

# Development of Clothing Information System base Android Applications of Boutique Modiste Shofi Samarinda

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**Abstract**— Development of Apparel Information System Applications at Fashion Boutique Shofi Samarinda Based on Android. Modiste Shofi Boutique is one of the boutiques that provide various types of men's and women's clothing for sales such as batik clothes, negligees, party dresses, masks, mokena, and others. The promotion and marketing carried out by the Modiste Shofi Boutique are inadequate so that there are still many people who do not know the existence of the Modiste Shofi Boutique. In addition, sales at the Modiste Shofi Boutique are only conventional where customers have to come directly to the Boutique to buy clothes. The results of this study are to create an application for selling clothes at the Modiste Shofi Boutique in order to promote clothes that are sold widely and make it easier for customers to make purchases without coming directly to the Modiste Shofi Boutique. Based on testing using the UML (Unified Modeling Language) method which consists of testing application analysis and implementation, it can be said that the Development of the Clothing Information System Application at the Android-Based Modiste Shofi Boutique can run smoothly and represent the features contained in the Android Application. Test results on users show that the application of ordering clothes has an adequate appearance (user friendly), the structure of the application is easy to learn, the commands or instructions are easy to use, the time used to process data is relatively fast and the resulting information is accurate.

**Keywords**— Information System, Clothing Sales, Java, Android Studio, Boutique Modiste Shofi

## I. INTRODUCTION

Boutique Modiste Shafi is one of the boutiques that provides clothing sales services which have been established approximately 8 (eight) years ago and its business has begun to develop in Samarinda City, where there are still many people looking for boutiques. which sells various kinds of clothing, such as Batik clothes, negligees, party dresses, masks, mokena and others. Boutique Modiste Shofilocated on Jl Rapak Indah Permai

GG Puri Kencana Blok L No.17 RT.39 Sungai Kunjang District, Samarinda City, East Kalimantan Province. Previously, the boutique Modiste Shofialways promoted and sold its goods through social media, namely WhatsApp and Facebook, where the Boutique owner had difficulty making sales in a day, because the boutique owner Modistehad to Shoficollect data on clothing orders manually in a notebook, therefore the author was interested in raised these problems into research by creating an-based application Android to make it easier to record orders for goods from customers. So promotions and transactions through the application android are the main keys to making it easier for people to access and update information about these clothes so that the management of the-based boutique Android can provide benefits not only to the manager but also to the boutique visitors. With this management, visitors will easily find the clothes they are looking for without having to waste a lot of time to come directly to the boutique, so people only order via the application android which is faster and people can also see the models items they want to buy at the boutique. Modiste Shofi Samarinda which has become one of the Distribution areas of clothing in Samarinda. This research was conducted to facilitate the promotion and marketing of a computerized conventional nature so that an application was made android which is used as a promotional and marketing a medium that is accessed by many people with the internet. With the development of application, it android this is hoped that it will provide benefits for the dissemination of clothing information in Samarinda which can have an increasing effect on the production scale. Based on the above background the author is interested in being able to help overcome the problems of marketing and product sales through an application Android that can be easily accessed by the public, with the title "Development of Clothing Information System Applications at fashion Boutique Shofi Based Android" Based on the background that has been described, then the problems to be discussed are: How to develop clothing Information System Application at he boutique Modiste Based Shofi

Android?, How to build an application that can help the owner of the Boutique Modiste Shofi?, The limitations of the problem in making the application are as follows:

The device used is advice mobile with the operating Android system. This application was developed using Android software Studio. The objectives of this research are: Application development that can be used by the Boutique Modiste Shofi. Create an application that can perform data processing clothing sales.

The expected result of this research is the availability of sales application development that can overcome existing problems and provide fast information in determining decisions.

