SALES INFORMATION SYSTEM USING THE WEBSITE-BASED RECOMMENDATION FEATURE TO IMPROVE PRODUCT SALES AT SANJAYA STORE

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Article Information	Abstract

The Sanjaya shop is a shop that sells various kinds of machines such as pumps, diesel and many more. Sales of their products are still carried out offline, recording of stock items and prices of goods are still manually recorded in a special book by the owner so that it consumes a lot of paper and also space. The development of information systems is very rapid, many have used information systems to help ease work.

This research was created to assist the store in inputting goods, monitoring inventory, sales reports. In addition, the system created has a recommendation feature for buyers based on the best-selling items. This study uses the prototype model as a method for system development. In making the system the author uses PHP and HTML and MySQL as a database.

The results of this study can be concluded that the average before using the system is 31.7437 minutes, while the average after using the system is 11.0627 minutes and testing the benefits obtained with excellent results, namely usability of 95.5%, learnability of 97, 7% and the efficiency is 98.9%. From the results that have been obtained, it can be concluded that the Sales Information System Using Website-Based Recommendation Features to Increase Product Sales at Sanjaya Stores can be used properly. With this system, it is expected to be able to assist in the efficiency and effectiveness of recording the stock of goods and sales at the Sanjaya Store.

INTRODUCTION

1.1. Background

Problem The development of Information Systems is now very fast, not a few people who have used Information Systems to help ease the work. Information systems that are currently widely used and easy to develop are Web-based Information Systems.

Inventory is goods or materials stored that will be used to fulfill certain purposes. Every shop/company that carries out business activities generally has inventory. Its existence is not only considered a burden because of waste, but at the same time it can also be considered as wealth that can be disbursed in cash. Inventory management system is a control policy to determine the level of inventory that must be maintained. If the amount of inventory is too large, it can result in large idle funds and high storage costs. Conversely, if there is too little inventory, there is a risk of a shortage of inventory because often goods cannot be brought in suddenly and as much as needed, so that it can cause sales delays and even lost customers. Sales is an effort to develop strategic plans that are directed at satisfying the needs and desires of buyers in order to get sales that generate profits. Online sales are sales activities from looking for prospective buyers to offering products or goods by utilizing the internet network supported by a set of electronic devices as a liaison with the internet network. Sanjaya shop is a shop that sells various kinds of machines such as water pump machines, tractors, milling machines, diesel and many other machines. In selling its products, Toko Sanjaya still sells offline. In addition, Toko Sanjaya in recording the stock of goods and the price of goods is still done manually, which is recorded in a special book by the owner so that it takes up a lot of paper and also space to store it. Not only that, inventory of goods is also often missed to stock the types of goods needed.

In addition, customers sometimes do not understand what size or complementary items are suitable for the machine and needs. In addition, there is also a Recommendation feature where the store will recommend the item you are looking for by looking at the percentage of sales of an item so that it can help buyers choose the item they are looking for.

With the above problems, the author will create a system for inventory to assist in efficient and effective recording of stock items and there will also be a feature for buyers where buyers will get recommendations for what goods are needed with a system entitled "INFORMATION SYSTEM SALES USING FEATURES WEBSITE-BASED RECOMMENDATIONS TO INCREASE SALES PRODUCTS AT SANJAYA SHOP".

1.2 PHP

PHP (Hypertext Preprocessor) is a programming language that can be used to translate program code into machine code that can be understood by computers (Supono, 2018).

1.3 Recommendation

The Recommendation System is a system that provides recommendations for goods according to the needs of buyers by predicting a number of items or data for buyers, then being used as a recommendation for the top item (Dewa Prasetya, 2017).

1.4 Sales

Sales is the purchase of goods or services from one party to another as a source of income received (Sumiyati, 2019).

1.5 Blackbox Testing

Blackbox testing is a test that is based on the appearance and functions of the application without seeing and testing the program code (Haryanto, 2019).

1.6 Whitebox Testing

Whitebox testing is a test that tests the program code whether it can produce input and output that meets the needs (Hadiprakoso, 2020).

