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Design and Build MSME Application Design Selling Vegetables and Fruit Based on Android

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ABSTRACT

The use of technology such as the internet and smartphones is the beginning of the development of e-commerce, especially in the MSME business. The sale of vegetables and fruit is a sector of the community's economy. Vegetables and fruits are staples that are often consumed by all people. Sales activities use conventional methods, starting from purchasing vegetables that have to come directly to the location, calculating the store's income and also relying on notes from books. This method is less effective, purchases come directly to the location, making the seller's marketing less developed, besides that it is difficult for the seller to know the income because the recording has not been computerized. The human need for information technology is very necessary because it will help in providing fast and accurate information services. This increases people's desire to buy and sell things quickly, so we need a system that can bring together buyers and sellers without having to meet in person. From the problems above, the researchers made a "Design of an Application Design for MSME Selling Vegetables and Fruits Based on Android".

1. Introduction

The rapid development of technology today, especially information technology, has had a major influence on human life. The human need for information technology is very necessary because it will help in providing fast and accurate information services. This increases people's desire to buy and sell things quickly, so we need a system that can bring together buyers and sellers without having to meet in person. The spread of the Covid 19 Virus has forced us all to isolate ourselves at home and not to gather in crowds. Vegetable and fruit sales are usually done in supermarkets. The number of health protocols during this pandemic makes sellers confused because buyers rarely go to supermarkets. With this pandemic, many sellers are feeling the impact of the decline in turnover and even losses.

Technological developments certainly have an impact on a country's economy and bring people into the digital economy era. The use of technology such as the internet and smartphones is the beginning of the development of e-commerce, especially in the MSME business. E-commerce is a place to buy and sell via the internet and can benefit consumers and producers. In this easy era, many housewives are also career women and are busy with their activities so they don't have time to go to the market.

Therefore, in this study, an application was designed that helps streamline time, makes it easier to shop anywhere and can also help vegetable and fruit entrepreneurs to sell their products. From the

problems above, the researchers made a "Design of an Application Design for SMES Selling Vegetables and Fruits Based on Android". With this application, it is hoped that it can help sales of traders and of course it is hoped that it can increase turnover, customers can also access easily for ordering vegetables and fruit.

2. Method

a. Method of collecting data

In the method of collecting data to get information I use several ways including:

1. Observation
   This method is carried out directly observing the process that occurs at the stage of buying and selling vegetables and fruits in local markets and small traders around the author.
2. Interview
   I did this interview directly with Mr. Yayat Hidayat as an entrepreneur selling vegetables and fruit.
3. Literature review
   The researcher uses the method of collecting data from reference books, journals, papers, websites and readings that are related to the research title that can support solving the problems obtained in the study.

b. Analysis Method

In developing the application design according to user needs, the authors use qualitative research methods in the form of information data collection which is carried out by observation and in-depth interviews.

Qualitative research method is a descriptive research that uses analysis. The purpose of this research method is to understand broadly and deeply the problem in detail about the problem under study.

c. Design Method

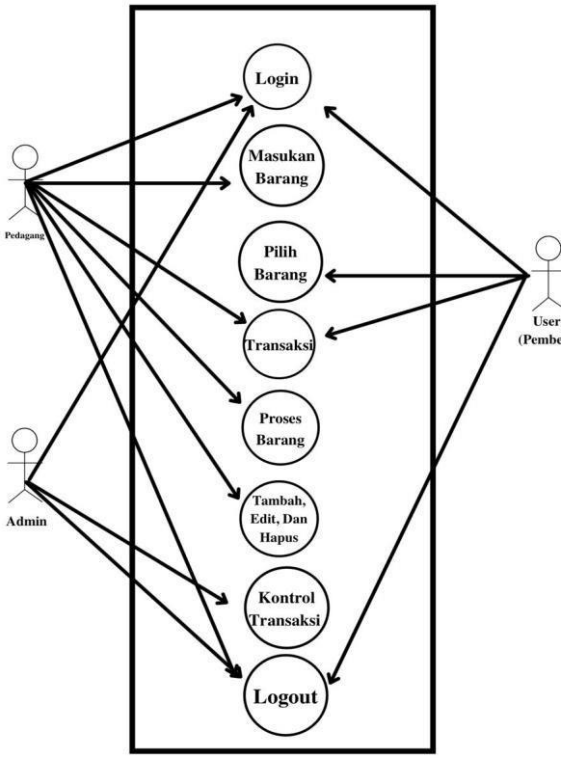
In the application design, the method used is the Extreme programming (XP) method to create applications for SMEs selling vegetables and fruit, the Extreme Programming (XP) method is a software process that tends to use an object-oriented approach and the target of this method is a team formed in small to medium scale. Extreme Programming (XP) is a software development method that is fast, efficient, low risk, flexible, predictable, scientific, and fun.". This model tends to use an Object-Oriented approach. The stages that must be passed include: Planning, Design, Coding, and Testing. The goal of Extreme Programming is that the team formed is between small to medium in size, no need to use a large team. This is intended to deal with unclear requirements as well as the occurrence of very fast changes in requirements. Extreme Programming is the most widely used agile method and has become a very popular approach