## II. LITERATURE REVIEW

### A. Literature Study

Some of the literature that is used as a guide and reference in the thesis task, among others:

According to research conducted by (Yusuf Agung Pramono, 2015, with the title of his research entitled "Information System for Ordering Clothing for Distros with applications Android". to overcome this problem by building an Android -M-Commerce based application as a medium of information and ordering online on Denim distributions. Based on the results of testing using the method black box testing which consists of alpha and beta testing, it can be concluded that the application M-Commerce that was built can run smoothly and represent the features found on the E-Commerce website. Test results on prospective users show that the application for ordering clothes from this distribution has a pretty good appearance (user friendly), the structure of the application is easy to learn, the commands or instructions are easy to use, the time used to process data is relatively fast and the

The information generated is accurate. . Based on the results of this study, it was obtained data that the application of ordering clothes for this distribution has a pretty good appearance (user friendly), the structure of the application is easy to learn, the commands or instructions are easy to use, the time used to process data is relatively fast and the information generated is accurate.

According to research conducted by (Apriliana Rizka Annisa,2017), with the title research entitled "sales application batik in Lamongan Android Based Invoice system"research objective is to build application systems selling batik shirt made using Android and web can access sales information in the batik shop. This area has a variety of types of batik that are quite good, such as batik made with the stamped batik technique, the written batik technique and the batik shirt makers in this area also make it using the screen printing technique. This is due to the very rapid development in the field of technology, especially computers, thus encouraging the world community to enter in the era of fast-paced technology, especially in the business field, many business people take advantage of existing technology computers to advance their business, including by utilizing android media as to means of sale.

According to research conducted by (Rida Indah Fariani, 2015), with the title of her research entitled "Development of mobile applications for navigation in Shopping Centers." The purpose of the research is information technology that will be made in the form of application mobile called STORE'D which functions as a navigation tool for visitors in shopping. Quickly, practically and conveniently. Seeing these conditions, the proposed information technology application is to use applications based on technology mobile and use mobile devices such as cellphones, smartphones, and tablets. For this reason, in this case, a location determination technology was chosen based on a floor map image database (which is usually owned by the building manager and is regularly updated) and a search algorithm for the closest route to help determine the location you are looking for.

According to research conducted by (Kusumanto & Fadli, 2019), with the title of her research entitled "Design of E-Commerce HomeHijab Boutique" Based Android the purpose of research is to develop research six previous that discussed the design of the E-Commerce Web-based android-based. As for some of the benefits of this research, namely being a solution for businessmen to be able to take advantage of technological advances in marketing products, so that they can provide benefits. In this study, the use of technology to be able to innovate in business through mobile phone media. And ensure that every system built provides convenience benefits for both target sellers and buyers. The data needed is in the form of system design data in the form of databases, HTML, MySQL, and Xampp in system design. The next step is to build an android-based application, a program that has been built previously based on a website, and is forwarded to android, needed Android software is Studio to convert program data that was previously a website into an android without having to rebuild the program.

According to research conducted by (Septi & Wellia Shinta, 2015), with the title of her research entitled "Designing Mobile Applications E-Commerce Based Android On Violet Fashion Jepara"The aim of the research is to build a system that can meet the needs of the applications built mobile e-commerce sales clothes on Violet Fashion Jepara can make it easier for customers to make ordering transactions and get information about Violet Fashion Jepara. Customers always want the convenience or speed of relevant information to facilitate all their activities, one of which is ordering or purchasing clothes at Violet Fashion Jepara.

### B. Theoretical Foundations

#### 1. Development

According to Seels & Richey's opinion, development is the process of translating or elaborating design specifications into the form of physical features. Development specifically means the process of producing Learning materials, in journals (Dewi S. Prawiradilaga, 2012).

According to Mudhofir, development is a systematic way to identify, develop and evaluate a set of materials and

strategies aimed at achieving specific educational objectives, the definition above, the authors conclude that the development is the process of translating a design that has been made before, by improving quality through the various stages trials as an effort to improve it's quality.

## 2. Application

Application is a software or program created and developed to perform certain tasks on a computer, laptop, or smartphone.

(Nugroho, 2010) argues, "Applications are stand-alone applications to solve specific business problems. In terms of conventional business processing applications, the software is the application used to control business functions in real-time, in journals (M. Ibnu Johanl & Department, 2011)

Based on this definition, the author concludes that the application is a program created in a software with a computer to facilitate work or certain tasks such as the application, use, and addition of required data.

