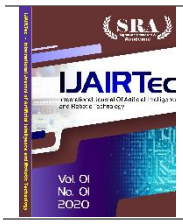

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ANDROID-BASED INTRODUCTION APPLICATION OF MEDICINAL PLANTS

Rinawati[1], Sri Hartati[2], Anggi Firmanto[3]
[1,2,3]Department of Information System, STMIK Pringsewu, Lampung
[1,2,3]Wisma Rini Steert No. 09 Pringsewu, Lampung, Indonesia
E-mail: rinastmik12@gmail.com[1], srihartatiskom.mti@gmai.com[2], anggifirmanto123@gmail.com[3]

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Abstract
Medicinal plants are very abundant biological wealth in Indonesia. Herbs made from medicinal gardens have also become the heritage of the Indonesian people. In the development of technology in the current era, especially for developers, a lot of the latest innovations have emerged. One of them is making the introduction application of this medicinal plant. However, currently there are still many people who have not used IT, so this research needs to be done not only once in order to create a more effective and updated application according to their needs. This research was conducted to create an android-based introduction application of medicinal plants which is simpler than previous research. This research was made using the mitt app inventor which is obtained for free and is easy to use because it has provided coding according to what researcher needs. This research model used the Systems Development Life Cycle (SDLC). From this research, the researcher produced an application which can be used to find out the list of plants, the benefits of plants and types of traditional medicinal plants which can treat certain types of diseases.

I. INTRODUCTION

Indonesia's biological wealth is very abundant. One of them is traditional medicinal plants. Indonesian people have long made potions made from medicinal plants known as Jamu. Jamu has become a legacy of the ancestors of the Indonesian people. Even in this modern era, medicinal plants are still used by people to cure certain diseases because they do not cause side and addictive effects. However, there are still many people who use chemical drugs because they are easier to obtain. Therefore, in modern era, the role of cultivators is important in order to preserve these medicinal plants. The existence of technology which is developing in modern era requires an application which can provide information and uses of certain

medicinal plants so that it can make it easier for the general public to access them. This android-based traditional medicinal plant will be developed more simply to be easily understood by the general public. According to Hanifuddin (2017), the introduction application of medicinal plants is very widely applied to Android-based gadgets because this communication device is most widely used by the general public so the introduction application of medicinal plants aims to provide information about the benefits of medicinal plants.[1]

Previous research used construct2 to develop the application and used coreldraw x7 to design the images. Previous research also added a game and quiz in the application. In this study, researcher in the framework used mitt app inventor to develop applications and used photoshop to design images. This research did not add games and quizzes in the application because this research focused on the benefits and types of diseases. This study added a video of medicinal plant processing so that it will be easier for users. With this concept, the researcher created an application which is easily understood by the general public by using the mitt app inventor. The use of mit app inventor is very easy because this website provides many features which have been provided in making applications, one of which is coding. This research was also done easily because mit app inventor is available for free so it is highly recommended for novice developers to learn it. How to use mit app inventor in the first stage is by opening the official mit app inventor website then the system will direct you to enter a gmail address and then researchers can enter the mit app inventor system and make applications.

It is hoped that the results of this research will be used by the general public in seeking information on the types and efficacy of medicinal plants. Researcher designed this application concisely and did not add other menus such as quizzes, games and others, so this application is very easy to understand by the general public and even ordinary people so it is hoped that many general people are interested in using it because of the many benefits in this application.

II. LITERATURE REVIEW

2.1. Medicinal plants

The use of traditional medicines internationally uses ingredients from plants (Situmorang et al, 2018). Plants have also become the most widely used medicine by rural communities in Indonesia [2]. According to Anitasari et al., (2018), tissue culture is a method of growing and multiplying plant cells, tissues, and organs under aseptic conditions in vitro, to produce plants in a short time, grow like their parents, be resistant to disease and increase plant productivity for cultivators[3].

