



## Development of National University Asset Management Application Using the Android-Based Life Cycle Development System Method

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### ARTICLE INFO

### ABSTRACT

#### Article history:

Received: 04/04/2020

Revised: 20/04/2020

Accepted: 30/05/2020

#### Keywords:

Android Studio, Internet, Java, Asset Management, SDLC.

*The goal of developing an asset management system is expected to make it easier for users to manage assets. The results of the application development that is developed first is the admin login if it is logged in, will enter the home menu, then the admin adds assets in the added assets menu according to the user's needs, if the assets have been added, appears in the asset view menu, all available asset data can be seen in the asset view menu, if the user requests an asset there is a request to request an asset, then requests as an admin to accept the request for the asset the user needs, if it has been received by Asset admin will appear in the history menu.*

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## 1. Introduction

Information technology can be used in all fields such as offices, business, hospitality, education and health. Information technology is an advantage that can compete. Asset management application development is very useful for managing existing assets in a company in order to optimize the work of a company[1].

Along with the development of technology, asset management is needed to overcome problems that occur in companies so that the recording of assets is not manual which will complicate the recording of assets because assets will also increase from year to year. Therefore the asset management application is needed by the company to manage all existing assets and easily monitored[2].

## 2. Literature Review

### a. Asset Management

Asset management is a systematic process for managing wealth that includes the process of planning the required asset needs[3].

### b. Android Studio

Android studio is software that can run on all platforms (platform-independent). The nature of Android is multi-language, multi-role, and multi-platform[4].

### c. Java

Java is an object-oriented programming language that can be run on various computers. Java is neutral, does not depend on a platform, and follows the principle of Write Once and Run Anywhere[4].

### d. Database

The database is a collection of interconnected information stored in electronic storage media[5].

### e. Object Oriented Analysis Design

Object-oriented method is an analytical method to create a new paradigm in software engineering that views the system as a collection of interacting objects[6]

## 3. Research methods

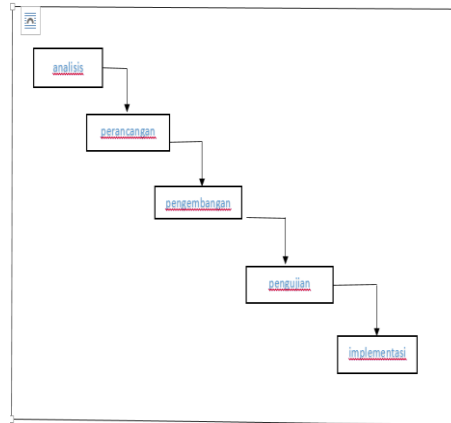
### 3.1. Study of literature

Literature study begins by understanding the problem domain in Asset management. By conducting interviews and collecting data from books[7].



**3.2 SDLC method**

The SDLC method is the method of approach used in the software industry to develop projects, ranging from small, medium to large projects[3]. In the asset management system research is carried out using the System Development Method and various data sets that are used namely by using a waterfall Development Method as shown below:

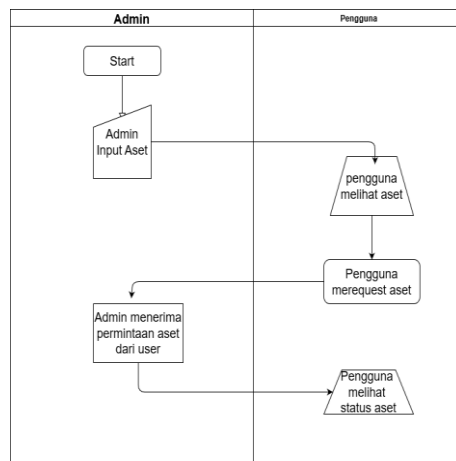


**Fig 1.** SDLC Model Waterfall

The System Development Life Cycle waterfall model method is an approach used in software. This method has the stages of developing analysis, design, development, testing, and implementation.

