

WEB MOBILE-BASED HERBAL PLANT BENEFITS INFORMATION SYSTEM

Nurbaiti¹, Deltia Resty Fauziyah²

¹Department of Information Management, STMIK Surya Intan

²Department of Information System, STMIK Pringsewu

¹Street Wisma Rini No. 09 Pringsewu, Lampung, Indonesia

²Street Ibrahim Syarief No. 107 Kotabumi, North Lampung, Lampung

*Corresponding author

E-mail :

restydeltia@gmail.com

Abstract

Lack of information about the processing of herbal plants is a major problem in most Indonesian people. Besides being one of the drugs that are easily made at home, herbal plants are also included drugs that are cheap and safe because of the lack of side effects. The purpose of this study is to create an information system in the form of an application to facilitate the public to know the efficacy of herbal plants. The method used to develop software is the Software Development Life Cycle method or we often call the SDLC Method. In building this information system using a structured model with components of the context diagram design, Data Flow Diagrams, and database design, and for designing applications using Appsgyser. The results of testing this application can display data on herbal plants and search for data based on the names of herbal plants and certain diseases.

Keywords: herbal plants, web-mobile, application

1.0 INTRODUCTION

The Indonesian nation consists of various ethnic groups that have a variety of herbal plants that have medicinal properties and even treatment using herbal plants which are believed to be able to treat various diseases for generations. According to WHO in 1985 predicted that around 80% of the world's population had used herbal plants as medicine to maintain their primary health [1]. For herbal plants / medicinal plants, the government has established Minister of Health regulation number 9 of 2016 concerning health development efforts through independent care, utilization of family medicinal plants and cultural skills and processing [2].

Herbal plants that have been processed simply can be used to treat various diseases. As the results of previous researchers Umar Zein (2005) Indonesian herbal plants hereditary taken and mixed at home alone to treat various diseases and disorders that arise in the body[3]. In addition to the many benefits that can be felt, herbal plants are also relatively inexpensive. As stated by Siti Aminah, Evy Wardenaar, Muflihati (2016) in Sukadana village about herbal plants planted by the village community were partly used for skin diseases and fever, as well as internal diseases such as diabetes, high blood pressure, disease, diabetes, high blood pressure, jaundice, and coughing up blood[4]. Herbs do not have large side effects like modern medicines and can be an option because they can be digested by the body and repair damaged organs. As based on research from Desi Dina Hanifa, Rini Hendriani (2017) said that there are many herbal plants that are reported to have hepatoprotective activity (liver damage drugs). This herbal plant is thought to contain anti-oxides which can prevent the formation of free radicals. Examples of herbal plants such as cinnamon, legundi leaves, and gambier can treat and repair liver damage. [5].

Herbal plants can be one of the medicines that are practical, inexpensive, and safe for consumption by the public. However, due to the lack of knowledge about the processing of herbal plants is a major problem. Previous research on herbal plants is still lacking and is only carried out in certain villages or regions, and there is only manual knowledge or books on health information sites. On this basis, this research was made to better help the community to find out the benefits of each plant that is around us.

Most information about the use of herbal plants to treat diseases is hereditary. Almost all parts of herbal plants can be used as a medicine, either singly or in the mixture. Herbs are considered to cure diseases and have a great effect on the body. But because of lack of knowledge and awareness of the importance of herbal plants, people become dependent on chemical-based drugs.

This study aims to provide knowledge about the benefits of herbal plants, how to process them, and the characteristics of these herbal plants. At present the knowledge about herbal plants and how to process them is still very limited. Even only some people who know about these herbs and how to process them. It is hoped that this application can help the community in learning and processing herbal plants, hopefully, with this application, it can foster public awareness of the importance of herbal plants.

2.0 THEORETICAL

2.1. Information Systems Concepts

According to Hanif Alfata (2007) Information System is collecting, processing, storing, analyzing, and distributing information for a specific purpose, the information system consists of input (data, instructions) and output (reports, calculations)[6]. Processed data cannot be said to be information, because useful information must be supported by three points, namely: relevant, timely, and accurate. If the information is not supported by the three points above, it can be said that the information is not useful[7].

As stated by Tata Sutabri (2012) in his book information systems are a set of interconnected components, which work to collect and store data and process it into information that is used[8]. The information system is made by the needs of its users, therefore to implement an effective information system, planning, implementation, regulation, and evaluation are according to the needs of each user.

