DESIGN OF PROTOTYPE OF WAREHOUSE SECURITY SYSTEMS BASED ON RFID AND INTERNET OF THINGS (IOT)

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ABSTRACT

Crimes often occur, be it in the form of theft and so on which of course harms the victim. One of the places at risk of theft crime is a storage warehouse. Very often the perpetrators of the crime of theft manage to escape after taking/stealing goods. The purpose of the tool created by the author is to create a warehouse security system that is integrated with the internet, with the hope of reducing warehouse theft crimes and being able to catch the perpetrators of warehouse theft. So the authors make a warehouse security system using IoT, the authors use ESP 32 as a microcontroller, magnetic door switch sensors as door detectors, RFID RC522 as door openers, DC motors as door movers, solenoid door locks as door locks, 12V adapter as power supply , as well as Telegram as the recipient of the information. The data obtained from this study is that the magnetic door switch sensor detects that the goods storage door in the warehouse is open, so it sends a notification message to Telegram and the security door in front will close, the door lock solenoid locks and a warning buzzer sounds. Then the guard came to see the state of the warehouse. Doors can be opened with RFID or commands from Telegram. This tool can be turned off when work activities in the warehouse are running as usual, and can be reactivated via commands from Telegram.

Keywords: Warehouse security, ESP 32, RFID, Magnetic Door Switch, Telegram.