Android Based Information System Design

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Abstract. The purpose of this system is to help record transactions from a restaurant to be more efficient and effective and to reduce the use of paper in the selection of food menus and printing receipts as well as bills. This system based on an android application using the waterfall. This application was created using the Java and MySql programming languages as a place to process database using XAMPP and all worked in android studio. The result of this system is it can help the process of selecting food menus and transactions to be more efficient in terms of time and cost with minimal constraints because with the system all activities in the restaurant can be handled quickly in an organized manner. With this system, we want to make an application which helps in the handling of transactions and the selection on the menus that all process does not use paper.

1. Introduction

Information Technology and information system are the main contributors to productivity and competitiveness in an enterprise [1], and information technology can be applied in all aspects of life and is used to support all decision in an organization, company, or institution [2]. While the role of the information system is to help control and regulate activities, and then that the information system is a bridge between divisions or fields in a company or organization [2,3]. So what is an information system, the system is an element the interactions each other to achieve a goal dan information is data that has been processed in such a way as to increase someone’s knowledge [4,5], so an information system is a system that accepts data input and instructions, process data according to instructions and outputs the result [6]. It is not denied in the business world that entrepreneurs run their business according to the times [7]. The menu is an application-based menu where there is no use of paper and accessed only by tablets provided on the table. The cashier is a service provided by a company to consumers of goods or services, the quality of a good service is the most important thing so that consumers feel satisfied. The ordering process until all payments are done automatically from the start of ordering the customer has provided a tablet on the table so the customer only enters the table number and select the foods they want to order and for payment, the customer only mentions the table number to the cashier and the cashier will input the table number to the application and then a payment description will appear and will automatically be sent to the customer’s email.

According previous research their research explained a similar topic, cashier application system in one restaurant, although the system is automated, they still do paper printing for the receipt and they do...
not discuss e - menu. They use the Unified Software Development Process (USDP) method to built the system [9]. The purpose of this research is to design an application for a restaurant so that in carrying out business process activities can be run in an organized and good for business so that the restaurant can compete in this all-digitizing modern era. This service is expected to be a benchmark for good quality from the restaurant for the customer to be satisfied because of the convenience provided.

2. Method
An object-oriented approach using the use case diagram was the method of the research. The use case diagram illustrated the process that occurs in this information system development method. And the waterfall will be the development method applied, the Waterfall method is a model for designing and developing software step by step. The waterfall testing method is considered complete if after the program has been developing [10], see figure 1 the waterfall testing method.

![Figure 1. Metode Waterfall](image)

3. Results and Discussion
Illustrated in Figure 2 is Use Care Diagram of Information System E – Menu.
This login display is for the customer, this page shows the fields that must be filled. The customer must input their name and their email address, the email address must be filled because it will be used later to receive bills (see Figure 3).

Figure 2. Use Case Diagram of Information System E – Menu
This page shows the main menu of this application, there we can see the entire menu that available and we can choose and see the details and then we can directly make an order for food that we choose earlier (see Figure 4).
This display shows the detail of the orders that have been made, there shows what price to pay (see Figure 5).

![Confirmation Display](image)

**Figure 5. Confirmation Display**

Here shows that the order we have made is successful and we have to wait (see Figure 6).

![Order Processing Display](image)

**Figure 6. The order was booked display**

This login display is for the cashier, this page shows the fields that must be filled. The cashier must input their username and their password for login (see Figure 7).
There is a table number input field to be processed, so the cashier only enters the table number (see Figure 8).

This page shows the detail of orders that have been made, there contains what was ordered, the quantity, the table number, and the price to be paid. It’s like bills in common. And the bill will be sent to the email of the customer (see Figure 9).
Figure 9. Bill Display

This login display is for admin, this page shows the fields that must be filled. The admin must input their username and their password for login (see Figure 10).

Figure 10. Login displays for admin

This page shows the menu that contains table data, customer data, and cashier data, and the admin can make actions for each menu, the admin can edit, add, delete the data (see Figure 11).
4. Conclusion
With this Information System, it will be very easy for the customer to get information and it can help the cashier for the transaction process without any trouble with effective and efficient and this application can help the company to reach their goals.

References
[1] Heart, T., & Pliskin, N. 2002. Business-to-business eCommerce of information systems: Two cases of ASP-to-SME eRental. INFOR: Information Systems and Operational Research, 40(1), pp. 23-34.
[2] Lipursari, A. 2013. Peran sistem informasi manajemen (SIM) dalam pengambilan keputusan. Jurnal Site Semarang, 5(1), pp. 26-37.
[3] Alzahrani, A. I., Mahmud, I., Ramayah, T., Alfarraj, O., & Alalwan, N. 2019. Modelling digital library success using the DeLone and McLean information system success model. Journal of Librarianship and Information Science, 51(2), pp. 291-306.
[4] Jogiyanto, H. M. 2017. Analisis dan Desain (Sistem Informasi Pendekatan Terstruktur Teori dan Praktek Aplikasi Bisnis). Penerbit Andi.
[5] Derindag, O. F., Canakci, M., & Tsarev, R. 2019. Information and communication technologies in e-commerce and e-governance. In Journal of Physics: Conference Series, 1399(3), p. 033110.
[6] Javid, E., Nazari, M., & Ghaeli, M. 2019. Social media and e-commerce: A scientometrics analysis. International Journal of Data and Network Science, 3(3), pp. 269-290.
[7] Soegoto, E. S. 2013. Entrepreneurship Menjadi Pemebisnis Ulung. Elex Media Komputindo.
[8] Varghese, F. P., Hardin, E. E., Bauer, R. L., & Morgan, R. D. 2010. Attitudes toward hiring offenders: The roles of criminal history, job qualifications, and race. International Journal of Offender Therapy and Comparative Criminology, 54(5), pp. 769-782.
[9] Muthohari, A., & Rahayu, S. 2016. Pengembangan Aplikasi Kasir pada Sistem Informasi Rumah makan Padang Ariung. Jurnal Algoritma, 13(1), pp.13-20.
[10] S. Balaji and M. S. Murugaiyan, 2012. Waterfall vs. V-Model vs. Agile: A comparative study on SDLC, *Int. J. Inf. Technol. Bus. Manag.*, 2(1), pp. 26–30.