**3.3 System Flowchart Running**

The design of various flow (flow) to be able to make the application, the design is also determined as in the design that is: a set of flow, application performance runs and the implementation of the results of the application. To see the current system flow.



**Fig 2.** Asset Management Flowchart

**3.4 Use Case Asset Management system diagram**

The following is a use case diagram of asset management that will be proposed to illustrate the expected function of a system, which can be seen in the picture below:

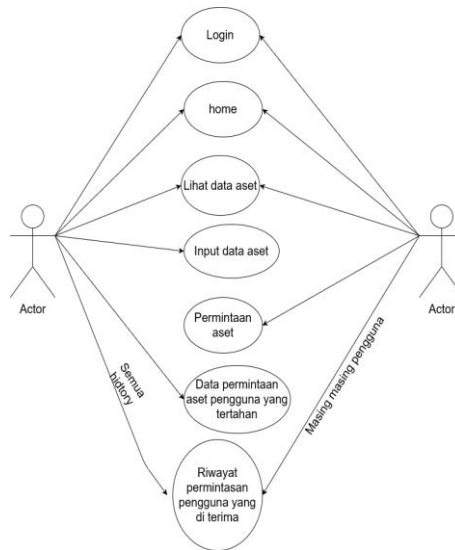


Fig 3. Use Case Asset Management Diagram

### 3.5 Activity Asset Management Request Diagram

The following is an asset management request flowchart that aims to request the assets the user needs to admin, which can be seen in the image below:

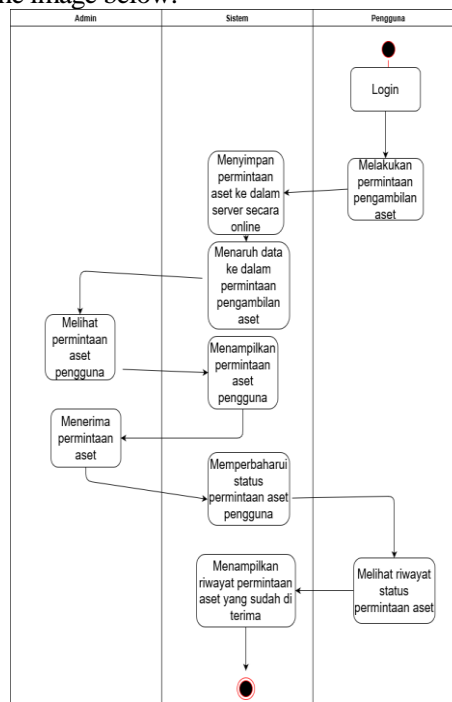


Fig 4. Activity diagram of Asset Management Request

### 3.6 Activity Asset Data Input Diagram

The following is an activity diagram running input data assets that aim to input the asset data needed by the user, which can be seen in the picture below:

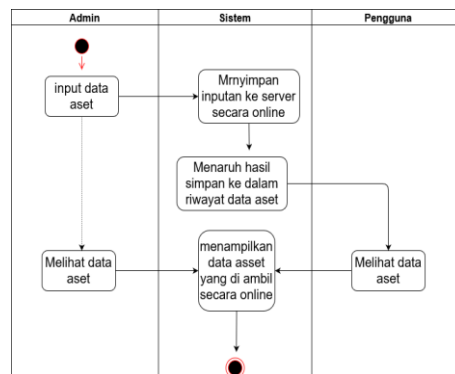


Fig 5. Activity Asset Data Input Diagram

#### 4. Results and Discussion

##### 4.1 Login Page Menu

Following are login credentials to enter as admin or user.