METHODS
2.1. System Development Method

In this study, researchers used the prototype model as a method for system development. By using the prototype method the system development process will be faster.
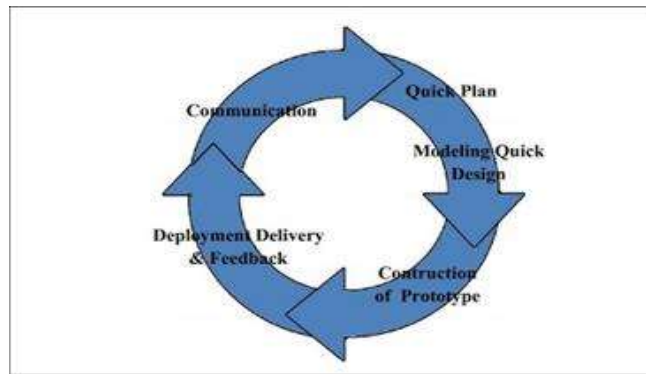

Figure 1. Illustration of Prototype Method

2.2. Needs Collection

Developers and customers identify system-wide requirements together

2.3. Product Design

Create an overview of the system created so that users can easily understand. The author conducts analysis and design design using use case diagrams.

Figure 2. General Use Case
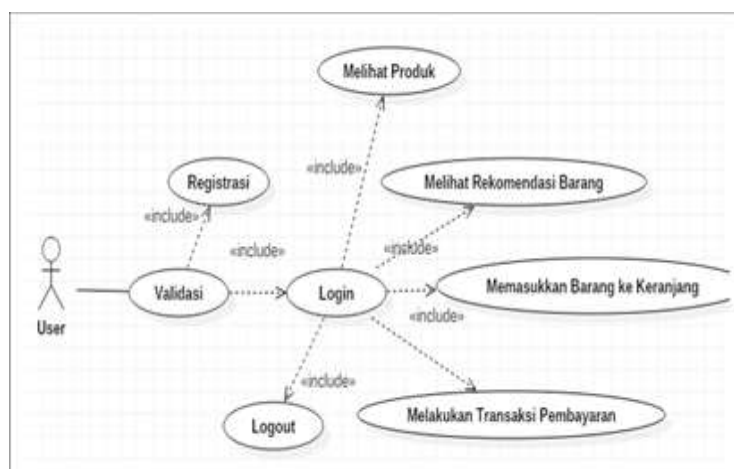
Figure 3. Use Case User
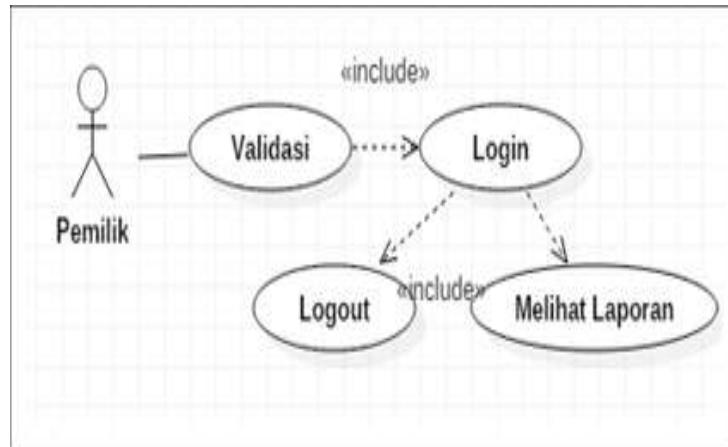
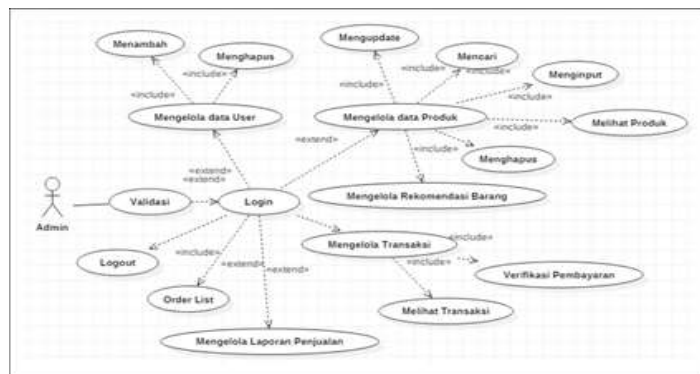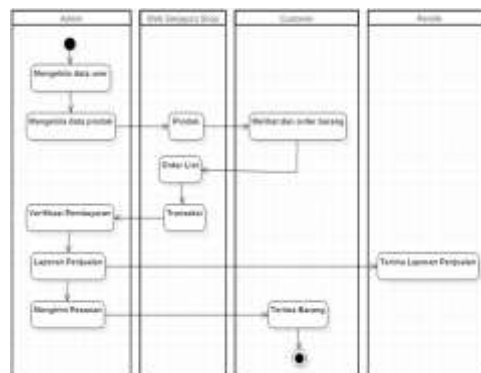Figure 4. Use Case Owner

