

**DESIGNING AND TESTING IOT AUTOMATIC SMART HOME SYSTEM  
USING GOOGLE ASSISTANCE  
BASED ON NODEMCU ESP8266 AND SMARTPHONE ANDROID**

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**ABSTRAK**

*Home is a safe place to gather and take shelter with family. Home is a basic need for human life. At home, there are various electronic devices support daily activities, such as lights. To control electronic devices commonly use manual methods such as turning off or turning on the lights.*

*In this final project, the researches created an automatic smart home system in turning on and off the lights by using Google assistance with voice commands on a smartphone. The system of this tool used a NodeMCU ESP8266 microcontroller. Google assistance with voice commands can be accessed via android. The voice commands were changed from text form, which were forwarded to the Adafruit.io server by IFTTT, the Adafruit.io. Server processed the command text from the user forwarding commands through the internet network that had been connected to NodeMCU ESP8266. The ESP8266 microcontroller processed commands from the Adafruit.io server to the Relay Board according to the commands inputted by the user.*

*The results of tests showed that the percentage of the accuracy of the system turned on 1, 2, 3, and 4 with an overall accuracy rate of 86.6%, while for turning off the lamps 1, 2, 3, and 4 with an overall accuracy of 90%.*

**Keywords:** *Smart Home system, Google Assistance, IFTTT, Adafruit.io*

