

## Development E-Commerce Applications

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**Abstract:** Buying and selling activities carried out electronically have now become delightful activities for many people. Also called online shopping, this is considered to make it easier for sellers and buyers and seems more practical. Not only making online shops in various types of shopping applications, but many business actors also create e-commerce themed websites to expand their sales network of products and services. For website creation, many templates can be used, one of which is Prestashop CMS, which is an e-commerce platform used to build online store sites. In Prestashop, there are already many features that can be used, and it also makes it easier for users to build the website they want to create. Even though many people have switched to online shop users. But there are too many shops or malls that they still visit directly to see first hand the quality of the desired goods.

**Keywords :** Applications, Business, Development, E-Commerce, System

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### 1. Introduction

A shopping center or supermarket is a place where everyone can look for clothing, food and household equipment needed. There are various kinds of shops selling their products and they are arranged as attractive as possible so that consumers can come to the stalls. Every shop that has a stall in a mall or supermarket, of course, has an income target to pay for land rent and pay its employees. Store rental tax which is quite high sometimes makes shop owners have to increase the price of their products, this is sometimes not understood by all consumers who make malls and supermarkets their source of needs.

The development of technology and information is currently attracting people's attention, with the times and the sophistication of the internet making everything easy and practical. This makes innovators make changes for economic and business development that everyone can enjoy, both from the seller and the buyer side. With sufficient facilities and equipment, E-commerce was born as a means of buying and selling which makes buyers and sellers more efficient in terms of sales and payments.

E-commerce has changed the classic business paradigm by growing interaction models between businesses and buyers in the virtual world. The principle of trading with a classic payment system that someone knows is trading where sellers and buyers meet physically or directly have now changed to the concept of telemarketing, namely long-distance trading using the internet media, where a trade no longer requires meetings between business people regularly. physical. The trading system used in e-commerce is designed to sign electronically.

The trading system used in e-commerce is designed to sign electronically. Electronic signing is designed from the moment of purchase, inspection, and delivery. Therefore, the availability of correct and accurate information about buyers and companies in e-commerce is an absolute prerequisite (Fitrono, 2011).

Of the many products sold on e-commerce sites, cosmetics are one of the most popular products, not only selling make-up needs but also selling products for facial skin care. In sales, not only include product photos but some also include videos or tutorials aimed at consumers for guidance on how to use and the benefits when using the products sold in these stores.

The presence of e-commerce is undoubtedly warmly welcomed by small business actors. They do not yet have stalls to sell their products. Behind the advantages of easy and fast e-commerce, many consumers sometimes feel disadvantaged, for instance, the goods ordered do not match the picture, and the quality of the goods is far from expectations. Sometimes the price does not match the product.

### 2. Literature review

#### A. E-Commerce

E-commerce is Internet Commerce or Ecom or e-commerce or Immerce which basically all of the above have the same meaning. These terms mean buying or selling electronically and this activity is carried out on the

internet network. e-commerce can also mean the best advertising, sales and support and service using a web shop (Sutrisno, 2011).

#### B. Online Transaction

A bill settlement activity carried out by two people where the seller and the buyer do not have to meet to negotiate and transact, and the communication used by the seller and the buyer can be through communication tools such as chat, telephone, SMS, and so on (Sidharta & Suzanto, 2015; Garidzirai et al., 2019).

#### C. CMS Prestashop

Prestashop is a free online shop CMS. Prestashop was founded in Paris, France, and officially launched in 2007. The software that uses the smarty template engine is used by hundreds of small and medium-sized online shops worldwide. By already supporting payment gateways such as Paypal, Google Checkout, Bank Wire, COD (cash on delivery), and several other payments via API. And more than 56 languages are available and can be used for free (Asmunin, 2016).

#### D. UML (Unified Modeling Language)

Unified Modeling Language is a visual modeling method used in the design and manufacture of object-oriented software. UML is a writing standard or a kind of blueprint which includes a business process, writing classes in a specific language (Prihandoyo, 2018)

#### E. MySQL

MySQL is a relational database management system. This means that the data that is managed in the database will be placed in several separate tables so that data manipulation will be much faster. MySQL can be used to manage databases ranging from small to very large. MySQL can also run Structured Query Language (SQL) commands to manage databases in it (Nusa & Qoiriah, 2013).

#### F. Xampp

Xampp is an instant install package for Apache, PHP, and MySQL, which can help the installation process of the three products (Sitohang & Tamando, 2018).

### 3. Research methods

This research is carried out by analyzing data, which is the essential requirement of making an e-commerce website created. This is done so that the website design can be arranged according to a predetermined pattern.

The method used here is the Action Research Design method, which is a form of research design. In action research, the researcher describes, interprets, and explains a social situation simultaneously by making changes or interventions with the aim of improvement or participation. According to (Davison, Martinsons, & Kock, 2004), Action Research is divided into five stages, which are cycles, namely.