3. Results and Discussion

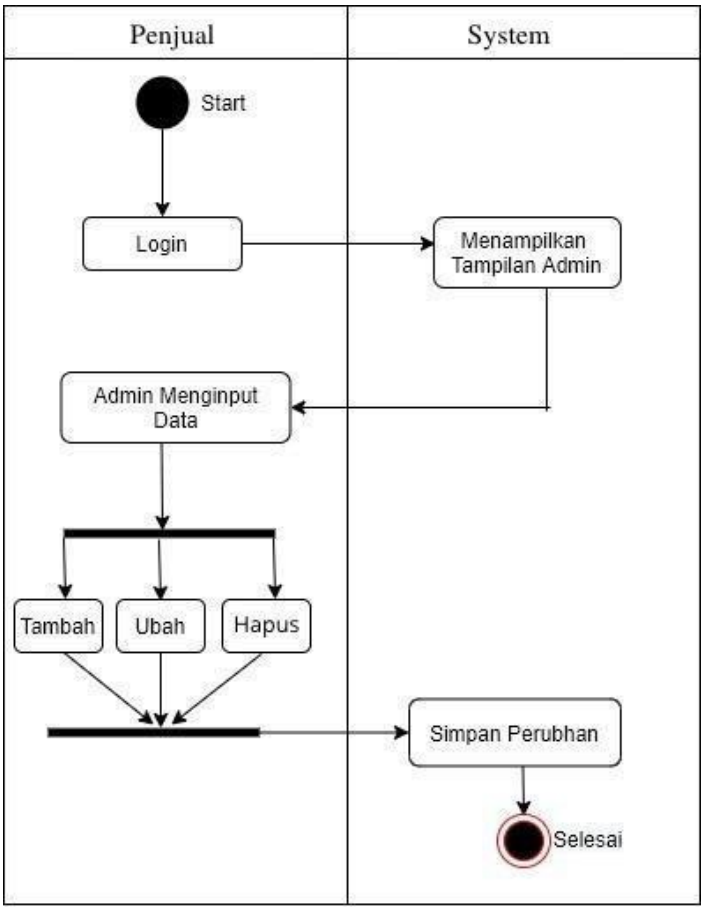
1. Proposed Application Design

In system design, it describes how the system runs and how a system is formed in order to provide a clear picture to the user, and can be described with design tools using Use Case Diagrams, Activity Diagrams, Class Diagrams and Sequence Diagrams.

