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Analysis and Design of Motorcycle Financing Systems at POS Semesta Finance

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ABSTRACT

The development of information and technology in Indonesia is currently progressing very rapidly, so that inevitably a company must not be left behind in implementing it. This implementation is in the form of system development from manual to computerized or even computerized systems that are redeveloped into an integrated system. This study aims to analyze and design a motorcycle financing system in accordance with user needs. The old system that is running and used in the SPU (Service Point Unit) is not possible to be applied to POS (Point of Sale). Therefore, the design is done from the beginning by following the existing systems and procedures. The motorcycle financing system being developed is expected to provide an increase compared to using the manual method. Some of the expected improvements include system performance, the information provided, the economic level and the level of control that can be carried out. With this increase, it is hoped that it can also improve the performance of employees who will also improve service to consumers.

1. Introduction

The use of motorbikes currently has a very important role as a means of transportation, in addition to being affordable, it is also more efficient. Every year the ownership of motorbikes is increasing along with the ability and purchasing power of the people who are getting better. The motorcycle financing business is the spearhead in meeting community demand.

Semesta Finance is a company engaged in motorcycle financing services and has many POS (point of sale) spread throughout Indonesia, where each POS (point of sale) is part of the SPU (service point unit). Consumers who want to buy motorbikes apart from visiting their SPU mostly come to POS because it is closer to the area where they live. In addition, POS-POS has an important role in sales to consumers and payments by consumers.

The weakness of the POS is that the transaction process that occurs in it is still selling, so it takes a long time for consumers to get the motorbike they want and the payment is still written in a book.

To support growing business activities, a system is needed that can properly support operational activities. The system used must be able to handle activities at the POS, so that it can produce accurate, relevant, and timely information. By using the information provided by this system, the data input process, data printing, and payments that have been made by the SPU can be made by POS. This can also reduce the gap in the loss of installment payment money from consumers to POS.

Currently, Semesta Finance has a system to support administrative activities, however this system is only used at SPU and is directly connected to the head office. There are several reasons why POS does not use the existing system, namely the usual expensive licenses and the database system used is not as complex as the one used in SPU.

Therefore, the management feels the need to develop the POS administration system itself by using its human resources. The advantage is, every consumer who wants to apply for a motorcycle purchase can immediately know whether their application is approved or not. Consumer search can be done in just seconds and payments made to POS are recorded in detail and neat.

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2. Research methods

The research method used in the development of this system uses the SDLC (System Development Life Cycle) method with the waterfall process. So in a quote from Rosa's book the waterfall method in system development is the process of changing a software system with methods or models that other people can use in developing software systems.
In this model there are several stages of system development, which can be described as follows:

2.1. Analysis Stage

At this stage, the system developer needs a communication that aims to understand the software that the user needs and the software limitations. This information can usually be obtained through interviews, surveys or discussions.

2.2. Design Stage

In the design process, translation of the requirements is carried out into a software design that can be estimated before the coding process is made. This process focuses on data structures, software architecture, interface representations, and detailed procedural algorithms. Examples of system designs that are usually created and used are Data Flow Diagrams, Flowcharts and Entity Relationship Diagrams (ERD).

2.3. Development Stage

At this stage there is a process of translating the design design into a form that can be understood by machines, using programming language code codes. The resulting program code is still in the form of small modules which will be combined at a later stage.

2.4. Testing Phase

At this stage, the modules that have been made are merged and this test is carried out to find out whether the software that has been made is in accordance with the design and the functions of the software have errors or not.

2.5. Maintenance Stage

This is the final stage in the waterfall model. The finished software is run and maintenance is done. Maintenance includes fixing errors that were not found in the previous step. Improved implementation of system units and increased system services as new requirements.

