

## Paper Rex Shop E-Commerce Website Design Using PHP: Enhance Online Shopping Experience

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
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### ABSTRACT

In the ever-growing digital era, online shopping experience has become a very popular phenomenon among consumers. In an effort to improve the online shopping experience, designing and developing an effective e-commerce website becomes important. This paper aims to design an e-commerce website called Paper Rex Shop using the PHP programming language. The use of the PHP programming language in developing this e-commerce website allows for integration with a strong database and efficient data processing capabilities. In addition, this website is also designed to support responsiveness, so that it can be accessed well via computers and mobile devices. The design of this e-commerce website is expected to provide a positive contribution in improving the online shopping experience for consumers. In addition, the results of this paper can also be a reference and inspiration for other e-commerce website developers in designing effective and innovative solutions to improve the online shopping experience.

**Keyword : Ecommerce; Paper Rex Shop; Website**

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### 1. INTRODUCTION

In the increasingly advanced digital era, online shopping has become one of the most popular activities among consumers. Advances in technology and the growth of e-commerce have changed the way people shop, providing convenience, accessibility, and wider choices in meeting their needs. However, despite its increasing popularity, there are still several challenges that need to be overcome in order to improve the online shopping experience.

One of the main challenges in online shopping is the unsatisfactory user experience. Some of the problems that are often faced by users are complicated navigation, unattractive product displays, difficult payment processes, and insecurity in transacting online. These factors can reduce the level of user satisfaction and even encourage them to switch to physical stores to make purchases.

To overcome these challenges, effective e-commerce website design and development is essential. In designing an e-commerce website, various aspects such as intuitive navigation, attractive product displays, secure payment processes, and efficient content management systems need to be considered carefully. In addition, integration with powerful programming languages and responsiveness are also important factors in creating a better online shopping experience.

In this context, this study aims to design an e-commerce website called Paper Rex Shop using the PHP programming language. Through this study, it is expected that an e-commerce website can be developed that is responsive, easy to use, and provides a pleasant online shopping experience for users. This study is also expected to provide a positive contribution in improving the quality of online shopping, as well as being a reference and source of inspiration for other e-commerce website developers in designing effective and innovative solutions.

With better e-commerce website design, it is expected that consumers will have a more positive online shopping experience, increase their trust in e-commerce platforms, and drive the growth of the e-commerce industry as a whole.

The objectives of this research are: Building an e-commerce platform specifically for Paper Rex Shop using PHP as the main programming language, implementing important features in an e-commerce system such as product catalog, shopping cart, payment system, and order management, optimizing the interface design to be more user-friendly, responsive, and easily accessible to users, providing intuitive navigation and search and filter features to help customers find products more easily, helping to expand market reach by presenting an online store that can be accessed by customers from various locations, allowing Paper Rex Shop to manage stock and orders more efficiently through a web-based system.

## **2. RESEARCH METHOD/MATERIAL AND METHOD/LETTERATURE REVIEW**

Explaining The system development method used in this study is the Waterfall Approach method or commonly called the waterfall approach which uses several stages in system development, namely the system development stage, system design stage, implementation and testing stage, and system maintenance stage [1]. The type of data used in this study is qualitative data, namely the type of data that can be categorized but cannot be calculated. This type of data cannot be written in numerical form. The qualitative data that will be used is data and information regarding the company's general overview, description of tasks and authorities and the company's organizational structure. As well as the data collection technique used is through field studies which include interview and observation activities and through literature studies. In the system design stage, a system is compiled that explains it in writing, the activities carried out are making a Use Case diagram, namely a diagram that describes the functionality expected from a system. What is emphasized is "what: what the system does, and not "how". And finally by using a Sequence Diagram, namely a diagram that describes the interaction between objects in and around the system (including users, displays, and so on) in the form of messages that are described against time.

The database design in this study uses the Entity Relationship Diagram (ERD) which is a database model by describing the relationship between storage in the Data Flow Diagram (DFD). After creating an entity diagram, then create a Table Structure where the table structure is the most important component in creating a website using a database.

## **3. RESULTS AND DISCUSSION**

System design is a further stage of the analysis and evaluation of the running system, where in the system design the system design that will be built is described before coding into a programming language. In designing a system, it cannot be separated from the results of the analysis, because from the results of the analysis a new system can be created so that it produces a system design.