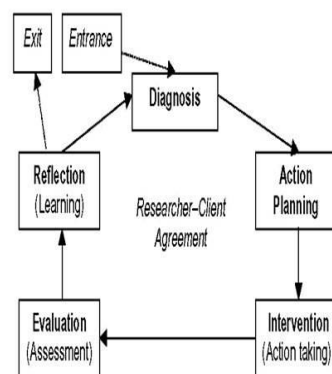


Fig. 1 Research Flowchart

#### 1. Diagnosing

Identify the main problems that exist so that changes occur for website development. At this stage, the researcher identifies the need for a website that is pursued by searching for information about consumer and stakeholder interests related to what is needed in e-commerce web design.

#### 2. Action Planning

At this stage, the researcher makes arrangements regarding the already available needs, such as collecting product images that will be used on the website, making mockups or designing sites in the form of sketches about website design, and determining the content that will fill the website.

3. Action Taking

At this stage, the researcher implements the plan that has been made based on the collected data. Furthermore, the sketch that has been made is used as a reference for the website's appearance and is filled in according to product pictures and other needs. After the site has been made according to the design, it continues with offline testing before later it will be tested online to ensure other users can access the website.

4. Evaluating

After the implementation period (action taking) is considered sufficient, the researcher evaluates the results of the implementation. In this stage, it is seen how user acceptance of the website is marked by various activities such as user login access, selecting products, and making product purchases.

5. Learning

This stage is the final part of the cycle that has been passed by conducting a review of the steps that have ended. All the criteria in this stage must be met to get results from making the website. A report accompanies the implementation of this Action Research on the success of designing a website using this method.

4. Results and discussion

1. The basis for the creation of e-commerce is to develop business through digital by utilizing technology facilities for online sales. This is because of the existence of a website, and its spread is fast. Selling products or services digitally or online also has many positive impacts on producers, consumers, and stakeholders involved in it.

2. With e-commerce, it also makes it easier for small traders to develop by following trends widely used by others. E-commerce development is also not arbitrary. Of course, we must have a mature concept and pre-determined planning to determine the desired target achievement.

DISCUSSION OF RESEARCH RESULTS

1) Sequence Diagram

Two things can be done with a Sequence Diagram, first to break down a business process into smaller activities to identify user interaction needs for each of these activities. The second use, Sequence Diagrams are used in each interaction to analyze the behavior of information systems to design views on these interactions (Nurdam, 2014).

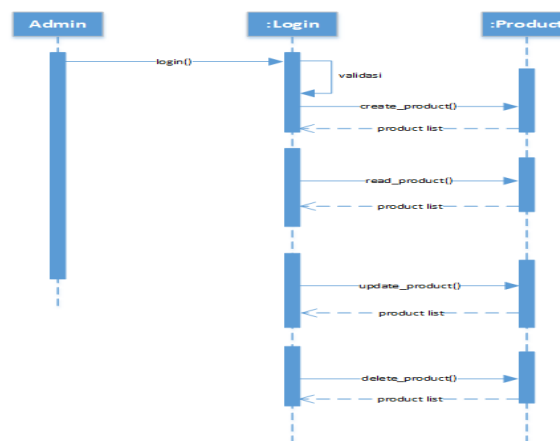


Fig. 2 Sequence Diagram for Admin (Create, read, Update and Delete)

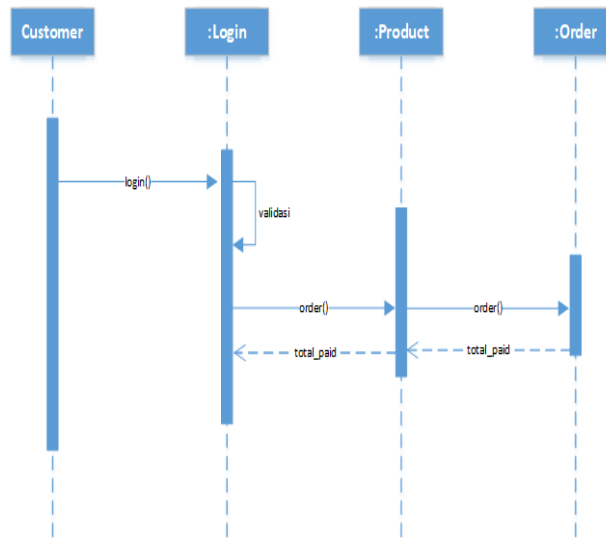


Fig. 3 Sequence Diagram User Order

2) Class Diagram

Class diagrams are static. This diagram shows the set of classes, interfaces, collaborations, and relationships (Sulistyorini, 2019). Below is an overview of the class diagram from the Pretty Me website :

