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Designing Application for Online Shopping

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Abstract. This research aims to design an online store to attract consumers' attention because it can facilitate the buying and selling of products, transactions, and ordering of an item and increase people's interest in online shopping. The waterfall approach was the method used in this research. It is a linear methodology of software development, in which improvement is seen as continuing to trickle down through the stages of design, modeling, execution (construction), and testing as a waterfall. The results show that a quality product design can increase brand awareness and quality because consumers and potentially new consumers trust. In online marketing, it can trigger a business in any field in cyberspace. Therefore, website development is also important for business competition and promotes products from placing orders, seeing what items are sold, product names, prices, and product stock. The conclusions obtained in this study are the design of an attractive and quality online store design plays an important role in attracting buyers and increasing sales of a product. With the help of promoting products online, products can be sold worldwide and increase the seller's profits.

Keywords: online shopping, application, online store

1. Introduction

With the development of times and technology that is developing rapidly, the internet is one of the special factors for obtaining information, especially for traders anywhere to promote their products, such as in selling products [1]. With technology, people who trade using direct methods must start learning and marketing via the internet to support the buying and selling process [2]. since customers tend to quickly and conveniently make purchases without trying to get to the supermarket. [3]. Another reason this business moved online was the emergence of competition and traction. However, the influencing factor is consumer needs in shopping [4].

In previous studies, many discussed online-based shops [5]. Online shop business is very profitable and does not take much time to develop [6]. However, unfortunately, no one has made a special system design for private online stores like ours in previous studies. It is what

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prompted us to create tIa special information system for private online shops. With this attraction, beginners who learn and dare to do business in the internet world see various available information and create their online shop [7]. Therefore, the current research is designing an online shop that is centered on a private shop so that it can improve the quality of the shop and be able to compete with other markets [8,9].

The goal of this research is to create an online store concept to draw customers. Based on our research, this design's development is important for business competition, especially in today's trade, because transactions are carried out starting from ordering products, seeing the number of products, product name data, product prices, and what is being sold [9,10]. The waterfall approach is the methodology used in this research. It is a linear methodology of software development, in which improvement is seen as continuing to trickle down through the stages of design, modeling, execution (construction), and testing as a waterfall.

2. Method

The research used the waterfall method. This method is used to develop a system - software, because it has a regular flow starting from analysis, design, coding, and testing. Using Unified PHP programming language, Modeling Language, and MySQL databases, the framework is built (See Figure 1).

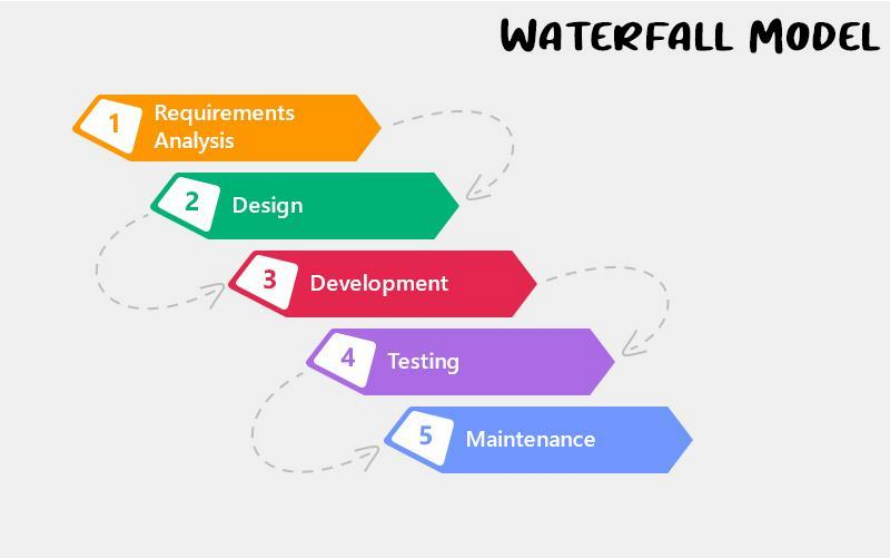

Figure 1. Waterfall Method.

a. Requirement analyst

At the analysis stage, direct communication is needed, which aims to be able to understand better the system that the user wants to create and can understand quickly. The information gathered may typically be evaluated by interviews or direct surveys to acquire users' data.

