

# ***SMART HOME DESIGN OF DOOR SECURITY USING WEBSITE BASED PIR SENSOR***

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## ***ABSTRACT***

*Today's home security systems generally still rely on conventional locks as a security method. This is a problem because conventional locks are vulnerable to break-ins and do not provide real-time warnings to homeowners. To overcome these problems, researchers propose a prototype home security system using ESP32 and ESP8266 microcontrollers as data processors. This system is equipped with a PIR sensor to detect movement around the door, a Magnetic Reed Switch sensor to monitor the condition of the door being opened, and a Buzzer to issue an alarm as a notification. In addition, this system will send notifications to homeowners via the Telegram application if the PIR sensor detects object movement and a door is broken. Users can also use a 4x4 keypad and a website as access to open and close doors. The test results show that the prototype of this home door security system functions well, starting from sensor detection, inputting passwords via keypad, to sending notifications via Telegram. This tool has been tested and produces ideal data, so that it can be used as a monitoring medium to improve the security of the door of the house. With this security system prototype, it can provide a more effective and modern solution to improve home security.*

***Keywords*** : *Internet of Things, NodeMCU ESP32, NodeMCU ESP8266, PIR Sensor, Home Security System, Telegram Notification.*