ABSTRAK

According to the Ministry of Health, people with high cholesterol in Indonesia are quite high, reaching 28%. In addition, the International Diabetic Federation (IDF) estimates that the number of diabetes sufferers in Indonesia could reach 28.57 million by 2045. This phenomenon is caused by people's poorly controlled lifestyles and diets, symptoms that are difficult to recognize, expensive access and examination costs, and invasive examination methods that are uncomfortable and seem scary. In fact, high cholesterol and diabetes levels can cause more dangerous diseases such as brain disorders, strokes, coronary heart disease, obesity, and even death. Based on these problems, it would be nice if an early detection tool for cholesterol and diabetes could be created that could be used as a means of early prevention of more detrimental disease risks by utilizing technological advances. Since blood has a key information of our health condition and eyes has a lot of blood vessels, developing a non-invasive tools with iris based is promising. This study aims to (a) Find out how to develop DEKAT (Cholesterol and Diabetes Detection Tool). (b) Find out the results of the DEKAT accuracy test (c) Find out the results of the DEKAT effectiveness test (d) Find out the public's response to DEKAT accessibility through the SUS Survey. This research method is research development by utilizing qualitative and quantitative data. The advantages of this application are that it can be used by anyone, anywhere and anytime to check their cholesterol and diabetes levels comfortably, easily, safely, accurately, and affordably via an Android cellphone. The results of this study are an Android application that has a percentage of accuracy for diabetes detection of 93%, cholesterol detection of 90%, 100% task efficiency from the black box test, and a score of 85.31 on the SUS Survey with a usability index of "Excellent".

Keywords: Application, Android, Cholesterol, Diabetes