b. System Design

In this phase, the previous phase's criteria will be analyzed, and the system configuration is scheduled. Device design helps identify the hardware and system requirements and explains the overall system's architecture.

c. Implementation

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In small programs called modules, which are introduced later, the architecture is designed first. For the features known as device testing, each unit is built and evaluated.

d. Integration & Testing

In the wake of every unit's testing, all units created in the usage cycle are actualized into the framework. After incorporation, the entire framework is tried to search for any disappointments or missteps.

e. Operation & Maintenance

In the final step of the model waterfall, the completed software is run and preserved. Maintenance involves error correction that was not observed in the previous phase. Improved system unit deployment and improved system services as new specifications.

3. Results and Discussion

In the context of Use Case Diagrams, the initial stage of developing this system is to construct an ordering system. Consumers may pick items to be bought, and the owner makes a list of products and sends them to the retailer. It is where the activities are carried out, namely the owner and the buyer. The owner works to manage logins, edit the stock of goods, receive payments, and confirm payments. Moreover, buyers as actors who can buy goods must log in first to gain access to buy goods (See Figure 2).

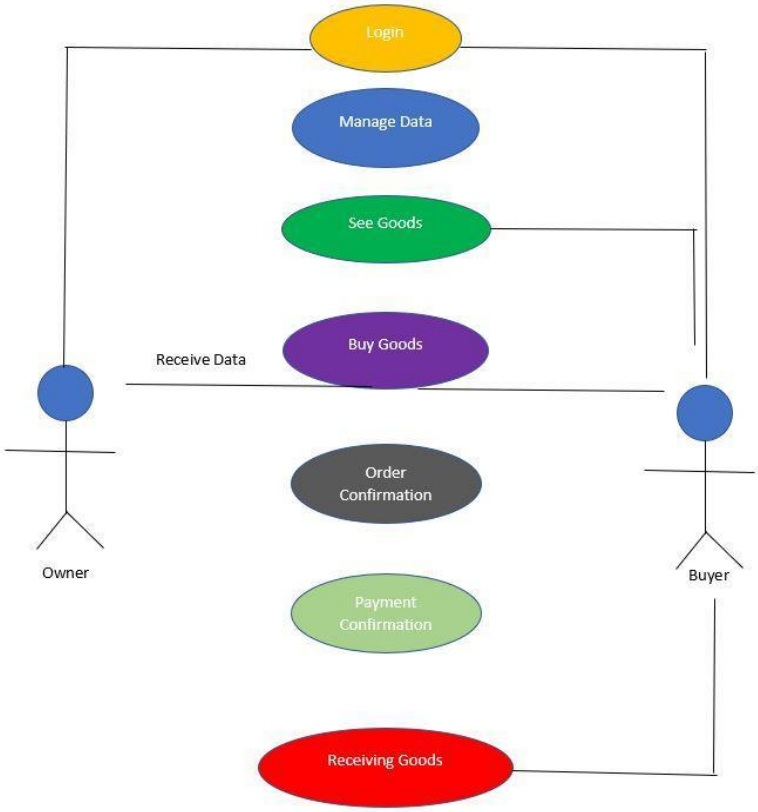

Figure 2. Use Case Diagram

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In this Class Diagram, 2 actors carry out activities. There are 2 ways admin and buyer, where the admin functions to monitor or supervise the website to log in. The admin can also repair stock items, receive payments, confirm payments, and buyers logged in will see the desired item in the store, then make a payment and, when it is finished waiting for the item to arrive. (see Figure 3).

