Information Systems Based on Customer Relationship Management for B2C Implementation (Case Study of PT. Maspar Engineering)

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Abstract. Customers are people who can provide huge profits for a company. The company hopes that their presence for customers can help the development of the company's efforts to encourage the progress of the use of computer technology by building an information system that can support better communication in the future. The selection of information system design development for the company is based on strategic and operational CRM using the RAD method, the design uses UML and the language used uses the Code Igniter Framework with result in accordance with B2C. The application built can make it easier for companies to interact with customers through the internet, web. So that what is the company's target for customers in terms of search, marketing and purchasing can be realized

Keywords: Information Systems; Customer Relationship Management; B2C Implementation

1 Introduction

The information system for a company is the initial foundation to be able to tie a company in marketing their products / services. Nowadays, the need for information technology, especially information systems for companies, is needed to provide convenience in terms of searching, ordering, selling and purchasing products / services from the company. Researchers hope that the freedom from the use of existing networks can have a good impact on companies to build information systems that were previously only conventional to become computerized in the sense of customers and companies do not have to directly meet face to face to carry out the process of selling or purchasing products / services. Researchers try to see needs that are tailored to company demands in terms of building information systems needed for customers through strategic and operational CRM with the results of applications using the Code Igniter PHP Framework.

2 Method

Research conducted using the RAD method from all its parts starting from business modeling, data modeling, modeling processes, application generation and testing of system applications that will be used.

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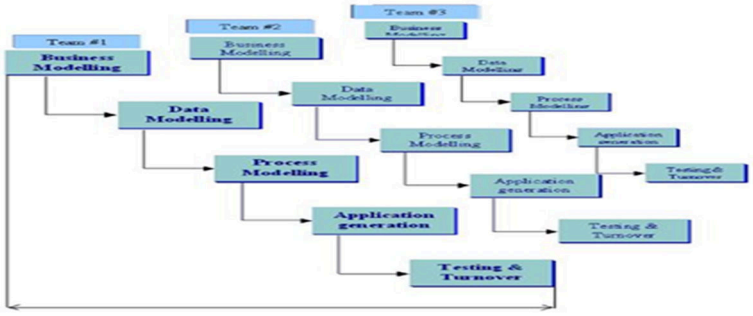


Fig 1. RAD Stages

The stages of RAD are as follows [1]:

a. Business Model
   Information obtained from the owner for a company that is running all activities are carried out manually not based on technology.
b. Modeling Data
   The use of information that is manual for the company becomes a data object to be converted into useful information to build a new system that can be run.
c. Process Modeling
   The information that has been collected becomes a data object that has been processed then a description of the process used to use UML is made.
d. Application Generation
   Applications built using the Code Igniter Framework so that the system built can run well by using the SQL Server database as a container for large data needs.
e. Testing & Turnover
   The use of components from applications that have been made has been tailored to the needs of the company to facilitate them in processing sales data management.

3 Result and Discussion

The use of the RAD method has been carried out as follows:

3.1 Functional System Requirements Analysis

a. The system created to manage data for companies is only devoted to the sale of products / goods which consists of a collection of master data (there is a process of adding data, editing data, and deleting data), namely product data, store data, contact data, and user data, sales data product items as well as reports from the sale of goods / products that can be printed.
b. There are 3 system users who are given access rights, each of which is given the authority according to the system's needs, namely 1. Admin, whose job is to fully manage the management of the system, 2. User AO, where the task can only manage sales data and sales report data, 3. Owner, can only see the results of the reports that have been made.

The schematic of user requirements can be seen in the table below:

Table 1. Admin (KAE) Requirement Table

No	Function	Access rights
1.	Manage Master Data (product data, store data, contact data, user data)	CRUD
2.	Manage Sales Data	CRUD
3.	Manage Report Data	CRUD

Table 2. AO User Requirement Table

No	Function	Access rights
1.	Manage Sales Data	CRUD

Table 3. Owner Requirement Table

No	Function	Access rights
1.	Manage Report Data	Read

3.2 Non-Functional Needs Analysis

Needs analysis for application development is:

Table 4. Application Development Needs

No	Hardware	Software
1.	a. PC Laptop Processor Core i3	a. Microsoft Windows 10
	b. RAM 3 Gb	b. Adobe Dreamweaver CS5
	c. HDD 120 Gb	c. SQL Server 2008 R2
	d. Mouse	d. XAMPP 3.2.4
	e. Printer	e. Google Chrome
	f. Flash disk	

Table 5. Application Implementation Needs

No	System	Server Computers	Client Computers
1.	Hardware	a. PC Core i7	a. PC Dual Core, 2 Ghz
		b. RAM 4 Gb	b. RAM 2 Gb
		c. HDD 240 Gb	c. HDD 120 Gb
		d. Mouse	d. Mouse
		e. Keyboard	e. Keyboard
		f. Monitor LCD 21’	f. Monitor LCD 14’
		g. Printer	g. Printer
2.	Software	a. Windows 7	a. Windows 7
		b. Xampp 3.2.4	b. Google Chrome
		c. Google Chrome	