## 3. Information Systems

According to (Jogiyanto HM, 2001) Information System is a system within an organization to meet the needs of daily transaction processing, support operations, managerial and strategic activities of an organization and provide certain outside parties with the necessary reports. This system utilizes hardware and devices computer software, manual procedures, management models, and databases Information system in an organization can be regarded as a system that provides information to all levels within the organization whenever needed This system stores, retrieves, processes, and communicates information received by using the system information or other system equipment, in journals (Mayssara A. Abo Hassanin Supervised, 2014)

## 4. Application Development

Application development is often misinterpreted as the activity of a programmer doing an activity, namely coding, the process of writing code when in fact application development is more than just the process of writing code. Application Development is a series of processes carried out by a programmer or group of programmers to create a series of processes from the initial design of the application, making the application prototype, implementation, final testing of the application until the application is complete and ready for use.

In application development, there are several stages that have been designed as a condition so that an application can be made in a structured and well-designed manner. These stages are information gathering, planning, development, and maintenance. This stage is an important stage for programmers in building applications. In practice, there are several application development methods that are often used by programmers, such as the waterfall method, spiral method, Extreme Programming (XP) method, Kanban method, agile development, prototype method, and scrum method. In this case, the author will discuss the method that will be used in this study, namely the prototype method, in the journal (Nurul, 2013).

## 5. Android Studio

Android is an operating system for Linux-based mobile devices that includes an operating system, middleware, and applications (Safaat, 2014).

Android provides an open platform for developers to create applications. Not only is an operating system on smartphones, but Android is also currently the main competitor of Apple on the tablet PC operating system. One of the reasons for the rapid growth of Android is because Android is a very complete platform, both in terms of the operating system, applications, and development tools, the Android application market, as well as very high support from the Open Source community in the world, so that Android continues to grow rapidly both in terms of technology and technology. in terms of the number of devices in the world.

Android Studio is an integrated development environment (IDE) software tool for the Android platform. Android Studio was launched on May 16, 2013, at the Google I/O conference by Google Product Manager, Ellie Powers.

Android studio is free under the Apache License 2.0. Android Studio initially started with version 0.1 in May 2013, then made beta version 0.8 which was released in June 2014. The most recent was released v.3 in October 2017. Based on JetBrains' IntelliJ IDEA, Studio is specially designed for Android Studio Development. . Now it can be downloaded for Windows, Mac OS X, and Linux.

## 6. Java

Java programming language is one of the many programming languages that can be run on various operating systems including mobile phones. This programming language was first created by James Gosling while still at Sun Microsystems. This programming language is a C++ development, currently, Java is the most popular programming language used, and is widely used in the development of various types of application software or web-based applications. also known as the multiplatform programming language, object-oriented programming (PBO), has a complete library, in the journal (Harumy, THF, Julham Sitorus, 2018)

## 7. UML (Unified Modeling Language)

According to (Sri Mulyani, 2016), UML is a system development technique that uses a graphical language as a tool for documenting and performing system specifications. According to (Herlawati, 2011), that some literature mentions that UML provides nine types of diagrams, others mention eight because there are several diagrams combined, for example, communication diagrams, sequence diagrams, and timing diagrams are combined into interaction diagrams.

## 8. Databases

According to Silberschatz, et al in (Simarmata and Paryudi 2010) suggest that: A database is a collection of data containing appropriate information for a company. A

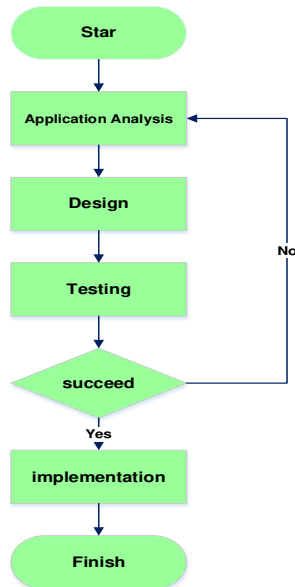
database management system (DBMS) is a collection of interconnected data and a collection of programs for accessing data. The main purpose of a database management system is to provide an easy and efficient way of storing and retrieving database information, in journals

According to (Ketut Darmayuda, 2014) in the book Basic Data Applications with Visual Basic.Net means "SQL Server is an advanced product from Microsoft SQL Server 2000. This SQL Server database is a reliable and full power RDMS (Relational Database Management System) software. ." Microsoft SQL Server is designed for handling large transaction data processing, SQL Server 2005 is a Microsoft product database application that has new features, making it a perfect database platform, especially in processing large-scale data in journals (Tambunan & Sela, 2018).

