

ABSTRACT

Rapidly developing technology has produced a variety of intelligent and sophisticated equipment that can change human life at this time. These developments can be applied in the community to help with their activities. One of them is an application in a house, therefore designing a system of access and remote monitoring of android-based household electrical appliances is therefore made.

In this study 3 control systems were created, namely remote control, automatic and time schedule that can be opened or activated as well as household electrical appliances namely lights and fans using the NodeMCU ESP8266 microcontroller that is connected to an Android smartphone using IoT features. To find out more about the quality of the Android smartphone application that was built, a questionnaire was directed to 15 user respondents and a tester on a prototype tool. This response proved effective because it immediately enjoyed the application on the tool prototype.

From the test results obtained the total time system value for the remote control light control system requires 0.297s and the fan needs 0.443s, the automatic safety system requires 0.306s and the fan requires 0.431s, the visit schedule system lights need 3.025s and the fan needs 3.023 -an With the value of the detection range of the PIR sensor as far as 5 meters and the value of the LDR resistance sensor is 200 Kilo Ohm when the conditions are a little light and will increase to 500 Ohm when conditions allow a lot of light. The results of sensor data are stored in the Antares cloud and stored on Android.

Keywords : Android, IoT, NodeMCU ESP8266, Smartphone