3.3 RAD Design

System design using use case diagrams:

a. Use Case diagram

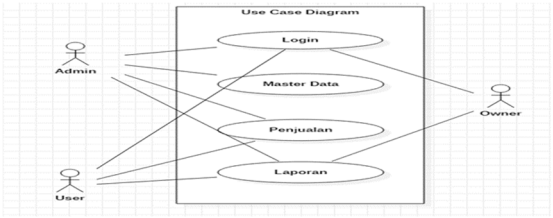


Fig 2. Use Case Diagram

b. Class Diagram

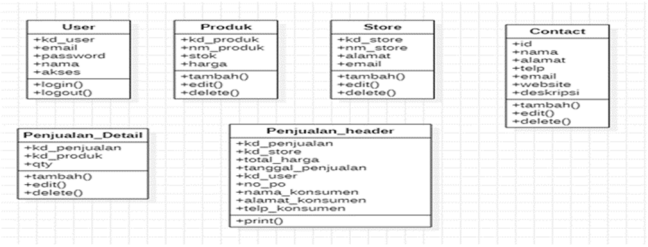


Fig. 3 Class Diagram

c. Activity Diagram

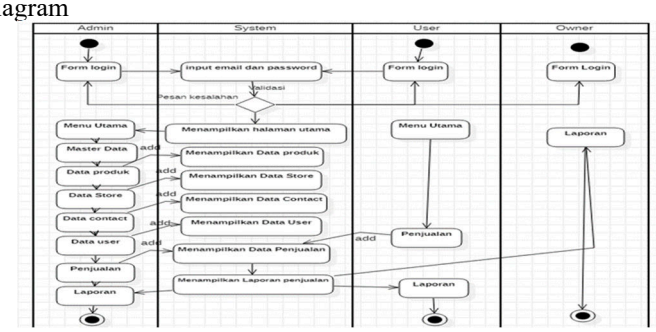
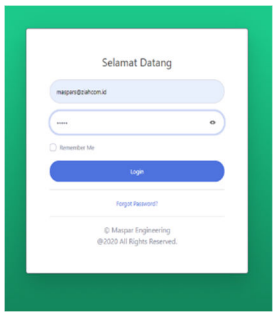


Fig 4. Activity Diagram

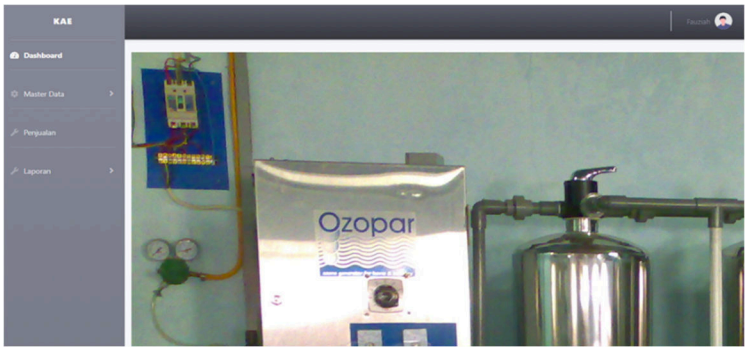
d. Implementation

After doing the system design, the system is implemented into the Code Igniter Framework programming language.

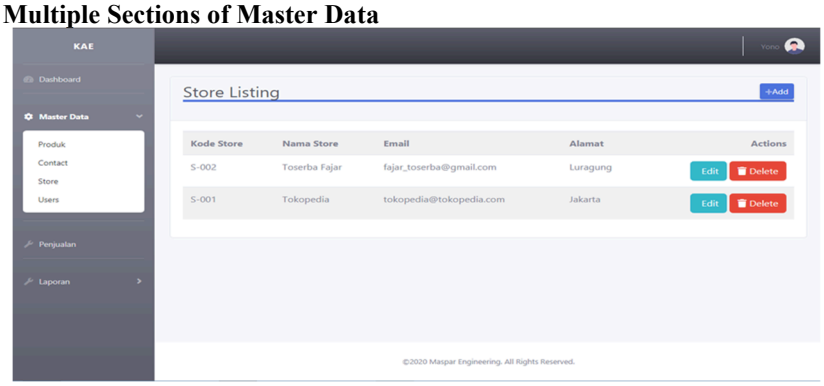
Form Login



Dashboard View



View of Multiple Sections of Master Data



4 Conclusion

The conclusion of this research is that the information system created for sales management can be used to improve manual sales, where the data needed to be managed is already running well.

References

[1] Pressman, Roger S. (2007). “Rekayasa Perangkat Lunak: pendekatan praktisi (Buku1)”. Beizer, B. (1995). Andi: Yogyakarta.