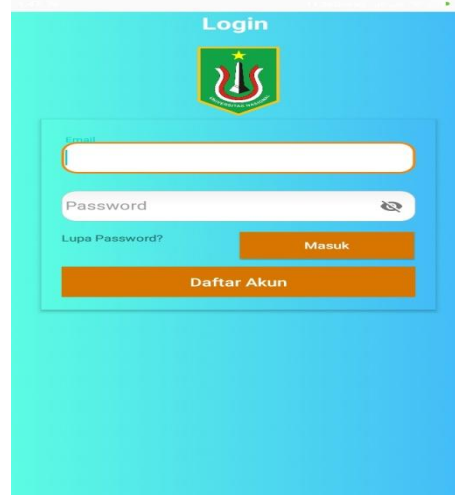


Fig 6. Login Page Menu

##### 4.2 Home Page Menu

If you have logged in, a home menu will appear as shown below:

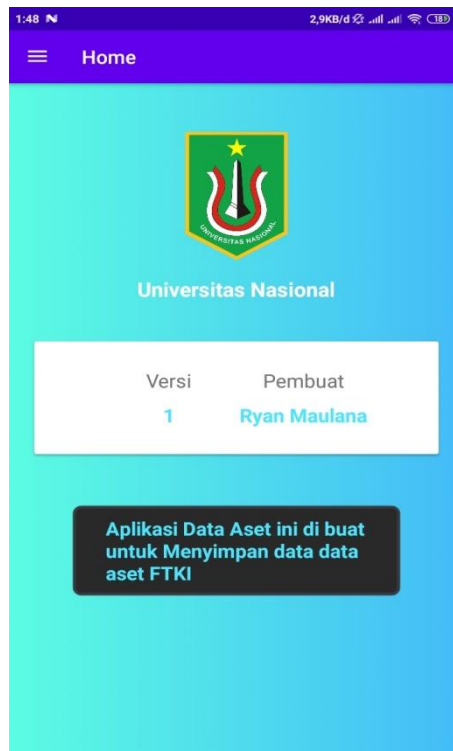


Fig 7. Home Page Menu

#### 4.3 Menu page Add Asset

In the added assets page, only admins can access this menu to make additional asset data needed by the user.

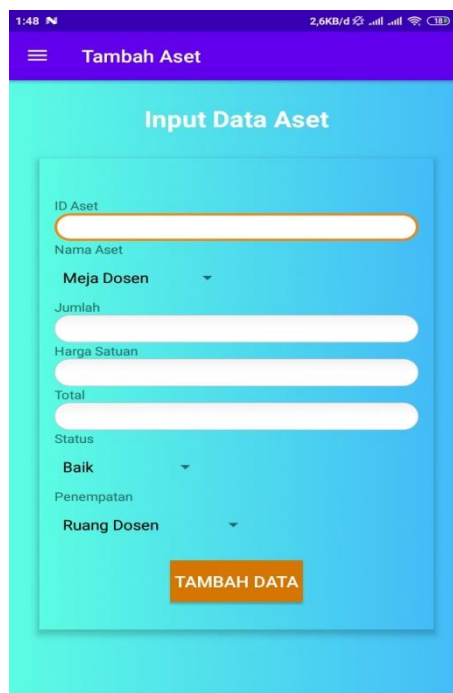


Fig 8. Menu page Add assets

#### 4.4 Menu Page See Assets

On the assets view page there is an asset data inputted by the admin, according to user requirements.

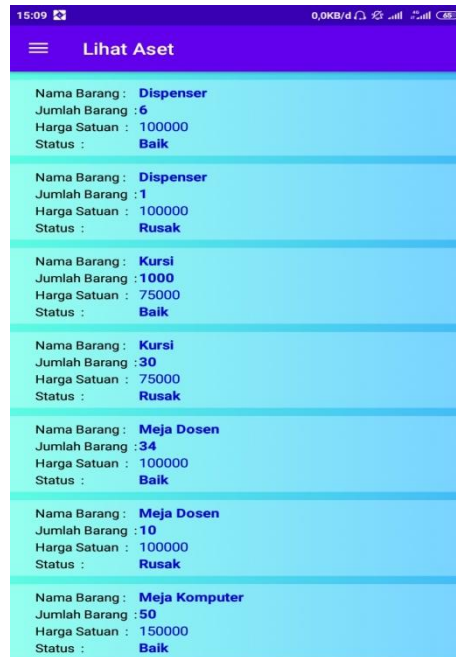


Fig 9. Menu page See Assets

#### 4.5 Request Page menu as User

On this page the user can request the assets needed by the user according to the availability of the assets available in the asset view, the user can request the amount of assets needed and will be sent to the room to which the asset will be sent. If you have requested an asset, the asset will be pending and waiting for acceptance by the admin.



