ABSTRACT

Electrical energy has become a very important requirement for daily life. Due to the increasing use of household electronic equipment. This also cause the use of electrical energy in the household sector to be the most dominant in Indonesia compared to other sectors. Behaviors such as turning on the AC, Tv, and lights when they are not needed can lead to wasteful use of electrical energy. Therefore we need a system that can reduce the use of excessive electrical energy, one of which is Smart Home

In this Final Project, a Smart Home system is created that can provide information such as room conditions and also allows users to control AC, Tv, and light from anywhere through the website and android application.

Based on the test result in this Final Project. The sensor used has an accuracy rate of 91.85% for LDR sensor, 98.36% for the DHT11 sensor, and 85% for the PIR sensor. The result of the sensor will be processed on the nodemcu ESP8266 as a microcontroller device and then sent to the firebase. The length of time for sending data from the device to the firebase is affected by delay, the farther the distance between the tool and access point, the higher the resulting delay value.

Key Words : *Smart Home, Internet of Things, waste of electrical energy, DHT11 sensor, LDR sensor, PIR sensor*..