

ABSTRACT

The crime rate in Indonesia is still very high. Especially in cases of theft crime. House theft and burglary are included in the types of criminal cases with the highest number of crimes compared to other criminal cases. A good and effective security system is needed so that residential homes can always be maintained and safe. The use of security camera (CCTV) devices has been widely used by the community to protect the condition of their homes from being robbed or stolen, but it is not effectively for solving this problem.

This final project purpose is to create a tool that can improve security at home based on the Internet of Things (IoT). By using a smart alarm, users will get a home security notification remotely, making it easier for users to know the state of the house when left behind. Sirens send data to the web service to display home security notifications to the user, and later the user can manage both siren and detector activities on the web service.

This final project focuses on making a siren module prototype for a home security system. The siren module manufacture uses Wemos as the core. The siren module will get a command to activate an alarm when an activity on the detector occurs, such as not entering a password for 15 seconds and an error in entering a password. After the alarm is active, the siren module will send data to the web module where a notification will appear to the residents of the house so that they can know the real time conditions of the house. Residents can control alarms on the web module. The result of the tests has been done, all hardware and system function are working properly. Qos test from the prototype to server obtained an average of delay 0,2884s and packet loss result is 0%.

Key Word: *Detector, Smart Alarm, Smart Security, Sirine, Web Service, Internet of Things*