

CHAPTER I INTRODUCTION

1.1 Project Background

Human diseases in general can be diagnosed with the help of advanced technology in line with the development of the 4.0 revolution era which is growing rapidly, especially the use of technology in the health or medical field used to improve access to good health services for community in detecting disease through symptoms and healthy lifestyles experienced. Many diseases actually have trivial symptoms, so some people experience them. The reason some people experience trivial disease symptoms is because they don't understand and don't even know how to deal with it. If their illness is getting worse, they can only rely on doctors. Diseases that are often taken for granted are skin diseases. Indeed, some skin diseases have symptoms that are not too severe and some can even heal on their own quickly, but even then it depends on the physical body and lifestyle of each person.

An example of a skin disease that is considered trivial and people don't know how to deal with it is acne. Usually this disease is the most sensitive experienced by women. Sometimes they make me very uncomfortable when only 1 pimple appears. What they know to treat is only using skin care. Though skin care is not to treat acne and other symptoms, but to treat the skin only. And not all skin care is suitable for everyone's skin type. Therefore, the solution to overcome this problem is that an expert system is needed that can detect skin diseases early. An expert system is a technology-based program that can perform something that can approach the thought process of an expert to overcome a problem problem effectively. Basically the expert system aims to support problem solving activities, including decision making and diagnosis or detection

An expert system to detect skin diseases that are expected to be diagnosed through an image processing system. In the development of this system, several samples of disease images are needed as classification data. Not only sample images but also required some points or written data that will

be used to classify skin diseases. The way the system works is that the system will give the user several choices regarding the disease he is experiencing, starting from the characteristics, symptoms, and how long he has suffered. Then the system will provide output in the form of classification results based on the data that has been input by the user. The output results consist of the name of the disease, its impact, causes, and how to overcome it.

1.2 Problem Identification

The application of this system is an effort to utilize the expertise of a doctor, to get information about the disease/medication that must be done by coming to the doctor or the hospital, this is one way in today's society to get details information. It is difficult to find a medicine that is suitable for the disease you are suffering from and also a lack of understanding of prevention because it is difficult. To recognize the type of disease, the cause is the symptoms and forms caused by several diseases that are almost the same. This application is expected to help and make it easier for people to get information on how to prevent, treat and treat skin diseases.

So, some related problem statements in this system are:

1. Recognize the type of skin disease from the symptoms suffered. Because many symptoms and forms of the disease are almost the same but with different types of disease.
2. Knowing the name of the appropriate medicine for the disease because so far the patient can only find out the medicine from the doctor by visiting the hospital or special disease poly.
3. Lack of understanding about prevention in order to avoid disease and deficiency knowledge in dealing with a disease.

1.3 Objectives

This project has the following objectives:

1. To develop a scanning system by photographing disease for skin detection.
2. To set up accuracy skin detection by phone camera with image processing.
3. Developing FAQ features as a way to manually detect diseases with relevant accuracy.

1.4 Scope

1.4.1 System Scope

1. There is a registration feature that works for users to register.
2. There is a detection feature that functions to detect the disease suffered by the user by answering several questions.
3. There is a scanner feature which is the main feature of this system to make it easier for users to detect diseases just by taking photos of the disease they are suffering from.
4. There is a dictionary feature that contains pictures of skin diseases that allow users to compare the disease they are suffering from, and provide various information ranging from methods of prevention, overcoming, and types of suitable drugs.

1.4.2 User Scope

1. Users are required to register first.
2. Users can answer questions about the symptoms they have suffered and will experience as a result of the disease they are suffering from by answering these questions.
3. Users can find out the disease suffered and how to treat it by taking photos of the disease

4. Users can find out how to prevent, treat and match drugs by comparing their disease based on the data that has been provided in the system.

1.5 Significance

In this project, the significance of this study includes:

1. An Android-based application that is able to detect types of common skin diseases in humans from the symptoms they suffer
2. An android-based application that is able to provide appropriate advice on drug names without using a doctor's prescription.
3. Android-based application that is able to provide prevention and action to users.

1.6 Assumption and Limitation

1.6.1 Assumption

With the construction of this system, it is hoped that it will make it easier for the public to detect skin diseases and be used as a means to manage various kinds of information experts, especially for the diagnosis of various types of common skin diseases in humans through the symptoms they suffer.

1.6.2 Limitation

The focus of this project is limited to:

1. This application contains several questions about symptoms and potential issues that one may be experiencing.
2. The system is designed to enable early diagnosis of diseases arising from the experienced symptoms.
3. The scanner feature can detect the most common skin diseases in humans, providing initial reference results to facilitate users in identifying those diseases.
4. The scanner feature performs image processing only once and cannot differentiate between real or fake images.