



## Information System for Purchasing and Sales of Goods on an Android Mobile based E-Store Application

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**Receive: 11/09/2023**

**Accepted: 25/09/2023**

**Published: 01/10/2023**

### *ABSTRACT*

This research aims to create an information system for purchasing goods on an Android mobile-based e-shop application. Android mobile-based e-shop applications have various advantages, such as making stock management, sales and bookkeeping easier. Additionally, integration with online payments and transaction tracking can improve operational efficiency. The system development method used is Waterfall with an SDLC approach. This research produces an information system for purchasing goods on an Android mobile-based e-shop application, namely dashboard menu, login menu, register menu, about menu, stock of goods, transactions and report menu.

Keywords: Information System, E-Shop Application, Android Mobile

## INTRODUCTION

In the era of digitalization that continues to grow rapidly, advances in mobile technology, especially the Android platform, have had a significant impact on the transformation of the way businesses operate. One important aspect of this transformation is the ease of consumer accessibility to products and services through mobile-based e-store applications. This kind of application not only makes it easier for consumers to make transactions, but also provides wider business opportunities for sellers to improve.

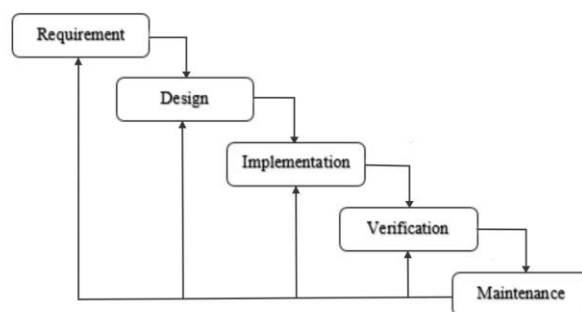
In the middle of 2000 launched a new application along with the rapid growth of mobile phones at that time appeared Operating System Named Android. With the existence of Android makes various kinds of computing that are in the PC become mobile. Android also took part in changing Mobile into SmartPhone by carrying Open Source, Android became a Popular Operation (Liyando Hermawan Hasibuan & Kusbianto Maruf, 2020). These advantages make android an attraction and developed by many software developers. People's needs for IT-based technology services are very varied, one of the needs is an android mobile-based

e-store application that makes it easier for sellers in stock management, sales, and bookkeeping. In addition, integration with online payments and transaction tracking can improve operational efficiency.

## RESEARCH METHODS

The waterfall method is a software development model that follows a sequential and linear approach. This model describes the software development life cycle as an uninterrupted flow, where each phase must be completed before the next phase begins.

This method is carried out with a systematic approach, starting from the system requirements stage then moving on to the analysis, design, coding, testing/verification and maintenance stages. The steps taken must be completed one by one (you cannot jump to the next stage) and run sequentially, therefore it is called a waterfall.



Gambar. Metode waterfall

#### a. Planning

At this stage we need to know and understand what information users need for software. This method of collecting information can be obtained in various ways, including discussions, observations, surveys, interviews, and so on. The information obtained is then processed and analyzed so that complete data or information is obtained regarding the specifications of user needs for the software to be developed.

#### b. Needs Analysis

At this needs analysis stage it is then implemented in the development design. Design planning is carried out with the aim of helping to provide a complete picture of what must be done. This stage will also help developers to prepare hardware requirements in creating the overall software system architecture that will be created.

#### c. Planning

At this design stage, one of the things that is done is designing the system structure, such as building data structures. The data structure here is in the form of how to store or organize the data that has been stored in computer storage media (database). At this stage, we

also design the interface or sketch the appearance of the system, both input and output, where this interface can make it easier for users to use the data management information system. inventory of promotional items.

#### d. Implementation

This implementation stage is the programming stage. Software creation is divided into small modules which will later be combined in the next stage. Apart from that, in this phase, testing and checking of the functionality of the modules that have been created is also carried out, whether they meet the desired criteria or not.

#### e. Testing

At this stage, trials will be carried out on the application program that has been created. The purpose of conducting trials is to ensure the feasibility of the system that has been created. Apart from conducting trials at this stage, improvements are also made if there are still deficiencies in the system so that the system meets its objectives. Program testing aims to provide an objective view of the software

#### f. Maintenance

Maintenance allows developers to make corrections to errors that were not detected in previous stages. Maintenance includes fixing errors, improving the implementation of system units, and upgrading and adjusting the system according to needs.

## **DISCUSSION & RESULT**

### **DISCUSSION**

The goods store application has various advantages, such as making stock management, sales and bookkeeping easier. Additionally, integration with online payments and transaction tracking can improve operational efficiency. Selecting an application that suits the shop's needs can provide significant benefits in optimizing business processes. Several key points in the discussion regarding goods shop applications involve:

#### **-Stock Management:**

This application allows shop owners to track stock easily. Provides automatic notifications when stock approaches the minimum limit to avoid running out of items.

#### **-Sales and Orders:**

Enables accurate sales recording. Provides an ordering feature to simplify customer order management.

#### **-Payment:**

Integration with various payment methods, including online payments, can be implemented to increase customer convenience. Record payments automatically for more efficient bookkeeping.

#### **-Customer Tracking:**

Records customer data to assist in loyalty programs or special promotions. Provides historical purchasing information to understand customer needs.