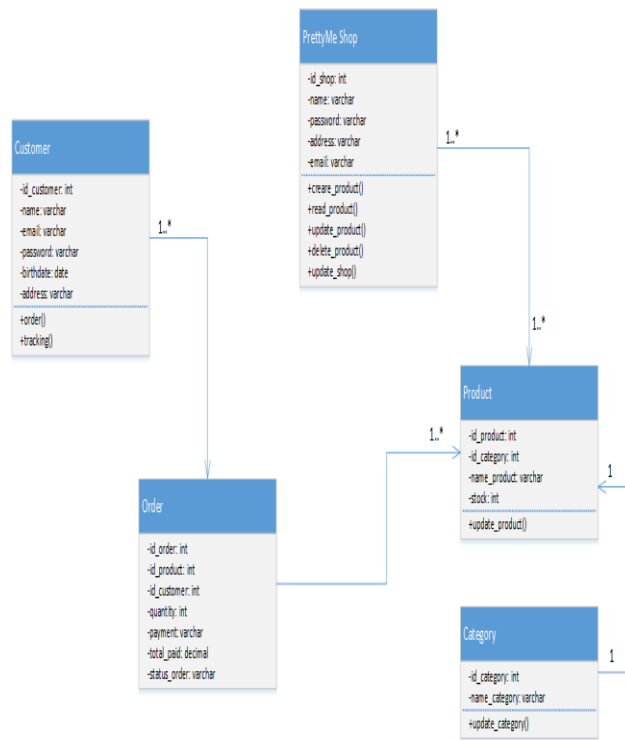


Fig. 4 Class Diagram of Pretty Me's Website

A. PROTOTYPE PRETTY ME's WEBSITE

This section contains views of the Pretty Me website. This website created a supporting factor for running an e-commerce business that aims to make it easier for related parties such as users and admins to interact more quickly and unlimited by time.

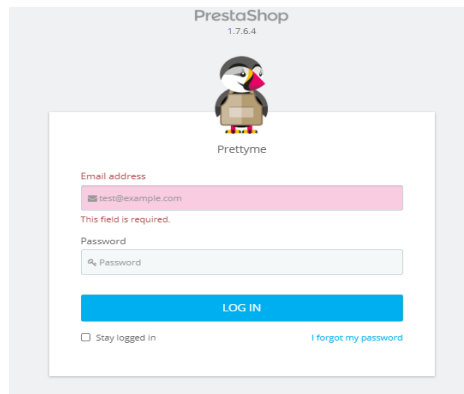


Fig. 5 Login Page admin and User

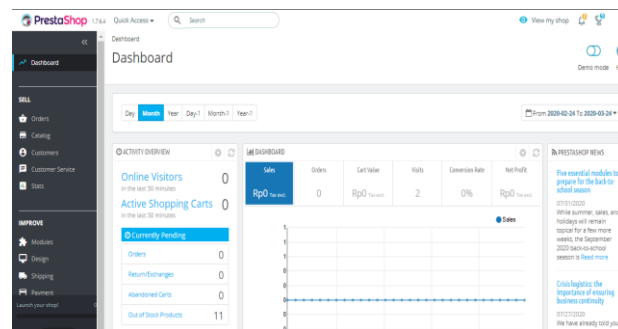


Fig. 6 The Main Page of Admin Website

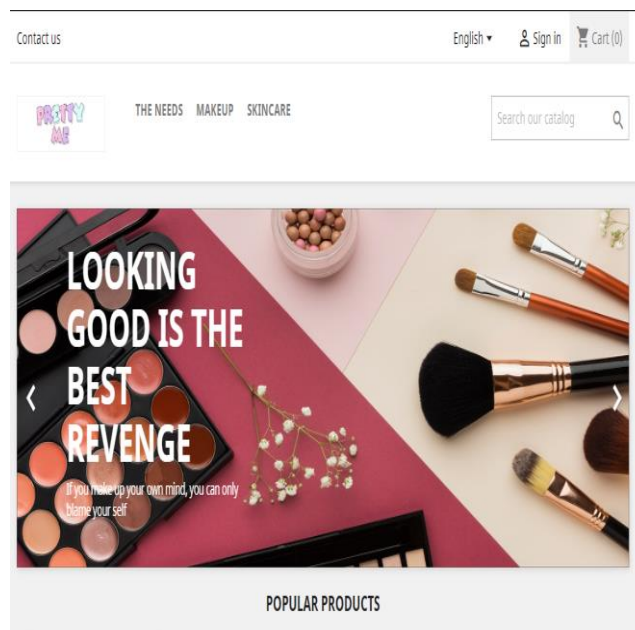


Fig. 7 The Main Page of User Website

## 5. Conclusions

Electronic commerce or e-commerce is one proof that technological advances have changed things from many aspects. The buying and selling activities that we usually do face-to-face now have many alternative ways only with gadgets. With this, we can easily shop, choose the desired product, and visit many stores online. Many consumers are delighted with this digital shopping because everything can be anytime and anywhere is also very practical.

With the creation of this e-commerce website, the relationship between sellers and buyers also benefits equally. Because basically, the website has made to make it easier for a job to be done anytime without distance and time restrictions. Creating a website also increases sellers' creativity to make product marketing strategies as attractive as possible for new prospective customers every day.

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