

## **ABSTRACT**

*The use of electrical energy in each house is the most important thing, because in the use of electricity that is not needed can result in waste of electricity. One of the is because of the daily busyness that causes us difficulty in monitoring the use of electrical equipment. The solution is to make remote control and monitoring devices.*

*Home automation is an intelligent system that is applied in a house to integrate electronic equipment. The integrated electrical equipment will be connected to the internet using the Internet of Things feature for monitoring and control purpose.*

*This final project aims to create a device based on Internet of Things. The IoT feature is used to integrate devices so that they can communicate with database for the purpose of monitoring electricity usage and controlling electrical equipment.*

*The results of data shows that the devices to be able to control and monitoring electrical equipment properly. The average response time of the control system from the database to the microcontroller is 1.83s for Firebase and 0.007s for MySQL with monitoring response time of 0.931s for Firebase and 0.006s for MySQL.*

*Key Words: Home Automation, Internet of Things, Database*