### III. RESEARCH METHODS

#### A. Research Procedure

The stage in picture 1 is the stage of making an application for selling clothes at the Modiste Shofi Samarinda Boutique based on Android, using the UML (Unified Modeling Language) method with a visual model that is used as a means of designing object-oriented systems.



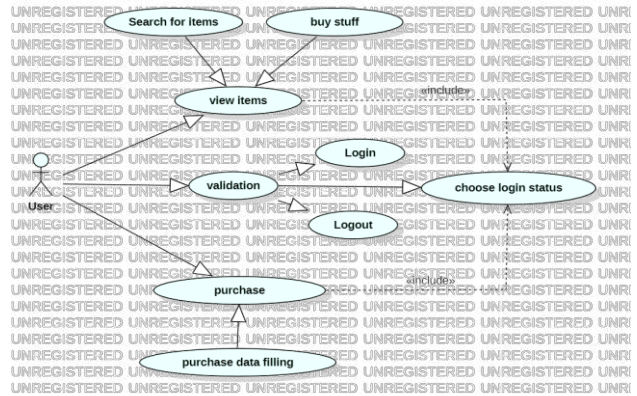
Picture 1. Research Procedure

#### 1. Application Analysis

Analysis of the research procedure or application design process provides an overview of the application that is currently running. This application analysis aims to find out more clearly how the application works. Application analysis is used to analyze a new application or improve an existing application. Make a decision if this application has problems or does not function properly and the results of the analysis will be used as a basis for improving the application.

#### a. Use Case Diagram Design

This application design is used to describe how the application runs and all its activities. The existence of this design is expected to facilitate the description and understanding of the process that is passed. Picture 2 shows, a display the use case diagram above, the buyer can manage filling in registration data, view goods, sales transactions and purchase transaction details.



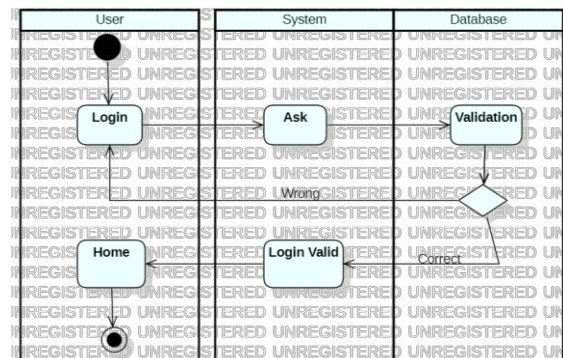
Picture 2. Purchase Use Case Diagram

#### b. Activity Diagram Design

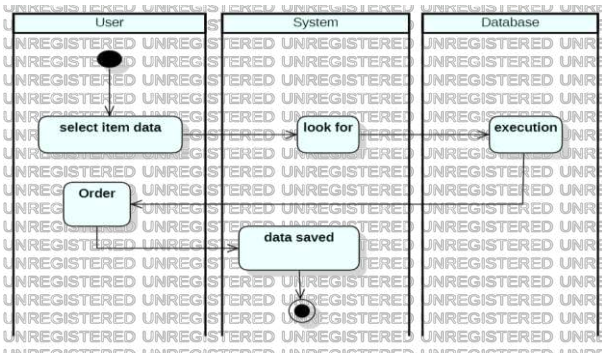
Activity diagrams describe the activities that occur in an application. In this activity diagram, it shows the steps in the application work process that has been created. Picture 3 shows, a display the activity diagram above is a buyer who enters a login and the system asks for data to validate. When the buyer enters the wrong password, the buyer automatically returns to the login and when the buyer has filled in the password, then proceed to valid login and home.

Picture 4 shows, a display the activity diagram above, the buyer selects the data for the goods, then the system searches for the goods, and in the database, the goods are executed first, then they are ordered and the data is stored.

