



Goods Inventory Monitoring Management with the CodeIgniter Framework

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ABSTRACT

CV. Mitra Bagus Utama is a company in Tangerang Regency which is engaged in the distribution of ATK (Office Stationery) and Office Furniture, which distributes ATK or furniture to meet the needs of each office. Currently the CV system. Mitra Bagus Utama is still a manual book, so the activity process becomes less effective. The purpose of this study was to build a monitoring system for inventory using a descriptive qualitative approach using the PHP programming language with the CodeIgniter Framework. Preliminary data collection was carried out through interviews and observations, object oriented analysis (OOA), unified modeling language (UML) and PIECES with reference to the prototype system development and ended with black-box testing. This research resulted in an inventory information system application where the process of inputting and archiving data becomes more structured, fast, timely and informative based on a website.

1. Introduction

It is important for every company to have a web-based information system to support existing processes. One of the businesses engaged in ATK (office stationery) and office furniture is CV. Mitra Bagus Utama, this company is located in Tangerang Regency, Kutabumi Village, Pasarkemis District. CV. Mitra Bagus Utama still has very limited employees so that until now the inventory data processing system for CV. Mitra Bagus Utama is still manual. Even the data processing system that is currently running still has deficiencies, especially in recording and calculating inventory data. Usually, the manual inventory recording process causes a discrepancy between the total inventory data and the physical amount of goods available each month, which can result in losses for the company.

This study aims to design a web-based inventory monitoring system that is needed so that it can improve the performance of CV employees. Mitra Bagus Utama in data processing. This system is web-based so it can be accessed anytime and anywhere.

2. Method

This study uses a descriptive qualitative approach using the PHP programming language with the CodeIgniter Framework. Preliminary data collection was carried out through interviews and observations, object oriented analysis (OOA), unified modeling language (UML) and PIECES with reference to the prototype system development and ended with black-box testing. This prototype was chosen because the researcher already had an initial description of the software to be developed and the researcher could test the software first before using the software.

The following are the stages of system development using the prototype method:

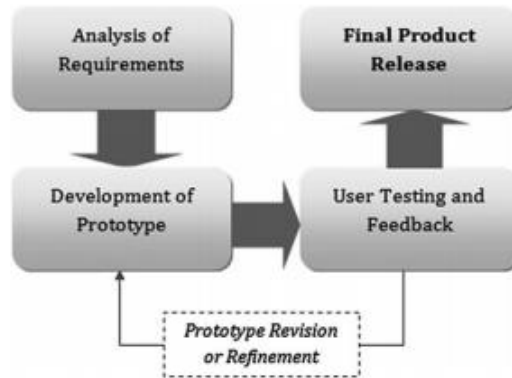


Fig. 1 SDLC prototyping

Based on interviews and observations that researchers have conducted at CV. Mitra Bagus Utama, the results obtained are that the inventory information system is still done manually, where sometimes employees still record or calculate data using a manual book. Here's an overview:

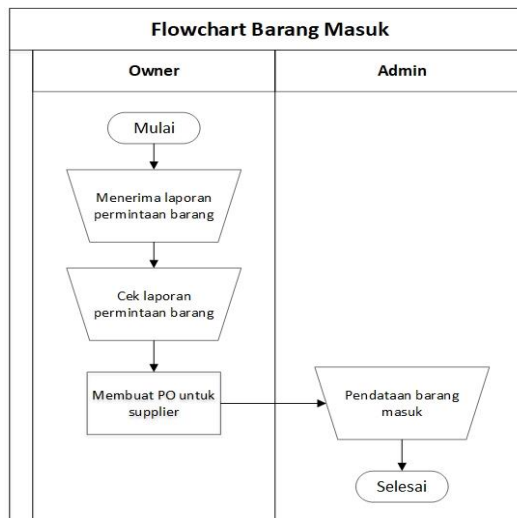


Fig. 2 Flowchart incoming goods

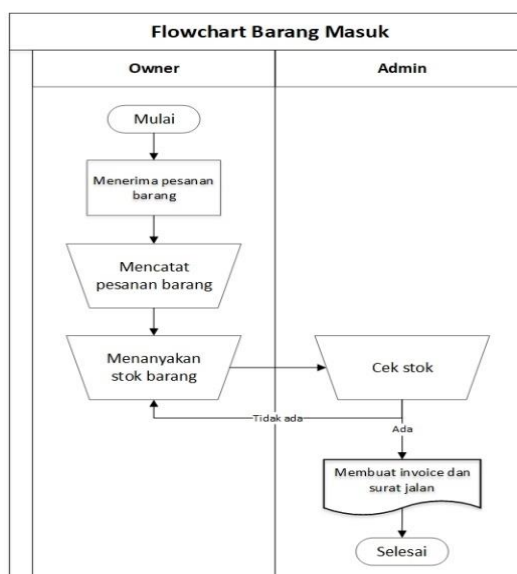


Fig. 3 Flowchart of outgoing goods

The system design uses the UML (Unified Modeling Language) model. The diagrams used are Use Case Diagram, Activity Diagrams, Sequence Diagrams and Class Diagrams.

