

## ABSTRACT

*Attendance is an important part for the company for the proportion level of attendance discipline. PT. Adhikari Inovasi Indonesia (Adhivasindo) currently uses a fingerprint/fingerprint attendance system with open door access rights. The problem comes when using the fingerprint attendance tool, data is often not entered because the fingerprint position is not correct or dirty and you have to try again. This small problem may not affect performance in the company, but it would be better to use an effective attendance system.*

*In this study, the authors improved the attendance feature by adding a mobile GPS (Global Positioning System) based application to online attendance. In addition to adding features to the tool by adding RFID (Radio Frequency Identification). The hardware used is ESP32, RFID, Fingerprint Sensor, I2C LCD, Buzzer, Relay, and Solenoid Door Lock. Absence data is entered and stored in the MySQL database.*

*This design was created to improve the presence system to provide effective attendance times without having to be constrained by fingerprints that are difficult to read with alternative RFID features. The results of this test use several examples of student RFID cards, fingerprints and NIMs as attendance data from applications and tools. When the test is carried out, it checks the UID of the RFID card, the fingerprint has been registered and, the application radius distance attendance test. This design can make it easier to overcome problems when using fingerprint entry.*

**Keywords:** Attendance, GPS, Door Access Right