### **A. Use Case Diagram**

In the design of the system used in this report is the Use Case diagram with the Customer, System or Administrator, and JNE actors. The customer actor has the activities of registering, logging in, viewing products, viewing product updates, shopping, making payments, and can check orders to be able to receive product shipments that have been ordered. The system actor or can be replaced with an administrator has activities including updating products, checking customer payments and sending products. While the JNE actor only carries out the task of sending products to customers.

### **B. Layout and Specifications**

In the implementation and testing stage, here are some displays of e-commerce websites that have been created by creating PHP code scripts first. Here are some displays on the Paper Rex Shop website page:

#### **1. Home Page**

The main display is the display when customers type the index.php url (domain name when localhost/file\_name). Where there are several links that connect customers and visitors to find out more details about what Paper Rex is and what types of products are sold. More clearly can be seen in the following image:



Fig 1. Home Page

2. Product Page

Product Page is a page that contains everything that is sold on the Paper Rex Shop e-commerce website where it can be seen by Customers but for those who are not logged in on the product page cannot click add to cart on the product. More details can be seen in the picture:

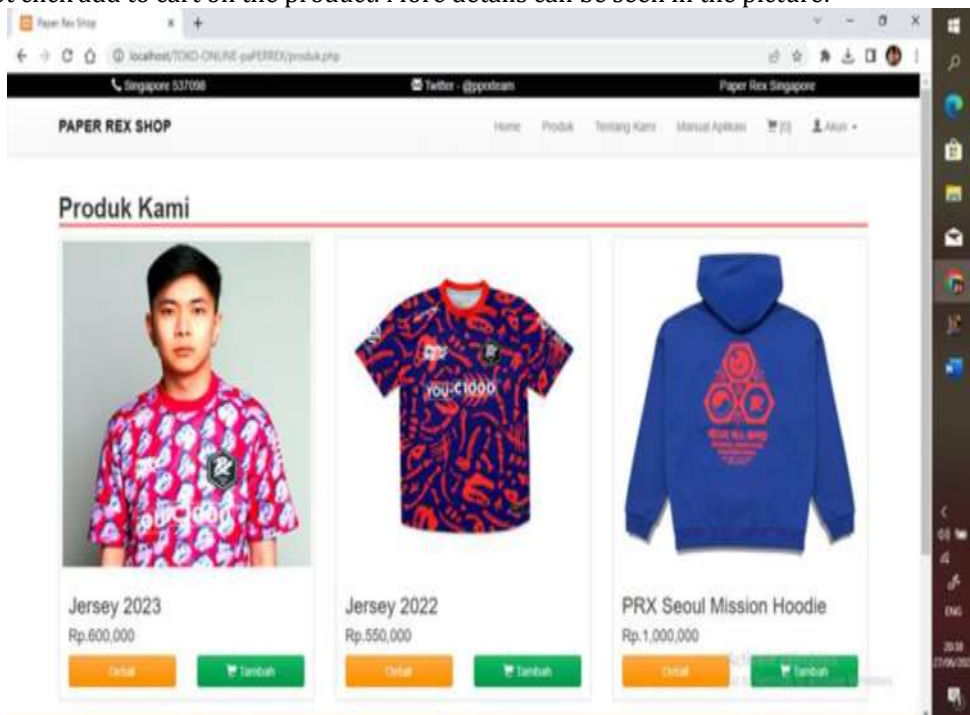


Fig 2. Product Page

3. About Us Page

This page displays a brief biodata of Paper rex. More details can be seen through the following image:

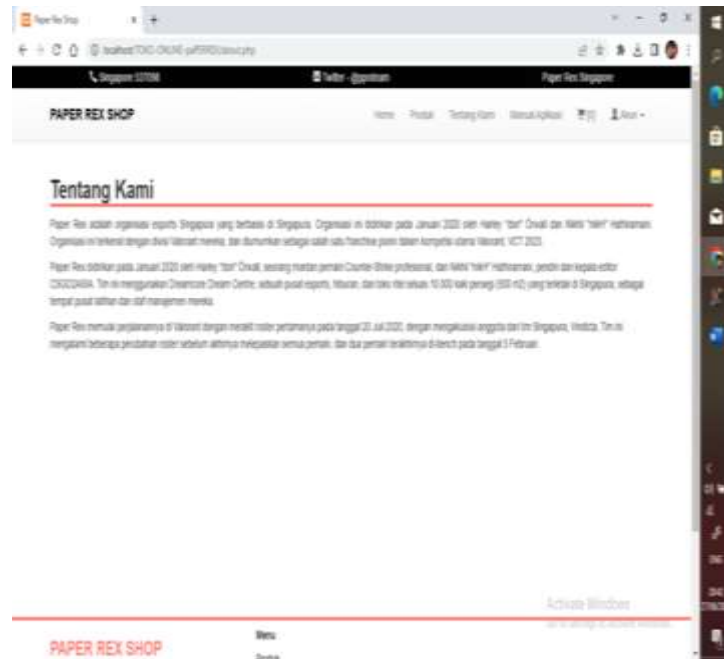


Fig 3. About Us Page

#### 4. Application Manual Page

This page shows how to shop on the Paper Rex site.