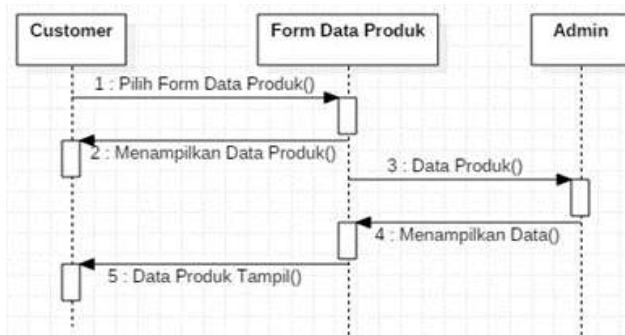Figure 5. Use Case Admin

Figure 6. Activity Diagram
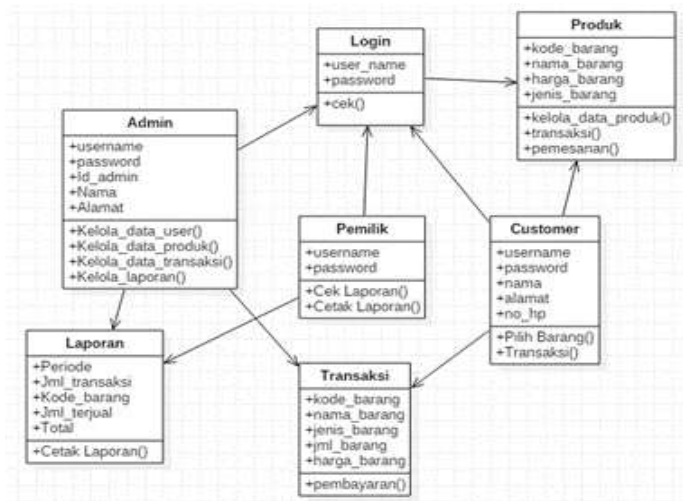

Figure 7. Sequence Diagram of Product Data
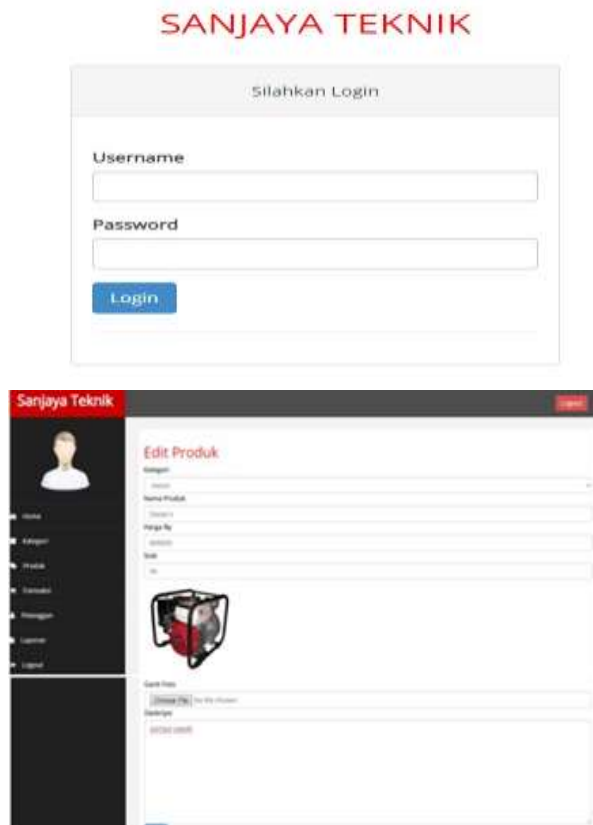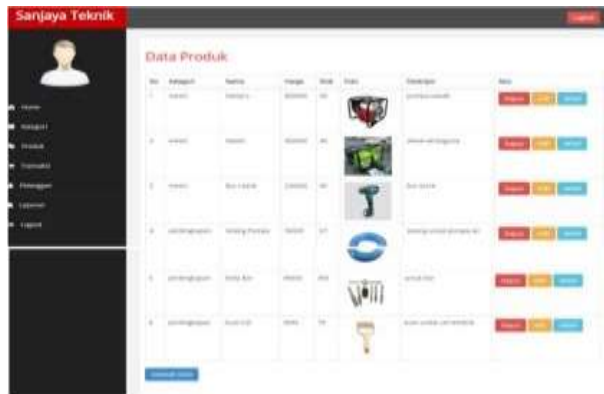
Figure 8. Class Diagram

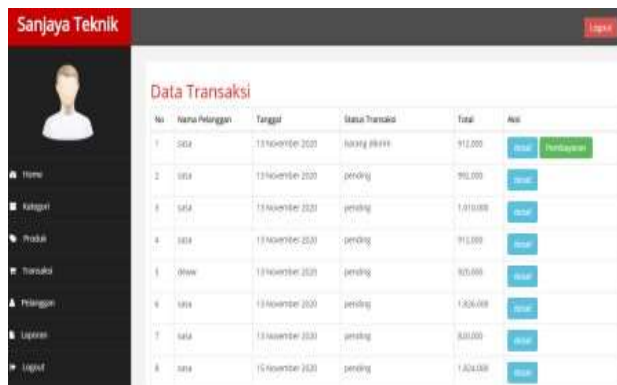## RESULT AND DISCUSSION
3.1. System Development Results

