

ABSTRACT

Telkom University dorm is home to students who are kept safe, because there are important valuables such as laptops, books, and pocket money. It is used by Universitas Telkom students to support academic and non-academic skills. Therefore, it takes security to prevent something unwanted, such as being entered by an irresponsible party. To prevent this, extra security is required for the occupants of the room or visitors to enter the dormitory rooms. These safeguards can be implemented by creating an integrated entrance with RFID (Radio frequency Identification) that will be connected to the KTM student/I.

Currently, the entrance of the dormitory at Telkom University is still using manual admission. Such as filling in the guest book, or filling the room occupants book. However, in the process is not efficient against time and security, often there is a loss of goods or any entry party irresponsible. Therefore RFID is used for dorm room door, and from the RFID can detect KTM. Therefore, in this research, conducted the design and implementation of RFID-based doors on the hostel Universitas Telkom.

In research, authors use Arduino to manage the connected RFID Reader. By having a test parameter that can show its performance. RFID Reader is able to read student sign cards of dormitory room owners. Average distance 3.5 cm if without barrier. And if there is a barrier 2 cm. To perform the distance between tapping to the other tapping has an average delay of 2.72 seconds. For the average time the reader used in < 1 second detection. For testing the tilt degree that can be detected is a 10 ° angle with a maximum distance of 3.5 cm. angle 20 ° with a maximum distance of 3 cm. Angle 30 ° with a maximum distance of 2.5 cm. Angle of 40 ° with a maximum distance of 2 cm. So that it can be concluded that the appliance on This research can answer the problems that occur.

Keywords: Radio Frequency Identification, Arduino, Dormitory