

ABSTRACT

Generally, door locks still use a conventional locking system consisting of a key cylinder or padlock. This level of locking protection is still relatively weak, easily duplicated and cannot record unrecognized test tracks. The purpose of this research is to design a smart lock that combines rfid technology and face recognition. This study uses the method of searching for data on literature sources and from research objects and designing the capital of the tool. Then proceed with testing and evaluating the results of the research design. the tightening process, to detect objects that are used when wanting to access the door using the camera sensor from the ESP-32CAM and the MFRC522 sensor. Then the data is processed by NodeMCUESP8266 as the master and sent to the server as data that informs who accesses the door. In this research functionally the sensor has a perfect level of accuracy. Specifically for delay testing on RFID using KTM which is carried out at a distance of 2 cm has an average time of 0.34 seconds, a distance of 4 cm 0.45 seconds and at a distance of 6 cm 0.84 seconds. Meanwhile, the delay on the camera for registered faces has an average time of 2.52 seconds. In testing the combination of sensors to access this door, it has an average time of 5.7 seconds for the solenoid door lock to open.

Keyword : Smart Lock, ESP-32CAM, RFID, MFRC522, NodeMCUESP8266