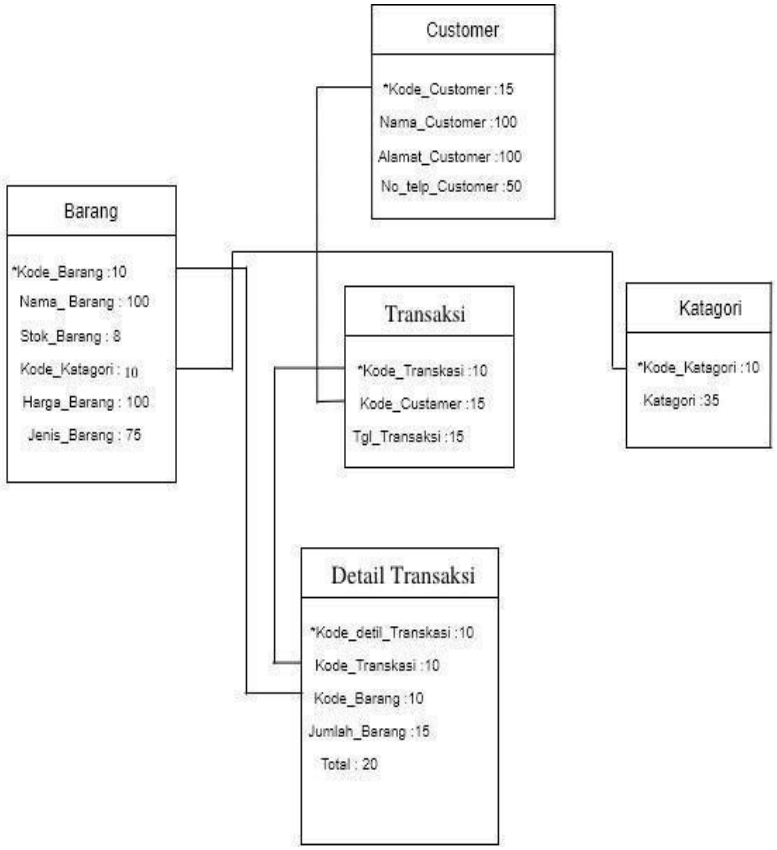
a. *Use Case Diagram*



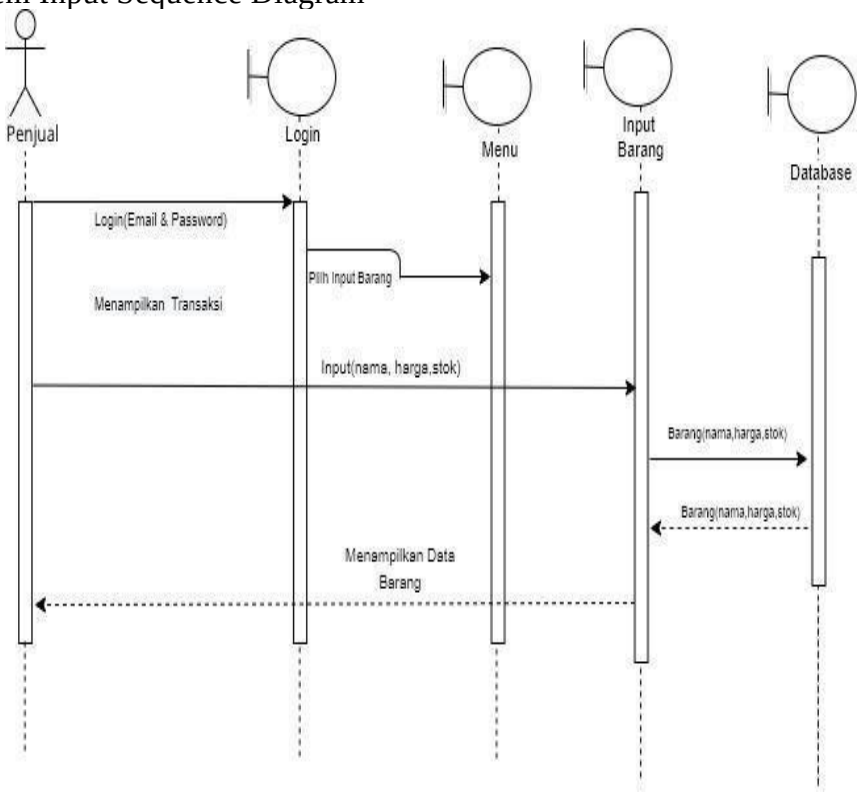
b. Seller Activity Diagram



c. Class Diagram



d. Item Input Sequence Diagram



2. Database Specifications

The following table structures are used in creating a database for this application:

a. Main Files

1. User

Table Name : User
Primary Key :
kd_user

Field	Type	Length	Description
kd_user	Varchar	15	User Code
user_name	Varchar	100	Username
user_address	Varchar	100	User Address
E-mail	Varchar	100	User Email
Password	Varchar	100	Password

