



Information System Design and Build Inventory at PT Prima Usaha Era Mandiri Branch Pasar Baru

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ABSTRACT

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Along with the times, creativity and innovation will continue to develop to create the latest technology. Aims to help facilitate human activities. Applications are one of the many developing technologies that are useful as a medium for carrying out data management and various other activities such as document and file processing. And the formulation that will be discussed is how to develop an inventory information system based on a desktop application at the new market branch of A&W Restaurant, which currently uses a manual in the form of a manual book. Therefore I want to develop a system where I can help make it easier for workers. This research is to help simplify human activities and benefit many parties. The design method in making the application uses the Java platform and MySQL for the database. And for analysis using United Modeling Language (UML). The result achieved is an inventory information system application. And the conclusion of this final project is to develop an information technology-based information system that can help make it easier for A&W restaurant workers in the new market branch, especially the warehouse section. The system can store and display data inputted by the admin and plan future development.

1. Introduction

Information system is an important factor in a community service agency that has a high level of routine and managed data management. Information systems that are supported by advances in information technology will make it easier for people to get things easily.

Along with current developments, with the existence of information technology that supports our progress, it is easier for users to carry out an inventory of goods data. The thing that underlies the research At PT PRIMA USAHA MANDIRI in Jakarta at this time the ongoing manual process will switch to a system design form. In designing the old system, PT PRIMA USAHA MANDIRI only used a manual system that used paper, on that basis the author chose the title of the book "Design of Inventory Information Systems at PT Prima Usaha Era Mandiri".

The purpose of writing is to find out and understand the inventory system in the restaurant warehouse at PT Prima Usaha Era Mandiri which has been running in Jakarta and to find out what are the shortcomings or obstacles and find solutions.

In this discussion, the company is engaged in the Food & Beverage Restaurant, fast food A&W, a typical American restaurant and has many branches in Indonesia. Due to the extent of the problem due to time constraints, the author only limits the data collection of incoming goods from the central warehouse to the restaurant's branch warehouse.

2. Method

In this writing, the writer collects related data. which is sourced from:

The author collects data and studies theories from various sources such as books, scientific journals, and related references. The author conducted a field study by going directly to the restaurant branch, especially in the restaurant warehouse at PT Prima Usaha Era Mandiri which is located at Jl. New Market No. 155 Ex: New Market. Kec: Sawah Besar. Central Jakarta. By making direct observations to collect the necessary data on the object of research, and doing some questions to related parties to obtain information about the object of research.

3. Results and Discussion

Information System Design

System design is an activity to design or design a good system, where the contents are operating steps in the data processing process and procedures to support system operation. The main goal in system design is to meet all the needs of the users of the system and to provide a clear picture and complete design for the programmer.

System Definition

The definition of the system according to Mulyadi (2016:5), the system is "A network of procedures made according to an integrated pattern to carry out the company's main activities". "Information system is a combination of objects or elements that are mutually regular so that they can form a complex series of components that can relate to each other".

Flow chart

Falahah Suprpto (2018:66-69) in his book entitled Software Engineering Explains that:

"Flowchart is a model for presenting data processing, document data information that occurs in a process, like business processes or processes in a program".

UML Modeling

UML is one of the language standards that is widely used in the industrial world for defining requirements, making analysis and design, and describing architecture in object-oriented programming.

Use Case

To describe the flow of the system briefly and describe the functionality requirements expected by a system.

1. Use Case Scenarios
the course of the use case process from the actor and system side.
2. Activity Diagram
To describe the main activities of the user on the information system created
3. Sequence Diagrams
interaction diagram arranged by time sequence Each sequential diagram represents a flow of several flows in the use case.

Database Design

1. Understanding Databases
According to Supono (2016: 97) database or database is "a collection of information stored in a computer systematically so that it can be checked using a computer program to obtain information from the database".
2. Normalization
Falahah Suprpto (2018:79) in his book entitled "Databases" states that:
"Normalization is one of the design methods by arranging data elements in tables in such a way that the database is obtained in a "Normal" state, which means that it can be operated according to relational database concepts".

Programming language

1. Java
Java is a reliable platform for developing enterprise applications that are designed to be a small language, easy and portable to various platforms.
2. Netbeans
Netbeans is an open source IDE (Integrated Development Environment) which is often associated with Java.
3. UML (Unified Modeling Language)
According to Rosa in Irmayani & Susyatih (2017) "UML is one of the language standards that is widely used in the industrial world for define requirements, make analysis and design, and describe the architecture in object-oriented programming.
4. XAMPP
It is an open source software which is a development of LAMP (Linux, Apache, MySQL, PHP and Perl)".
5. MySQL Databases
"MySQL is an RDBMS (Relational Database Management System) application.