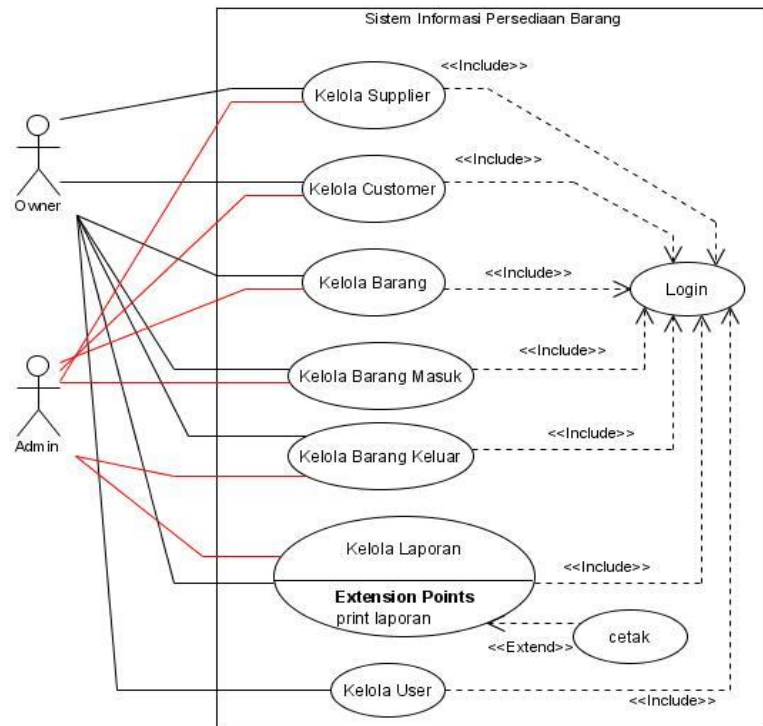


Fig. 4 System development use case

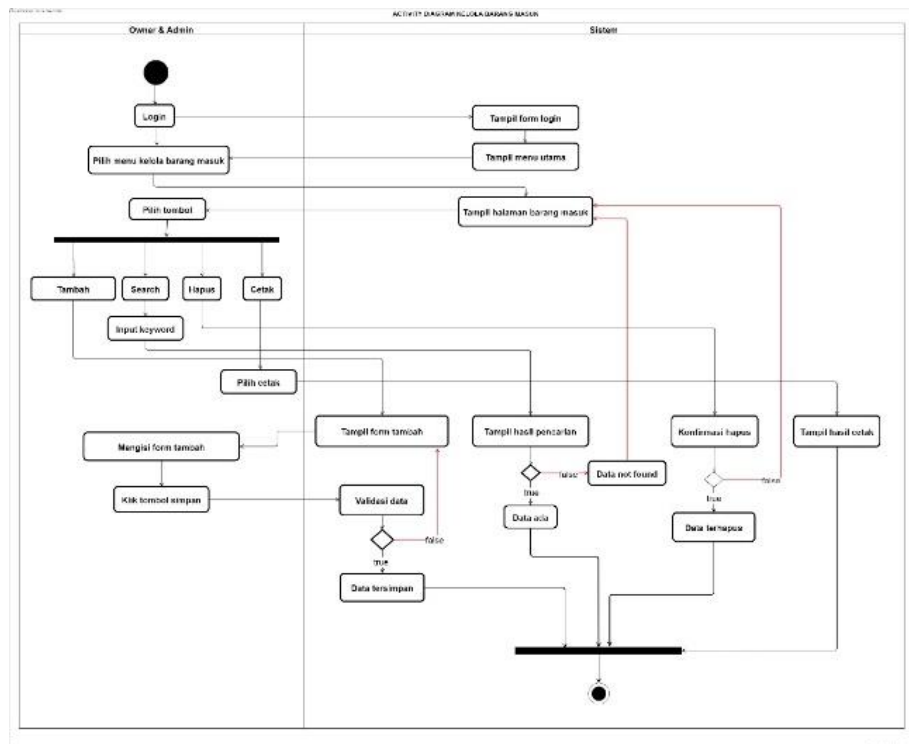


Fig. 5 Activity diagram of incoming goods

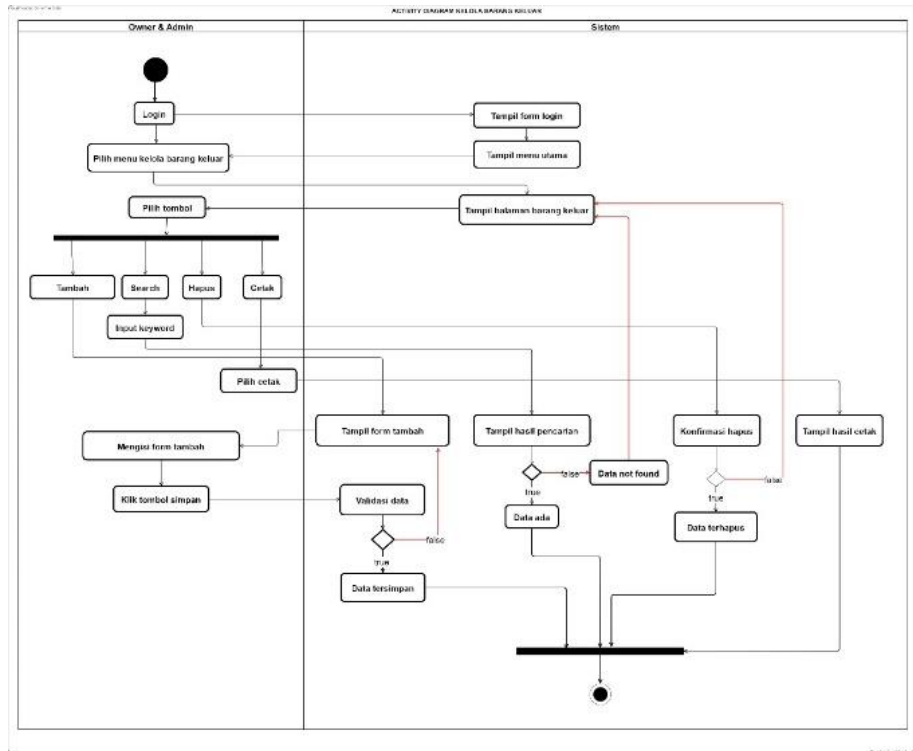


Fig. 6 Activity diagram of goods coming out

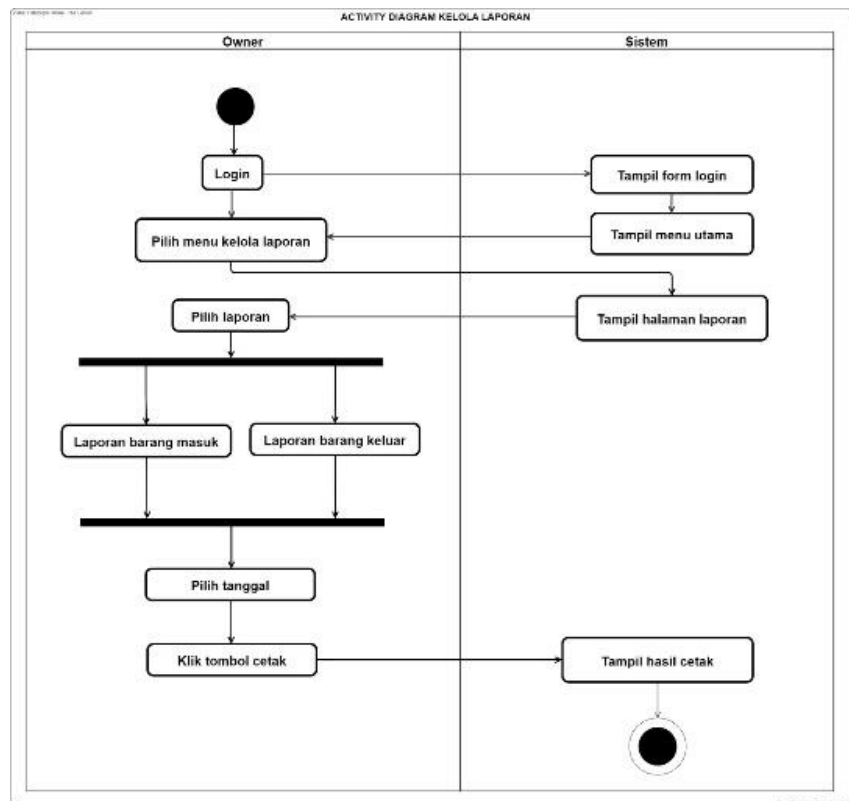


Fig. 7 Activity diagram for managing reports

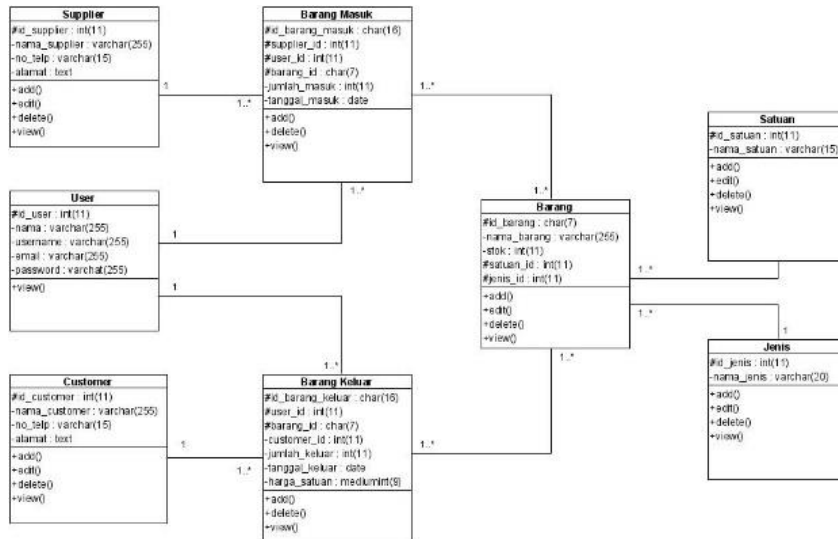


Fig. 8 Class diagrams

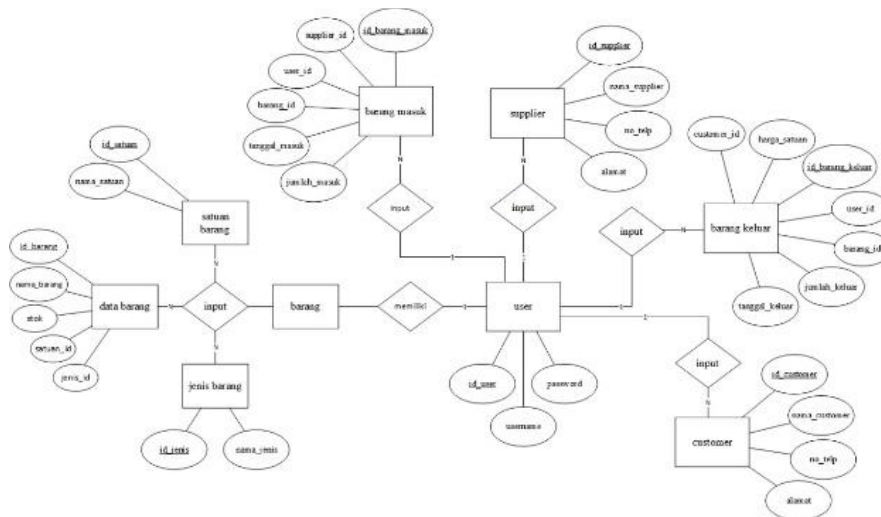


Fig. 9 Entity relationship diagram

3. Results And Discussion

A web-based inventory monitoring management application that has been developed by utilizing the facilities of the codeigniter framework which is supported by the concept of ERD and database life cycle (SDLC) has an important role in supporting the availability of a database that meets the concept of normalization so that this application is able to answer problems in the running system by acting as monitoring system for ATK inventory. Here is a picture of the implementation:



Fig. 10 Dashboards

No.	ID Barang	Nama Barang	Jenis Barang	Stok	Satuan	Aksi
1	B000001	Binder Clip 107	ATK	0	Box	[Edit] [Delete]
2	B000002	Binder Clip 111	ATK	0	Box	[Edit] [Delete]
3	B000003	Binder Clip 155	ATK	0	Box	[Edit] [Delete]
4	B000004	Kertas HVS A4 75gr	ATK	10	Rim	[Edit] [Delete]
5	B000005	Lem Cair	ATK	0	Pcs	[Edit] [Delete]

Fig. 11 Display of goods data

No.	No Transaksi	Tanggal Masuk	Supplier	Nama Barang	Jumlah Masuk
1	BM-22073100007	2022-07-31	PT. Disney Land	Lem Cair	10 Pcs
2	BM-22073100006	2022-07-31	PT. Violent	Binder Clip 107	2 Box
3	BM-22073100005	2022-07-31	PT. Pabrik Kertas	Binder Clip 107	10 Box
4	BM-22073100004	2022-07-31	PT. Violent	Solatip Bening 2"	30 Slop
5	BM-22073100003	2022-07-31	PT. Sejahtera Sentosa	Baterai Alkaline A3-isi 2	35 Pack

Fig. 12 Display of incoming goods data

No.	No Transaksi	Tanggal Keluar	Customer	Nama Barang	Jumlah Keluar
1	BK-22073100006	2022-07-31	PT. Citra Elektro Mandiri	Lem Cair	2 Pcs
2	BK-22073100005	2022-07-31	PT. Citra Elektro Mandiri	Kertas HVS A4 75gr	10 Rim
3	BK-22073100004	2022-07-31	PT. Citra Elektro Mandiri	Binder Clip 107	2 Box
4	BK-22073100003	2022-07-31	PT. TOA Coating Indonesia	Baterai Alkaline A3-isi 2	10 Pack
5	BK-22073100002	2022-07-31	PT. TOA Coating Indonesia	Baterai Alkaline A2-isi 2	15 Pack

Fig. 13 Display of outgoing goods data

4. Conclusions

The design of an inventory monitoring system using a descriptive qualitative approach and the development of a prototype system can overcome data accumulation problems, display data results in the form of tables and graphs, and display ATK reports in and out dynamically. For further research, this application can be improved by adding portal features and distributed systems, so that this system is more than the scope of inventory data management.

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