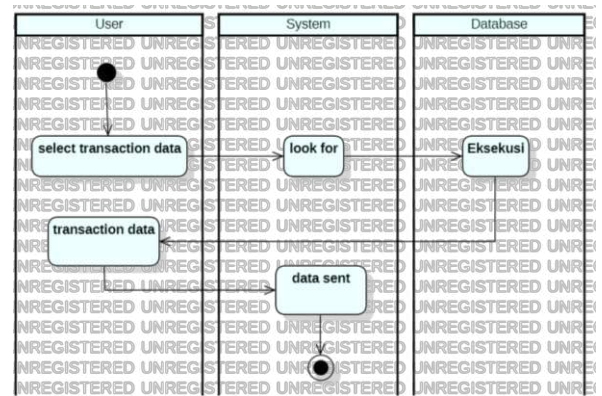
Picture 5 shows, a display the activity diagram above is the buyer who selects transaction data, then the system searches for goods and in the goods database is executed first and then displays transaction data and sent data.



Picture 3. Buyer Activity Diagram

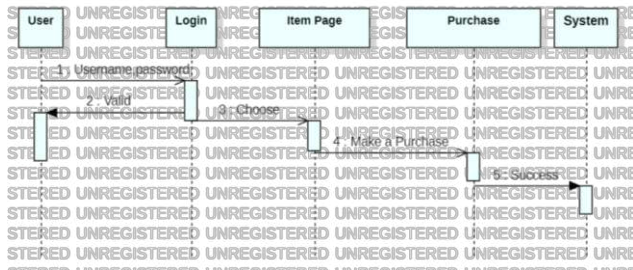


Picture 4. Item Activity Diagram



Picture 5. Sales Transaction Activity Diagram

c. Purchase Sequence Diagram Design



Picture 6. Purchase Sequence Diagram

Picture 6 shows, a display the Sequence Diagram explains how buyers can log in so that they can enter the goods page display, make sales transactions and be successful in purchasing the next item.

2. Application Design (Design)

a. Login View

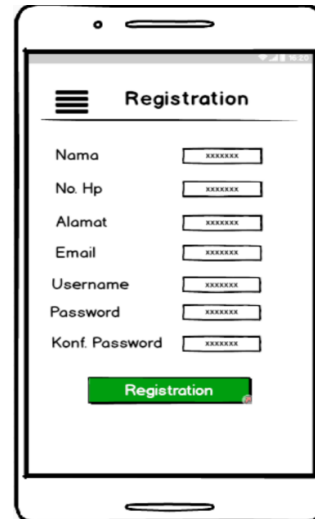
On the login page for users who have registered and enter their username and password, if not, it is necessary to register first, click registration to enter the registration screen, it can be seen in the display as shown in picture 7.



Picture 7. Login Display Design

b. Registration View

The registration design display displays fields that must be filled in in the form of user information for data purposes, as well as getting a username and password to log in, which can be seen in the display as shown in Picture 8.



Picture 8. Login Display Design

c. Home View

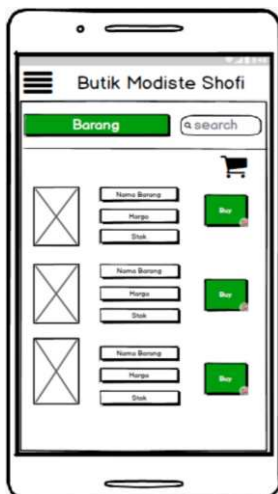
On the home screen will display a selection of goods, purchase transactions, and purchase history can be seen in the display as shown in picture 9 .



Picture 9. Home Display Design

d. Item Display

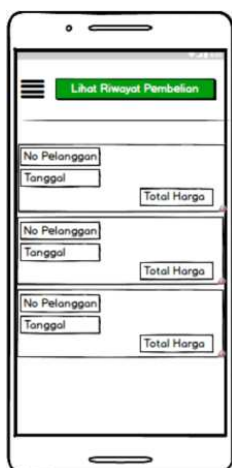
In the goods display containing product images, the search engine for goods and the user can also select the goods to be ordered, as shown in the display as shown in picture 10



Picture 10. Item Display Design

e. Login View

In the Purchase history view, it can be seen in a display like a picture 11.