The Information System Component according to Loudon et al (2005) consists of five resources namely human, hardware, software, data, and network. These five components play a very important role in an information system. However, in reality, not all information systems cover these five components. For example, personal information systems that do not cover telecommunications networks[9].

2.2. Herbal Plants in Indonesia and the Benefits

Herbal plants are a wealth that exists in Indonesia. According to the Republic of Indonesia Health Regulation Number 6 the Year 2016 Regarding the Formulary of Original Indonesian Herbal Medicine, traditional medicines are ingredients or ingredients in the form of plant material, animal ingredients, mineral materials, galactic preparations, or mixtures of these ingredients which have been hereditary used for treatment, and can be applied in accordance with the norms prevailing in society[10]. The advantage of using herbs is from natural ingredients so that the side effects can be reduced to a minimum. This reason makes people still recognize traditional medicine using herbal plants.

Traditional treatment using herbs is usually called herbal medicine. Herbal medicine has been known by the people since ancient times, even its usefulness can be felt until this time and demand for herbal medicine continues to increase. According to Utami (2008), the efficacy of herbal treatments has been proven through experience. For example, various kinds of diseases that cannot be cured through medical conditions can still be overcome with herbal medicine. For example, sour soup leaves mangos teen peel, a crown of the gods, etc. can help in overcoming the symptoms that arise during cancer therapy.

2.3. Mobile Application

By using the application community can solve the problem from the information contained in it. According to Henky W Pramana (2012) application is a software unit created to serve the needs of several activities such as trading systems, games, community services, advertising or all processes that are almost done by the community[11][12], [13].

According to Yuhefizar (2012), an application is a program that was developed to meet the needs of users in carrying out certain jobs. The software is made to speed up the work process in processing various kinds of data into information needed by its users[14].

3.0 METHODOLOGY

The information system development method applied in this study is the SDLC (Software Development Life Cycle) method[15][16]. The SDLC method is the process of developing or changing a software system that uses the methodology used to develop previous software systems. The stages in SDLC, in general, are as follows:

a. Planning Systems

Put more emphasis on aspects of the feasibility study of system development (feasibility study). Activities include:

- Formation and consolidation of the development team.
- Define the goals and scope of development.
- Identify whether existing problems can be solved through system development.
- Determine and evaluate strategies that will be used in system development.
- Determination of technology priorities and application selection.

b. Analysis Systems

System analysis is the stage in which the following activities are carried out:

- Conduct literature studies to find a case that can be handled by the system.
- Brainstorming in the development team about which cases are best modeled by the system.
- Classify problems, opportunities, and solutions that might be applied to the case.
- Analyze system requirements and create system boundaries.
- Define system requirements.

c. Design Systems

At this stage, features and operations on the system are described in detail. Activities are undertaken i.e:

- Analyzing the interaction of objects and functions on the system.
- Analyze data and create database schemas.
- Design a user interface.

d. Implementation Systems

The next stage is the implementation of implementing the design of the previous stages and conducting trials. In the implementation, the following activities are carried out:

- Database creation according to the design scheme.
- Making applications based on system design.
- Application testing and debugging.

e. Maintenance Systems

Maintenance Systems are performed by an admin appointed to keep the system able to operate properly through the ability of the system to adapt itself according to needs.

4.0 RESULTANTS AND DISCUSSION

4.1. Information System Design

The application of herbal plants is used to help the public to find out the efficacy and how to concoct herbal plants so that they can be used as a guide for making medicines at home. In building this information system using a structured model with components of the context diagram design, Data Flow Diagrams and database planning. A context diagram is a diagram that consists of a process and illustrates the scope of a system.

a. Context Diagram

In building an information system the benefits of the first herbs that are built are the system flow. The first information system design is a context diagram using two entities, namely admin and community. The design of the context diagram can be seen in Figure 1 below:

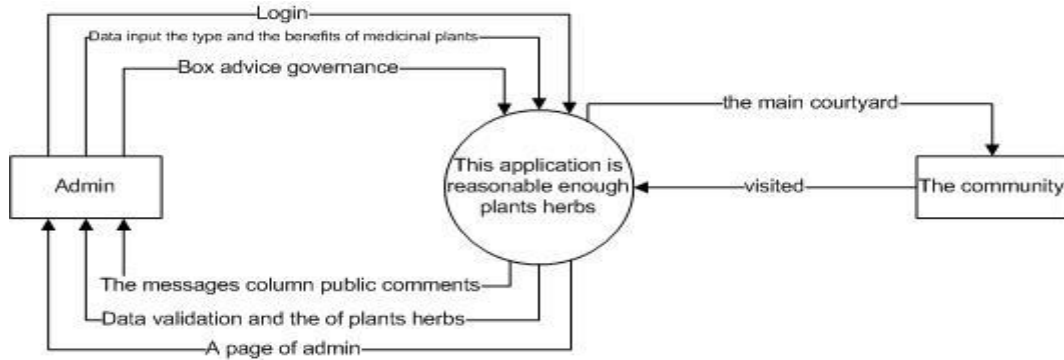


Figure 1. Diagram of the context of an herbal plant information system

After each entity is illustrated in the context diagram the system flow is then reduced to the Data Flow Diagram (DFD Level 0) as shown in Figure 2 below:

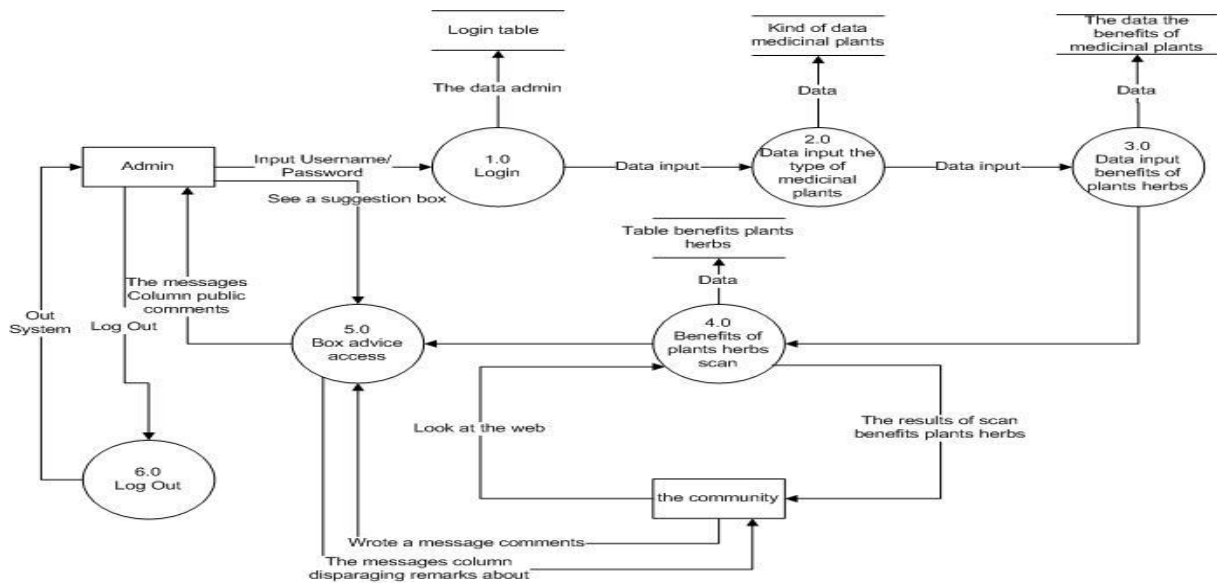


Figure 2. DFD Level 0 herbal plant information system

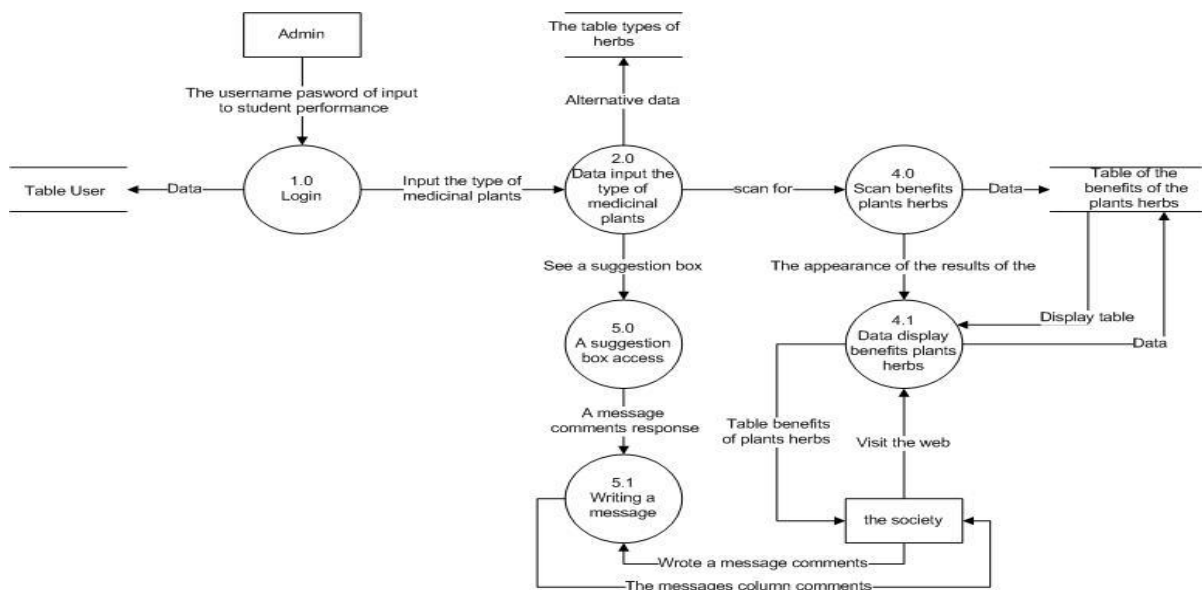


Figure 3. DFD Level 1 process 4 and process 5

To be able to manage the admin application, you must log in on the admin page to be able to enter, add, and delete data and also process or info about herbs. For the visitor page, you do not need to log in to obtain herbal plant data.

4.2. Program Implementation

The start page of this application is as follows:

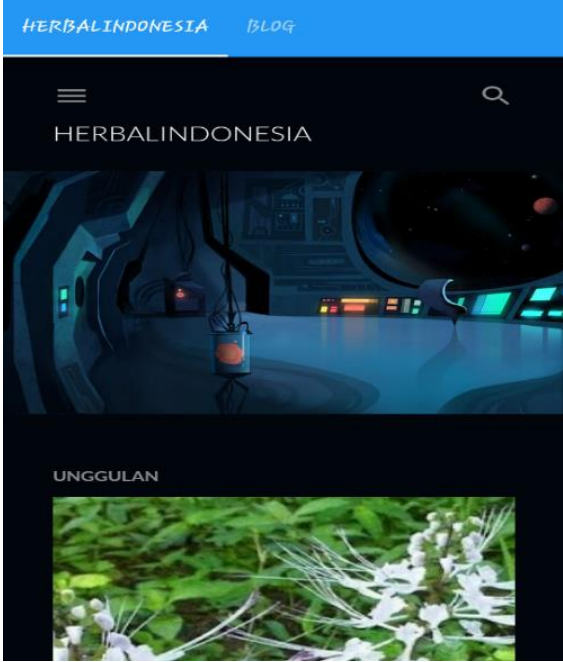


Figure 4: Implementation of the Main Page

The second page in this application, visitors can search using keywords, which are as follows:



Figure5. Search Results Menu



Figure6. Herbal Plant Information Menu

4.3. Analysis of results

From all research and implementation results that have been carried out by the authors, analysis of research results in accordance with the expected results. From the results of these studies can be explained as follows:

1. Program login in the menu performs the login process to enter the main page in accordance with admin access rights.
2. The menu page within the page will later be tested whether the menus that are programmed by the web application can work well or vice versa. If the application program can be run in accordance with what is desired from the start, it means that the test and analysis results carried out by the author were successful.
3. With this website, it can be easier for people to find out the benefits and ways to gather herbal plants
4. The website system intended by this program can process internet access to enter the application website that can be accessed on Smartphone or Android.
5. With this website can provide information about the benefits and ways to gather herbal plants

After conducting a localhost test the researchers then analyzed the implementation of the application by giving a questionnaire containing questions given to 30 people about the Benefits of the Mobile Based Herbal Plant Information System. From testing the applications that have been made, it was found that 85% of people answered that they were satisfied with the application of herbal plants. While the remaining 15% answered they were not satisfied with the application of the benefits of herbal plants.

5.0 CONCLUSION

5.1 Conclusion

Based on the discussion of information systems on the benefits of herbal plants based on mobile applications using Appsgeyser, conclusions can be drawn:

1. With the information system on the benefits of Indonesian herbal plants based on web-mobile, this application is expected to help the public to find out the benefits and how to mix herbal plants.
2. This application can raise public awareness about the importance of using herbs as medicine.

5.2 Suggestion

In this study, researchers realized that there were still many shortcomings in this application. The researcher hopes that the readers who want to develop applications using JavaScript and the Android platform.

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