3. Results and Discussion

3.1. Input Credit Processing at POS

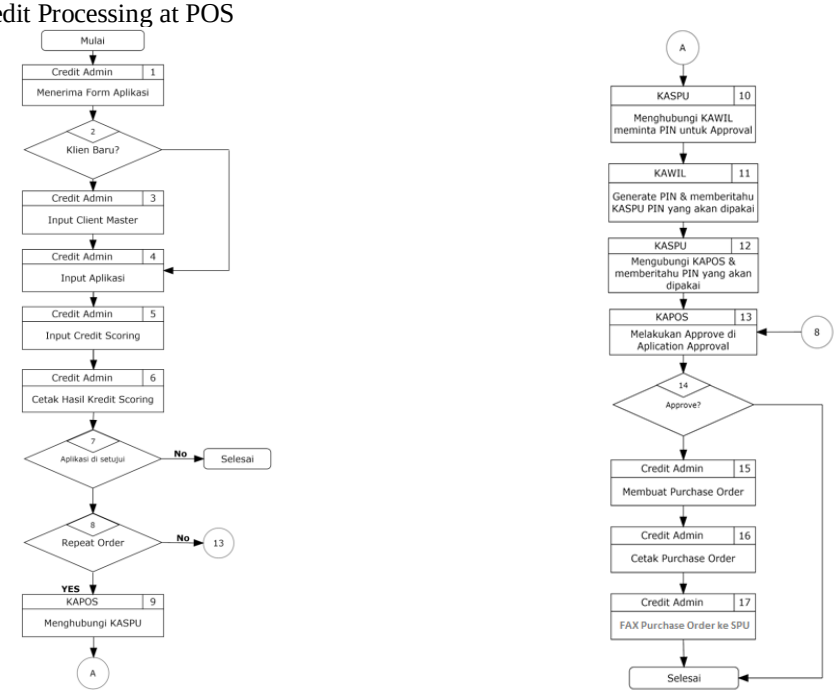

Fig 1. Credit processing flow diagram

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Credit Admin inputs consumer data (client master) into the system. An assessment is carried out using credit scoring. The Head of Social Affairs approves the application that has a decent value after credit scoring is carried out, but the system will check whether the customer has submitted a payment for the first time or more than once. If it's only once, KaPos can immediately do the approval. For the case of consumers who request financing more than once, the Head of Social Affairs contacts the Head of the Commission, then the KaSPU contacts the KaWil to ask for a PIN so that it can be approved. The approved application is then made a Purchase Order (PO) and sent to the SPU as documentation.