Picture 11. Purchase History Display Design

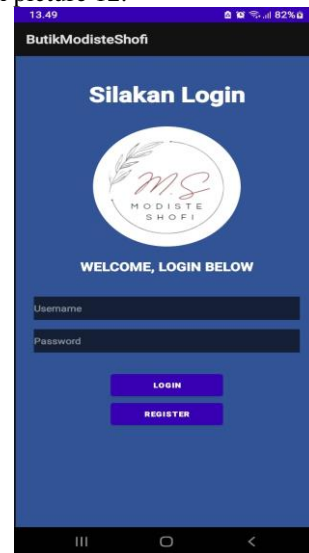
IV. RESULTS AND DISCUSSION

At this stage, it is used to implement the implementation stage and at the same time test the application based on the results of the analysis and design carried out. This implementation, is the result of a design into an android-based clothing sales application development application.

The following is a display of the results of making an application for selling clothes at the Modiste Shofi Samarinda boutique:

1. Login Display

This login display is the display used by the user to log in so that later they can access to the next display, it can be seen in picture 12.



Picture 12. Login Display Design

2. Registration View

The registration design display displays fields that must be filled in in the form of user information for data purposes, as well as getting a username and password to log in, which can be seen in the display as shown in Picture 13.



Picture 13. Login Display Design

3. Home View

On the homepage there are several menu items, purchase baskets, purchase history, and help can be seen in picture 14.



Picture 14. Home Display Design

4. Item Display

This item display is a view that is used to view item data. In this view, the user can also carry out activities to buy existing goods, which can be seen in picture 14.



Picture 14. Item Display Design

5. View Purchase History

Showing transaction number, date, and total price can be seen in picture 15.



Picture 15. Purchase History Display Design

6. Respondent Test

Testing the results of the respondents there were 36 people including students, the owner of the Modiste Shofi Samarinda Boutique. There are 8 (eight) questions with answers, namely strongly agree, agree, neutral, disagree, and strongly disagree.

Based on the results obtained, the highest score is 58.3%, namely the agree on category, with the question Is the application operating well? easy to understand?, Based on the results, the average value is 4.17%, which means that the application made can be said to be good by the respondents. Android Respondent Test Results. Testing the results of the respondents in table 8 below, there are 36 respondents, including the owner of the Modiste Shofi Boutique and the Samarinda community, the questionnaire questions have 8 questions with answers, namely very agree (VA), agree (A), neutral (N), disagree (D) and strongly disagree (SD).

Table 1. Respondent Test

Item	VA		A		N		D		SD		N	MEAN
	F	%	F	%	F	%	F	%	F	%		
1	12	34	18	50	6	17	0	0	0	0	36	4,17
2	16	44	16	44	4	11	0	0	0	0	36	4,33
3	9	25	12	58	6	17	0	0	0	0	27	4,11
4	11	31	17	42	8	22	0	0	0	0	36	4,08
5	12	33	18	50	6	17	0	0	0	0	36	4,17
6	14	39	17	47	5	14	0	0	0	0	36	4,25
7	13	36	19	53	3	8	1	3	0	0	36	4,22
8	11	31	17	47	7	19	1	3	0	0	36	4,06
Average												4,17

### 7. Validation Test

Table 2 is the result of the respondent's validity test to users who have run the Clothing Information System Application Development at the Modiste Shofi Samarinda Boutique, the validity test is used to determine whether the questionnaire data is valid or not, in the journal (Maulana & Rachmawati, 2017).

Table 2. Validity

		Total
N		9
Normal Parameters	Mean	4,1733
	Std. Deviation	,08529
	Absolute	,182
	Positive	,182
	Negative	-,151
Kolmogorov-Smirnov Z		,547
Asymp. Sig. (2-tailed)		,926

### V. CONCLUSION

With this management system, buyer will easily find the clothes they are looking for without having to waste a lot of time to come directly to the boutique, so people only order via the Android application which is faster and people can also see the models of goods they want to buy at the store. Modiste Shofi Samarinda boutique which has become one of the distribution areas for clothing in Samarinda. This android application is one solution to make it easier for Modiste Shofi Boutique customers to find out information on items that are updated every day or every week. Customers of the Modiste Shofi Boutique can find out information about the goods and details of the goods desired by the customer, without the customer having to come directly to the Modiste Shofi Boutique.

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