

ABSTRACT

Smart door lock is an advanced door locking system developed on traditional door locking that still uses manual locks, Smart door locks can be controlled remotely connected using the internet network. Smart door locks are used for home security systems that can be controlled remotely. Therefore, this study aims to create a smart door lock design based on temperature sensors and ultraviolet light with a database using the MQTT dashboard. The components used are: FPM10A module (fingerprint sensor), NodeMCU ESP8666, solenoid door lock, GY-906 Module, DHT11, and ultraviolet light. In this study added temperature measurement sensors and ultraviolet light. In the smart door lock will be done body temperature measurements, fingerprints, sterilization of bacteria with ultraviolet light, and LEDs as an indicator of the status of the open door or not. Tests conducted on smart door lock prototypes include device testing and data transmission traffic testing using the internet. QoS parameters used include packet loss, delay, throughput. The accuracy of the GY-906 sensor on this device is 96.311% for body temperature. The accuracy of the DHT11 sensor on this device is 97.075% for room temperature. The results on the Quality of Service calculation in the form of Delay 0.586314 ms include the very good category on the ITU-T G.1010 standard, throughput of 1.828 kbps is a bad category on the TIPHON standard, and packetloos 0% belongs to the very good category on the ITU-T G.1010 standard.

Keywords: modul FPM10A (fingerprint sensor), NodeMCU ESP8266, solenoid door lock, modul GY-906, DHT11, and ultraviolet light.