



Point of Sales Application Development at Worm Store Workshop

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ABSTRACT

Workshop/Mobile Store Worms Store is a store that sells various brands of Mobile. This shop has been established for 5 years and continues to grow until now. Unfortunately, this development is not followed by developments in the store's sales and marketing system. Incoming data collection system used for this still use the application of data processing manually that is using handwritten in bookkeeping. It is considered less effective and efficient in supporting the productivity of employees in it. From the problem raises the idea to create a web-based application, Customer Relationship Management (CRM) is integrated with point of sales. The methodology used in making this application is Spiral method. The programming language is PHP and HTML. To view using CSS and JQuery. The database uses MySQL. Tools and Editor used is XAMPP for Windows, Photoshop, Sublime text 3. With the application of Point of Sales Web-Based is expected to facilitate administrators in managing the goods so that the results of reporting data can be known easily, quickly and accurately.

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1. INTRODUCTION

Along with the development of the world of computers and mobile phones is growing rapidly, especially in Indonesia, which is a developing country. Therefore, Indonesia must be able to compete with other developed countries to keep up with the times. The development of information technology makes various activities in human life evolve.

This dynamic condition gave rise to breakthroughs in information systems as an answer to the old system. The old system that was done conventionally began to be abandoned and switched to a computerized system, which was felt to be faster and more accurate in delivering information and processing data in the system. Submission of information has a very important role for every company, especially in companies that have a high level of routine and have data that must be processed. The use of information systems to help organizational performance is increasingly needed. Supported by the sophistication of information technology, it has enabled the development of an increasingly reliable information system. Information is one of the important resources in

modern management. Many strategic decisions depend on information. Worm Store is a company engaged in the sale of gadgets. The products sold by the Worm store are various well-known brands of cellphones and accessories. There are various cellphone products such as Android and iOS as well as various other cellphone accessories. The services provided by this company are more emphasized on the use of information technology. One example is information technology that is capable of managing various financial reports, managing company data and other data needed by the company. Information technology itself is a technique for collecting, preparing, storing, processing, analyzing and disseminating information. There are several factors that hinder the company so that it is difficult to implement information technology, one of which is because human resources have difficulty in adjusting to the growing information technology.

Based on the results of observations and interviews with the author and the owner of the Worm Store Workshop, the transaction process and data entry and exit have been computerized. Data - data about goods and transactions are in a database with a web-based Point Of Sale application program. However, the application still has drawbacks, namely the absence of customer data features needed for promotional media. In addition, there is no supplier data feature in the Point Of Sales (POS) application. For example, supplier data problems are still done manually by handwriting and the reports generated from the system have not met the company's needs.

Therefore, a company data processing concept is needed with the features of processing goods data, customer data, supplier data, transaction data and sales reports as needed in the Worm Store Workshop. Based on the explanation above, the author is interested in conducting research in the framework of a thesis with the theme "Development of Point of Sales Applications at the Worm Store Workshop" to improve the application which is felt to have many shortcomings. The hope of this research is that this final project can provide a solution as a problem solver for the shortcomings of the Point of Sales (POS) application that is running at the Worm Store Workshop.

2. RESEARCH METHOD

2.1 Data Collection Method

a. Interview

Interview is a collection of data by way of questions and answers conducted by the author with the company. Researchers conducted interviews at the Worm Store Workshop to find out the complex problems faced and the application development process that was running or used by the company.

b. Obsevasi

Observation is an observation that aims to obtain data about a problem, so that an understanding or proof of the information/information obtained previously is obtained.

2.2 System Development Method

System development method in this study uses the spiral method. The spiral model is an improvement from the waterfall model and prototyping technique. The spiral model combines the advantages of the waterfall model and prototyping techniques by including risk analysis activities.

3 RESULTS AND DISCUSSIONS

3.1 Communication

The results of interviews with customers to get all information related to the processes that are running in the company. The process is described through use case diagrams and activity diagrams.