#### **-Reporting and Analysis:**

Provide sales reports and performance analysis to help store owners make strategic decisions. Monitor sales trends to identify products that are popular or slow to sell.

#### **Data Security and Integrity:**

Guarantee the security of customer data and transactions. Automatic backup and data recovery to protect important information.

#### **-Flexibility and Scalability:**

Applications that can be tailored to a store's specific needs and can scale as the business grows.

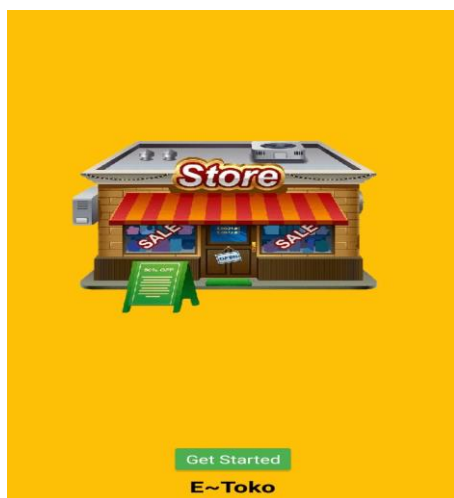
-Technical Support:

Can provide good technical support to ensure smooth use of the application. It is important for store owners to choose an application that suits their type of business, scale of operation and specific needs in order to make the most of all the features.

## RESULTS

### 1. Dashboard Menu

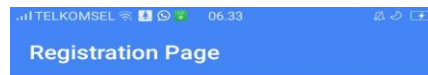
is the initial display on the e-Store application. Here there is a get started button.



### 2. Login Menu

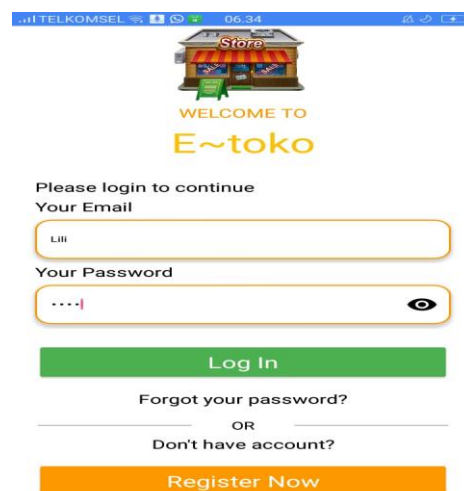
On this page, if you already have an account, to log in, just enter your email and password then click login. If you

don't have an account, click register now.



### 3. Register Menu,

where those who have an account must register first by entering their username and password then click sign up.



### 4. Stock of goods

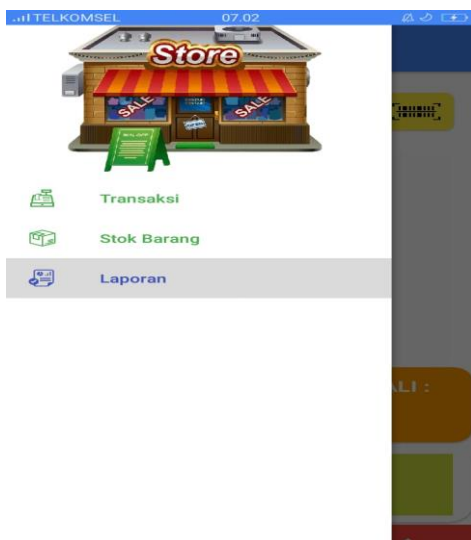
In the item stock feature, there is a form for entering the item name, price and stock, then there are save and delete buttons. The save button functions to save

item data that has been entered, and the delete button functions to delete data that is no longer needed.



#### 5. Menu About

There are transaction, stock and report features.



#### 6. Transaction

The transaction feature includes search, barcode and receipt printing.



#### 7. Report Menu

Where in this report menu there are reports of transactions that have been carried out.



#### CONCLUSION

- **Ease of Accessibility:** The Android Mobile-based E-Shop application provides easy accessibility for users to purchase goods anytime and anywhere via their mobile devices. This increases customer convenience and flexibility in shopping.
- **Transaction Efficiency:** This system helps increase transaction efficiency by

providing a fast and easy-to-use platform. The purchasing process can be completed quickly, saving both customers and sellers time.

- **Order Monitoring and Tracking:** This application allows users to monitor and track the status of their orders in real-time. This helps in providing accurate information to customers and reduces uncertainty related to delivery of goods.

- **Transaction Security:** The system must have a strong security layer to protect users' personal data and transaction information. This is important to build customer trust in the application.

- **Efficient Inventory Management:** This E-Shop application can help sellers in inventory management by providing real-time information about stock items. This allows sellers to manage inventory more efficiently.

- **Integration with Online Payment Methods:** The system should be integrated with online payment methods that are safe and easy to use. This increases the ease of transactions and reduces the risk of irregular payments.

- **Improved User Experience:** With an intuitive user interface and good functionality, these applications can improve the overall user experience, which can have a positive impact on customer loyalty.

- **Effective Customer Support:** The system should include effective customer support features, such as online chat or help desk, to assist users in resolving problems or obtaining additional information.

Thus, this conclusion reflects that the Information System for Purchasing Goods in the Android Mobile-Based E-Shop Application provides significant benefits in improving efficiency, security and user experience in the process of purchasing goods online.

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