

ABSTRACT

Currently accessing the room conventionally is dangerous because there are more and more ways to access the room by people who do not have access. Along with the development of technology, especially smartphones that can be connected to the internet, it is possible to make door control access using smartphones.

This door access control system uses a dropbolt door lock and a Raspberry Pi microcontroller running the Laravel framework, with wireless connectivity and facial recognition as a liaison between the microcontroller and Android smartphone users. This system is useful for limiting the access rights of each user who wants to access the lecturer's room according to their classification, where each classification includes lecturers, students, and unregistered users.

In this study, we discuss the design and implementation of a lecturer room door access control system which is expected to make it more efficient for everyone who has access to the room. Based on the tests that have been done, the website application got 95.83% of the total 24 blackbox tests, for the android application 92.85% of the total 14 blackbox tests, for the tools it got 80% of the total 5 blackbox tests, for the eye detection it got 100% of the total 3 blackbox tests, for the delay test between faces and open doors, the average value is 8.389744s with the lowest value is 3.02s, the highest value is 17.64s, the standard deviation value is 3.943567s and the percentage of successful face detection tests is 97%.

Keywords: *Android, Bluetooth, DropBolt, Internet of Things, Laravel, Wireless, Raspberry Pi*