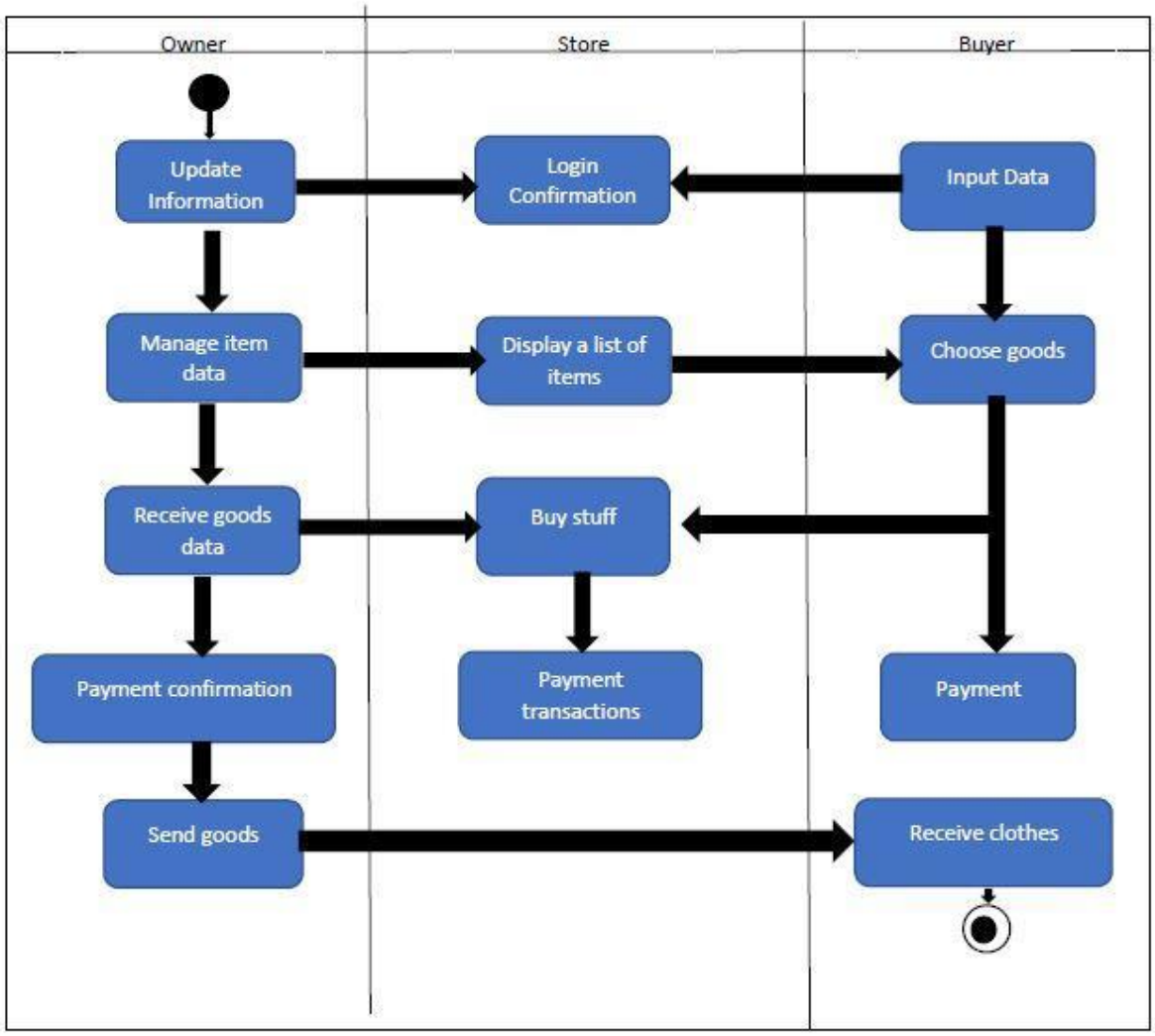

Figure 3. Activity Diagram

A design, especially a web design, must require a programming language, which must make the basic elements of coding the beginning of making or designing a web. The basic design is shown in Figure 4.