2.2. Android

According to Satyaputra & Aritonang (2016: 2), Android is a system which existed on tablets and smartphones. The illustration on this system is as a bridge which connects users to interact with their devices and can operate or run applications available on the device [4]. According to Setyaningsih and Nuryati (2016), Indonesia's market share is almost 51% controlled by Android smartphones[5].

2.3. Application

According to Chan (2017), applications are objects which provide user activity functions which are also interpreted as collections of windows such as: data input, processing and reporting. Applications can contain:

a. Interfaces are user controls, menus, and windows which interact with the computer directly. The interface can also be interpreted as the appearance of an application to be implemented and as an interaction between the operating system and the programmer.
b. Application logic is validation and script functions which are processed as application logic and other processes [6]. The UXL method has previously been used in designing mobile applications which make it easier for people with disabilities to get information and get appropriate accessibility when doing mobility (Fatahillah & Asfarian, 2020)[7].

2.4. Mit App Inventor

According to Kamriani and Roy (2016: 2), Mitt App Inventor is a free block-based visual programming language for users who want to create applications. On the Mit app inventor device there are several components consisting of:

1.) Designer

It is used to set the system design. Designers have several components to choose from. Those are component, media, properties, palette and viewer.

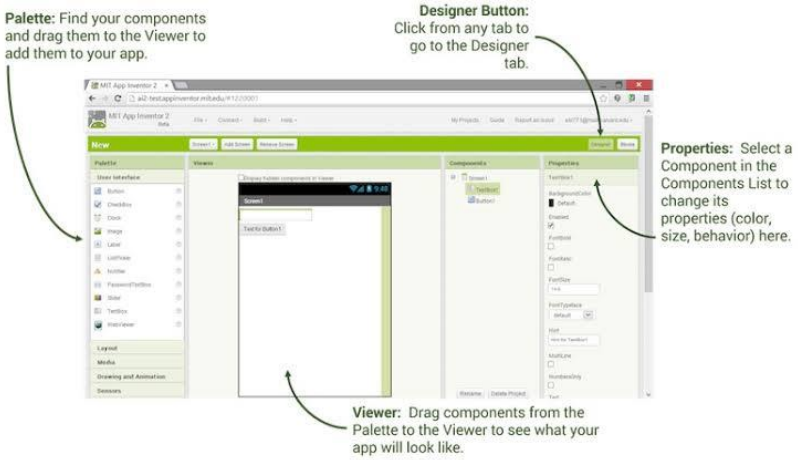

Figure 1. Mit APP Designer and Initial View

2.) Block

It is used to load and organize the components which have been created in the component designer so that they are interconnected.