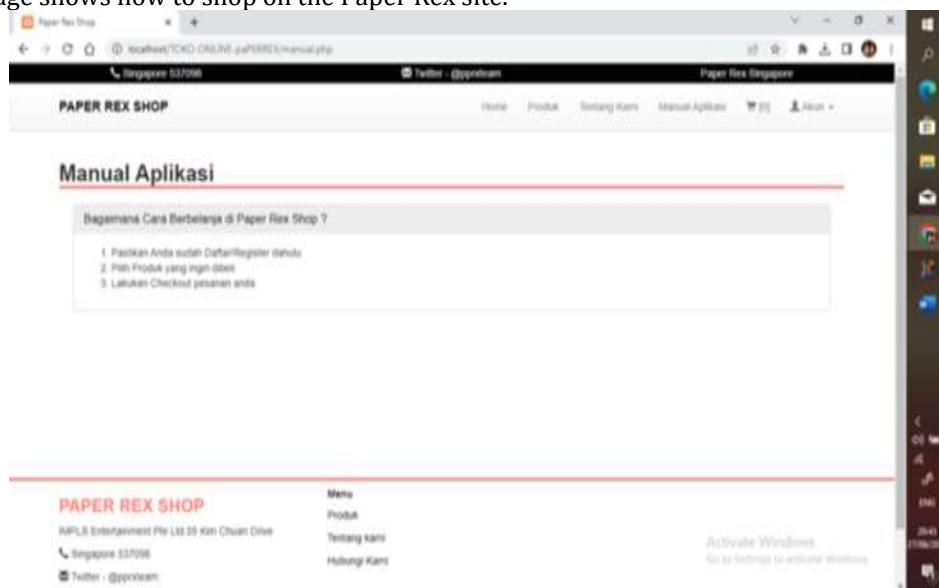


Fig 4. Application Manual Page

#### 5. Cart Page

This page displays the customer's or user's cart who has placed the product in their cart. and for those who have not registered there is a notification "Please Login First". Customers can continue shopping or can choose to check out directly. For more details, see the image:

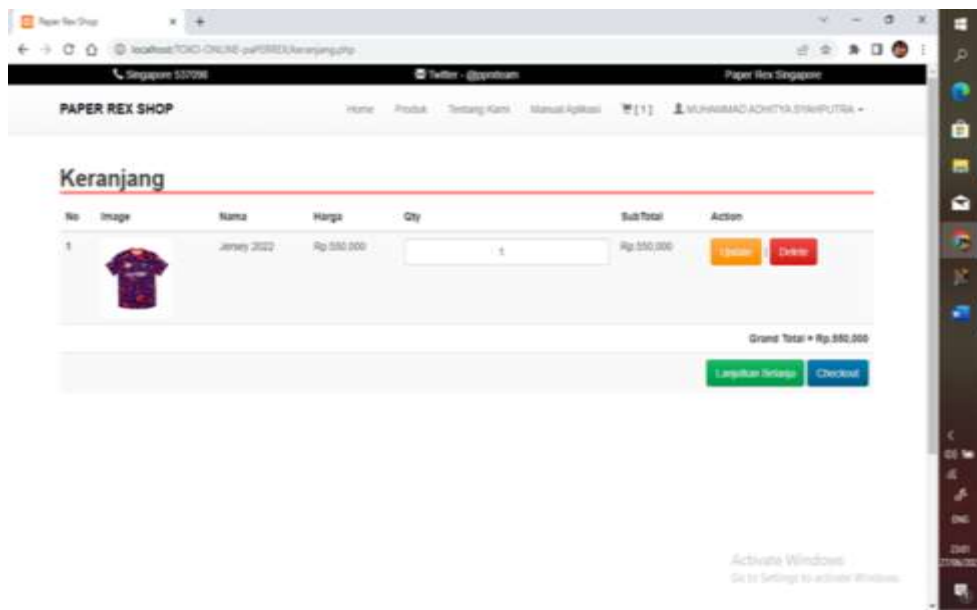


Fig 5. Cart Page

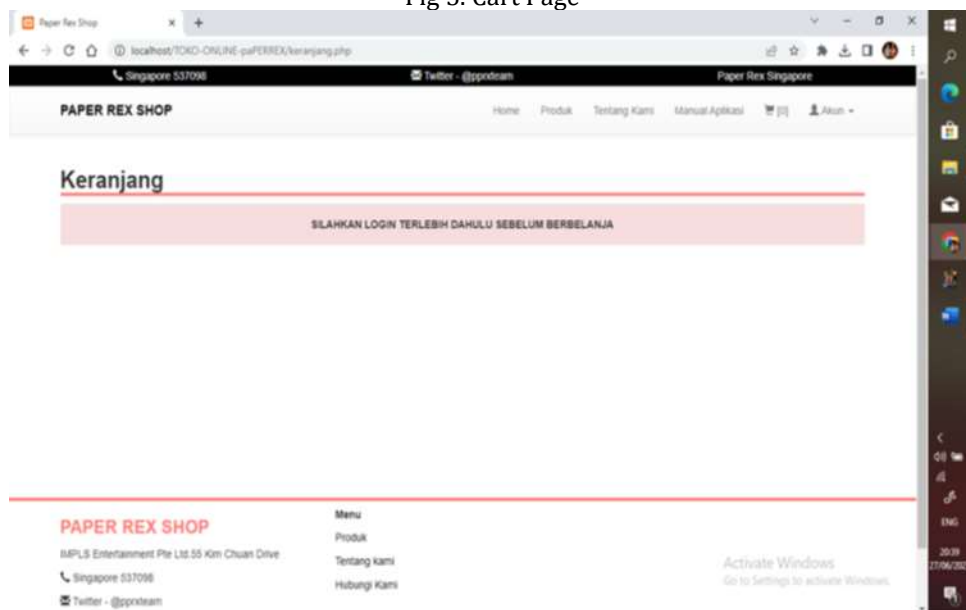


Fig 6. Visitors who are not logged in

#### 6. Login Page

This page displays the login section for customers who already have an account at PaperRex Shop. For more information, see the following image:

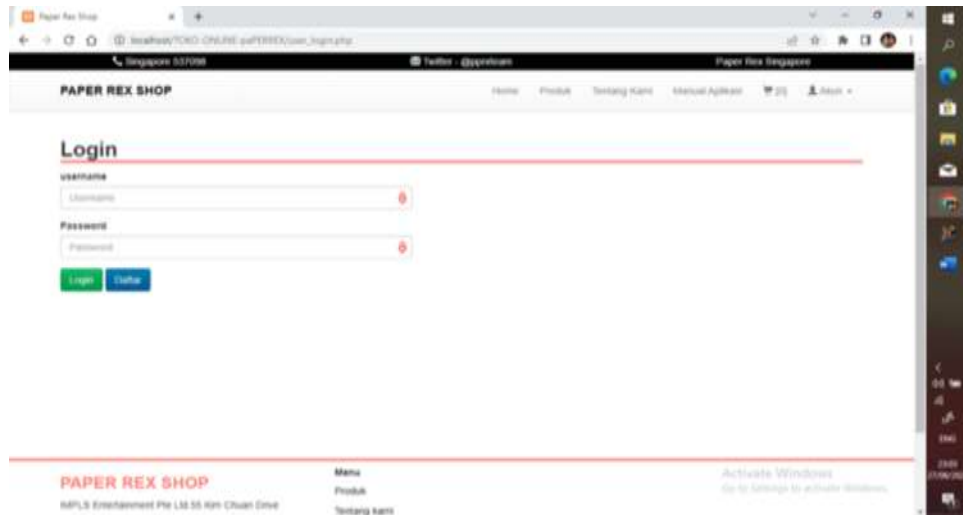


Fig 7. Login Page

#### 7. Register Page

This page displays a section for visitors to the Paper Rex Shop website to register an account so they can make purchases of products at Paper Rex Shop. by filling in the data: Name, Email, Username, Phone Number and Password.