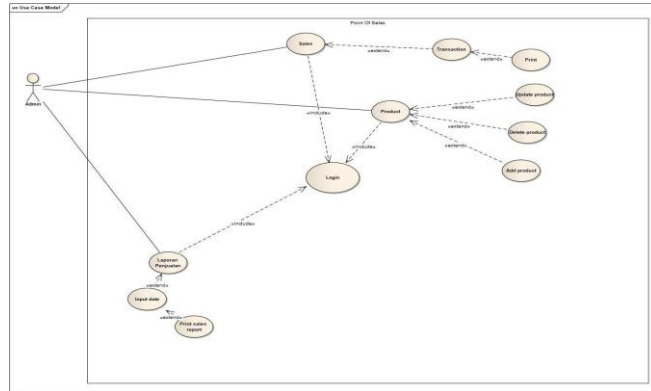


Figure 1 Use Case Diagram Running System

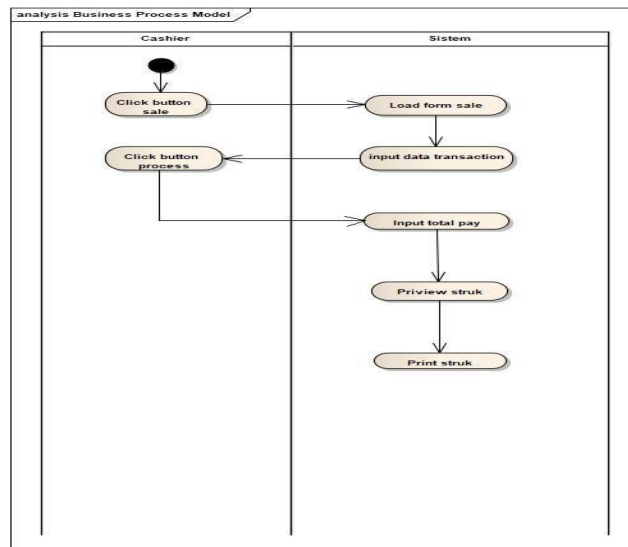


Figure 2 Activity Diagram Use Case Sale

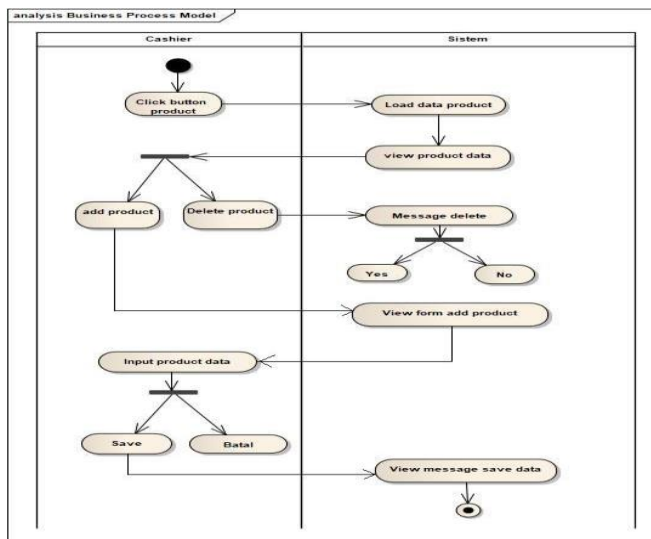


Figure 3 Activity Diagram Use Case Product

3.2 Risk Analysis

At this stage, a risk analysis of the functional requirements needed in making the system is carried out. The menus that will be designed by the author are as follows.

Tabel 1. Risk Analisis Point of sales Application Development

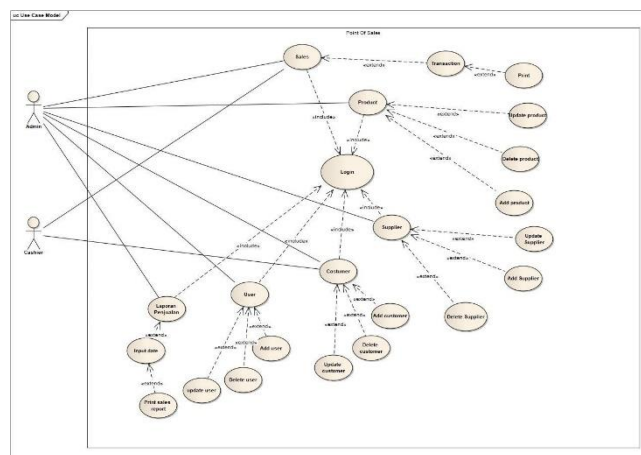
Activity	Risk
Changing Login Function	1.Change the whole code and databases. 2.Requires more time
Adding Supplier Function	1.Change the whole code and databases. 2.Requires more time
Adding Customer Functions	1.Change the whole code and databases. 2.Requires more time
Adding sales report attributes	1.Change the whole code and databases. 2.Requires more time