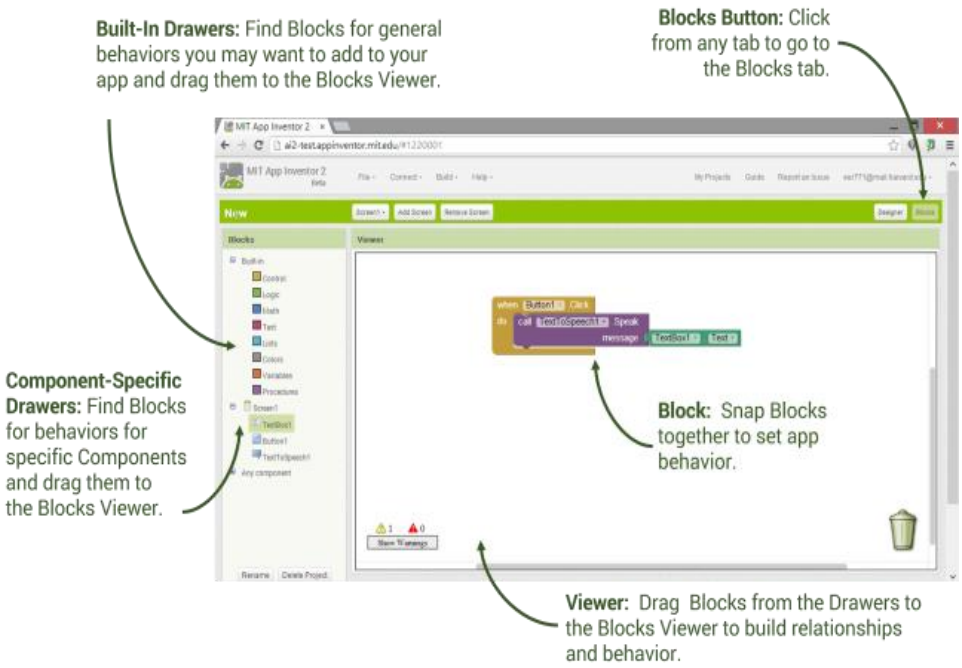

Figure 2. Block System

III. RESEARCH METHODS

3.1. Data collection

At this stage the researcher carried out several processes including:

a) Observation

Researcher made direct observations on medicinal plant objects which will be displayed in the application.

b) Literature review

Researcher collected data obtained from the internet and a collection of journals from previous researchers.

c) Interview

Researcher conducted direct questions and answers to the resource person to find out the object to be studied.

3.2. Design Model

At this stage the design model used is the Systems Development Life Cycle (SDLC). This system will explain the system development life cycle with the hope that the information system can be built and run as expected.

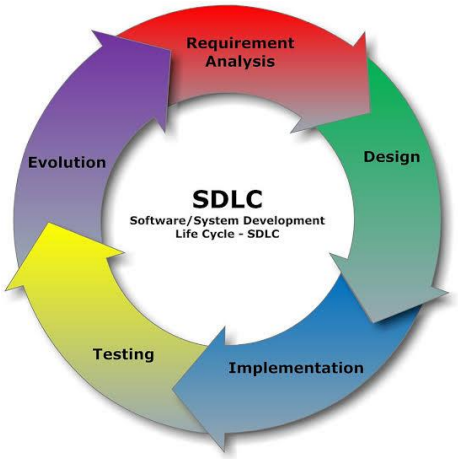

Figure 3. System Development Life Cycle (SDLC)

a) Analysis Stage
At this stage, the researcher conducted a survey about the object to be studied and analyzed the system according to the object.

b) Design Stage
At the design stage, the researcher designed a system which was previously in the form of a concept which will be made into a real system, by uniting the previous concepts into a single unit so that it can become an application.

c) Implementation Stage
At this stage the researcher applied the results of the analysis stage and the system design stage which has been made so that the application of the results of this study can be used by the general public.

d) Testing stage
At the testing or testing stage, researcher tested and ensured the application system runing smoothly.

e) Evaluation Stage
At this stage the researcher measured the effectiveness of the program used to achieve the goal so that the results can be used as further analysis.

IV. DISCUSSION

4.1.Design

At this stage the researcher designed a system consisting of input, output and database according to system requirements.

a. Flowchart

This is an illustration design which displays steps in the form of graphic symbols. This flowchart will make it easier for users to know the process and steps of describing problem solving in this study.

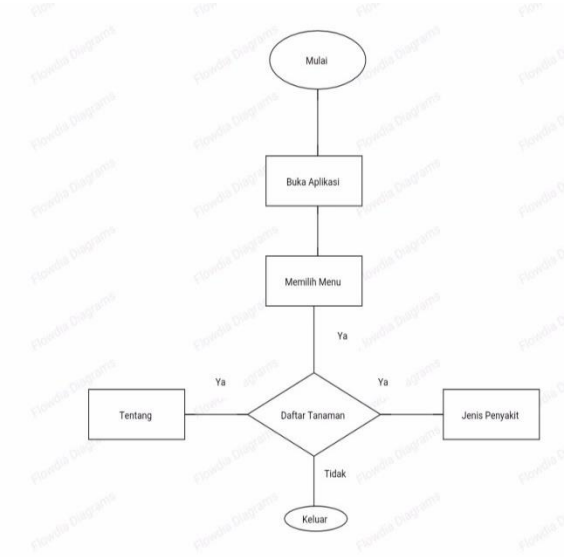

Figure 4. User Flowchart

4.2. Implementation

The implementation stage is the stage of placing the system so that it is ready for operation. This study aims to conduct trials on hardware as a means of data processing and information presentation. Activities which can be carried out at this implementation stage are from the process of opening a web browser program, opening the web, opening existing links and closing or exiting the program.