3.2. Input Finance Process at POS

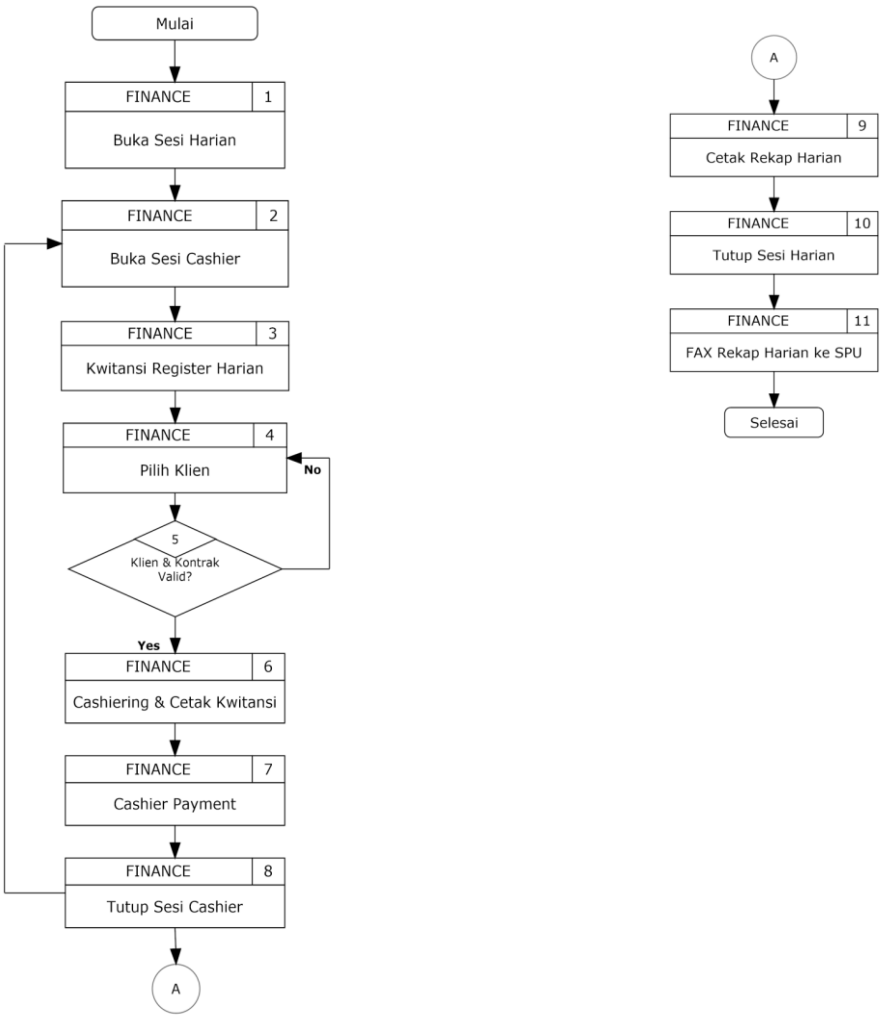

Fig 2. Flow finance diagram

Finance opens the daily session in the morning. Before the installment input, the finance company registers daily receipts. If there are consumers who want to make installment payments, first look for the data in the system. If the data is valid (correct), do cashiering and print receipts to be submitted to consumers. Make a cashier payment if you want to deposit installment payments from consumers to the bank. Close the cashier session. 2-8 process can be repeated. Print a daily recap for documentation. Close daily sessions. The results of the daily recap are then faxed to the SPU as evidence and documentation of the SPU.

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3.3. Entity Relationship Diagram