Table 1 Specifications Table User

2. Category

Table Name : Category
Primary Key :
kd_category

Field	Type	Length	Description
kd_category	Varchar	10	Category Code
Category	Varchar	35	Category

Table 2 Specifications Category Table

3. Goods

Table Name : Goods
Primary Key : kd_barang
Foreign Key :
kd_category

Field	Type	Length	Description
kd_goods	Varchar	10	Item code
kd_category	Varchar	10	Category Code
name of goods	Varchar	100	Name of goods
stock of goods	int		Stock of goods
price of goods	int		Price of goods

Table 3 Specifications Table of Goods

4. Customers

Table Name : Customer
Primary Key :
kd_customer

Field	Type	Length	Description
kd_customer	Varchar	15	Customer Code
customer_name	Varchar	100	Customer Name
address_customer	Varchar	100	Customer Address
phone number	Varchar	50	Customer Phone Number

Table 4 Specifications of the Customer Table

5. Transaction
   Table Name : Transaction
   Primary Key : kd_transaksi
   Foreign Key : kd_customer

Field	Type	Length	Description
kd_transaction	Varchar	10	Transaction Code
transaction date	Datetime		Transaction date
kd_customer	Verchar	15	Customer Code

Table 5 Transaction Table Specifications

6. Transaction Details
   Table Name : Detail_Transaction
   Primary Key : kd_detail_transaksi
   Foreign Key : kd_goods, kd_transaction

Field	Type	Length	Description
kd_detail_transaction	Varchar	10	Code Details Transaction
kd_transaction	Varchar	10	Code Transaction
kd_goods	Varchar	10	Item code
number_item	int		Number of Items
Total	int		Total

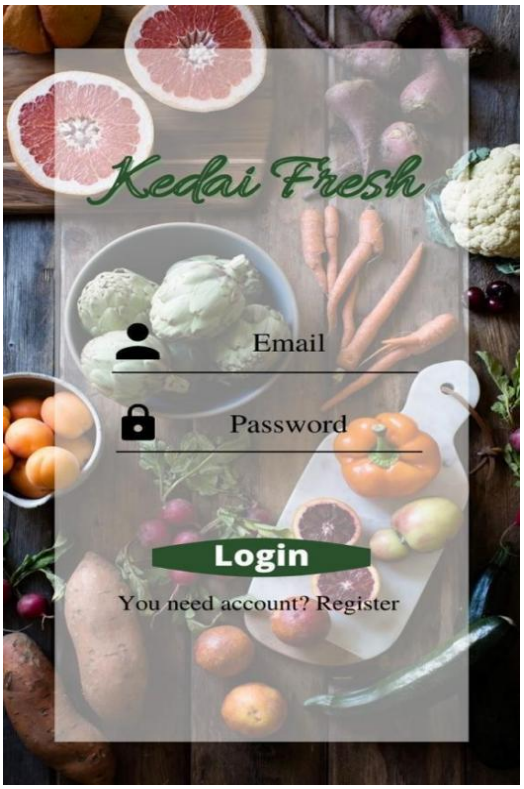
Table 6 Transaction Table Specifications

4. Results

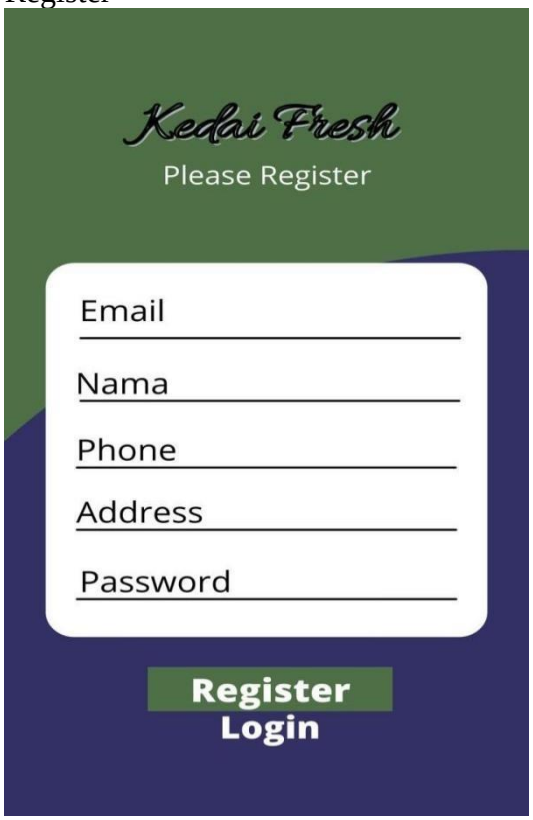
After getting a list of functional requirements and system design, the application interface is designed and the system is then tested on the user. Testing is carried out so that it can be seen that the design that has been made is correct or not. The interface presented in the sales application has a simple design and has a user-friendly impression,