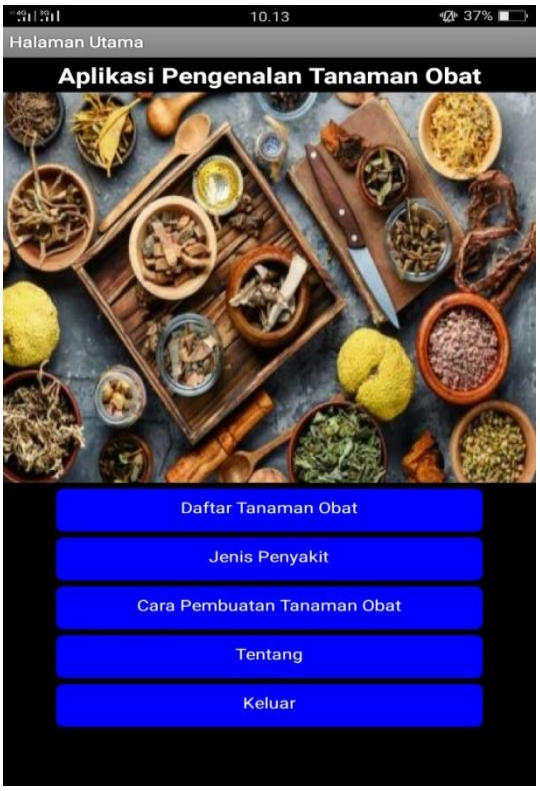

Figure 5. Application Main Page

The main page of the application displays the menus to be selected.

Figure 6. Display of Plant List

On the next display is a list of medicinal plants where users can check the benefits of certain plants according to what the user has chosen.

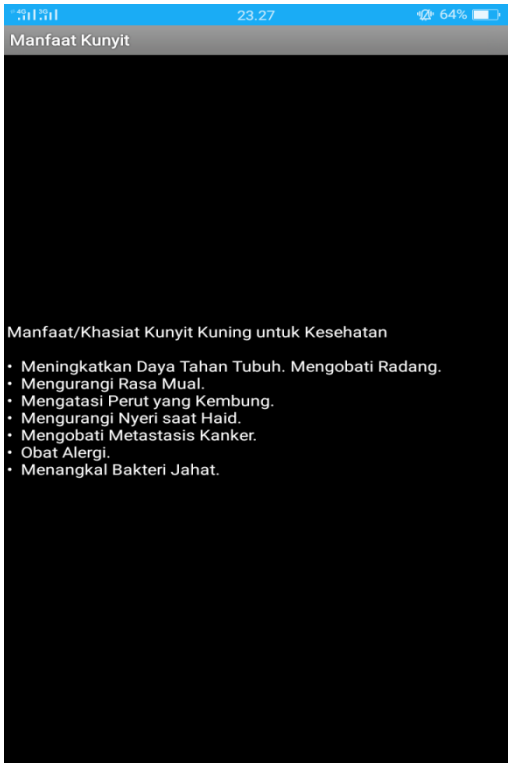

Figure 7. Display of Plant Benefits

This display explains the benefits which were previously selected on the menu of the list of medicinal plants so that the benefits of medicinal plants appear according to what the user previously selected.