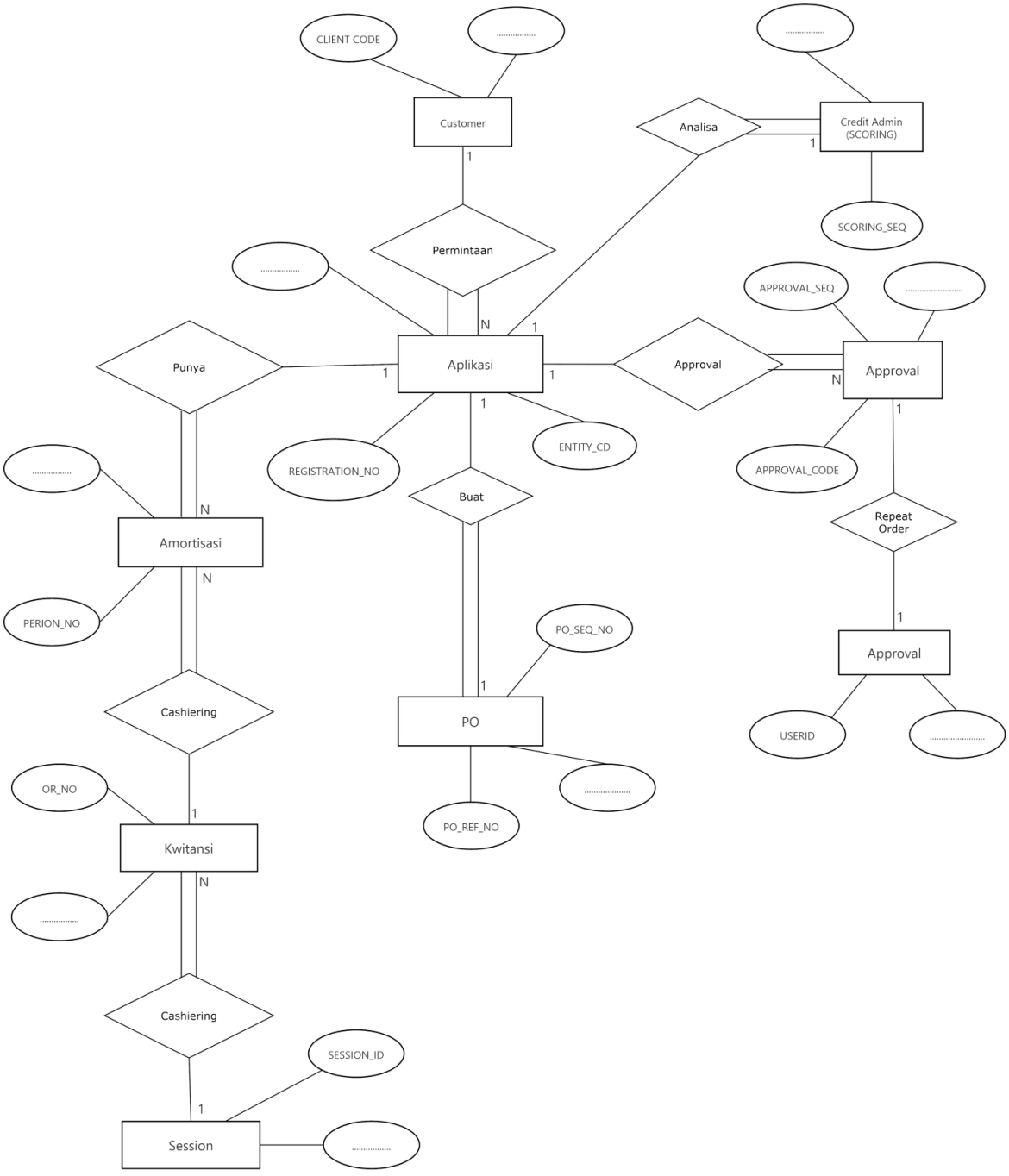

Fig 3. Entity Relationship Diagram

3.4. Relations Between Tables

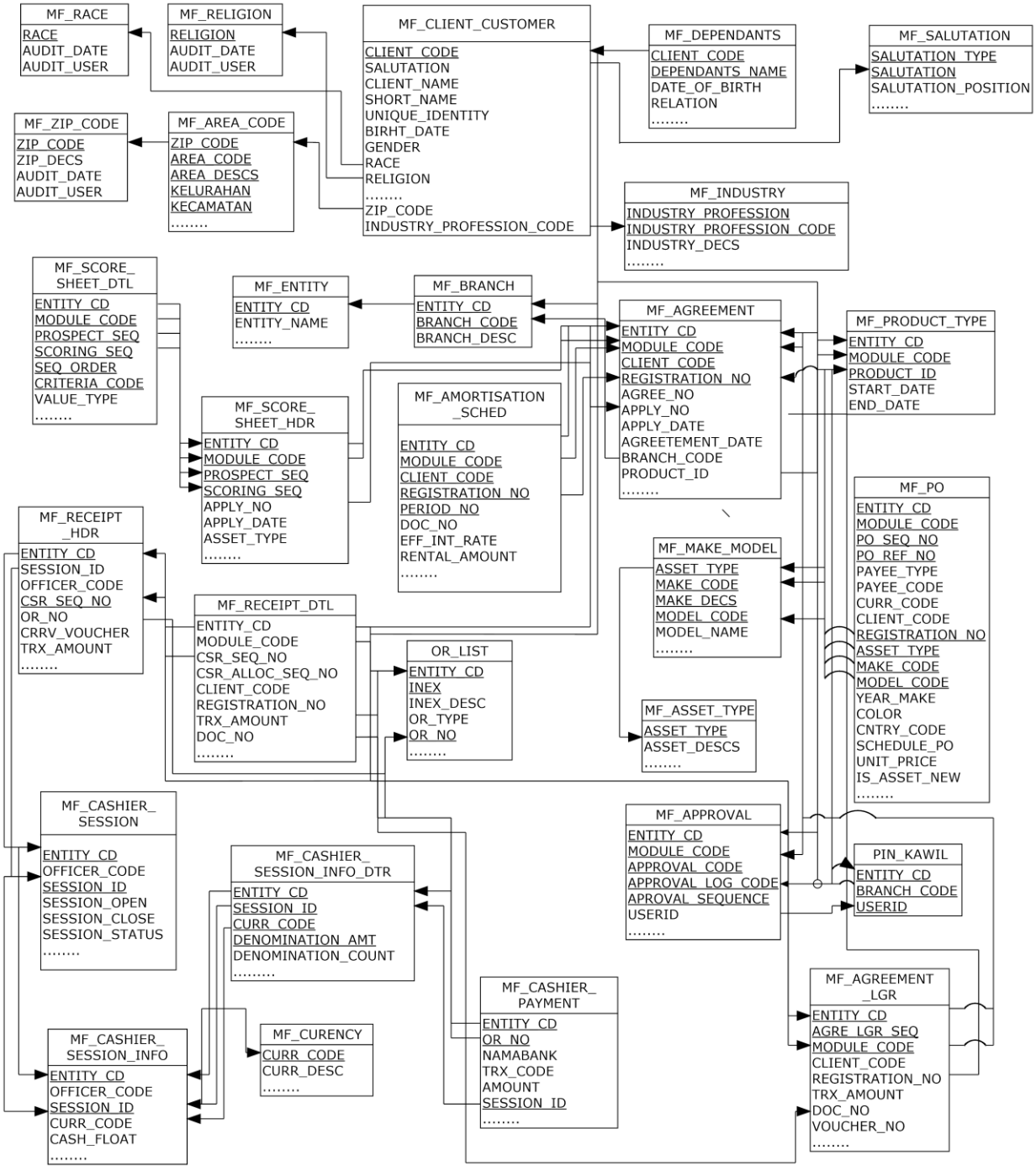

Fig 4. Relationship Between Tables

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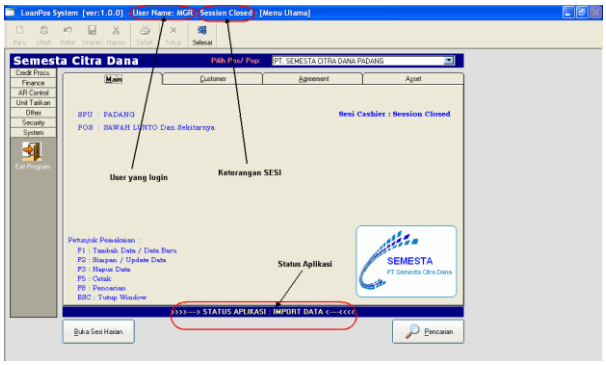
3.5. Implementation Stage

A. Main Page Implementation



Figu 5. Main page

B. Customer Page Implementation

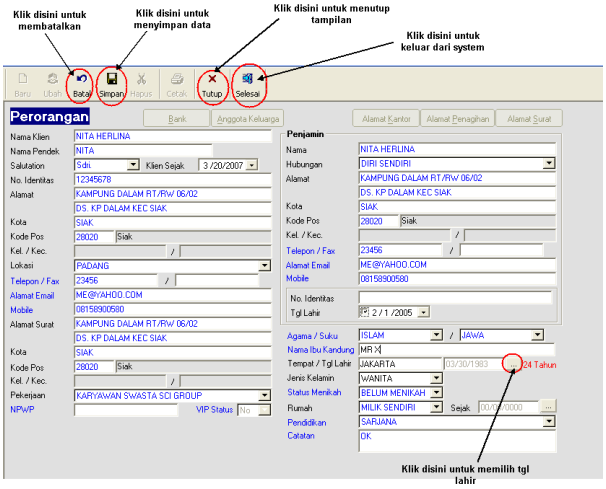


Fig 6. Customer page

C. Implementation of Contract Pages

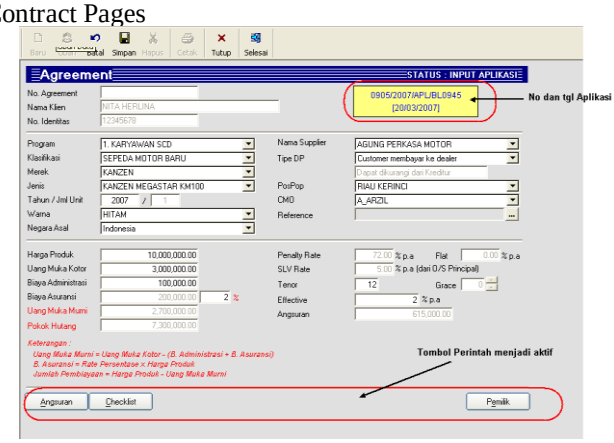


Fig 7. Contract page

4. Conclusion

With the POS financing system, manual data entry which can cause duplication of data can be eliminated. The part involved in SPU that handles credit processing and finance does not have to go home late at night to manually input data obtained from POS.

Based on the results of the evaluation of the development of the financing system, it can be concluded that the financing system developed for this POS has been able to solve problems that have occurred so far, and the management can use the reports provided by the system for their needs.

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