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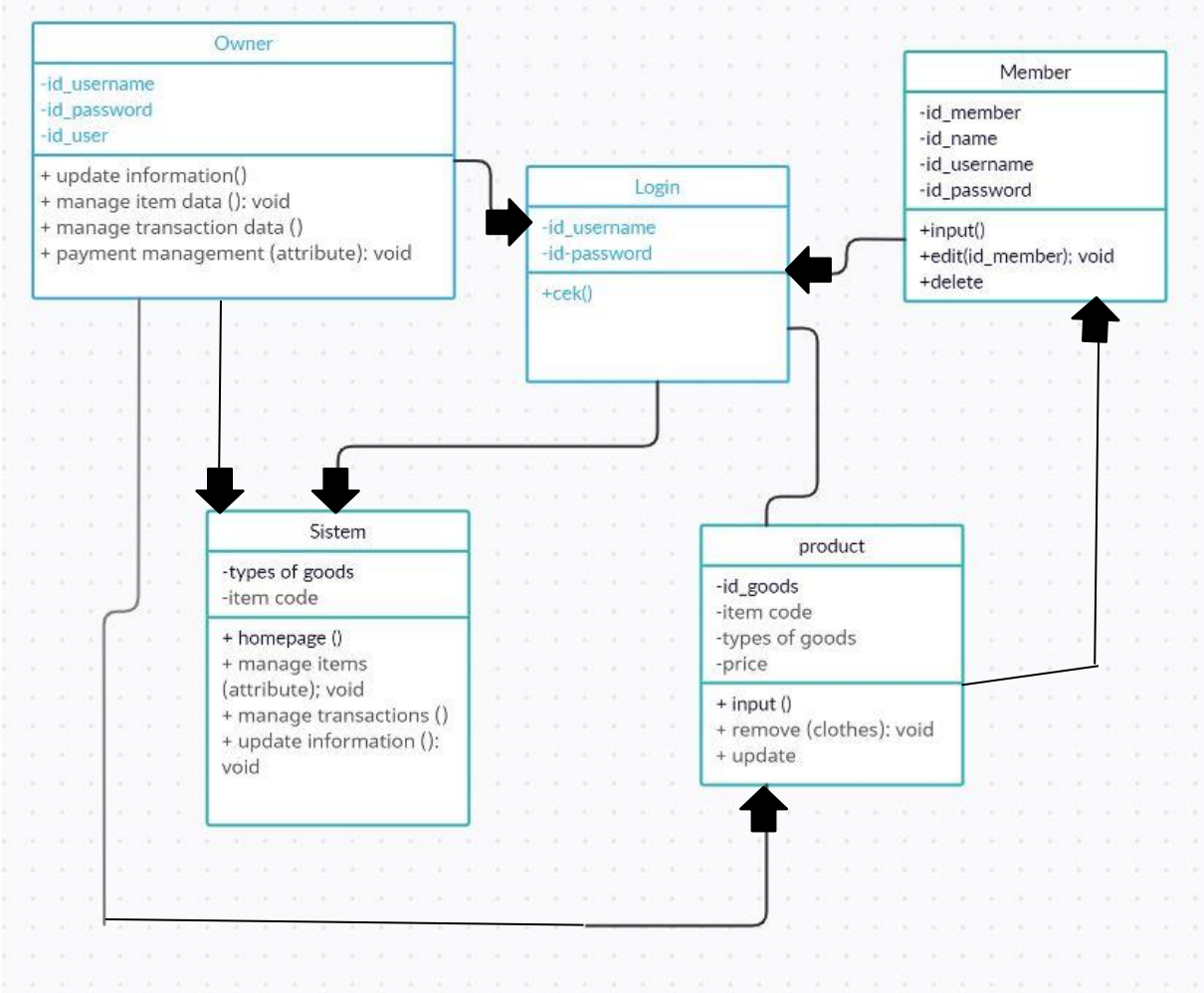

Figure 4. Class Diagram

According to Figure 4, the owner part has three attributes, consisting of a username, which means that all admins must have a username to enter the password system so that the account is safe and the user's name is a name or identity. Moreover, the function of this method is updating information, storing data storage, and payment. Then the login section has two attributes, consisting of a username and password. The username and password here, before entering the system or shop, you must first enter the system or shop, you must first be able to access and can enter the web store then you can make purchases [11]. The member's section has four attributes: members, username, name, and password, which can be used as a buyer or member who purchases at the store. The function of the member method is to be able to update the data that is in the store. Go to the system section with three attributes: the admin can check goods by entering the code name for new items and checking the availability of goods in the shop. The product section has four attributes: item id, item code, item type, and price. What can be used as the goods' identity to make it easier for the store admin to manage them?

The last one is design analysis, creating a store for a store to use as an online shop. It is to facilitate sales and promotion, especially to attract many buyers to the store because an online-based store will make it easier, and sell it will be crowded because of consumers' attractiveness

[11-13]. The online shop is easy to access via the internet, so you do not have to come directly to the store. It allows us to visit the webshop, click, get goods, make transactions, complete.

4. Conclusion

The data collected shows that consumers want a sales system that is attractive and easy to use because the website can make shopping easier and is used as a marketing tool for business people. The increasing number of purchases of a store only with online businesses, because it is easy to do and at the same time is its main attraction because online businesses that are easily accessible through social media can attract buyers.

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