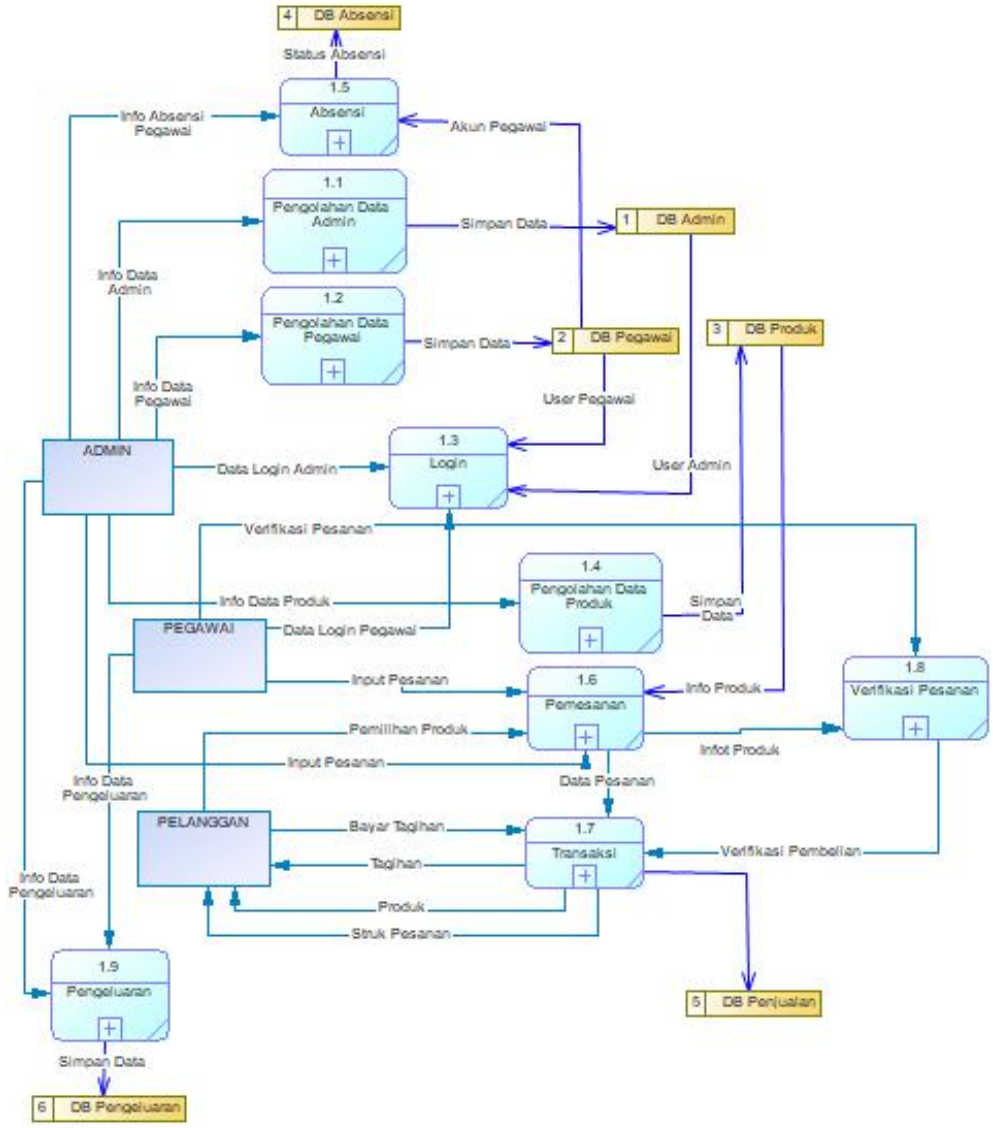

Figure 4. Data Flow Diagram (DFD)

From Figure 3, it can be seen that the Admin who already has the email and password from the admin database does the login process with the admin login data, if it matches the admin user in the admin database then it can enter into this system if it doesn't match then it cannot enter. The admin will make attendance to the attendance process, then the attendance data will be stored in the attendance database. The admin will create a new account by inputting admin data or employee data into the admin data processing or employee data processing, then the data will be stored in the admin database if it's for admins and the employee database if it's for employees. The admin will enter product info to be sold by inputting product data into the product data processing process and the data will be stored in the product database, then the output of this process is product info in the ordering process.

Employees who already have an email and password from the employee database do the login process with admin login data, if it matches the admin user in the employee database then they can enter this system, if it doesn't match then they can't enter. The employee will input expenses into the expense process, then the expense data will be stored in the expense database. The employee will also input the order into the ordering process for customers who have problems ordering orders on their device, after the employee inputs the order it will proceed to the transaction process, and after the transaction

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process is complete, the transaction data will be saved to the transaction database. Customers who have ordered their orders via the device will be verified by the employee in the order verification process and will proceed to the transaction process, after the transaction process is complete, the transaction data will be saved to the transaction database.

The customer does not need to log in and the customer will immediately select his order to the ordering process, it will proceed to the next process, namely the transaction process, this process will send a bill to the customer and when the customer has paid the bill, the customer will get a receipt and the results of this transaction will be stored in the transaction database.

D. Website Design

Figure 4 and 5 below is the front view of the website using mobile and PC.

Figure 4. Mobile Version

Figure 5. PC Version

IV. CONCLUSION

Based on the research, it can be concluded that this website-based ordering and sales information system has provided advantages regarding the transaction recap process. Where when compared to the old system, the reporting process still uses manual methods and is less effective in terms of storage, so a proposed system is made where the transaction recap process is carried out automatically according to existing customer transaction data. Then in the product ordering process, it will be easier for customers. Where this system produces an ordering system that is easy to use only requiring an internet connection. That way the proposed system can be said to have effectiveness in carrying out transaction activities on the website.

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