

ABSTRACT

Smarthome is a system that represents a smartphone that will provide all the comforts, safety, security and protection of a residential home that is automatic and efficient and programmed by a computer that is used via a smartphone. The smarthome system is very well liked by many people with a residential assistance system that is an innovation in the field of technology. For this reason, it is necessary to have an expert system on this smarthome application.

In conducting this research, a type of expert system research is used by conducting interview methods with experts in their fields. Data analysis is done by expert system methods. This application runs on smartphone devices with an Android operating system designed using the Java programming language. In the modeling, this application uses the step research method, application system flowchart, user interface flowchart, use case diagram, system mockup, linear program and continuous testing to the user.

With the existence of this research, an expert system has been produced on the smarthome application with three aspects of light, electricity and thermal comfort research, where the system receives expert knowledge to be analyzed into the data obtained as well as the decision-making system process. And the application testing using alpha testing to find out the application process successfully and the existence of optimal values with a linear program method for data giving efficiency. The expert system on this smarthome application will produce output in the form of data results that will be recommended based on the results of expert interviews.

Keywords: *Android applications, Expert Systems, Comfort, Smarthome, efficiency*