

ABSTRACT

This study explores the creation of a tool that aims to reduce the increasing number of theft cases in minimarkets or shops in Indonesia. In dealing with this problem, this study has the main objective of developing an innovative intelligent security system using NodeMCU ESP8266, LDR Sensor module, laser module, and buzzer. LDR sensor module and laser module play an important role in this system. The LDR sensor module functions to receive light from the beam emitted by the laser module, and will respond when the laser beam is blocked by an object. This system is designed as an early warning mechanism by activating the buzzer when the LDR sensor module does not receive light from the laser module indicating that there is an object blocking the light or laser beam. The absence of this light functions as a trigger for the alarm sound from the buzzer. In addition, this system has the ability to send notifications directly via Telegram. The use of a Telegram bot called "botfather" which has been programmed in advance which is combined or entered into the program code in nodemcu in Arduino IDE which later by connecting this botfather can provide a warning "WARNING !!!" via a message to the telegram account on the owner's device. Thus, the results of this study provide a security system that will provide a buzzer warning and telegram message that only takes a delay of 0.5 seconds when the LDR sensor does not receive light from the KY-008 laser, where the voltage on the LDR is 2.94V and will return to 0V when the LDR receives light again from the KY-008 laser.

Keywords: Theft, Nodemcu ESP8266, laser module, LDR Sensor Module, buzzer, botfather.