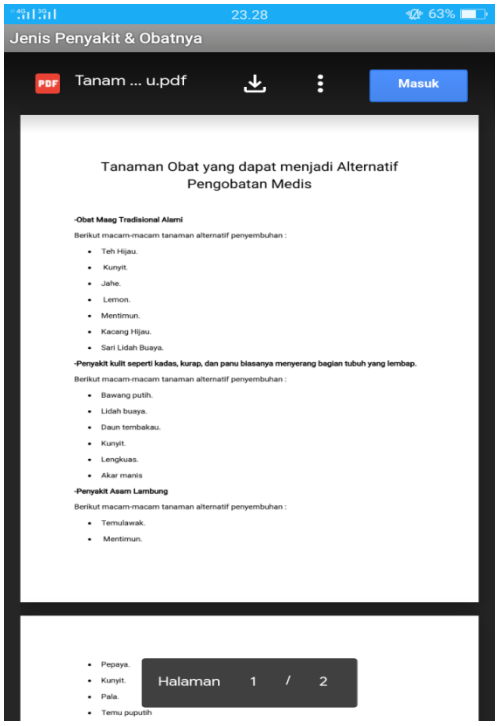

Figure 8. Display of Disease Type

This is a display of type disease where this view describes a particular disease by including what types of plants are good for consumption.

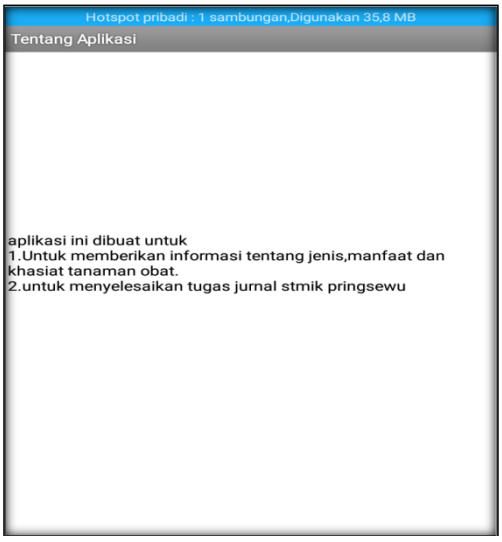

Figure 9. Display of Applications

This view explains the purpose and what this application is made for.

Figure 10. How to make medicinal plants

This image displays a menu of plant types which will be selected by the user to find out how to process them.

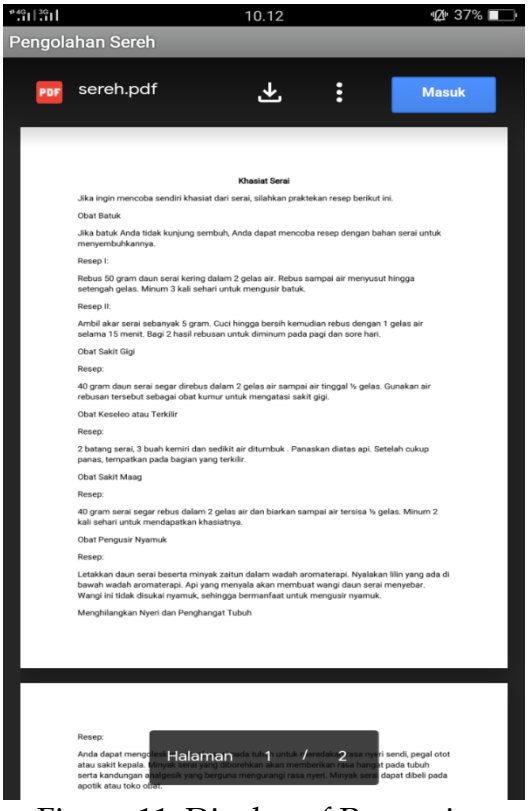

Figure 11. Display of Processing

Figure 11 shows the processing method according to the menu selected by the previous user.

Figure 12. Display of Exit Application

In Figure 12 above, the user performs the command to exit the application.

V. CONCLUSION

The conclusion of the study is that the application of the introduction of medicinal plants will be able to help the general public regarding information about what types of drugs are best consumed for people with certain diseases and the benefits of certain medicinal plants. This research resulted in an application which can be used to find out the list of plants, benefits and types of plants to treat various types of certain diseases.

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