ABSTRACT

The crime rate and the expertise of thieves, especially in elite housing, is getting higher. Many thefts occur when the homeowner is away and the house is left for a long time. Therefore, a home security system is needed that is stronger and not easily broken into by criminals.

In this final project, a security system is implemented which is the development of previous research, with the difference lies in its features. The topic that will be proposed is a home door security system based on the Internet of Things (IoT). This security system focuses on making smart siren prototypes for home security systems. Making smart siren using NodeMCU V3 ESP8266. The previous security system (smart door lock) and smart siren can be connected to each other via wifi, so that the smart siren will later receive a command to activate the siren when the E-KTP is not registered in the database. Users can disable the siren through an android application that is connected to firebase as a real-time database.

From the results of functionality testing, it was found that the smart siren was successfully used to activate the siren under certain conditions and the SmartSirine application to deactivate the siren. The test on reading the RFID reader that detects the E-KTP is not recorded in the database for 30 trials, then produces the output of the E-KTP which is accessed through the database and stored in the emergency alert. QoS performance with system performance on RFID and siren gets an average delay value of 40.22 ms, while application performance on status and off button features gets an average delay value of 1.58 ms.

Keywords: *Internet of Things, Smart sirine, E-KTP, Smart door lock.*