a. Splash Screen

b. Login



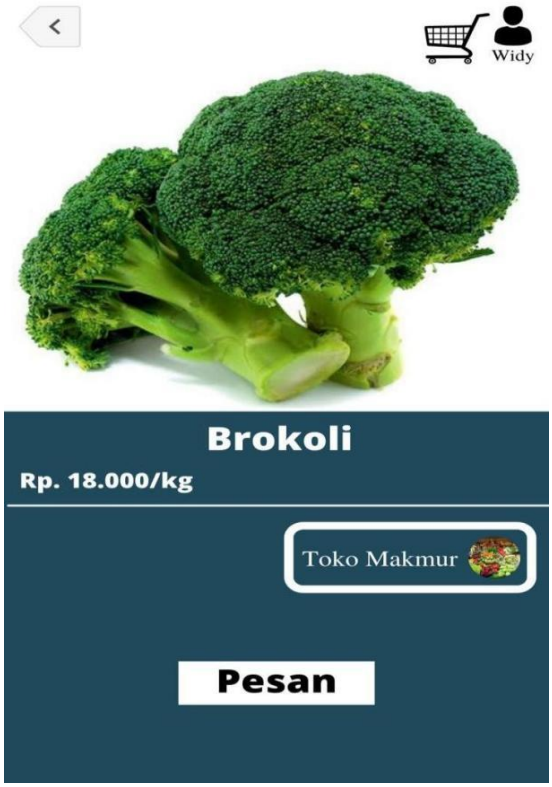
c. Register



d. Category Pages

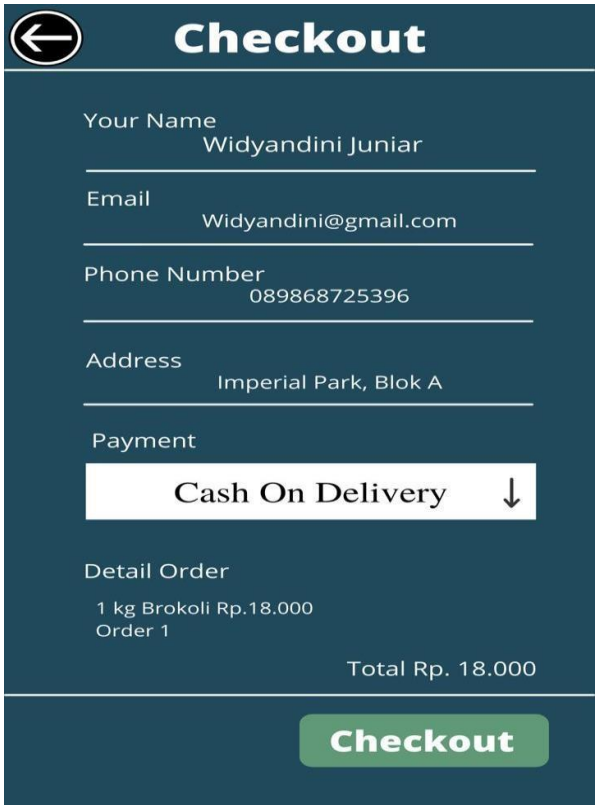
e. Product View Page

f. Shop Page



g. Checkout Page

h. Payment Transaction Page



i. Order History page

5. CONCLUSION

The conclusions that can be drawn based on the results of the implementation and evaluation of making this application are:

1. Applications can be used as a place for sellers to market products.
2. Applications can be used to make sales or purchase transactions.
3. Applications can help sellers and buyers to monitor and process transactions that take place.

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