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ANALYSIS AND DESIGN OF ANDROID APPLICATIONS FOR PROCESSING CUSTOMER DATA IN PRINTING CV. SUMBER REZEKI

Meniada Dohare[1], Mohammad Fauzi[2], Perlindungan Simanjuntak[3]
[1,2,3] Information Systems, Faculty of Science and Technology, Tjut Nyak Dhien University

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ABSTRACT

General Background: CV. Sumber Rezeki, a printing company, currently processes customer orders manually, requiring customers to visit the shop and place orders face-to-face. This method is inefficient and inconvenient for both customers and administrators. **Specific Background**: There is a growing need for businesses to adopt digital systems to enhance customer service and streamline order processing. CV. Sumber Rezeki's current system lacks the ability to handle customer data, item lists, and order reports efficiently, resulting in delays and miscommunication. **Knowledge Gap:** Despite the clear benefits of digital transformation in retail and service sectors, the implementation of such systems in small-to-medium-sized enterprises like CV. Sumber Rezeki has been limited. **Aims**: The aim of this research is to develop a system that improves customer service by simplifying and digitizing the ordering process, thereby making it faster and more efficient for both customers and the company's administration. **Results:** The system design includes features for customer data management, item cataloging, and order tracking through a user-friendly interface. The software development employed a structured approach including system analysis, design, coding, testing (via black-box testing), and ongoing support. **Novelty:** This study introduces an order management system tailored for a small printing business, enabling customers to place orders remotely and allowing the business to manage these orders in real time. **Implications:** The implementation of this system increases operational efficiency, reduces face-to-face interaction requirements, and saves time for both customers and staff. Further research is needed to explore scalability and integration with other business processes, such as inventory management and customer feedback mechanisms.

Corresponding Author:
Meniada Dohare
1Information Systems, Faculty of Science and Technology, Tjut Nyak Dhien University
E-mail : fandidohare@gmail.com
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INTRODUCTION

With the advancement of information technology, many businesses, especially those operating internationally, offer shopping services from Android

As more and more people shop, the competition in the current sales market is getting tougher.

In the modern era, many people have switched to android smartphones, so this android is very suitable to be applied in the business field, one of which is the sales business that provides facilities and infrastructure for customers. A business in the field of sales is a business that is now growing significantly, because the company's function is not only a location for selling goods, but can also focus on certain types of consumer data such as contact data, purchase history, consumer addresses and product preferences without discussing other aspects of consumer data

CV printing. Sumber Rezeki is a company that adheres to the principle of using the main raw material, namely paper. Until now, the company continues to experience development and strives to improve the quality of service, security, and convenience for customers or users. Sumber Rezeki still uses a manual system, which still does not apply computerized technology, so its business method is still through telephone or direct interaction with customers.

METHODS

Data Collection Techniques

1. Observation
   The author carried out direct observation of manual data entry activities that took place on CV. Source of Sustenance.
2. Interview
   Conducting questions and answers to related parties, especially in the input of consumer data on CVs. Source of Fortune
3. study book
   Data collection by studying and understanding books and other reading materials that have the problem being researched.

System Development Methods

1. System Requirements Analysis
   At this stage, an analysis of the needs of the software is carried out by determining what information options are needed to produce various reports displayed in the system, starting from the customer's name, address, and the goods taken/needed by the customer.
2. Design
   At this stage, the design and model of the system architecture are focused on the design of data structures, software architecture , interfaces, and program algorithms. The system design is divided into various parts, namely: DFD, Database, User Inteface.
3. Code Generation.

This stage is created through commands that are easy to understand and to program devices such as MySQL, as well as code editors, in line with these programming needs.

4. Testing
   At this stage, the author uses a black box as a trial stage. Which is intended to check whether the program is free of errors, whether it is writing errors as well as logic.
5. Support
   This stage is carried out to maintain application programming that is created in line with the needs of the program to be able to be maintained such as data validation, data updating, and maintaining the program from viruses.

Running System

Running System Context Diagram

A context diagram is called a fundamental system model that presents all elements of a system as a single form with inputs and outputs indicated by arrows that enter and exit in sequence. The context diagram can be seen in figure 1 below:

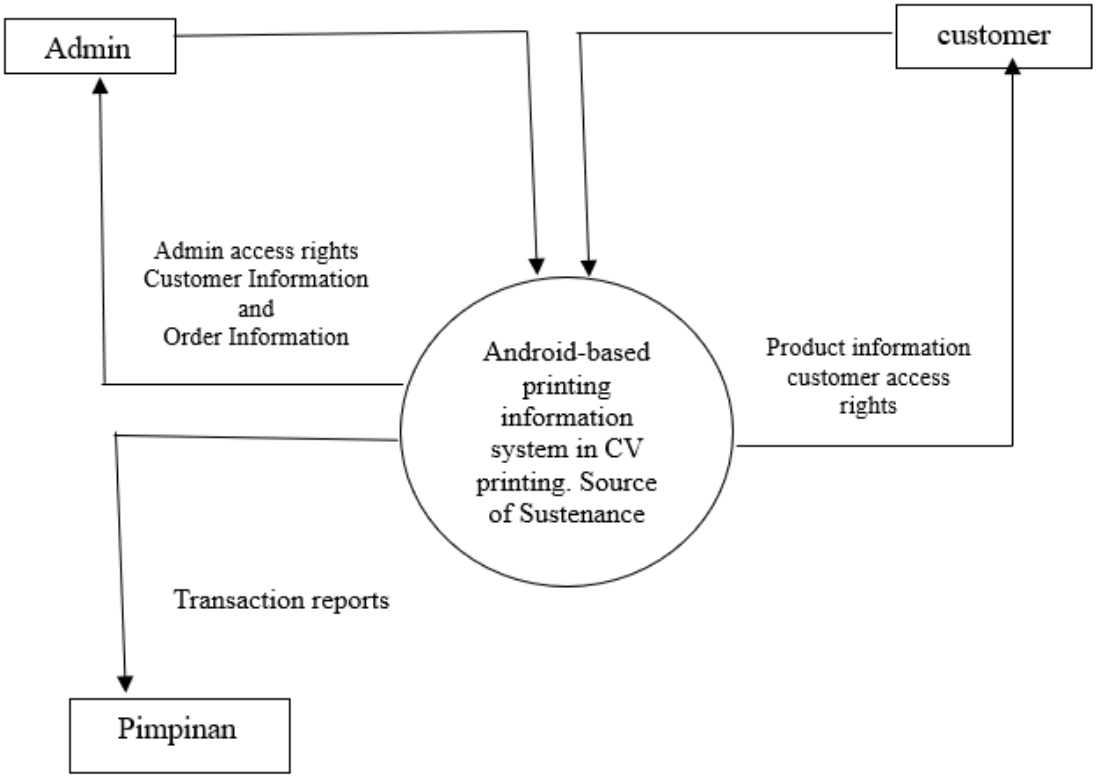

Figure 1. Context diagram of the running system

RESULT AND DISSCUSION

The results of the implementation of the system which contains the form and appearance that have been completed with the shape and appearance consisting of:

The user login page is the initial page when running an application, in the login page the user must first input the username and password to enter the system. The user login page can be seen in the following image:

Figure 2 User Login Page

Access Menu Display on Admin

On the Admin main page, admins can change item data, item category data, customer data on the master data selection. Sales list, list of goods found in the order transaction option and store profile in the settings option, which is found in the home menu. As in the following image.

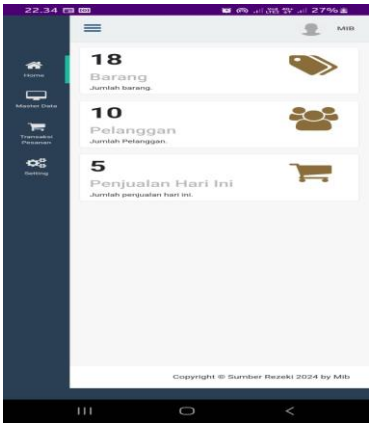

Figure 3 Admin main page

Customer data input

On the new customer data input, if the customer has not registered or has an account. Customers first create a new account and fill in several steps, especially on the choice of username and password that should not be forgotten by customers. After the

customer has registered or has access to the application, the customer can already shop, as shown in the following new customer data input image:

Figure 4 New customer data input

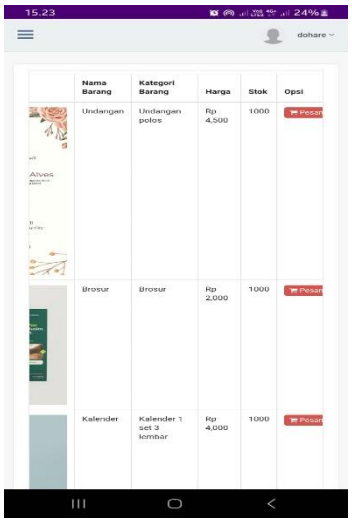

Figure 5 List of goods accessed by customers

List of customer access items

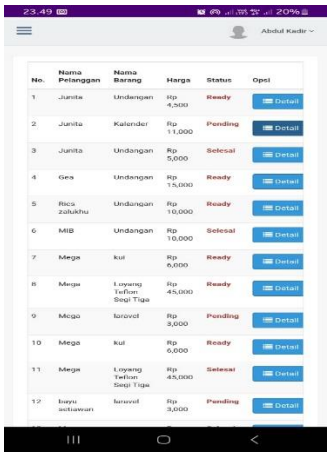

Figure 6 Transaction data of leadership access

CONCLUSION

Fundamental Finding: The study reveals that the current manual order processing system at CV. Sumber Rezeki is inefficient and time-consuming for both customers and administrators, which hinders customer satisfaction and operational effectiveness. By implementing a digital order management system, the ordering process becomes more practical, allowing customers to order goods remotely and streamlining the admin's ability to manage customer data and order reports. **Implication**: The introduction of this system significantly enhances customer service efficiency, reduces face-to-face interaction, and optimizes business processes, ultimately saving time and resources. **Limitation**: The research focuses on the immediate benefits of digitizing the ordering system without addressing potential integration challenges with other business functions, such as inventory management and payment gateways. **Further Research**: Future studies should explore the scalability of this system to accommodate more complex business operations, as well as the integration of customer feedback mechanisms and advanced analytics for continuous service improvement.

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