System Flow running

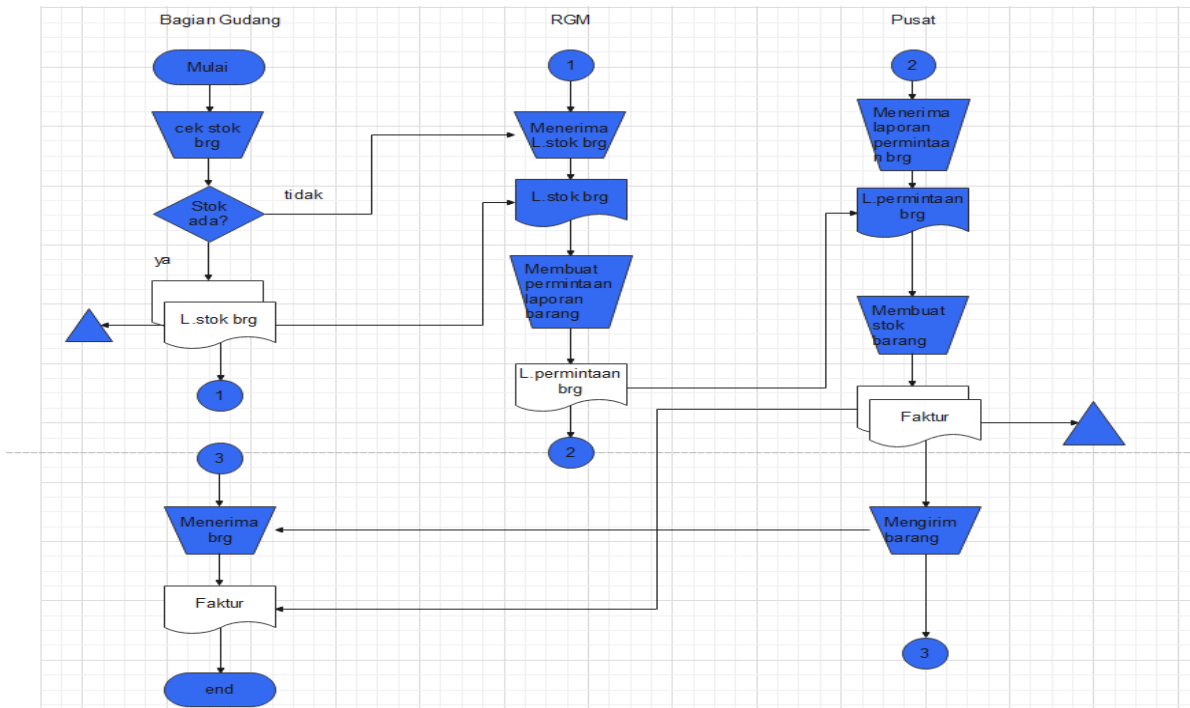


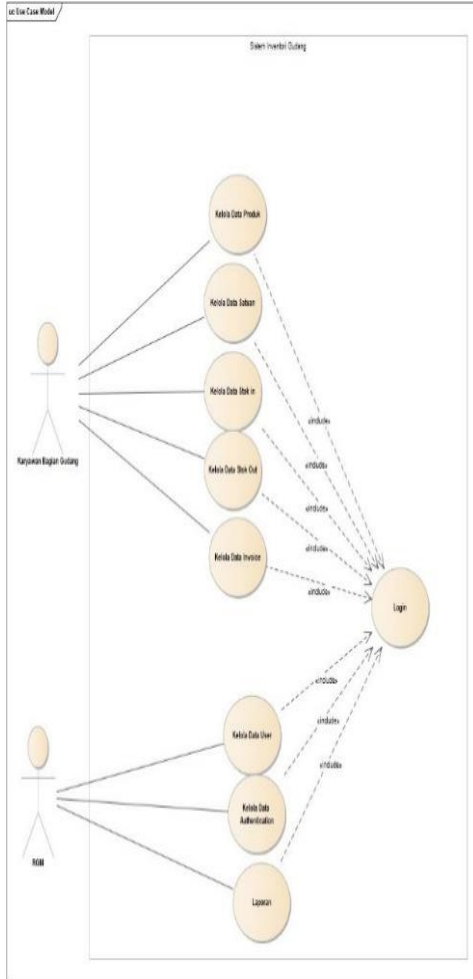
Image 1.Running System Flowchart

Running System Constraint

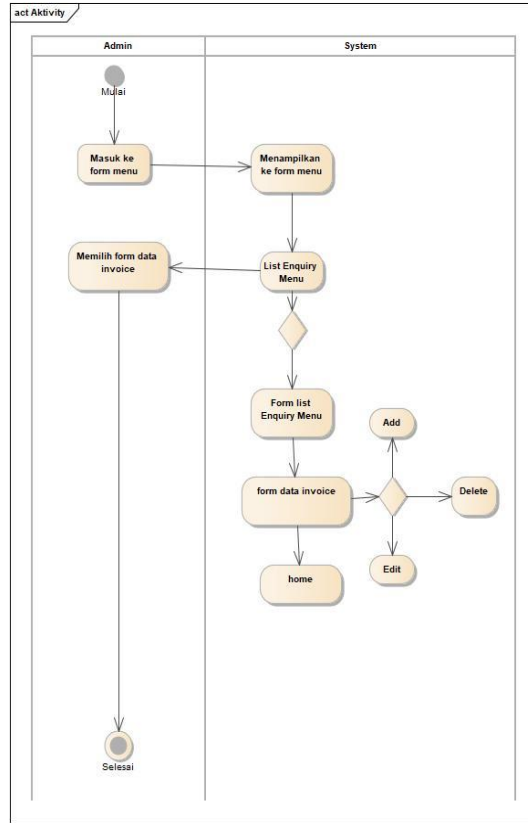
In the current system at PT Prima Usaha Era Mandiri, especially in the restaurant warehouse, they still use paper manuals, and there are still some that have not been resolved, namely:

1. The data is not well structured.
2. There is no data backup in the form of softcopy.

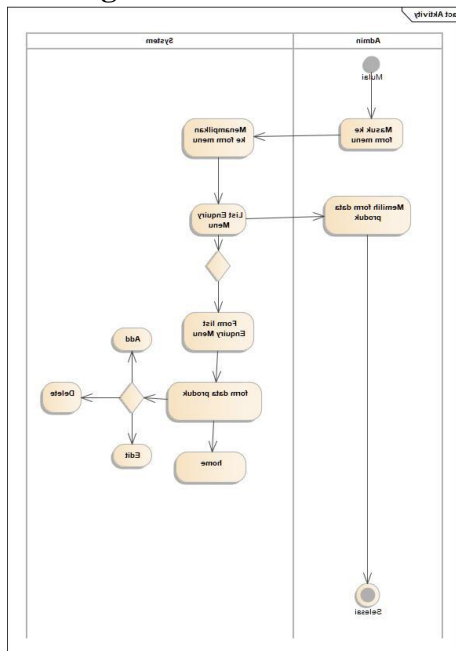
DISCUSSION
Information System Design
Use Case Diagrams
1. Use Case