Fig 10. Request Page Menu As User

#### 4.6 Request page menu as admin

On this page menu the admin sees the user's request to accept the pending asset request.

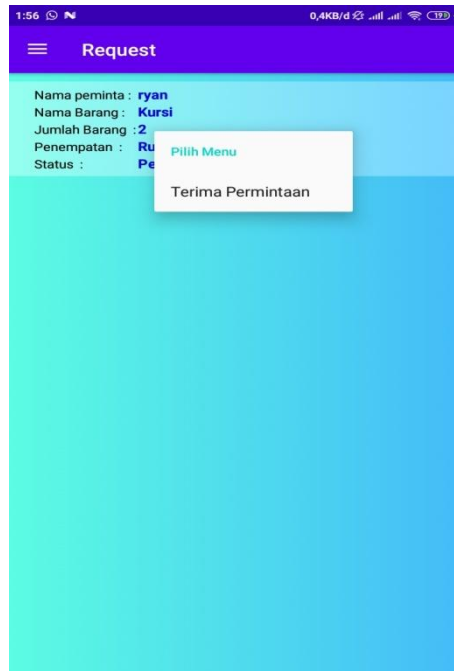


Fig 11. Request page menu As admin

#### 4.7 History Page Menu

On this page all assets received by the admin request will appear on this page.

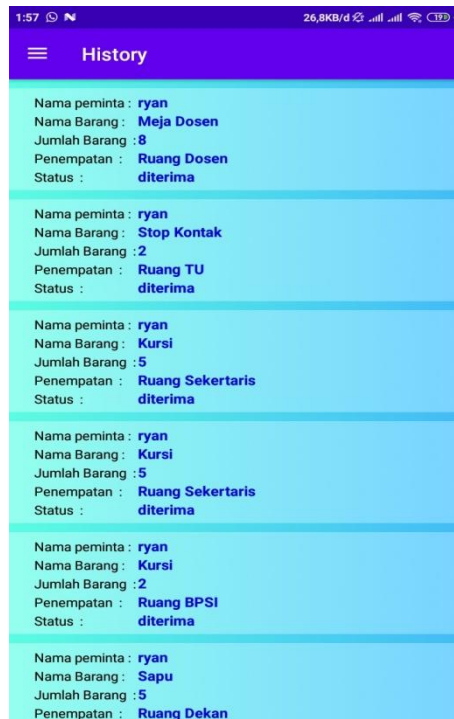


Fig 12. History Page Menu

#### 4.8 Black Box Testing

Table 1  
Black box

Input	Process	the output	Test results
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Click the Enter Button on the login menu	Enter the application	Display the home menu	Was successful
Click the add asset menu	Asset data input menu appears	Displays the column for adding assets and adding data button	Was successful
Click the add data button	Data added	Added data will appear in the add assets menu	Was successful
Click the asset view menu	Showing assets	Displays all assets added in the add asset menu	Was successful
Click the request menu	Displays the asset request	In the request menu the admin displays all user requests	Was successful
Click the History menu	History display	Displays all asset history that has been received by the user request by admin	Was successful
Click the logout menu		Exit the application	Was successful

## 5. Conclusion

From the results of the discussion about the development of asset management applications can overcome various problems, namely managing, recording asset data, and procuring new assets needed by users. Asset management application development can also make it easier for users to order assets that users need.

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