

ABSTRACT

The door becomes access to someone in and out of a room (indoor) or outdoors (outdoor). The door is also a place for interaction between a person and an officer, but during a pandemic like this we are required to reduce close direct contact with someone, especially when we are about to enter a room. So we need a system that can design a prototype door access as well as a presence after the mask detection process is successful. This design is integrated with Google Sheets and uses NodeMCU as a system control center, and uses RFID MFRC522 as a two-way communication tool between the RFID Tag and the RFID Reader. Servo motor works to open and close the door according to conditions, LCD to display notifications according to conditions. Ultrasonic sensor as object detector. Push Button as a door opener. When the RFID Tag is attached to the RFID Reader, the data in the form of the UID will be automatically entered into Google Sheets. RFID Reader can read RFID tags with a minimum distance of 0 cm and a maximum of 2 cm, when the distance between the RFID Tag and Reader exceeds the maximum distance, the RFID Tag will not be read. Based on the test results, this research produces an RFID-based door access system as well as a presence that is connected to Google Sheets.

Keywords: Door, Presence, RFID, NodeMCU, LCD, Ultrasonic Sensor, Push Button