3.3 Engineering

System design is made as a stage to prepare the desired system implementation process and to clearly describe the processes desired by the user. In accordance with the approach method used in the object oriented approach, the method used to describe all processes and objects is the Unified Model Language.

a. Use Case Diagram

Use case diagrams describe an interaction between one or more actors and the system will be designed.



Gambar 4 Use Case Diagram Proposed System

b. Login Menu Display

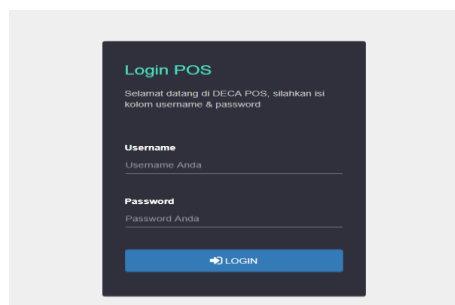


Figure 5 Login Menu

c. Admin Main Menu Display

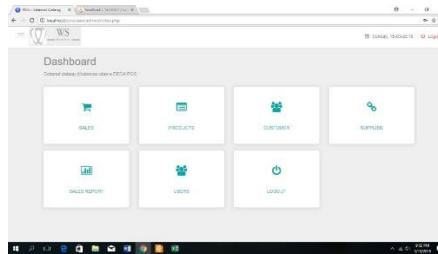


Figure 6 Admin Main Menu

d. Sale Menu Display

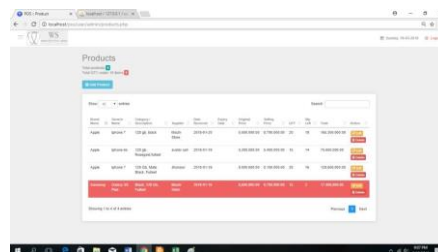


Figure 8 Main Menu Product

e. Display the Customer Main Menu

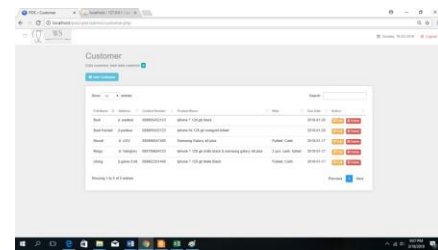


Figure 9 Customer Main Menu

f. Display Main Menu Supplier

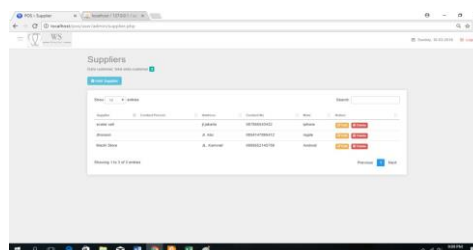


Figure 10 Main Menu Suppliar

g. Main Menu Display Sales Report

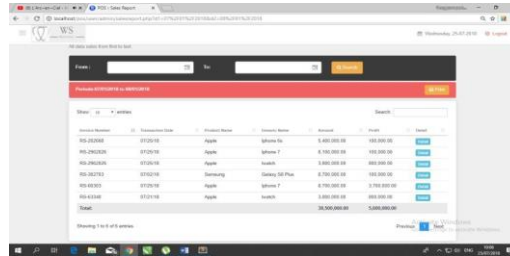


Figure 11 Main Menu Sales Report

3.4 System Testing

System testing is an important part of the software development cycle. Testing is done to ensure the quality and find out the weaknesses of the software. The purpose of this test is to ensure that the software that is built has reliable quality, which is able to present the main study of the specifics, analysis, design and coding of the software itself.