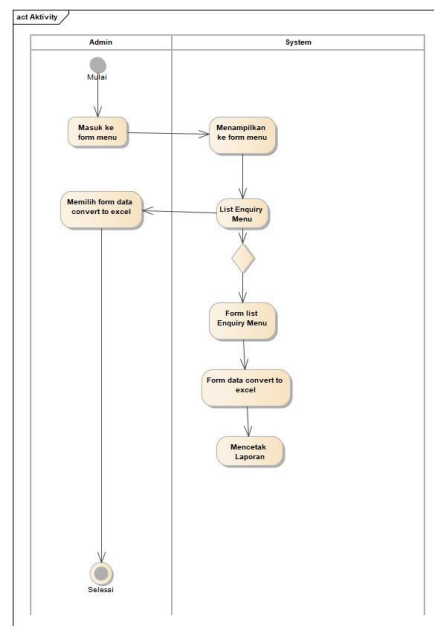
2. Manage Product Data



3. Manage Invoice Data

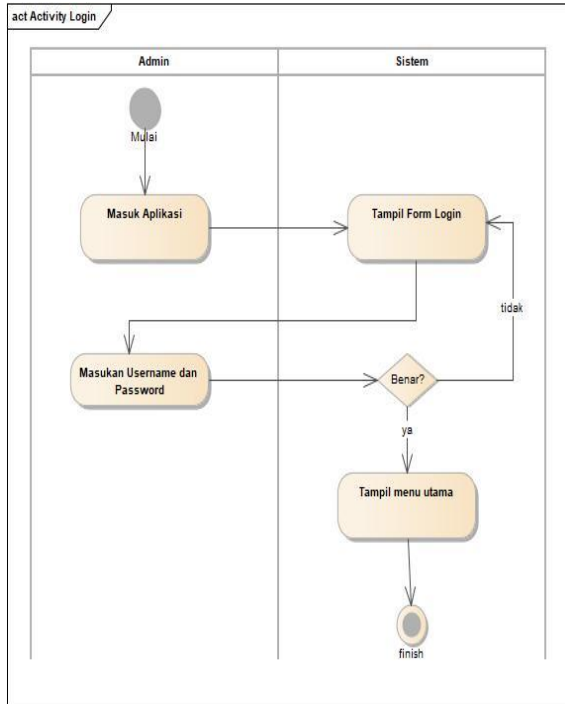


4. Manage Item Data report



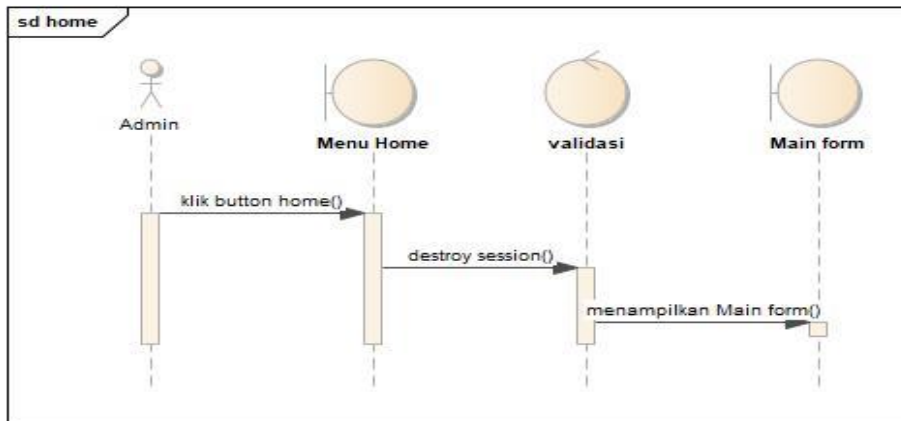
Activity Diagram

1. Login

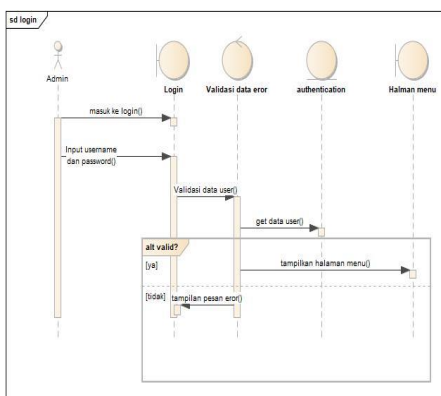


Sequence Diagrams

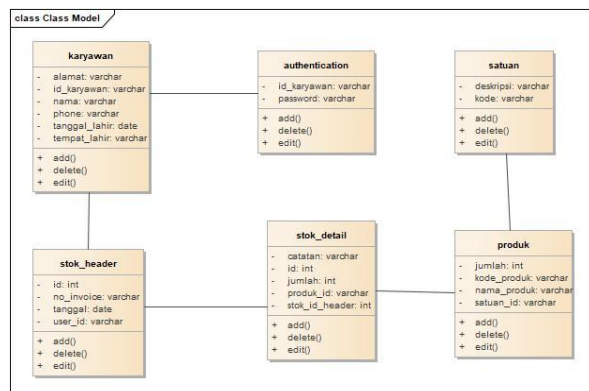
1. Login



Home



Class Diagram



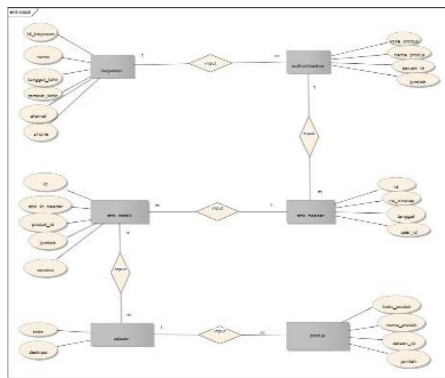
Normalization of 3 Diagrams

NF3				Tabel transaksi			
no_invoice	tanggal	user_id	produk_id	jumlah	catatan		
I001	16/04/2021	K001	P001	10	Masuk 10		
I001	16/04/2021	K002	P002	20	masuk 20		
I001	16/04/2021	K003	P003	30	Masuk 30		