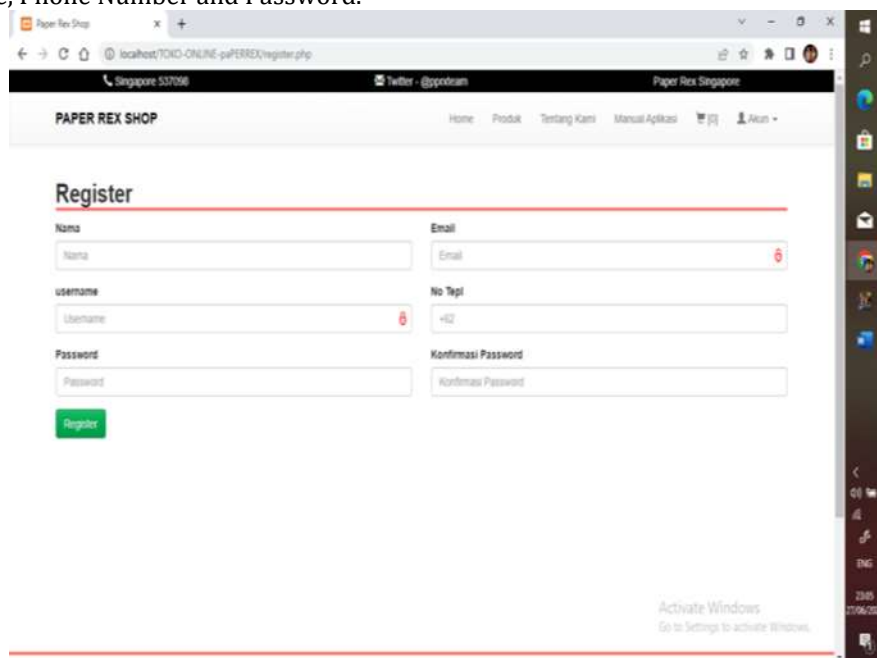


Fig 8. Register Page

#### 8. Checkout Page

This page displays the final part of the customer to buy the goods they have chosen. By filling in their form and directly order now or they can cancel their purchase.

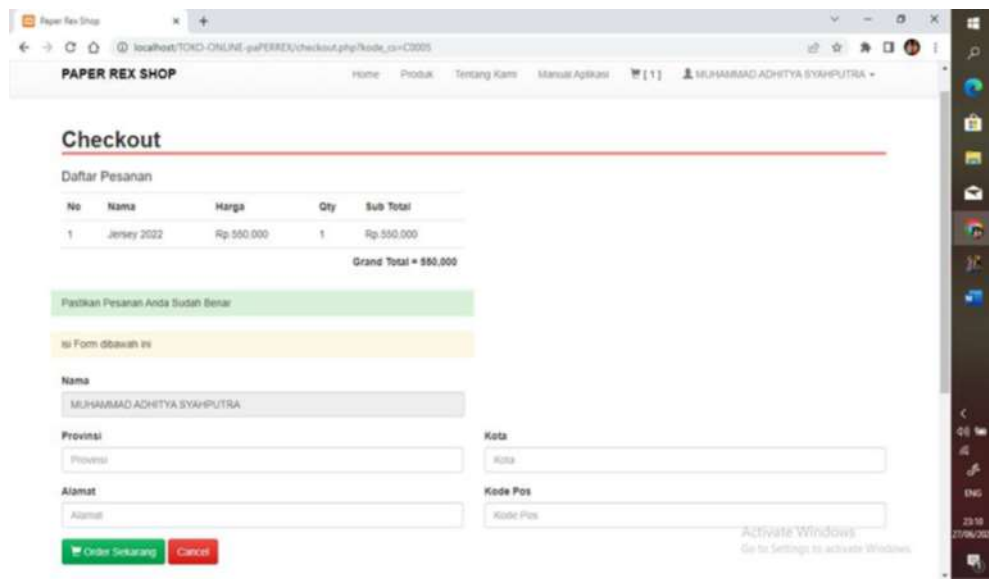


Fig 9. Checkout Page

#### 9. Admin Page

This page displays the admin section. The only one who can access this section is the admin who has access. This page contains Master Data, Transaction Data, Reports from the Website.



Fig 10. Admin Page

#### 4. CONCLUSION

From the explanation of the previous chapters, it can be concluded for this study that the design and creation of an e-commerce website is highly recommended to be implemented in the Paper Rex Shop because it will greatly assist in expanding company promotions and make it easier to manage customer purchases. By implementing an e-commerce website, sales can increase due to market expansion that includes national and even international markets. And it is hoped that the implementation of the e-commerce website can run as expected. There are several suggestions that sellers can implement in an effort to improve product quality and facilities on the website. It is hoped that subsequent researchers will consider the imposition of online store sales taxes that have been set by the government. For subsequent researchers, they can add product payment facilities using credit cards because this is more in demand by customers in line with the increasing number of people using credit cards when shopping. And it is expected to employ computer technicians to be able to operate the website and its system updates.

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