The test criteria are intended to determine the correctness of the software and compliance with the specifications declared successful if the application is able to carry out the functions based on the specifications correctly. On the other hand, the test is declared failed if there is a function of the software in the specification that cannot be executed in the testing process. Testing this software using the Black Box method. Black Box testing focuses on the functional requirements of the software created. The following is the software testing conducted by the author:

Table 2. Test plan

No	Test Class	Test Items
1	Login System	Checking data entry and validation appropriate users.
2	Logout System	Checking out of the information system.
3	Data User	Checking, filling, deleting, appropriate data changes.
4	Data Customer	Checking, filling, deleting, appropriate data changes.
5	Data Supplier	Checking, filling, deleting, appropriate data changes.
6	Data Sales	Checking, filling, deleting, appropriate data changes.
7	Data Sales Report	Checking, filling, deleting, appropriate data changes.

Table 3. Testing System Login

Needs	Scenario	Expected results	Test result
Login system	Fill in the username and password (Correct)	Enter the system according to the section	<input type="checkbox"/> Accepted <input type="checkbox"/> Denied
	Isikan username dan password	Tidak masuk kedalam sistem & menampilkan pesan kesalahan	<input type="checkbox"/> Accepted <input type="checkbox"/> Denied

Tabel 4. Pengujian Logout Sistem

Needs	Scenario	Expected results	Test result
Logout	Push the	Exit the	<input type="checkbox"/>

system	button logout	information system and return to start menu	Accepted [] Denied
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Tabel 5. Pengujian Data User

Needs	Scenario	Expected results	Test result
Save user data	Fill in the user data, username, password, display name, and Position	Save and upload data into a database on the server	[] Accepted [] Denied
Change user data	Select the change user button, fill in the new data then Save	User data changes are appropriate and stored in the database	[] Accepted [] Denied
Delete user data	Select the delete user button	Data deleted from database and is not displayed by the system	[] Accepted [] Denied

Tabel 6. Pengujian Data Customer

Needs	Scenario	Expected results	Test result
Simpan customer	Fill in your name, address, contact, product name, note, expected date	Save and upload data into a database on the server	[] Accepted [] Denied
Change customer data	Select the change customer button, fill in the new data then Save	User data changes are appropriate and stored in the database	[] Accepted [] Denied
Delete customer data	Select delete button	The data is deleted from the database and is not displayed by the system	[] Accepted [] Denied

Tabel 7. Pengujian Data Supplier

Needs	Scenario	Expected results	Test result
Save supplier	Fill in the data, Supplier name, address, contact person, and Note	Save and upload data into a database on the server	[] Accepted [] Denied
Change supplier data	Select the change supplier button, fill in the new data then Save	User data changes are appropriate and stored in the database	[] Accepted [] Denied
Delete supplier data	Select delete button suppliers	The data is deleted from the database and is	[] Accepted []

not displayed by Denied
the system

Tabel 8. Pengujian Data Product

Needs	Scenario	Expected results	Test result
Save product	Fill in the brand name, product name, purchase price, selling price	Save and upload data into a database on the server	<input type="checkbox"/>] Accepted <input type="checkbox"/> Denied
Change product data	Select the change product button, fill in the new data then Save	User data changes are appropriate and stored in the database	<input type="checkbox"/>] Accepted <input type="checkbox"/> Denied
Delete product data	Select delete button	The data is deleted from the database and is not displayed by the system	<input type="checkbox"/>] Accepted <input type="checkbox"/> Denied

Tabel 9. Pengujian Data Sales Report

Needs	Scenario	Expected results	Test result
View sales report	Select transaction date	Display sales reports by selected date	<input type="checkbox"/>] Accepted <input type="checkbox"/> Denied
Print Report sale	Select the print button	The report will be printed based on the date chosen	<input type="checkbox"/>] Accepted <input type="checkbox"/> Denied

4 CONCLUSION

Based on the results of writing the final project that has been described in the previous chapters, the following conclusions can be drawn: With the database in this system separate data can be interconnected so that it can facilitate and support transaction activities in the company starting from recording, calculating, managing and making reports. In this application there is customer data storage and which serves as a promotional medium. This application has been updated by adding a profit report to the previous report function. There is a user data management function in running this application.

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