Development of information system based on mobile stock management in outlet

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Abstract. Garut is a regency in West Java that has various potentials that can be developed. Now many industries have been established. The food or culinary industry is one of the special characteristics of Garut Regency. One of them is a company engaged in the dodol food industry, PT. Herlinah Cipta Pratama, which has several outlets in terms of consignment delivery of dodol. Problems for the delivery of dodol occur because of the shipping process by PT. Herlinah Cipta Pratama which does not match the stock management at the outlet. Therefore, it will need a system that can manage dodol stock in outlets that can be set by PT. Herlinah Cipta Pratama. With the Unified Software Development Process design method with the stages of Requirement, Analysis, Design and Implementation. The results of this study in the form of dodol stock information system design at PT. Herlinah is expected to be able to help the problems in the stock management with the aim that both parties can know the consignment process.

1. Introduction
The system is a working concept of any or various interrelated processes in a process to carry out activities in solving problems of a business organization [1-4]. So the information system is an activity in a business process where the information is processed and processed with certain links in a business process [5-8].

This article explained the problem of Dodol stock-taking, where there are various problems in the running system. Because dodol is a food that has a short expiration period, consumers sometimes do not know the expiration period of dodol at the outlet. So that it affects the quality of dodol, which will be marketed to consumers and consumers feel disadvantaged. In supplying dodol on a consignment basis, PT. Herlinah Cipta Mandiri checks the dodol stock in detail, starting from the type to the quantity of each type of dodol or, in this case, stock-taking regularly to cope with the expiration period of 4 to 5 months [9,10]. However, the process takes a long time so it is less effective and efficient. For this reason, a system that can conduct consignment stock-taking is needed in accordance with the needs of the stock at the Outlet that will be sent by PT. Herlinah Cipta Mandiri. Then the measurement expires automatically three days before the expiration date with mobile-based application media to make it more practical and facilitate the process of checking stock-taking [3,11,12].

Previously, it was a peratama reference research on dodol companies where the application was designed to include inventory and sales in PD. Setia Garut, in outline of this research is about the distribution of dodol that occurs in PD. Setia uses an application for processing [13]. The second reference research is about the development of information systems in the supply of goods and sales in PD. Juwita Garut Dodol using the web of research in broad outline, is the processing of inventory
information data and the sale of goods, in this case, Juwita Dodol using a desktop application [14]. Third reference research regarding information systems for ordering goods at UP Kencana Semarang, the results of the study, was in the form of a company's goods distribution information system using a web-based application [15].

2. Methods
The methodology used for the Dodol Stock Management Information System in Mobile-Based Outlets is to use the Unified Software Development Process methodology illustrated by the Work Breakdown Structure modeling, which can be seen in the image below [2].

![Work Breakdown Structure](image)

System requirements aim to find or accommodate data or information needed in research conducted. Analysis phase (Analysis) is an activity carried out to identify the problems that have been obtained at the system requirements stage. System Design is the stage after system analysis in which problems that have been identified and become functional needs will be used to prepare the design in the form of drawing, planning, and sketching. Implementation and testing of the system (Implementation and Test). At this stage, testing is done before use. Checking the readiness of the system in order to reduce errors on the new system and bring out the benefits of the old system.

3. Results and discussion

3.1. Requirement
Literature study conducted at PT. Herlinah and branch outlets, namely the consignment process carried out by PT. Herlinah Cipta Pratama to the outlets. Where goods sent and received by the outlet are not directly paid by the outlet to PT. However, according to the items sold. The consignment conditions are given by PT. Herlinah for outlets is where outlets are willing to accept consignment goods, PT. The quality must be maintained, and it is the obligation of each outlet and transaction in accordance with the items sold, as shown in Figure 2, ongoing business processes.
3.2. Analysis

3.2.1. Actor classification. After carrying out the requirement process discussed in the previous sub-chapter, the next step is the Analysis process by describing a business process proposed for system design with UML (Unified Modeling Language) [16].

| No | Actor’s Name | Information |
|----|--------------|-------------|
| 1  | Outlet       | PT. Herlinah consignment network for selling dodol picnic to consumers. |
| 2  | PT. Herlinah | PT. Herlinah Cipta Pratama, which supplies dodol picnic to outlets. |

From the two actors above, it can be concluded that PT Herlinah only supplies dodol picnic to outlets by way of consignment not directly sold but the process of selling dodol at the outlet to consumers or sold goods.

3.2.2. Use case diagrams. Use Case Diagrams describe how interactions between PT. Herlinah with Outlet in managing dodol stock in each outlet, as shown in figure 3.
3.2.3. Activity diagram. Activity Diagrams are a way to model the flow of behavior from interconnected systems, as shown in Figure 4.

Figure 4. Activity diagram of the dodol stock process.

Figure 4. Activity Diagram illustrates the activities carried out by the admin PT. Herlinah Cipta Pratama in data management, shipping stock and data collection at each outlet.

3.2.4. Class diagram. The class diagram phase is based on the use case diagrams and diagrams of previous activities. The following classes relate to dodol stock management consisting of Outlets, Dodols, Stocks, Transaction Transactions, Sales Transactions. The relationship between classes can be seen in Figure 5.
3.3. Design

The design of the system to be designed is described in the form of the application interface as for the interface design as follows:

![Main page layout design](image)

Figure 6. Main page layout design.

4. Conclusion

With the design of the information management system for shipping goods PT. Make it easy for each outlet to be easier because the process for collecting stock data sent has been automatically received in real-time by the outlet, and there is no need to check the goods or stock-taking by the outlet. With the proposed outlet system is not necessary, again to order consignment goods because the system that has been made can directly inform the existing stock of dodol stock at the outlet to PT. Herlinah Cipta Pratama. Expired items can be easily identified either from the outlet or PT. Herlinah, because the proposed system with application media can provide information automatically in the form of dodol dating that has expired.
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