ABSTRACT

attendance is to record and monitor someone's presence in an activity or event. The purpose of its use is varied, from managing attendance data, creating attendance reports, to as an access control tool. As an access control tool, the situation could be that someone has to carry out biometric verification or enter a secret code before being given permission to enter a certain area. Using presence in this way can increase the security of areas that require special supervision.

The aim of this research is to design and implement an Internet Of Things (IoT) based attendance system. The system designed integrates two types of attendance systems, namely a facial recognition-based attendance system (FRA) and a fingerprint-based attendance system (FPA), with a server. FRA uses the Python programming language and the OpenCV library, while FPA was developed using an ESP8266 MCU Node and an AS608 fingerprint scanner with a combination of xampp and php to create attendance websites. Both FRA and FPA are connected to a web server with a database engine via an internet connection and send attendance data using the method HTTP_POST. Server development using Apache Webserver, the PHP programming language. The server has two main purposes, namely to record attendance data sent by FPA and FRA, and generate attendance reports based on user requests. System testing is carried out on a local network. Test results show that the integrated subsystems and systems work well.

The parameter results that will be displayed are the results of attendance carried out by employees at PT. INDONESIA MUDA ENGINERING, you can see the data in the form of JSON which is initial data, before being converted into objects, the data obtained is in the form of 3 types of data, namely presence data, number of employees, and users .

Keywords: Fingerprint, xampp, Node MCU ESP8266, OpenCV.