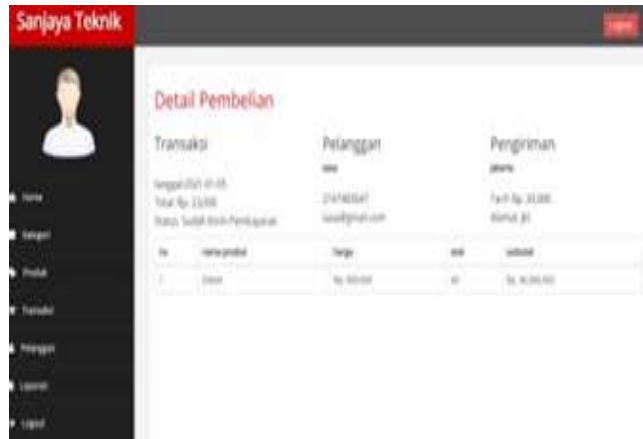### 3.2. Product Edit Menu

3.3. Menu Details
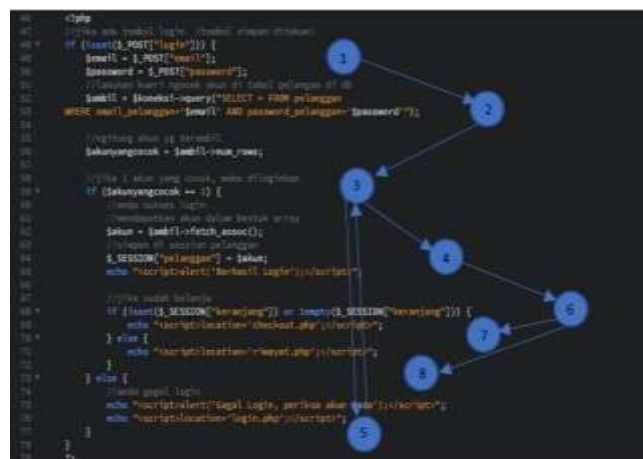

3.4. Category Pages
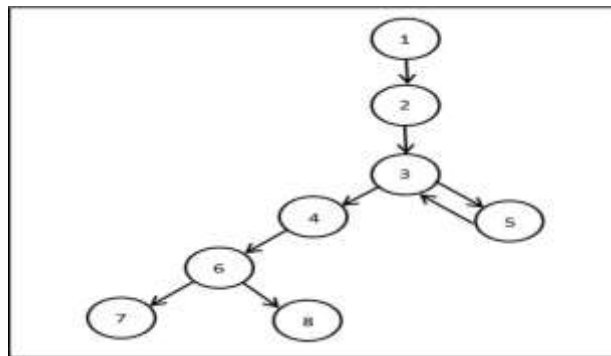
3.5. Menu Add Category

3.6. Payment Menu

3.7. Whitebox Testing System Test

3.8. Testing Process Flowgraph

Login Process Flowgraph Based on the flowgraph above, to calculate the cyclomatic complexity using the formula $V(G) = E - N + 2$. So the calculation of the cyclomatic complexity is as follows: $V(G) = 8 - 8 + 2 = 2$. Based on the sequence of plots, we get 3 paths as follows: 1. Path 1 = 1-2-3-5-3-4-6- 7 2. Line 2 = 1-2-3-5-3-4-6-8

3.9. Blackbox System Test

No	Input	Fungsi	Pengujian	Output	Hasil
1	Login	Validasi Masuk Sistem	Mengosongkan username atau password kemudian klik tombol Login Test Case :	Sistem akan memunculkan peringatan "Gagal Login, Silahkan Periksa Akun Anda" Hasil Pengujian:	Berhasil
2	Login	Validasi Masuk Sistem	Mengisi username dan password dengan benar kemudian klik tombol Login Test Case :	Sistem akan menerima akses login dan masuk kedalam halaman utama Hasil Pengujian :	Berhasil

3.10. Benefit Test Recap

Usability (Mudah Digunakan)	Kriteria	Pertanyaan			Rata-rata
		P1	P2	P3	
	S	53,3%	63,3%	53,3%	
	SS	46,7%	30,0%	40,0%	95,5%
Total		100%	93,3%	93,3%	
Learnability (Mudah Dipelajari)	Kriteria	Pertanyaan			Rata-rata
		P4	P5	P6	
	S	60,0%	63,3%	60,0%	
	SS	40,0%	30,0%	40,0%	97,7%
Total		100%	93,3%	100%	
Efficiency (Efisien)	Kriteria	Pertanyaan			Rata-rata
		P7	P8	P9	
	S	40,0%	56,7%	40,0%	
	SS	56,7%	43,3%	60,0%	98,9%
Total		96,7%	100%	100%	

CONCLUSIONS AND SUGGESTIONS

4.1. Conclusions

The results of research on Sales Information Systems Using Website-Based Recommendation Features To Increase Product Sales At Sanjaya Stores, it can be concluded that the average before using the system is 31.7437 minutes while the average after using the system is 11.0627 minutes and testing the benefits obtained with very good results, namely usability of 95.5%, learnability of 97.7% and efficiency of 98.9%. From the results obtained, it can be concluded that the Sales Information System Using the Website-Based Recommendation Feature to Increase Product Sales at the Sanjaya Store can be used properly.

4.2. Suggestions

Suggestions For further research, the authors provide useful suggestions that can develop a sales system at Sanjaya Teknik, namely developing the system into android, developing the system display to attract more customers' attention, adding the name of the goods that have been purchased by the customer in the sales report, and adding other features. such as bold letters on item descriptions, payment methods, notifications when purchasing transactions and the choice of shipping services

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