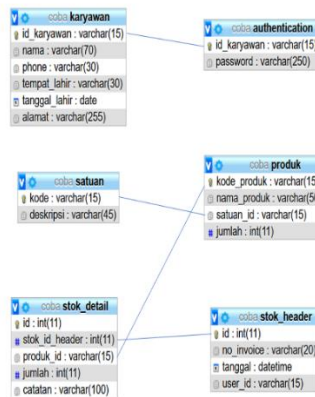
Tabel karyawan						tabel produk			
id_karyawan	nama	phone	tempat_lahir	tanggal_lahir	alamat	kode_produk	nama_produk	satuan_id	jumlah
K001	Abdul	081902889878	Jakarta	10/04/1997	Jl. Kramat Raya	P001	Beef Patty Frozen 45G	pc	219
K002	Adam	081908002404	Jakarta	19/04/1997	Jl.Hidup Baru	P002	Chix Slice 20Gr	pc	104
						P003	Chix SBB Strip	pc	1280

tabel header			tabel detail			
no_invoice	tanggal	user_id	stok_id_header	produk_id	jumlah	catatan
I001	16/04/2021	K001	1	P001	10	Masuk 10
			2	P002	20	Masuk 20
			3	P003	30	Masuk 30

Entity Relationship Diagram

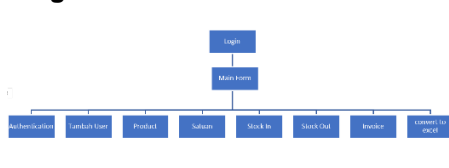


Logic Record Structure



User Interface

Diagram



Design Form

Login

Login

Silahkan Login

Username

Password

Play Form

Main Form

Authentication

Product

Stock In

Tambah Karyawan

Satuan

Stock Out

Invoice

Convert to excel

Authentication

Authentication

Id Karyawan

Password

List Karyawan

IdKaryawan	Password
Item One	
Item Two	
Item Three	

Add Edit

Delete

Home

1. Add User

Karyawan

Id Karyawan

Nama

NoTlp

Tempat Lahir

Tanggal Lahir

Alamat

List Karyawan

IdKaryawan	Nama	NoTlp	TempatLahir	TanggalLahir	Alamat
Item One					
Item Two					
Item Three					

Add Edit

Delete

Home

2. Product

Product

Kode Produk

Nama Produk

Satuan Id

Jumlah

List Produk

KodeProduk	NamaProduk	Kode	Deskripsi	Jumlah
Item One				
Item Two				
Item Three				

Add Edit

Delete

Home

3. Unit

Satuan

Id Satuan

Deskripsi

List Satuan

IdSatuan	Deskripsi
Item One	
Item Two	
Item Three	

Add Edit

Delete

Home

4. Stock In

Stock In Detail

Id

Stock In Header

Produk ID

Jumlah

Catatan

List Product

Id	StockInHeader	ProdukId	Jumlah	Catatan
Item One				
Item Two				
Item Three				

Add Edit

Delete

Home

Support Device Needs

1. Operating System Requirements

Operating systems that can be used to run this application include:

- Operating system (OS), Windows 10 64 Bit.
- Apache NetBeans IDE.
- XAMPP web server (localhost).

2. Hardware Requirements

Hardware that can be used to run this application, among others:

- a. Intel Processors
- b. Random Access Memory (RAM) DDR3 4GB
- c. 500GB Hard Drive
- d. Monitor
- e. Central Processing Unit (CPU)
- f. Printer
- g. Keyboard
- h. Mouse

4. Conclusions

From the report of the Inventory Information System Design Project at PT. PRIMA USAHA ERA MANDIRI for data collection, it can be concluded that:

1. The design of this information system is made because it is based on this background.
2. The design of this information system that has been made can be used in accordance with the flow for inventory of goods.
3. Computerization of the system is not a guarantee for the success of a goal, this is because the computer is only a means of support. In this case, the human role is prioritized as the person in charge of the system.

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